

**SMALL WATERSHED ROTATING BASIN MONITORING PROGRAM
YEAR 1: NEOSHO-GRAND AND UPPER CANADIAN BASINS**

FY 00 §319(h) Task 600
EPA Grant # C9-996100-08

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FINAL REPORT
October 2005

TABLE OF CONTENTS

| | |
|--|---|
| LIST OF TABLES | 3 |
| LIST OF FIGURES | 3 |
| 1.0 INTRODUCTION | |
| 1.1 PROJECT BACKGROUND..... | 4 |
| 1.2 PROJECT DESCRIPTION..... | 6 |
| 2.0 MATERIALS AND METHODS | |
| 2.1 WATER QUALITY MONITORING..... | 9 |
| 2.2 BIOLOGICAL MONITORING | |
| 2.2.1 Habitat Assessment..... | 9 |
| 2.2.2 Fish..... | 12 |
| 2.2.3 Macroinvertebrate..... | 14 |
| 2.3 WATERSHED ASSESSMENT..... | 16 |
| 2.4 BENEFICIAL USE SUPPORT ASSESSMENT..... | 17 |
| 3.0 RESULTS AND DISCUSSION | |
| 3.1 WATER QUALITY MONITORING..... | 17 |
| 3.2 BIOLOGICAL MONITORING | |
| 3.2.1 Habitat Assessment..... | 31 |
| 3.2.2 Fish..... | 32 |
| 3.2.3 Macroinvertebrate..... | 38 |
| 3.3 WATERSHED ASSESSMENT..... | 44 |
| 3.4 BENEFICIAL USE SUPPORT ASSESSMENT..... | 46 |
| 4.0 LITERATURE CITED | 49 |
| APPENDIX A | WATER QUALITY DATA |
| | A.1 Raw chemical and physical water quality data..... |
| | A.2 Raw bacterial data..... |
| | A.3 Descriptive statistics by site for water quality parameters..... |
| APPENDIX B | HABITAT ASSESSMENT DATA |
| APPENDIX C | FISH DATA |
| APPENDIX D | MACROINVERTEBRATE DATA |
| APPENDIX E | BENEFICIAL USE SUPPORT ASSESSMENT DATA |
| | E.1 OCC assessment results for beneficial use support..... |
| | E.2 Key for beneficial use support assessment codes and impairment cause and source codes..... |
| APPENDIX F | HIGH QUALITY SITES DESCRIPTION |

LIST OF TABLES

| | |
|--|----|
| Table 1. Site list for Rotating Basin Monitoring Program Year 1..... | 8 |
| Table 2. Index of Biotic Integrity (IBI) scoring criteria for fish..... | 14 |
| Table 3. Index of Biotic Integrity score interpretation for fish..... | 14 |
| Table 4. Bioassessment scoring criteria for macroinvertebrates..... | 16 |
| Table 5. Bioassessment score interpretation for macroinvertebrates..... | 16 |
| Table 6. Mean physical water quality values for monitoring sites..... | 18 |
| Table 7. Low dissolved oxygen values (DO>5.0 mg/l)..... | 19 |
| Table 8. Mean chemical water quality values for monitoring sites..... | 21 |
| Table 9. Mean bacteria values for monitoring sites..... | 22 |
| Table 10. Comparison of water quality data from previous projects to the Rotating Basin Year 1 project..... | 26 |
| Table 11. Habitat assessment values for monitoring sites..... | 31 |
| Table 12. IBI scores based on Oklahoma state Fish and Wildlife Propagation biocriteria..... | 33 |
| Table 13. IBI score summary based on EPA’s RBP protocol..... | 34 |
| Table 14. Fish metrics for monitoring sites..... | 35 |
| Table 15. Comparison of fish data from previous projects to the Rotating Basin project..... | 38 |
| Table 16. Mean macroinvertebrate values for monitoring sites..... | 40 |
| Table 17. Bioassessment score summary for macroinvertebrates..... | 42 |
| Table 18. Watershed landuse for monitoring sites..... | 45 |
| Table 19. Comparison of NPDES types on nutrient levels..... | 46 |
| Table 20. Beneficial use support assessment..... | 47 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1. Small Watershed Rotating Basin Monitoring Schedule and Year 1 Monitoring Sites.. | 5 |
| Figure 2. Mean levels of ammonia, total nitrogen, and total phosphorous by ecoregion..... | 24 |
| Figure 3. Habitat score by ecoregion..... | 32 |
| Figure 4. Total number of fish species, number of darter species, number of sunfish species, and number of intolerant fish species by ecoregion..... | 37 |
| Figure 5. Mean macroinvertebrate values by ecoregion..... | 43 |

1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

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 NPS pollution 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 the organization charged by Oklahoma state statute with the task of monitoring NPS impacts to state waters. Assessment of the state's water quality is the foundation for meeting the long-term goals of the Oklahoma NPS program.

Historically, Oklahoma has not had a consistent, statewide ambient monitoring program that allowed for the identification of nonpoint source (NPS) affected waters. Instead, pollution monitoring has been confined to project-specific areas, or has been conducted on such a large scale that it has not been effective in identifying sources of impairment. Without a comprehensive approach to monitoring and evaluation of the state's waters, it has been difficult to accurately assess the impact of NPS pollution throughout the state, identify the sources of the pollution, and determine the success of measures to improve water conditions.

As the state's technical lead agency in NPS issues, the Oklahoma Conservation Commission (OCC) initiated in 2001 a new monitoring program, coordinated with other monitoring programs in the state, to address NPS issues on a larger, more continuous scale than previously done. This program, referred to as the "Small Watershed Rotating Basin Monitoring Program," is based on a staggered, rotational sampling protocol such that outlets of complete watersheds at an eleven digit scale (HUC-11) are sampled for a period of two years on a five year rotational cycle, resulting in approximately 40% of the state being monitored at any given time (see Figure 1). The program was 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 will provide a thorough and statistically sound evaluation of Oklahoma's waters every five years, which will help focus NPS program planning, education, and implementation efforts in areas where they can be most effective. The current project includes components of stages 1 and 2.

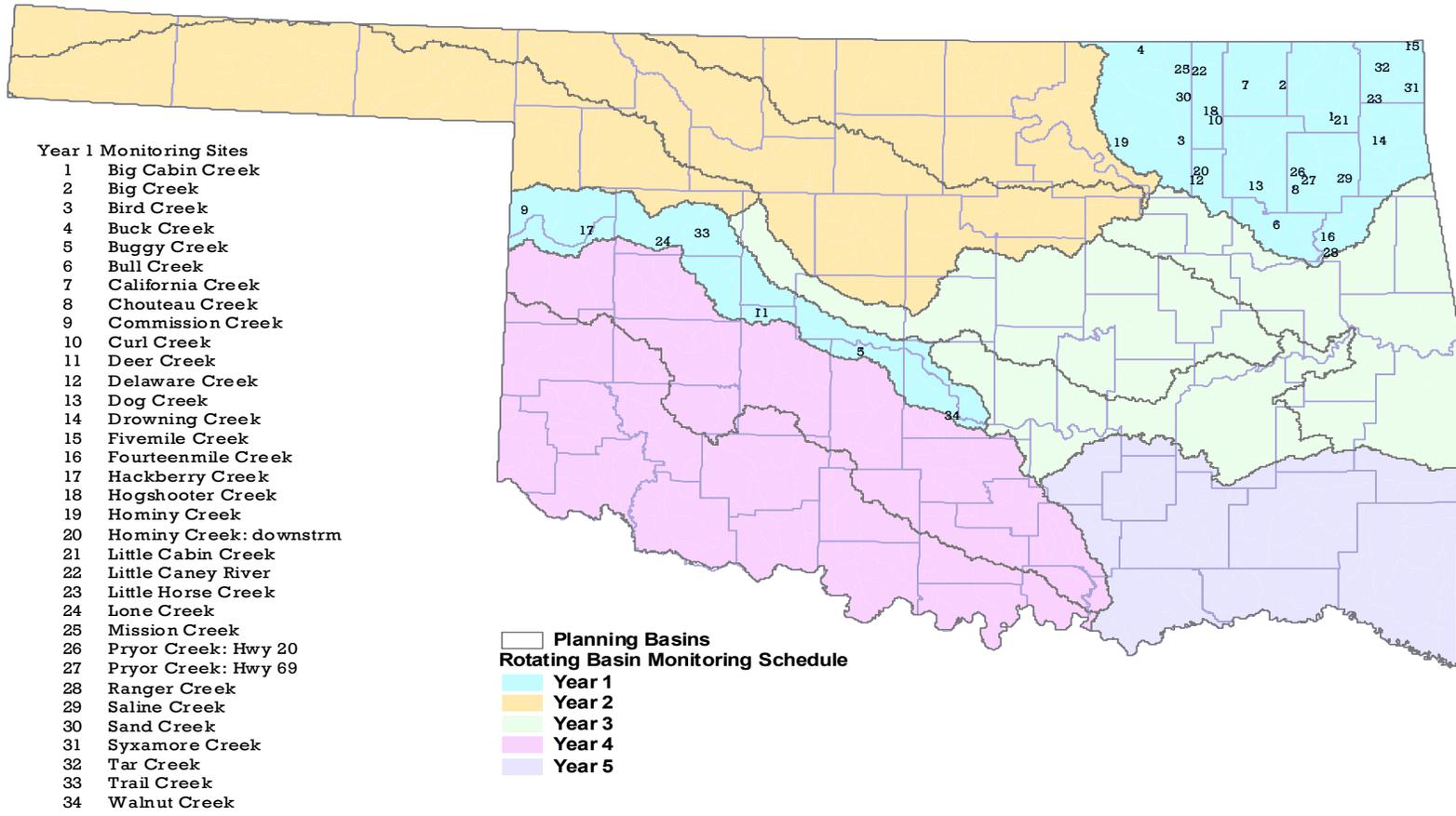


Figure 1. Monitoring Schedule and Year 1 Monitoring Sites for the Small Watershed Rotating Basin Monitoring Project.

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

1. Which HUC 11 waterbodies are non-supporting due to NPS or NPS+PS pollution?
2. Which waterbodies show elevated or increasing levels of NPS or NPS+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?

This monitoring program will provide an assessment of water quality, watershed conditions, and support status for selected streams statewide with regard to NPS pollution, as well as allow planning of mitigation efforts and eventual evaluation of those efforts.

1.2 PROJECT DESCRIPTION

Oklahoma contains all or part of 414 USGS 11-digit HUC basins which have been collated into eleven planning basins for water quality management purposes. The sampling units for the Small Watershed Rotating Basin Monitoring Program are based at the outlets of HUC 11 watersheds which are located entirely in the state, with secondary sites upstream in selected watersheds. This report focuses on the first planning basins to be monitored, the Neosho-Grand and Upper Canadian basins (see Figure 1). These basins were selected to coordinate with the Oklahoma Department of Environmental Quality (ODEQ) efforts to implement whole basin planning and were monitored routinely for two consecutive years.

In this first phase of the Small Watershed Rotating Basin Monitoring Program, ambient monitoring, which consists of collecting routine physical, chemical, and biological parameters, and diagnostic monitoring, which attempts to identify causes and sources of NPS pollution, were performed. This level of assessment fulfilled three primary objectives:

1. To identify NPS and/or NPS+PS threatened and impaired waterbodies.
2. To check water bodies previously identified as affected by NPS pollution to determine if threats or impairment continue, and to verify that previously identified non-impaired streams have remained non-impaired.
3. To gather data to more intensively assess impaired streams to verify the causes of impairment, identify categorical and geographical sources, and allow planning of restoration strategies.

The implementation of the Rotating Basin Program has provided a thorough and current assessment of water quality and watershed conditions in the Neosho-Grand and Upper Canadian basins and assignment of beneficial use support status for the selected streams with regard to NPS pollution.

Specifically, watersheds that were located entirely within the state of Oklahoma were monitored at their outlet, and samples were collected at the outlet to allow for a general representation of

water quality for the entire watershed. Watersheds that did not have perennial water, referring specifically to the presence of water but not flow, and watersheds that were actually a segment of a larger river being sampled by another agency were not monitored. All sites were located far enough upstream of the receiving waterbody so that backwater effects were negated. This included alluvial water of the receiving waterbody as well as surface water. Where the watershed is monitored by another entity for other purposes, the site was dropped if the monitoring met the NPS assessment data quality objectives. When the designated watershed was in a large river segment, the OCC monitored a stream with perennial water that was a tributary to that large river. In addition to the main outlet stream, a lower order stream situated higher in the watershed was occasionally monitored concurrently. Secondary sites within the watershed were selected depending on available resources. When there was a choice between several streams in such a watershed, an effort was made to monitor a stream draining an area of land use different from the majority of the other streams being monitored in that region.

After reconnaissance of the watersheds within these two basins and removal of those sites which did not meet the sampling criteria, 34 sites were monitored regularly from August 2001 to July 2003 (Table 1). Water chemistry data was collected approximately 20 times over the two-year monitoring period (every five weeks), and one intensive habitat assessment and fish collection was performed for each site. Four macroinvertebrate collections were attempted per site over the monitoring period; however, lack of water or flow at some sites at certain times of the year may have prevented some of the collections.

Data was compared within ecoregions in order to account for the natural differences in physical and chemical water parameters that constitute healthy streams in a particular area. Ecoregions are the spatial framework for a number of states' water quality standards programs and allow the creation of regional criteria (Gallant et al., 1989). Data values which differ from the expected regional criteria values may be used to determine attainment or non-attainment for water bodies (Gallant et al., 1989). The sites monitored in the Neosho-Grand Basin occur over four, level three ecoregions: Central Irregular Plains, Cross Timbers, Boston Mountains, and Ozark Highlands (Woods et al., 2005). In the Upper Canadian Basin, one site is located in the Southwestern Tablelands, while the other sites are in the Central Great Plains ecoregion. To determine general condition, rotating basin data was compared to data collected previously from streams determined to be "high quality" sites in each ecoregion (see Append. F for details).

Table 1. Site List for Rotating Basin Monitoring Program (Year 1).

| SiteName | WBID | Lat | Long | Ecoregion | County |
|--------------------------|-------------------|---------|----------|--------------------------|------------|
| Delaware Creek | OK121300-01-0150H | 36.2771 | -95.9924 | Central Irregular Plains | Tulsa |
| Bird Creek | OK121300-02-0010C | 36.4852 | -96.0610 | Cross Timbers | Osage |
| Hominy Creek: downstream | OK121300-04-0010C | 36.3078 | -95.9740 | Central Irregular Plains | Tulsa |
| Hominy Creek: upstream | OK121300-04-0280G | 36.4810 | -96.3980 | Cross Timbers | Osage |
| Curl Creek | OK121400-01-0270G | 36.6177 | -95.8455 | Central Irregular Plains | Washington |
| Hogshooter Creek | OK121400-01-0300D | 36.6306 | -95.8620 | Central Irregular Plains | Washington |
| Little Caney River | OK121400-02-0140H | 36.8587 | -95.9579 | Central Irregular Plains | Osage |
| Mission Creek | OK121400-02-0190B | 36.8693 | -96.0130 | Cross Timbers | Osage |
| Buck Creek | OK121400-03-0170C | 36.9755 | -96.2947 | Cross Timbers | Osage |
| Sand Creek | OK121400-04-0010F | 36.7192 | -96.0074 | Cross Timbers | Osage |
| Bull Creek | OK121500-02-0090D | 36.0298 | -95.4940 | Central Irregular Plains | Wagoner |
| Dog Creek | OK121500-02-0360D | 36.2486 | -95.5980 | Central Irregular Plains | Rogers |
| California Creek | OK121510-02-0050C | 36.7802 | -95.6657 | Central Irregular Plains | Nowata |
| Big Creek | OK121510-03-0010D | 36.7853 | -95.4634 | Central Irregular Plains | Nowata |
| Ranger Creek | OK121600-01-0060D | 35.8844 | -95.2001 | Boston Mountains | Cherokee |
| Fourteenmile Creek | OK121600-01-0100G | 35.9591 | -95.1825 | Ozark Highlands | Cherokee |
| Chouteau Creek | OK121600-01-0430M | 36.2192 | -95.3865 | Central Irregular Plains | Mayes |
| Saline Creek | OK121600-02-0030D | 36.2820 | -95.0929 | Ozark Highlands | Mayes |
| Drowning Creek | OK121600-03-0090G | 36.4749 | -94.8672 | Ozark Highlands | Delaware |
| Little Horse Creek | OK121600-03-0190A | 36.6862 | -94.9115 | Central Irregular Plains | Ottawa |
| Sycamore Creek | OK121600-03-0510D | 36.7685 | -94.6920 | Ozark Highlands | Ottawa |
| Tar Creek | OK121600-04-0060D | 36.8748 | -94.8620 | Central Irregular Plains | Ottawa |
| Little Cabin Creek | OK121600-06-0080C | 36.5975 | -95.1385 | Central Irregular Plains | Craig |
| Big Cabin Creek | OK121600-06-0220I | 36.6142 | -95.1617 | Central Irregular Plains | Craig |
| Fivemile Creek | OK121600-07-0110G | 36.9835 | -94.6919 | Ozark Highlands | Ottawa |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | 36.3074 | -95.3472 | Central Irregular Plains | Mayes |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | 36.2798 | -95.3290 | Central Irregular Plains | Mayes |
| Buggy Creek | OK520610-02-0120C | 35.3343 | -97.9184 | Central Great Plains | Grady |
| Walnut Creek | OK520610-03-0010C | 34.9934 | -97.3580 | Central Great Plains | McClain |
| Trail Creek: Dewey Co. | OK520620-02-0090G | 35.9565 | -98.8480 | Central Great Plains | Dewey |
| Lone Creek | OK520620-03-0020C | 35.9062 | -99.0650 | Central Great Plains | Dewey |
| Hackberry Creek | OK520620-04-0050D | 35.9320 | -99.5237 | Central Great Plains | Ellis |
| Commission Creek | OK520620-05-0160C | 36.0336 | -99.9170 | Southwestern Tablelands | Ellis |
| Deer Creek | OK520620-06-0010F | 35.5365 | -98.5174 | Central Great Plains | Caddo |

2.0 MATERIALS AND METHODS

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 the Environment (OSE), 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 SOP 2001). Water quality chemical analyses were conducted by the Oklahoma Department of Agriculture, Food and Forestry (ODAFF) laboratory.

2.1 WATER QUALITY MONITORING

Starting in August 2001, sites were monitored for physical and chemical parameters on a fixed interval schedule of ten sampling events per year (five-week intervals) through June 2003 (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. All sampling and measurement activities followed procedures outlined in the appropriate OCC SOP (2001). *In-situ* water quality parameters were measured at a standard location and included the following parameters: water temperature (YSI Model 55), dissolved oxygen (YSI Model 55), pH (YSI Model 60), specific conductance (YSI Model 30), alkalinity (Hach Digital Titrator Model 16900-01), turbidity (Hach Portable Turbidimeter Model 2100P), and instantaneous discharge (Marsh-McBirney Flo-Mate Model 2000).

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 or at 4° C. Quality assurance/control samples were collected in accordance with the project QAPP. Samples were submitted to the ODAFF Laboratory for analysis of the following parameters: nitrate (NO₃), nitrite (NO₂), orthophosphate (PO₄), total phosphorous (TP), total Kjeldahl nitrogen (TKN), ammonia (NH₄), chloride (Cl), sulfate (SO₄), total suspended solids (TSS), total dissolved solids (TDS), 5-day biochemical oxygen demand (BOD₅), and total hardness. Total soluble nitrogen (excluding soluble organic nitrogen) was calculated by summing the values of nitrite, nitrate, and TKN for each sample. Available nitrogen was calculated by summing the values of ammonia, nitrite, and nitrate.

Separate samples were collected and submitted concurrently for analysis of *E. coli* and *Enterococcus* bacteria during the time period of one-month prior to, during, and after each recreational season (May 1 – September 30) so that approximately 12 samples were assessed per site over the two-year monitoring period. In addition, observations and quantities of odor, excessive bottom deposits, surface scum, oil/grease, and foam were recorded each time to facilitate assessment of the aesthetics beneficial use. 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*.

2.2 BIOLOGICAL MONITORING

2.2.1 Habitat Assessment

In the summers of 2001 and 2002, OCC staff conducted instream and riparian habitat assessments at sites concurrent with fish collections. All assessments were conducted in accordance with procedures outlined in the OCC Habitat Assessment SOP (OCC SOP 2001). 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.

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 this 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 a 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. IBI scores should be higher as channels become more sinuous. Sinuosity was calculated from digital ortho quad maps using Geographic Information System technology (GIS).

(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.

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.

2.2.2 Fish

In the summers of 2001 and 2002, 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 (2001). 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 Coffelt CPS backpack shocker powered by a 300 ma, 120 V Honda generator. 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 5 shocking unit powered by 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 on print film for reference. All fixed fish samples were transferred to ethanol and retained for future reference.

Fish data were compiled and analyzed by site following the state biocriteria for attainment of Fish and Wildlife Propagation (see Oklahoma Water Resource Board, 2002, for specific protocol). 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. An overall fish score was calculated using the following assessed categories:

- (1) The **total number of fish species** decreases with decreasing water or habitat quality.
- (2) The **number of sensitive benthic species (darters, madtoms, sculpins)** 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 round bodied suckers** is used as a long-term integration of both physical and chemical quality. As a group, these fish are sensitive to both chemical water quality and physical habitat quality. They are long-lived so their presence is a good indicator of overall long-term quality.

(5) 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.

(6) 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.

(7) The **proportion of individuals as omnivores** increases as stream quality decreases. Omnivores are well suited to prosper in streams that are unstable. This prosperity comes at the expense of fish that have more restrictive diets.

(8) 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.

(9) The **proportion of individuals as top carnivores** decreases as the quality of the stream decreases. Many top carnivores are popular sports fish, so their absence does not necessarily mean life in the stream is stressful in and of itself. If angling pressure can be ruled out as a cause of low predator numbers, their scarcity is a good indicator and integrator of the sum total of life in the stream since they are dominant in the food web.

(10) The **number of individuals in the sample** varies by ecoregion, but within an ecoregion it can indicate problems. It is expressed as catch per unit effort, and generally decreases with decreasing stream quality. It can also increase with nutrient enrichment as the food base grows, provided that no other limiting conditions exist (e.g. low nighttime dissolved oxygen levels). An increase in density due to nutrient enrichment can be especially pronounced if piscivores (top carnivores) are decreasing at the same time.

For each of these ten metrics, a score of 5, 3, or 1 was assigned (see Table 2, below), and these scores were summed to get a total IBI score for each site, with a maximum of 50 points. 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 in a particular 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 3, below). This score indicates the quality of the fish community (higher scores indicate higher quality) but says nothing about whether any deficiencies are due to degraded water quality or to degraded habitat.

Table 2. Index of Biotic Integrity (IBI) scoring criteria for fish.

| <i>Metrics</i> | <i>5</i> | <i>3</i> | <i>1</i> |
|-----------------------------------|----------|----------|----------|
| Number of species | >80% | 60-80% | 40-60% |
| Number of darter species | >85% | 70-85% | 50-70% |
| Number of sunfish species | >75% | 50-75% | 25-50% |
| Number of sucker species | >30% | 20-30% | 10-20% |
| Number of intolerant species | >90% | 80-90% | 70-80% |
| Proportion tolerant individuals | <20% | 20-30% | 30-40% |
| Proportion omnivorous individuals | >3.5 | 2.5-3.5 | 1.5-2.5 |
| Proportion insectivores | >30% | 20-30% | 10-20% |
| Proportion top carnivores | >90% | 80-90% | 70-80% |
| Total number of individuals | <20% | 20-30% | 30-40% |

Table 3. Index of Biotic Integrity (IBI) score interpretation for fish.

| % Comparison to the Reference Score | Integrity Class | Characteristics |
|-------------------------------------|-----------------|--|
| >97% | 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 |
| 26 - 37% | Very Poor | Few species and individuals present; tolerant species dominant; diseased fish frequent |

2.2.3 Macroinvertebrates

Collection of macroinvertebrates was attempted at all sites for both the winter and summer index periods of 2001 and 2002 according to procedures outlined in the OCC SOP (2001). Index periods represent seasons of relative community stability that afford opportunity for meaningful site comparisons. For Oklahoma, the summer index occurs from July 1 to September 15; the winter index is from January 1 to March 15. 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 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 1/4" 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 seven 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 uses tolerance values of North Carolina invertebrates (Plafkin et al., 1989).

(3) The **ratio Ephemeroptera, Plecoptera, and Trichoptera (EPT) to EPT plus Chironomini** is a further isolation of EPT relative abundance corrected for Chironomini. Chironomini are a tribe of the Dipteran family Chironomidae or midges. Members of this tribe are pollution tolerant, and they can build up to high numbers as animals that prey on them begin to disappear due to the effects of pollution (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) 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).

(6) **Percent dominant taxa** is the percentage of the collection composed of the most common 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).

(7) 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. This 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 4, below) and then summed to get a total bioassessment score for each site, with a maximum of 42 points. For taxa richness, EPT taxa richness, and EPT/EPT + Chironomini, 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 5, below (adapted from Plafkin et al., 1989).

Table 4. Bioassessment scoring criteria for macroinvertebrates. *Modified HBI Using North Carolina Tolerance Values, **RBP for Use in Streams and Rivers 1989, *Modified by OCC**

| <i>Metrics</i> | <i>6</i> | <i>4</i> | <i>2</i> | <i>0</i> |
|-------------------------|----------|----------|----------|----------|
| Taxa Richness** | >80% | 60-80% | 40-60% | <40% |
| Modified HBI* (**) | >85% | 70-85% | 50-70% | <50% |
| EPT/EPT + Chironomini** | >75% | 50-75% | 25-50% | <25% |
| EPT/Total*** | >30% | 20-30% | 10-20% | <10% |
| EPT Taxa** | >90% | 80-90% | 70-80% | <70% |
| Dominants to Total** | <20% | 20-30% | 30-40% | >40% |
| Shannon-Weaver*** | >3.5 | 2.5-3.5 | 1.5-2.5 | <1.5 |

Table 5. Bioassessment score interpretation for macroinvertebrates.

| % Comparison to the Reference Score | Biological Condition | Characteristics |
|-------------------------------------|----------------------|---|
| >83% | Non-impaired | Comparable to the best situation expected in that ecoregion; balanced trophic and community structure for stream size |
| 54 - 79% | Slightly Impaired | Community structure and species richness less than expected; percent contribution of tolerant forms increased and loss of some intolerant species |
| 21 - 50% | Moderately Impaired | Fewer species due to loss of most intolerant forms; reduction in EPT index |
| <17% | Severely Impaired | Few species present; may have high densities of 1 or 2 taxa |

2.3 WATERSHED ASSESSMENT

GIS coverage was used to determine the landuse in each watershed (USGS, 1992). The number of oil and gas wells, confined animal feeding operations, national pollution discharge elimination system permit holders, total retention sites, active municipal landfills, and biosolid land application sites was recorded for each watershed, in addition to calculating the percent landuse in terms of bare rock/sand/clay, vegetation (broken into several categories, both natural and agricultural), open water, and residential/commercial/industrial uses (divided into several

categories). This data was used to determine possible sources of NPS pollution when a stream was found to be impaired.

2.4 BENEFICIAL USE SUPPORT ASSESSMENT

The support status of each stream site for agriculture, aesthetics, primary body contact, secondary body contact, public and private water supply, sensitive water supply, and fish and wildlife propagation beneficial uses was evaluated following the protocols outlined in the state's *Continuing Planning Process, Integrated Water Quality Report Listing Methodology* (Oklahoma Department of Environmental Quality, 2002) and per *Implementation of Oklahoma's Water Quality Standards, Subchapter 15: Use Support Assessment Protocols* (OAC 785:46-15; Oklahoma Water Resource Board, 2002). 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 non-support. Assessment results were submitted to the ODEQ for final assimilation in the state's 2004 Integrated Report to EPA Region VI in November 2004.

3.0 RESULTS AND DISCUSSION

3.1 WATER QUALITY MONITORING

All chemical and physical water quality data collected for the project can be found in Appendix A.1. Appendix A.2 gives all bacteria data. Table 6 (below) gives the mean values of physical water quality parameters for each site based on approximately 20 visits to each site (includes elevated and base flow). Since dissolved oxygen (DO) concentration is strongly dependent on time of day, which is not controlled for in OCC sampling protocol (most sampling occurs between 10:00 AM and 2:00 PM), the mean DO collected for sites may not be very informative. Instead, the absolute minimum DO concentration is the factor that influences biological communities, so Table 7 indicates the percentage of water samples which had DO concentrations below 5.0 for each site, as well as the actual low values. For discharge (Table 6), all elevated flow measurements were omitted so that the value given is the mean base flow. Table 8 provides the means for chemical parameters used to assess water quality, and Table 9 shows the geometric mean of *Enterococcus* and *E.coli* bacteria for each site over the two-year monitoring period. Descriptive statistics for each site for water quality parameters are presented in Appendix A.3.

Table 6. Mean Physical Water Quality Values for Year 1 Monitoring Sites.

| Site Name | WBID | DO (mg/l) | Temp (°C) | Turbidity (NTU) | Alkalinity (CaCO ₃) | Conductivity (uS/cm) | pH (SU) | Discharge (cfs) |
|--------------------------|-------------------|-----------|-----------|-----------------|---------------------------------|----------------------|---------|-----------------|
| Delaware Creek | OK121300-01-0150H | 5.92 | 16.45 | 36.74 | 77 | 837.0 | 7.92 | 0.86 |
| Bird Creek | OK121300-02-0010C | 8.41 | 16.98 | 70.00 | 65 | 300.3 | 7.40 | 21.94 |
| Hominy Creek: Downstream | OK121300-04-0010C | 8.61 | 15.91 | 32.40 | 54 | 300.4 | 7.58 | 82.16 |
| Hominy Creek: Upstream | OK121300-04-0280G | 9.82 | 17.99 | 38.20 | 110 | 1189.0 | 7.86 | 2.26 |
| Curl Creek | OK121400-01-0270G | 6.73 | 15.80 | 37.95 | 95 | 418.3 | 7.44 | 1.40 |
| Hogshooter Creek | OK121400-01-0300D | 5.78 | 15.97 | 39.10 | 130 | 454.8 | 7.54 | 1.99 |
| Little Caney River | OK121400-02-0140H | 9.12 | 16.80 | 72.35 | 91 | 328.9 | 7.75 | 9.72 |
| Mission Creek | OK121400-02-0190B | 6.57 | 16.56 | 63.60 | 93 | 262.1 | 7.16 | 0.23 |
| Buck Creek | OK121400-03-0170C | 8.79 | 17.94 | 30.30 | 132 | 357.3 | 7.64 | 1.21 |
| Sand Creek | OK121400-04-0010F | 7.80 | 16.21 | 22.60 | 93 | 442.2 | 7.31 | 5.96 |
| Bull Creek | OK121500-02-0090D | 5.48 | 15.32 | 55.03 | 73 | 327.4 | 8.35 | 0.85 |
| Dog Creek | OK121500-02-0360D | 5.54 | 14.34 | 17.43 | 90 | 427.2 | 8.13 | 12.71 |
| California Creek | OK121510-02-0050C | 5.99 | 15.82 | 48.50 | 99 | 418.4 | 8.06 | 0.34 |
| Big Creek | OK121510-03-0010D | 7.36 | 16.28 | 21.08 | 111 | 336.5 | 8.01 | 2.94 |
| Ranger Creek | OK121600-01-0060D | 8.73 | 16.27 | 8.93 | 111 | 413.0 | 7.69 | 3.51 |
| Fourteenmile Creek | OK121600-01-0100G | 9.81 | 17.14 | 5.05 | 69 | 190.7 | 7.68 | 15.03 |
| Chouteau Creek | OK121600-01-0430M | 4.99 | 15.53 | 43.40 | 75 | 255.0 | 8.09 | 0.53 |
| Saline Creek | OK121600-02-0030D | 10.21 | 17.32 | 1.00 | 98 | 230.6 | 7.72 | 31.16 |
| Drowning Creek | OK121600-03-0090G | 9.65 | 15.82 | 1.42 | 107 | 353.0 | 7.51 | 4.63 |
| Little Horse Creek | OK121600-03-0190A | 7.32 | 15.03 | 14.59 | 93 | 359.3 | 6.99 | 0.93 |
| Sycamore Creek | OK121600-03-0510D | 10.77 | 16.00 | 16.80 | 105 | 265.4 | 7.70 | 18.17 |
| Tar Creek | OK121600-04-0060D | 9.19 | 15.10 | 16.63 | 88 | 1294.0 | 7.35 | 7.17 |
| Little Cabin Creek | OK121600-06-0080C | 5.87 | 14.63 | 44.10 | 73 | 348.8 | 7.91 | 4.04 |
| Big Cabin Creek | OK121600-06-0220I | 7.28 | 15.84 | 25.22 | 89 | 640.6 | 8.08 | 5.24 |
| Fivemile Creek | OK121600-07-0110G | 10.38 | 15.79 | 0.80 | 107 | 397.0 | 7.94 | 12.17 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | 5.66 | 15.36 | 40.59 | 71 | 456.8 | 7.96 | 0.44 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | 6.45 | 15.21 | 28.64 | 66 | 436.0 | 8.08 | 2.28 |
| Buggy Creek | OK520610-02-0120C | 9.88 | 19.20 | 62.50 | 264 | 1309.1 | 8.12 | 9.31 |
| Walnut Creek | OK520610-03-0010C | 9.44 | 15.86 | 56.30 | 336 | 685.6 | 8.13 | 18.96 |
| Trail Creek | OK520620-02-0090G | 10.03 | 16.47 | 12.83 | 160 | 2562.2 | 8.04 | 3.74 |
| Lone Creek | OK520620-03-0020C | 9.55 | 18.93 | 7.47 | 166 | 2690.0 | 8.11 | 1.55 |
| Hackberry Creek | OK520620-04-0050D | 10.44 | 13.03 | 11.35 | 253 | 2519.0 | 8.11 | 3.46 |
| Commission Creek | OK520620-05-0160C | 9.99 | 14.83 | 15.28 | 235 | 819.4 | 8.30 | 6.15 |
| Deer Creek | OK520620-06-0010F | 9.76 | 19.66 | 39.70 | 167 | 1200.0 | 8.19 | 38.62 |

Table 7. Low dissolved oxygen values (DO<5.0 mg/l).

| % Samples under 5.0 mg/l | SiteName | WBID | SAMPLEID | Date | DO (mg/l) |
|--------------------------|-----------------------|-------------------|----------|--------------|-------------------|
| 42% | Delaware Creek | OK121300-01-0150H | 24376 | 22-Oct-01 | 3.65 |
| | | | 25616 | 05-Aug-02 | 4.86 |
| | | | 25869 | 16-Sep-02 | 4.22 |
| | | | 25995 | 14-Oct-02 | 3.68 |
| | | | 26132 | 18-Nov-02 | 2.40 |
| | | | 26273 | 16-Dec-02 | 3.04 |
| | | | 27560 | 12-May-03 | 4.83 |
| | | | 27748 | 16-Jun-03 | 4.08 |
| 5% | Bird Creek | OK121300-02-0010C | 25813 | 10-Sep-02 | 4.52 |
| 15% | Curl Creek | OK121400-01-0270G | 24228 | 17-Sep-01 | 4.24 |
| | | | 24364 | 22-Oct-01 | 2.85 |
| | | | 26665 | 27-Jan-03 | 0.00 |
| 44% | Hogshooter Creek | OK121400-01-0300D | 23913 | 13-Aug-01 | 0.65 |
| | | | 24229 | 17-Sep-01 | 3.11 |
| | | | 24365 | 22-Oct-01 | 3.85 |
| | | | 24491 | 03-Dec-01 | 2.46 |
| | | | 25811 | 09-Sep-02 | 1.85 |
| | | | 25982 | 14-Oct-02 | 4.02 |
| | | | 26119 | 18-Nov-02 | 0.70 |
| | | | 26262 | 16-Dec-02 | 2.57 |
| 20% | Mission Creek | OK121400-02-0190B | 24233 | 18-Sep-01 | 4.73 |
| | | | 25815 | 10-Sep-02 | 4.50 |
| | | | 26123 | 19-Nov-02 | 0.50 |
| | | | 26266 | 17-Dec-02 | 3.81 |
| 10% | Sand Creek | OK121400-04-0010F | 25318 | 09-Jul-02 | 4.59 |
| | | | 25814 | 10-Sep-02 | 3.73 |
| 45% | Bull Creek | OK121500-02-0090D | 23925 | 14-Aug-01 | 1.83 |
| | | | 24377 | 23-Oct-01 | 4.51 |
| | | | 25327 | 09-Jul-02 | 3.01 |
| | | | 25617 | 06-Aug-02 | 2.41 |
| | | | 25870 | 17-Sep-02 | 2.33 |
| | | | 25996 | 15-Oct-02 | 4.46 |
| | | | 26133 | 19-Nov-02 | 4.97 |
| | | | 27561 | 13-May-03 | 4.02 |
| 53% | Dog Creek | OK121500-02-0360D | 23926 | 14-Aug-01 | 3.83 |
| | | | 23997 | 21-Aug-01 | 1.74 |
| | | | 24378 | 23-Oct-01 | 4.97 |
| | | | 25328 | 09-Jul-02 | 4.98 |
| | | | 25618 | 06-Aug-02 | 1.76 |
| | | | 25871 | 17-Sep-02 | 1.11 |
| | | | 25997 | 15-Oct-02 | 2.22 |
| | | | 26134 | 19-Nov-02 | 4.79 |
| 40% | California Creek | OK121510-02-0050C | 23923 | 13-Aug-01 | 3.96 |
| | | | 24239 | 17-Sep-01 | 4.29 |
| | | | 24375 | 22-Oct-01 | 3.01 |
| | | | 24672 | 07-Jan-02 | 4.59 |
| | | | 25325 | 08-Jul-02 | 2.37 |
| | | | 25868 | 16-Sep-02 | 4.01 |
| | | | 26272 | 16-Dec-02 | 3.10 |
| 25% | Big Creek | OK121510-03-0010D | 23922 | 13-Aug-01 | 4.11 |
| | | | 24238 | 17-Sep-01 | 4.13 |
| | | | 25867 | 16-Sep-02 | 3.22 |
| | | | 27558 | 12-May-03 | 4.59 |
| | | | 27746 | 16-Jun-03 | 4.67 |
| | | | 15% | Ranger Creek | OK121600-01-0060D |
| Ranger Creek, cont. | | 25310 | | 09-Jul-02 | 4.14 |
| | | 25627 | | 06-Aug-02 | 4.72 |
| 50% | Chouteau Creek | OK121600-01-0430M | 23929 | 14-Aug-01 | 4.88 |
| | Chouteau Creek, cont. | | 24244 | 18-Sep-01 | 4.01 |
| | | | 24381 | 23-Oct-01 | 4.01 |
| | | | 25621 | 06-Aug-02 | 3.88 |
| | | | 25874 | 17-Sep-02 | 1.41 |
| | | | 26000 | 15-Oct-02 | 4.44 |
| | | | 26137 | 19-Nov-02 | 1.98 |
| | | | 26277 | 17-Dec-02 | 4.39 |
| | | | 27565 | 13-May-03 | 2.31 |
| 5% | Drowning Creek | OK121600-03-0090G | 24249 | 17-Sep-01 | 4.83 |
| 20% | Little Horse Creek | OK121600-03-0190A | 23930 | 13-Aug-01 | 2.89 |
| | | | 25305 | 08-Jul-02 | 3.76 |
| | | | 25622 | 05-Aug-02 | 2.83 |
| | | | 25854 | 09-Sep-02 | 3.02 |

Table 8. Mean Chemical Water Quality Values for Year 1 Monitoring Sites.

| Site Name | WBID | Chloride (mg/l) | Sulfate (mg/l) | Ammonia (mg/l) | Nitrate (mg/l) | Nitrite (mg/l) | TKN (mg/l) | Ortho-Phosphate (mg/l) | Total Phosphorous (mg/l) | TSS (mg/l) | TDS (mg/l) | Hardness (mg/l as CaCO3) |
|--------------------------|-------------------|-----------------|----------------|----------------|----------------|----------------|------------|------------------------|--------------------------|------------|------------|--------------------------|
| Delaware Creek | OK121300-01-0150H | 201.10 | 23.480 | 0.1096 | 0.4089 | 0.0105 | 0.5190 | 0.0162 | 0.0596 | 33.68 | 497.10 | 191.90 |
| Bird Creek | OK121300-02-0010C | 29.66 | 13.930 | 0.1196 | 0.3942 | 0.0347 | 0.5760 | 0.0225 | 0.0497 | 13.79 | 171.85 | 106.09 |
| Hominy Creek: Downstream | OK121300-04-0010C | 37.42 | 13.924 | 0.1884 | 0.5580 | 0.0105 | 0.4061 | 0.0391 | 0.1180 | 28.45 | 162.75 | 97.66 |
| Hominy Creek: Upstream | OK121300-04-0280G | 280.20 | 26.960 | 0.0773 | 0.2860 | 0.0110 | 0.4130 | 0.0153 | 0.0429 | 13.60 | 694.50 | 309.90 |
| Curl Creek | OK121400-01-0270G | 40.54 | 27.770 | 0.1497 | 0.3320 | 0.0360 | 0.6693 | 0.0272 | 0.1357 | 32.65 | 222.10 | 130.96 |
| Hogshooter Creek | OK121400-01-0300D | 35.85 | 19.840 | 0.1312 | 0.3778 | 0.0800 | 0.5010 | 0.0344 | 0.0928 | 18.72 | 245.80 | 182.98 |
| Little Caney River | OK121400-02-0140H | 28.23 | 19.130 | 0.0938 | 0.5080 | 0.0280 | 0.5317 | 0.0378 | 0.0782 | 38.00 | 199.60 | 127.42 |
| Mission Creek | OK121400-02-0190B | 13.47 | 17.230 | 0.1508 | 0.4040 | 0.0590 | 0.7147 | 0.0465 | 0.1170 | 48.20 | 168.80 | 121.70 |
| Buck Creek | OK121400-03-0170C | 7.96 | 18.440 | 0.0704 | 0.3235 | 0.0600 | 0.3509 | 0.0178 | 0.0447 | 35.70 | 208.30 | 167.97 |
| Sand Creek | OK121400-04-0010F | 53.47 | 23.650 | 0.1047 | 0.3360 | 0.0155 | 0.5377 | 0.0213 | 0.0597 | 21.90 | 239.90 | 149.34 |
| Bull Creek | OK121500-02-0090D | 19.16 | 65.450 | 0.2728 | 0.5620 | 0.0600 | 0.9810 | 0.0347 | 0.1118 | 26.20 | 220.10 | 121.74 |
| Dog Creek | OK121500-02-0360D | 40.89 | 48.830 | 2.4420 | 3.5750 | 0.3520 | 3.5980 | 1.0090 | 1.2300 | 13.06 | 281.50 | 132.63 |
| California Creek | OK121510-02-0050C | 44.96 | 150.000 | 0.1546 | 0.3720 | 0.0405 | 0.5198 | 0.0158 | 0.0527 | 36.30 | 255.80 | 176.20 |
| Big Creek | OK121510-03-0010D | 7.19 | 114.900 | 0.1422 | 0.3695 | 0.0680 | 0.5470 | 0.0168 | 0.0566 | 15.60 | 215.17 | 178.02 |
| Ranger Creek | OK121600-01-0060D | 4.76 | 16.600 | 0.0661 | 0.4215 | 0.0455 | 0.3062 | 0.0275 | 0.0556 | 13.35 | 162.57 | 133.87 |
| Fourteenmile Creek | OK121600-01-0100G | 5.64 | 8.619 | 0.0368 | 0.5825 | 0.0155 | 0.2121 | 0.0215 | 0.0466 | 14.00 | 104.15 | 82.59 |
| Chouteau Creek | OK121600-01-0430M | 10.92 | 37.790 | 0.2154 | 0.6437 | 0.0668 | 0.8520 | 0.0362 | 0.1121 | 29.11 | 170.70 | 93.31 |
| Saline Creek | OK121600-02-0030D | 8.27 | 5.881 | 0.0302 | 0.7145 | 0.0145 | 0.1138 | 0.0068 | 0.0149 | 9.55 | 133.25 | 108.42 |
| Drowning Creek | OK121600-03-0090G | 25.40 | 17.720 | 0.0227 | 2.5040 | 0.0375 | 0.1370 | 0.0531 | 0.0716 | 9.75 | 206.60 | 142.97 |
| Little Horse Creek | OK121600-03-0190A | 18.71 | 27.860 | 0.1808 | 1.2700 | 0.6220 | 0.6890 | 0.1123 | 0.1609 | 13.30 | 203.50 | 144.20 |
| Sycamore Creek | OK121600-03-0510D | 8.50 | 5.686 | 0.0208 | 1.8720 | 0.0395 | 0.1407 | 0.0096 | 0.0220 | 9.85 | 154.38 | 125.71 |
| Tar Creek | OK121600-04-0060D | 37.05 | 633.300 | 0.1811 | 1.6350 | 0.0160 | 0.6266 | 0.2539 | 0.3255 | 18.45 | 1126.40 | 749.00 |
| Little Cabin Creek | OK121600-06-0080C | 10.33 | 62.000 | 0.1611 | 0.6225 | 0.0855 | 0.7069 | 0.0468 | 0.1061 | 42.50 | 209.90 | 127.97 |
| Big Cabin Creek | OK121600-06-0220I | 19.24 | 243.400 | 0.1753 | 3.0200 | 0.0230 | 0.6147 | 0.4410 | 0.5120 | 18.95 | 526.70 | 353.90 |
| Fivemile Creek | OK121600-07-0110G | 6.66 | 7.158 | 0.0157 | 0.5890 | 0.0125 | 0.1124 | 0.0096 | 0.0169 | 9.65 | 154.23 | 138.51 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | 82.60 | 31.330 | 0.1971 | 0.5679 | 0.0363 | 0.8117 | 0.0479 | 0.1028 | 29.05 | 298.60 | 110.46 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | 70.80 | 38.710 | 0.1828 | 0.5150 | 0.0133 | 0.7426 | 0.0338 | 0.0995 | 26.00 | 286.60 | 118.10 |
| Buggy Creek | OK520610-02-0120C | 39.00 | 431.600 | 0.1895 | 0.9250 | 0.0105 | 0.6460 | 0.1085 | 0.1605 | 40.40 | 1004.10 | 548.20 |
| Walnut Creek | OK520610-03-0010C | 25.59 | 42.330 | 0.1483 | 0.5600 | 0.0470 | 0.6350 | 0.1259 | 0.2171 | 73.20 | 396.50 | 318.10 |
| Trail Creek | OK520620-02-0090G | 25.18 | 1530.600 | 0.0845 | 0.4130 | 0.0105 | 0.3083 | 0.0316 | 0.0511 | 28.85 | 2503.60 | 1715.70 |
| Lone Creek | OK520620-03-0020C | 38.15 | 1619.000 | 0.1012 | 0.7095 | 0.0125 | 0.6360 | 0.0506 | 0.1001 | 31.30 | 2501.00 | 1755.40 |
| Hackberry Creek | OK520620-04-0050D | 72.55 | 1247.000 | 0.0689 | 0.3183 | 0.0106 | 0.4792 | 0.0174 | 0.0344 | 17.17 | 2249.00 | 1457.60 |
| Commission Creek | OK520620-05-0160C | 102.98 | 30.260 | 0.0367 | 0.6360 | 0.0105 | 0.3265 | 0.0133 | 0.0373 | 27.05 | 482.03 | 232.60 |
| Deer Creek | OK520620-06-0010F | 117.00 | 456.900 | 0.1092 | 1.6660 | 0.0415 | 0.5177 | 0.0930 | 0.1536 | 60.00 | 893.70 | 615.50 |

Table 9. Geometric Mean of Bacteria Values for Year 1 Monitoring Sites.

| Site Name | WBID | <i>Enterococcus</i> | <i>E. coli</i> |
|--------------------------|-------------------|---------------------|----------------|
| Delaware Creek | OK121300-01-0150H | 74.943 | 48.661 |
| Bird Creek | OK121300-02-0010C | 40.617 | 67.507 |
| Hominy Creek: downstream | OK121300-04-0010C | 53.186 | 79.147 |
| Hominy Creek: upstream | OK121300-04-0280G | 42.651 | 62.239 |
| Curl Creek | OK121400-01-0270G | 132.74 | 167.74 |
| Hogshooter Creek | OK121400-01-0300D | 126.54 | 102.13 |
| Little Caney River | OK121400-02-0140H | 79.837 | 49.421 |
| Mission Creek | OK121400-02-0190B | 89.137 | 94.625 |
| Buck Creek | OK121400-03-0170C | 46.101 | 44.472 |
| Sand Creek | OK121400-04-0010F | 97.508 | 118.23 |
| Bull Creek | OK121500-02-0090D | 389.8 | 202.93 |
| Dog Creek | OK121500-02-0360D | 224.44 | 187.62 |
| California Creek | OK121510-02-0050C | 73.089 | 60.593 |
| Big Creek | OK121510-03-0010D | 143.36 | 72.951 |
| Ranger Creek | OK121600-01-0060D | 70.607 | 75.56 |
| Fourteenmile Creek | OK121600-01-0100G | 121.85 | 82.568 |
| Chouteau Creek | OK121600-01-0430M | 173.16 | 114.11 |
| Saline Creek | OK121600-02-0030D | 17.567 | 24.225 |
| Drowning Creek | OK121600-03-0090G | 39.236 | 33.17 |
| Little Horse Creek | OK121600-03-0190A | 55.743 | 121.98 |
| Sycamore Creek | OK121600-03-0510D | 26.448 | 39.195 |
| Tar Creek | OK121600-04-0060D | 518.91 | 190.4 |
| Little Cabin Creek | OK121600-06-0080C | 185 | 134.08 |
| Big Cabin Creek | OK121600-06-0220I | 432.83 | 95.774 |
| Fivemile Creek | OK121600-07-0110G | 17.134 | 26.204 |
| Pryor Creek: HWY 20 | OK121610-00-0050D | 93.193 | 141.64 |
| Pryor Creek: HWY 69 | OK121610-00-0050M | 164.29 | 93.914 |
| Buggy Creek | OK520610-02-0120C | 193.37 | 188.97 |
| Walnut Creek | OK520610-03-0010C | 189.14 | 210.76 |
| Trail Creek | OK520620-02-0090G | 191.38 | 183.01 |
| Lone Creek | OK520620-03-0020C | 388.75 | 202.04 |
| Hackberry Creek | OK520620-04-0050D | 227.87 | 174.13 |
| Commission Creek | OK520620-05-0160C | 86.131 | 113.75 |
| Deer Creek | OK520620-06-0010F | 92.459 | 51.41 |

In order to account for natural regional differences in water quality, data from each monitoring site was compared to the mean of high quality sites for the respective ecoregion. Figure 2 shows interquartile range plots for each site for three important indicators of pollution: ammonia, total nitrogen, and total phosphorous. All elevated flow data was omitted. The mean of each site is shown by a line within the boxplot, and outliers are denoted by asterisks. 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 for high quality site parameters. Most streams did not show levels of ammonia, total nitrogen, or total phosphorous outside of the 95% confidence interval relative to the high quality sites. However, Ranger Creek (Boston Mountains ecoregion) had a mean total nitrogen value above the high quality range. Dog Creek (Central Irregular Plains ecoregion) had much higher ammonia, nitrogen, and phosphorous than the mean reference site range, and it exceeded the chronic ammonia toxicity values in 7 out of 17 samples (App. A.1), which is of particular concern. Big Cabin Creek and Tar Creek, also in the Central Irregular Plains ecoregion, had higher levels of both phosphorous and nitrogen than the reference streams, but none of the means were outside the reference range. Drowning Creek, in the Ozark Highlands ecoregion, had higher phosphorous and nitrogen than the reference values, although only the phosphorous value was outside the high quality range.

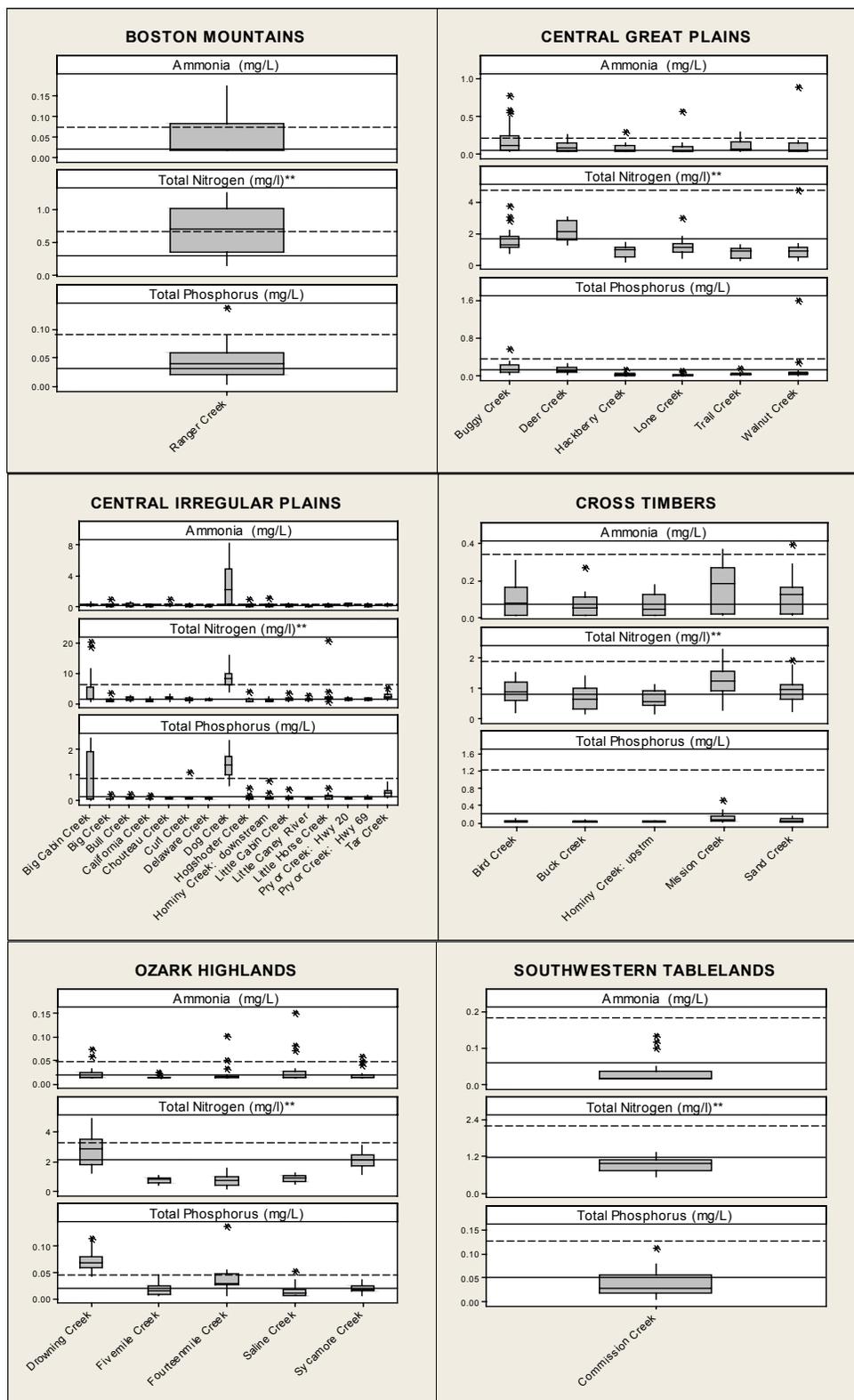


Figure 2. Selected water quality parameters for each site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent + two standard deviations (if only one dashed line, the lower standard deviation was below zero).

Table 10 shows a comparison between water quality data collected in previous projects and the rotating basin project in order to examine whether water conditions have improved, worsened, or remained the same at a particular site. Many of the rotating basin sites had not been previously monitored; only eight sites could be compared with past data. One-way ANOVAs were performed for each set of data after all high flow data had been excluded. Statistically significant differences ($p < 0.05$) between the means of each parameter in past projects and the means collected during this project are indicated by p-values in bold and with asterisks. There were no significant differences in discharge or temperature between the past and present projects. Nitrogen was the parameter that exhibited the most differences, increasing significantly over time at six of the eight sites compared (soluble N [excluding soluble organic N] and nitrate/nitrite). Chloride increased significantly at three sites, while sulfate increased at one site (Drowning Creek). California Creek had significantly decreased sulfate in the rotating basin project relative to a previous project, Fivemile Creek had significantly less ammonia, and Trail Creek had significantly less total phosphorous. Chouteau Creek had only one significant change, while Dog Creek had significant changes in eight of the fourteen parameters shown in Table 10.

Table 10. Comparison of water quality data from previous projects to the Rotating Basin Year 1 project (2001-2003).

| Parameter | SiteName | WBID | Date of Collection | N | Mean | Standard Deviation | p value |
|--------------|--------------------|-------------------|--------------------|----------|---------|--------------------|----------|
| Alkalinity | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 92.500 | 29.120 | 0.269 |
| | | | 1999-2001 | 17 | 82.060 | 22.460 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 14 | 100.240 | 34.270 | 0.456 |
| | | | 1999-2001 | 14 | 110.060 | 38.170 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 14 | 81.210 | 18.060 | 0.525 |
| | | | 1999-2001 | 15 | 71.800 | 51.750 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 19 | 106.950 | 19.240 | 0.987 |
| | | | 1999-2001 | 18 | 107.060 | 21.150 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 106.550 | 16.620 | 0.066 |
| | | | 1999-2001 | 19 | 116.530 | 16.230 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 95.790 | 30.030 | 0.313 |
| | | | 1999-2001 | 18 | 106.390 | 32.940 | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 98.250 | 19.380 | ***0.042 | |
| | | 1999-2001 | 18 | 85.610 | 17.250 | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 159.950 | 18.320 | 0.180 | |
| | | 2000-2001 | 12 | 142.250 | 51.620 | | |
| Conductivity | Dog Creek | OK121500-02-0360D | 2001-2003 | 13 | 449.900 | 120.100 | 0.293 |
| | | | 1999-2001 | 17 | 402.700 | 118.800 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 426.000 | 153.700 | 0.255 |
| | | | 1999-2001 | 15 | 482.000 | 112.600 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 263.390 | 94.450 | 0.937 |
| | | | 1999-2001 | 17 | 260.760 | 90.260 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 353.030 | 93.570 | ***0.024 |
| | | | 1999-2001 | 17 | 286.710 | 73.240 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 397.000 | 462.000 | 0.216 |
| | | | 1999-2001 | 19 | 263.100 | 42.500 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 370.900 | 138.400 | ***0.023 |
| | | | 1999-2001 | 18 | 281.600 | 81.300 | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 230.580 | 18.020 | ***0.002 | |
| | | 1999-2001 | 19 | 186.700 | 54.280 | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 2573.200 | 232.900 | ***0.010 | |
| | | 2000-2001 | 12 | 1923.400 | 999.700 | | |
| pH | Dog Creek | OK121500-02-0360D | 2001-2003 | 13 | 8.108 | 0.825 | ***0.004 |
| | | | 1999-2001 | 12 | 7.325 | 0.193 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 8.017 | 0.700 | 0.146 |
| | | | 1999-2001 | 11 | 7.633 | 0.593 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 14 | 7.969 | 0.916 | 0.075 |
| | | | 1999-2001 | 14 | 7.478 | 0.378 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 17 | 7.511 | 0.367 | 0.439 |
| | | | 1999-2001 | 16 | 7.603 | 0.301 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 18 | 7.944 | 0.483 | 0.277 |
| | | | 1999-2001 | 17 | 8.096 | 0.304 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 16 | 7.000 | 0.424 | ***0.000 |
| | | | 1999-2001 | 15 | 7.749 | 0.512 | |

| Parameter | SiteName | WBID | Date of Collection | N | Mean | Standard Deviation | p value |
|-----------------|--------------------|-------------------|--------------------|-------|-------|--------------------|------------------|
| pH, cont. | Saline Creek | OK121600-02-0030D | 2001-2003 | 18 | 7.715 | 0.353 | 0.412 |
| | | | 1999-2001 | 17 | 7.809 | 0.312 | |
| | Trail Creek | OK520620-02-0090G | 2001-2003 | 18 | 8.049 | 0.160 | 0.238 |
| | | | 2000-2001 | 12 | 8.117 | 0.132 | |
| Ammonia | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 2.921 | 2.828 | *** 0.012 |
| | | | 1999-2001 | 17 | 0.713 | 1.707 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 16 | 0.176 | 0.118 | *** 0.000 |
| | | | 1999-2001 | 14 | 0.044 | 0.014 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.204 | 0.239 | 0.764 |
| | | | 1999-2001 | 16 | 0.241 | 0.408 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 0.023 | 0.016 | 0.097 |
| | | | 1999-2001 | 18 | 0.033 | 0.020 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 0.016 | 0.002 | *** 0.000 |
| | | | 1999-2001 | 19 | 0.038 | 0.018 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 0.184 | 0.137 | *** 0.003 |
| | | | 1999-2001 | 18 | 0.070 | 0.067 | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.030 | 0.034 | 0.410 | |
| | | 1999-2001 | 19 | 0.038 | 0.019 | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 0.082 | 0.071 | 0.247 | |
| | | 2000-2001 | 12 | 0.056 | 0.027 | | |
| Nitrate/Nitrite | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 4.319 | 3.077 | *** 0.034 |
| | | | 1999-2001 | 17 | 2.401 | 1.613 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 0.382 | 0.305 | *** 0.001 |
| | | | 1999-2001 | 15 | 0.073 | 0.108 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.701 | 0.344 | 0.105 |
| | | | 1999-2001 | 17 | 0.461 | 0.454 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 2.541 | 1.043 | *** 0.006 |
| | | | 1999-2001 | 17 | 1.801 | 1.025 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 0.602 | 0.200 | *** 0.000 |
| | | | 1999-2001 | 19 | 0.238 | 0.277 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 1.952 | 4.565 | 0.176 |
| | | | 1999-2001 | 18 | 0.452 | 0.605 | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.729 | 0.195 | *** 0.003 | |
| | | 1999-2001 | 19 | 0.519 | 0.217 | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 0.414 | 0.271 | *** 0.034 | |
| | | 2000-2001 | 12 | 0.221 | 0.161 | | |
| TKN | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 4.141 | 3.049 | *** 0.031 |
| | | | 1999-2001 | 14 | 1.820 | 2.264 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 16 | 0.537 | 0.234 | 0.322 |
| | | | 1999-2001 | 15 | 0.461 | 0.178 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.776 | 0.373 | 0.124 |
| | | | 1999-2001 | 17 | 1.350 | 1.361 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 0.137 | 0.038 | 0.328 |
| | | | 1999-2001 | 18 | 0.163 | 0.109 | |
| Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 0.112 | 0.007 | 0.712 | |
| | | 1999-2001 | 19 | 0.107 | 0.060 | | |

| Parameter | SiteName | WBID | Date of Collection | N | Mean | Standard Deviation | p value | |
|----------------------|--------------------|-------------------|--------------------|-----------|-------|--------------------|------------------|------------------|
| TKN, cont. | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 0.691 | 0.376 | 0.674 | |
| | | | 1999-2001 | 18 | 0.751 | 0.479 | | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.114 | 0.008 | 0.362 | |
| | | | 1999-2001 | 19 | 0.101 | 0.064 | | |
| | Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 0.304 | 0.159 | 0.735 | |
| | | | 2000-2001 | 9 | 0.324 | 0.124 | | |
| Available N | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 7.240 | 3.471 | *** 0.000 | |
| | | | 1999-2001 | 17 | 3.114 | 1.889 | | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 0.548 | 0.367 | *** 0.001 | |
| | | | 1999-2001 | 14 | 0.161 | 0.106 | | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.906 | 0.492 | 0.392 | |
| | | | 1999-2001 | 16 | 0.728 | 0.631 | | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 2.564 | 1.044 | *** 0.033 | |
| | | | 1999-2001 | 18 | 1.825 | 1.003 | | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 0.617 | 0.200 | *** 0.024 | |
| | | | 1999-2001 | 19 | 0.451 | 0.239 | | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 2.135 | 4.534 | 0.144 | |
| | | | 1999-2001 | 18 | 0.522 | 0.620 | | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.759 | 0.206 | *** 0.005 | |
| | | | 1999-2001 | 19 | 0.556 | 0.223 | | |
| | Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 0.495 | 0.312 | *** 0.033 | |
| | | | 2000-2001 | 12 | 0.277 | 0.161 | | |
| | Total N | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 8.460 | 3.612 | *** 0.001 |
| | | | | 1999-2001 | 14 | 2.338 | 2.338 | |
| California Creek | | OK121510-02-0050C | 2001-2003 | 17 | 0.888 | 0.476 | *** 0.028 | |
| | | | 1999-2001 | 15 | 0.574 | 0.239 | | |
| Chouteau Creek | | OK121600-01-0430M | 2001-2003 | 15 | 1.477 | 0.605 | 0.467 | |
| | | | 1999-2001 | 17 | 1.811 | 1.660 | | |
| Drowning Creek | | OK121600-03-0090G | 2001-2003 | 20 | 2.678 | 1.032 | *** 0.032 | |
| | | | 1999-2001 | 18 | 1.955 | 0.956 | | |
| Fivemile Creek | | OK121600-07-0110G | 2001-2003 | 20 | 0.714 | 0.202 | *** 0.007 | |
| | | | 1999-2001 | 19 | 0.521 | 0.220 | | |
| Little Horse Creek | | OK121600-03-0190A | 2001-2003 | 19 | 2.643 | 4.448 | 0.187 | |
| | | | 1999-2001 | 18 | 1.203 | 0.893 | | |
| Saline Creek | | OK121600-02-0030D | 2001-2003 | 20 | 0.843 | 0.197 | *** 0.002 | |
| | | | 1999-2001 | 19 | 0.619 | 0.226 | | |
| Trail Creek | | OK520620-02-0090G | 2001-2003 | 19 | 0.717 | 0.317 | 0.240 | |
| | | | 2000-2001 | 9 | 0.569 | 0.279 | | |
| Total OrthoPhosphate | | Dog Creek | OK121500-02-0360D | 2001-2003 | 13 | 1.152 | 0.459 | 0.835 |
| | | | | 1999-2001 | 17 | 1.091 | 0.964 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 15 | 0.017 | 0.019 | 0.844 | |
| | | | 1999-2001 | 14 | 0.015 | 0.022 | | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.026 | 0.017 | 0.655 | |
| | | | 1999-2001 | 16 | 0.030 | 0.032 | | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 19 | 0.053 | 0.017 | 0.076 | |
| | | | 1999-2001 | 18 | 0.042 | 0.019 | | |

| Parameter | SiteName | WBID | Date of Collection | N | Mean | Standard Deviation | p value |
|-----------------------------|--------------------|-------------------|--------------------|--------|--------|--------------------|------------------|
| Total Orthophosphate, cont. | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 18 | 0.010 | 0.006 | 0.968 |
| | | | 1999-2001 | 19 | 0.010 | 0.005 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 0.107 | 0.107 | 0.911 |
| | | | 1999-2001 | 18 | 0.102 | 0.135 | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.007 | 0.003 | 0.757 |
| | | | 1999-2001 | 19 | 0.007 | 0.003 | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 18 | 0.029 | 0.016 | *** 0.020 | |
| | | 2000-2001 | 12 | 0.016 | 0.011 | | |
| Total Phosphorous | Dog Creek | OK121500-02-0360D | 2001-2003 | 13 | 1.405 | 0.500 | 0.850 |
| | | | 1999-2001 | 16 | 1.479 | 1.331 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 15 | 0.046 | 0.041 | 0.136 |
| | | | 1999-2001 | 15 | 0.085 | 0.090 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 0.089 | 0.031 | 0.165 |
| | | | 1999-2001 | 17 | 0.131 | 0.109 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 19 | 0.072 | 0.019 | 0.169 |
| | | | 1999-2001 | 18 | 0.063 | 0.020 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 18 | 0.017 | 0.011 | 0.125 |
| | | | 1999-2001 | 19 | 0.026 | 0.023 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 0.152 | 0.115 | 0.437 |
| | | | 1999-2001 | 18 | 0.190 | 0.174 | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 0.015 | 0.013 | 0.572 |
| | | | 1999-2001 | 19 | 0.017 | 0.009 | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 18 | 0.045 | 0.027 | *** 0.039 | |
| | | 2000-2001 | 12 | 0.073 | 0.046 | | |
| Chloride | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 44.680 | 12.950 | *** 0.042 |
| | | | 1999-2001 | 17 | 31.490 | 19.980 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 49.750 | 44.870 | 0.842 |
| | | | 1999-2001 | 15 | 47.170 | 22.390 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 12.110 | 10.656 | 0.639 |
| | | | 1999-2001 | 17 | 10.488 | 8.706 | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 25.400 | 10.948 | *** 0.002 |
| | | | 1999-2001 | 18 | 15.456 | 6.544 | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 6.640 | 1.675 | 0.259 |
| | | | 1999-2001 | 19 | 6.121 | 1.241 | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 19.470 | 12.700 | 0.234 |
| | | | 1999-2001 | 18 | 15.290 | 7.440 | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 8.271 | 1.852 | *** 0.003 |
| | | | 1999-2001 | 19 | 6.295 | 2.055 | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 25.564 | 2.177 | 0.524 | |
| | | 2000-2001 | 12 | 23.751 | 9.954 | | |
| Sulfate | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 48.740 | 14.200 | 0.370 |
| | | | 1999-2001 | 17 | 52.880 | 11.110 | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 26.970 | 11.480 | *** 0.049 |
| | | | 1999-2001 | 15 | 38.600 | 19.910 | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 34.570 | 19.830 | 0.206 |
| | | | 1999-2001 | 17 | 44.690 | 23.880 | |

| Parameter | SiteName | WBID | Date of Collection | N | Mean | Standard Deviation | p value | |
|--------------------|--------------------|-------------------|--------------------|-----------|----------|--------------------|------------------|------------------|
| Sulfate, cont. | Drowning Creek | OK121600-03-0090G | 2001-2003 | 20 | 17.718 | 7.649 | *** 0.000 | |
| | | | 1999-2001 | 18 | 9.043 | 1.068 | | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 20 | 7.158 | 1.457 | 0.290 | |
| | | | 1999-2001 | 19 | 6.548 | 2.053 | | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 19 | 28.970 | 33.930 | 0.206 | |
| | | | 1999-2001 | 18 | 17.720 | 15.340 | | |
| | Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 5.881 | 0.724 | 0.679 | |
| | | | 1999-2001 | 19 | 5.728 | 1.455 | | |
| | Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 1540.300 | 386.100 | 0.640 | |
| | | | 2000-2001 | 12 | 1608.900 | 405.600 | | |
| | Total Hardness | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 136.710 | 16.380 | *** 0.003 |
| | | | | 1999-2001 | 17 | 115.880 | 18.760 | |
| California Creek | | OK121510-02-0050C | 2001-2003 | 17 | 182.070 | 63.220 | 0.773 | |
| | | | 1999-2001 | 15 | 176.330 | 45.110 | | |
| Chouteau Creek | | OK121600-01-0430M | 2001-2003 | 15 | 96.830 | 20.600 | 0.394 | |
| | | | 1999-2001 | 16 | 89.280 | 27.350 | | |
| Drowning Creek | | OK121600-03-0090G | 2001-2003 | 20 | 142.970 | 30.280 | 0.120 | |
| | | | 1999-2001 | 18 | 127.770 | 28.260 | | |
| Fivemile Creek | | OK121600-07-0110G | 2001-2003 | 20 | 138.510 | 16.500 | 0.230 | |
| | | | 1999-2001 | 19 | 132.320 | 15.080 | | |
| Little Horse Creek | | OK121600-03-0190A | 2001-2003 | 19 | 148.920 | 55.200 | 0.247 | |
| | | | 1999-2001 | 18 | 131.420 | 31.370 | | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 20 | 108.420 | 8.320 | *** 0.001 | | |
| | | 1999-2001 | 18 | 96.240 | 11.420 | | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 1722.900 | 125.800 | 0.185 | | |
| | | 2000-2001 | 12 | 1813.500 | 245.800 | | | |
| Turbidity | Dog Creek | OK121500-02-0360D | 2001-2003 | 14 | 14.851 | 6.956 | 0.151 | |
| | | | 1999-2001 | 17 | 18.576 | 7.035 | | |
| | California Creek | OK121510-02-0050C | 2001-2003 | 17 | 27.590 | 30.350 | 0.960 | |
| | | | 1999-2001 | 15 | 28.350 | 53.330 | | |
| | Chouteau Creek | OK121600-01-0430M | 2001-2003 | 15 | 28.250 | 14.760 | 0.207 | |
| | | | 1999-2001 | 17 | 39.610 | 31.090 | | |
| | Drowning Creek | OK121600-03-0090G | 2001-2003 | 19 | 1.419 | 0.532 | *** 0.029 | |
| | | | 1999-2001 | 17 | 2.602 | 2.165 | | |
| | Fivemile Creek | OK121600-07-0110G | 2001-2003 | 19 | 0.800 | 0.660 | 0.824 | |
| | | | 1999-2001 | 19 | 0.758 | 0.449 | | |
| | Little Horse Creek | OK121600-03-0190A | 2001-2003 | 18 | 12.790 | 10.490 | 0.630 | |
| | | | 1999-2001 | 18 | 15.340 | 19.630 | | |
| Saline Creek | OK121600-02-0030D | 2001-2003 | 19 | 1.001 | 0.609 | 0.053 | | |
| | | 1999-2001 | 19 | 1.504 | 0.911 | | | |
| Trail Creek | OK520620-02-0090G | 2001-2003 | 19 | 8.879 | 9.248 | 0.380 | | |
| | | 2000-2001 | 12 | 12.047 | 10.252 | | | |

3.2 BIOLOGICAL MONITORING

3.2.1 Habitat Assessment

Total habitat scores for each site and computed metric scores are listed below (Table 11). The raw habitat data can be found in Appendix B. Sites were compared relative to the mean habitat score of high quality sites in the respective ecoregion, as shown in Figure 3. The highest habitat score possible is 180, which represents the best possible habitat. The one site that was assessed in the Boston Mountains had the highest habitat score of all the sites, while the Ozark Highlands had the highest mean habitat score. In general, the sites in the Central Great Plains ecoregion had the worst habitat. The single Southwest Tablelands site had one of the lowest habitat scores, and the Central Irregular Plains and Cross Timbers had approximately equal mean habitat scores. No habitat scores fell outside of the high quality site range for the appropriate ecoregion.

Table 11. Habitat assessment values for monitoring sites in the Rotating Basin Project Year 1.

| SiteName | 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 Vegetative Stability | Streamside Cover | Total Habitat Score |
|--------------------------|-------------------|----------------|-----------------------|------------------|----------------------|-----------------------------------|------|--------------------|-------------------|----------------|---------------------------|------------------|---------------------|
| Delaware Creek | OK121300-01-0150H | 12.3 | 4.4 | 18.1 | 11.9 | 2.2 | 0.1 | 15.1 | 7.3 | 10 | 3.7 | 8.8 | 93.9 |
| Bird Creek | OK121300-02-0010C | 2.2 | 1.6 | 14.6 | 8.7 | 0 | 19.1 | 16.5 | 0.8 | 10 | 5 | 9.6 | 88.1 |
| Hominy Creek: Downstream | OK121300-04-0010C | 14.1 | 0.4 | 0 | 13.9 | 7.5 | 20 | 16.5 | 2.4 | 10 | 4.4 | 9.9 | 99.1 |
| Hominy Creek: Upstream | OK121300-04-0280G | 7.6 | 12.1 | 1.2 | 4.9 | 7.5 | 0.8 | 4.2 | 0.8 | 7.1 | 4.7 | 9.5 | 60.4 |
| Curl Creek | OK121400-01-0270G | 2.6 | 9.9 | 20 | 17.3 | 0 | 0 | 16.5 | 2.7 | 7.2 | 2.8 | 9.6 | 88.6 |
| Hogshooter Creek | OK121400-01-0300D | 0.2 | 14.4 | 15 | 15.7 | 0 | 0 | 16.5 | 6.2 | 2.9 | 5.3 | 9.3 | 85.5 |
| Little Caney River | OK121400-02-0140H | 3.1 | 1.9 | 13.2 | 9.2 | 7.5 | 18.6 | 8.7 | 5.4 | 10 | 3.4 | 3.6 | 84.6 |
| Mission Creek | OK121400-02-0190B | 8.8 | 12.9 | 16.6 | 15.5 | 11.4 | 4.8 | 12.3 | 1.6 | 10 | 5.4 | 10 | 109.3 |
| Buck Creek | OK121400-03-0170C | 4.7 | 11.4 | 18.2 | 8.8 | 0 | 0 | 15.1 | 2.8 | 9 | 5.4 | 10 | 85.4 |
| Sand Creek | OK121400-04-0010F | 5.4 | 4.2 | 13.6 | 7.7 | 7.5 | 0.6 | 9.9 | 0.8 | 9.6 | 8.2 | 10 | 77.5 |
| Bull Creek | OK121500-02-0090D | 7.1 | 10.7 | 18.8 | 4 | 0 | 0 | 6.7 | 2.3 | 6.9 | 2.2 | 9.7 | 68.4 |
| Dog Creek | OK121500-02-0360D | 3.6 | 1.6 | 13.4 | 17.2 | 2.2 | 19.8 | 16.5 | 5.3 | 8.2 | 4.4 | 9.6 | 101.8 |
| California Creek | OK121510-02-0050C | 9.3 | 10.9 | 15.7 | 16.8 | 0 | 0.5 | 9.9 | 5.4 | 7.4 | 3.9 | 9.3 | 88.1 |
| Big Creek | OK121510-03-0010D | 1.6 | 5.2 | 16.1 | 7 | 0 | 0 | 16.5 | 0 | 7.5 | 4.4 | 9.5 | 67.8 |
| Ranger Creek | OK121600-01-0060D | 15.2 | 17.4 | 19.3 | 19.4 | 2.2 | 0 | 16.5 | 0.8 | 9.7 | 6.5 | 9.5 | 116.5 |
| Fourteenmile Creek | OK121600-01-0100G | 17 | 10.6 | 15.6 | 5.8 | 13.1 | 16.2 | 4.2 | 1.6 | 9 | 4.4 | 3.4 | 100.9 |
| Chouteau Creek | OK121600-01-0430M | 3.5 | 5.9 | 20 | 18.3 | 0 | 0 | 9.9 | 0 | 7.5 | 2.6 | 6.8 | 74.4 |
| Saline Creek | OK121600-02-0030D | 18 | 16.2 | 17.2 | 7.7 | 15.2 | 15 | 0.4 | 0 | 5.1 | 1.6 | 8.4 | 104.7 |
| Drowning Creek | OK121600-03-0090G | 16.2 | 13 | 16.3 | 8.8 | 4.1 | 9.2 | 16.5 | 0.8 | 9.7 | 4.8 | 4.4 | 103.8 |
| Little Horse Creek | OK121600-03-0190A | 4.6 | 13.2 | 0 | 19.8 | 0 | 0 | 16.5 | 2.4 | 9.2 | 7.1 | 6.2 | 79 |
| Sycamore Creek | OK121600-03-0510D | 18 | 17.3 | 17.2 | 8.6 | 15.9 | 15.1 | 0.5 | 1.6 | 9 | 3.7 | 8.7 | 115.6 |
| Tar Creek | OK121600-04-0060D | 7.8 | 2.2 | 2 | 16.2 | 2.2 | 8 | 16.5 | 0 | 10 | 6.2 | 6 | 77 |
| Little Cabin Creek | OK121600-06-0080C | 1.4 | 2.5 | 13.4 | 20 | 0 | 0.9 | 8.7 | 1.6 | 7.7 | 3.8 | 9.5 | 69.5 |
| Big Cabin Creek | OK121600-06-0220I | 7.5 | 9.8 | 18.7 | 20 | 4.1 | 0 | 8.7 | 1.1 | 9.9 | 4.1 | 9.6 | 93.5 |
| Fivemile Creek | OK121600-07-0110G | 16.6 | 14.1 | 18.7 | 8.3 | 15.2 | 3.6 | 2.3 | 0 | 10 | 5.6 | 3.6 | 97.9 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | 7.5 | 3.6 | 19 | 18.9 | 5.9 | 0 | 13.7 | 1.6 | 6.3 | 2.9 | 8.5 | 87.9 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | 3.1 | 8.3 | 19.1 | 17.6 | 4.1 | 0.2 | 5 | 0.8 | 7.2 | 2.6 | 6.2 | 73.8 |
| Buggy Creek | OK520610-02-0120C | 1.2 | 1.7 | 0 | 11 | 0 | 10.8 | 3.5 | 0.4 | 10 | 5 | 10 | 53.6 |
| Walnut Creek | OK520610-03-0010C | 2.3 | 0.7 | 15 | 4.1 | 0 | 15.3 | 5.8 | 0.8 | 9.7 | 4.4 | 9.6 | 67.7 |
| Trail Creek | OK520620-02-0090G | 2.1 | 0.7 | 9.9 | 8.9 | 0 | 15.3 | 0.5 | 1.1 | 8.6 | 4.1 | 4.6 | 55.8 |
| Lone Creek | OK520620-03-0020C | 1.5 | 1.4 | 0 | 2.1 | 0 | 0.6 | 0.4 | 0.6 | 10 | 8.8 | 8.7 | 34.1 |
| Hackberry Creek | OK520620-04-0050D | 0.8 | 1.4 | 0 | 17.5 | 0 | 1.3 | 0.4 | 4.7 | 9.3 | 3 | 5 | 43.4 |
| Commission Creek | OK520620-05-0160C | 2.5 | 0.4 | 0 | 5.6 | 5.9 | 10 | 16.5 | 0.1 | 6.8 | 6.2 | 5 | 59 |
| Deer Creek | OK520620-06-0010F | 1.4 | 3 | 0 | 2.1 | 0 | 20 | 0.7 | 2.3 | 7 | 1.5 | 9.6 | 47.6 |

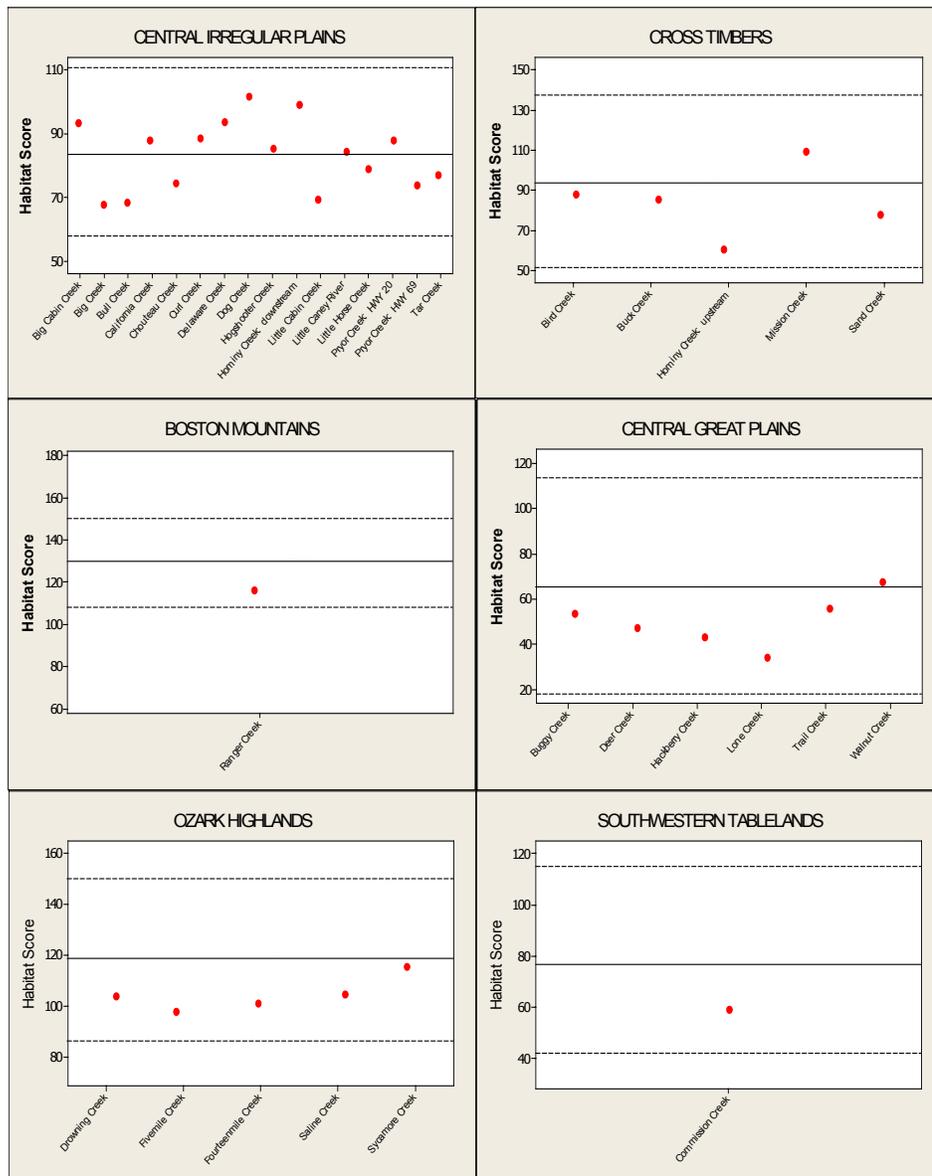


Figure 3. Habitat score for each site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

3.2.2 Fish Collections

Table 12 presents the assessment of the Year 1 Rotating Basin sites with regard to Oklahoma state biocriteria for fish 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). Several sites had assessments of "undetermined," so all sites were further classified (see Table 13) based on the EPA's RBP guidelines described previously in Section 2.2.2. IBI scores that fell between the assessment ranges in the EPA method (Table 13) were classified in the closest scoring group. Fish metrics used to compute IBI scores are listed in Table 14. For a complete listing of fish data, including species and numbers caught, consult Appendix C.

Table 12. IBI scores based on Oklahoma state Fish and Wildlife Propagation biocriteria. WWAC=warm water aquatic community, CWAC=cool water aquatic community, HLAC=habitat limited aquatic community.

| WBID | Sitename | FWPROP | IBI total score | FWProp Support |
|-------------------|--------------------------|--------|-----------------|----------------|
| OK121300-01-0150H | Delaware Creek | WWAC | 30 | supporting |
| OK121300-02-0010C | Bird Creek | WWAC | 28 | supporting |
| OK121300-04-0010C | Hominy Creek: downstream | WWAC | 20 | not supporting |
| OK121300-04-0280G | Hominy Creek: upstream | WWAC | 26 | supporting |
| OK121400-01-0270G | Curl Creek | WWAC | 32 | supporting |
| OK121400-01-0300D | Hogshooter Creek | WWAC | 26 | undetermined |
| OK121400-02-0140H | Little Caney River | WWAC | 20 | not supporting |
| OK121400-02-0190B | Mission Creek | WWAC | 26 | supporting |
| OK121400-03-0170C | Buck Creek | WWAC | 38 | supporting |
| OK121400-04-0010F | Sand Creek | WWAC | 34 | supporting |
| OK121500-02-0090D | Bull Creek | WWAC | 32 | supporting |
| OK121500-02-0360D | Dog Creek | WWAC | 32 | supporting |
| OK121510-02-0050C | California Creek | WWAC | 32 | supporting |
| OK121510-03-0010D | Big Creek | WWAC | 34 | supporting |
| OK121600-01-0060D | Ranger Creek | WWAC | 32 | supporting |
| OK121600-01-0100G | Fourteenmile Creek | CWAC | 36 | undetermined |
| OK121600-01-0430M | Chouteau Creek | WWAC | 28 | undetermined |
| OK121600-02-0030D | Saline Creek | CWAC | 34 | undetermined |
| OK121600-03-0090G | Drowning Creek | CWAC | 32 | undetermined |
| OK121600-03-0190A | Little Horse Creek | WWAC | 36 | supporting |
| OK121600-03-0510D | Sycamore Creek | CWAC | 36 | undetermined |
| OK121600-04-0060D | Tar Creek | HLAC | 22 | undetermined |
| OK121600-06-0080C | Little Cabin Creek | WWAC | 26 | undetermined |
| OK121600-06-0220I | Big Cabin Creek | WWAC | 34 | supporting |
| OK121600-07-0110G | Fivemile Creek | CWAC | 36 | undetermined |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | WWAC | 30 | supporting |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | WWAC | 32 | supporting |
| OK520610-02-0120C | Buggy Creek | WWAC | 18 | not supporting |
| OK520610-03-0010C | Walnut Creek | WWAC | 20 | undetermined |
| OK520620-02-0090G | Trail Creek | HLAC | 16 | not supporting |
| OK520620-03-0020C | Lone Creek | WWAC | 22 | supporting |
| OK520620-04-0050D | Hackberry Creek | WWAC | 20 | undetermined |
| OK520620-05-0160C | Commission Creek | WWAC | 24 | supporting |
| OK520620-06-0010F | Deer Creek | WWAC | 22 | supporting |

Table 13. IBI score summary based on EPA's RBP protocol.

| SiteName | WBID | Ecoregion | IBI Score | Percent Reference | Score Interpretation |
|-------------------------|-------------------|------------------|-----------|-------------------|----------------------|
| Delaware Creek | OK121300-01-0150H | CentrIrregPlains | 40 | 1.00 | excellent |
| Bird Creek | OK121300-02-0010C | CrossTimbers | 38 | 0.90 | good |
| Hominy Creek:downstream | OK121300-04-0010C | CentrIrregPlains | 20 | 0.50 | poor |
| Hominy Creek: upstream | OK121300-04-0280G | CrossTimbers | 32 | 0.76 | fair |
| Curl Creek | OK121400-01-0270G | CentrIrregPlains | 34 | 0.85 | good |
| Hogshooter Creek | OK121400-01-0300D | CentrIrregPlains | 24 | 0.60 | poor |
| Little Caney River | OK121400-02-0140H | CentrIrregPlains | 22 | 0.55 | poor |
| Mission Creek | OK121400-02-0190B | CrossTimbers | 36 | 0.86 | good |
| Buck Creek | OK121400-03-0170C | CrossTimbers | 42 | 1.00 | excellent |
| Sand Creek | OK121400-04-0010F | CrossTimbers | 38 | 0.90 | good |
| Bull Creek | OK121500-02-0090D | CentrIrregPlains | 38 | 0.95 | excellent |
| Dog Creek | OK121500-02-0360D | CentrIrregPlains | 40 | 1.00 | excellent |
| California Creek | OK121510-02-0050C | CentrIrregPlains | 36 | 0.90 | good |
| Big Creek | OK121510-03-0010D | CentrIrregPlains | 40 | 1.00 | excellent |
| Ranger Creek | OK121600-01-0060D | BostonMtns | 32 | 0.70 | fair |
| Fourteenmile Creek | OK121600-01-0100G | OzarkHighlands | 44 | 0.96 | excellent |
| Chouteau Creek | OK121600-01-0430M | CentrIrregPlains | 34 | 0.85 | good |
| Saline Creek | OK121600-02-0030D | OzarkHighlands | 44 | 0.96 | excellent |
| Drowning Creek | OK121600-03-0090G | OzarkHighlands | 32 | 0.70 | fair |
| Little Horse Creek | OK121600-03-0190A | CentrIrregPlains | 44 | 1.10 | excellent |
| Sycamore Creek | OK121600-03-0510D | OzarkHighlands | 48 | 1.04 | excellent |
| Tar Creek | OK121600-04-0060D | CentrIrregPlains | 26 | 0.65 | fair |
| Little Cabin Creek | OK121600-06-0080C | CentrIrregPlains | 40 | 1.00 | excellent |
| Big Cabin Creek | OK121600-06-0220I | CentrIrregPlains | 42 | 1.05 | excellent |
| Fivemile Creek | OK121600-07-0110G | OzarkHighlands | 46 | 1.00 | excellent |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | CentrIrregPlains | 38 | 0.95 | excellent |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | CentrIrregPlains | 40 | 1.00 | excellent |
| Buggy Creek | OK520610-02-0120C | CentrGreatPlains | 28 | 0.70 | fair |
| Walnut Creek | OK520610-03-0010C | CentrGreatPlains | 28 | 0.70 | fair |
| Trail Creek | OK520620-02-0090G | CentrGreatPlains | 24 | 0.60 | poor |
| Lone Creek | OK520620-03-0020C | CentrGreatPlains | 30 | 0.75 | fair |
| Hackberry Creek | OK520620-04-0050D | CentrGreatPlains | 26 | 0.65 | fair |
| Commission Creek | OK520620-05-0160C | SWTablelands | 31 | 0.82 | good |
| Deer Creek | OK520620-06-0010F | CentrGreatPlains | 26 | 0.65 | fair |

Table 14. Fish metrics for calculation of IBI scores for Rotating Basin Year 1 monitoring sites.

| SiteName | WBID | Ecoregion | Total Individuals | Total Species | Number Darter Spp. | Number Sunfish Spp. | Number Round Bodied Suckers | Number Intolerant Species | Proportion Tolerant Individuals | Proportion Omnivorous Individuals | Proportion Insectivorous Cyprinid Individuals | Proportion Top Carnivore Individuals |
|--------------------------|-------------------|-----------|-------------------|---------------|--------------------|---------------------|-----------------------------|---------------------------|---------------------------------|-----------------------------------|---|--------------------------------------|
| Delaware Creek | OK121300-01-0150H | CIP | 260 | 25 | 2 | 8 | 1 | 2 | 49.23 | 16.54 | 3.08 | 9.62 |
| Bird Creek | OK121300-02-0010C | CT | 2134 | 23 | 4 | 6 | 1 | 2 | 83.08 | 54.36 | 0.75 | 21.37 |
| Hominy Creek: downstream | OK121300-04-0010C | CIP | 157 | 14 | 0 | 4 | 0 | 1 | 82.80 | 71.97 | 0.64 | 6.37 |
| Hominy Creek: upstream | OK121300-04-0280G | CT | 802 | 18 | 2 | 6 | 0 | 1 | 70.95 | 51.87 | 0.62 | 1.62 |
| Curl Creek | OK121400-01-0270G | CIP | 216 | 25 | 4 | 9 | 0 | 2 | 67.59 | 23.61 | 4.17 | 8.33 |
| Hogshooter Creek | OK121400-01-0300D | CIP | 210 | 12 | 1 | 4 | 0 | 3 | 68.57 | 51.43 | 1.90 | 4.76 |
| Little Caney River | OK121400-02-0140H | CIP | 174 | 17 | 0 | 3 | 0 | 1 | 71.26 | 68.39 | 0.57 | 17.82 |
| Mission Creek | OK121400-02-0190B | CT | 765 | 25 | 2 | 8 | 1 | 1 | 63.66 | 50.85 | 3.01 | 3.27 |
| Buck Creek | OK121400-03-0170C | CT | 666 | 28 | 4 | 6 | 2 | 4 | 23.72 | 19.97 | 9.91 | 4.20 |
| Sand Creek | OK121400-04-0010F | CT | 378 | 21 | 2 | 7 | 1 | 2 | 40.21 | 25.13 | 15.08 | 3.70 |
| Bull Creek | OK121500-02-0090D | CIP | 1830 | 24 | 2 | 8 | 1 | 2 | 26.01 | 21.97 | 0.00 | 4.21 |
| Dog Creek | OK121500-02-0360D | CIP | 538 | 26 | 3 | 7 | 1 | 2 | 86.43 | 33.27 | 0.00 | 27.32 |
| California Creek | OK121510-02-0050C | CIP | 970 | 24 | 3 | 6 | 1 | 2 | 40.10 | 23.92 | 1.96 | 0.41 |
| Big Creek | OK121510-03-0010D | CIP | 905 | 29 | 2 | 7 | 3 | 3 | 27.29 | 19.23 | 3.54 | 3.20 |
| Ranger Creek | OK121600-01-0060D | BM | 647 | 17 | 2 | 6 | 0 | 3 | 32.77 | 1.08 | 13.29 | 16.23 |
| Fourteenmile Creek | OK121600-01-0100G | OH | 2043 | 31 | 6 | 8 | 5 | 16 | 9.93 | 0.39 | 35.66 | 0.65 |
| Chouteau Creek | OK121600-01-0430M | CIP | 361 | 23 | 0 | 8 | 1 | 1 | 42.94 | 11.08 | 2.49 | 11.91 |
| Saline Creek | OK121600-02-0030D | OH | 1095 | 21 | 5 | 6 | 2 | 12 | 0.73 | 0.00 | 29.04 | 0.46 |
| Drowning Creek | OK121600-03-0090G | OH | 438 | 14 | 3 | 6 | 0 | 3 | 25.57 | 0.00 | 0.00 | 7.53 |
| Little Horse Creek | OK121600-03-0190A | CIP | 428 | 22 | 4 | 5 | 0 | 10 | 9.58 | 0.47 | 47.20 | 4.21 |
| Sycamore Creek | OK121600-03-0510D | OH | 1261 | 26 | 4 | 8 | 2 | 13 | 5.55 | 0.00 | 51.63 | 4.68 |
| Tar Creek | OK121600-04-0060D | CIP | 160 | 16 | 0 | 5 | 0 | 0 | 73.75 | 14.38 | 8.75 | 9.38 |
| Little Cabin Creek | OK121600-06-0080C | CIP | 1083 | 25 | 3 | 8 | 1 | 3 | 82.55 | 25.58 | 5.45 | 26.13 |
| Big Cabin Creek | OK121600-06-0220I | CIP | 425 | 24 | 5 | 7 | 1 | 3 | 48.94 | 14.59 | 12.24 | 5.65 |
| Fivemile Creek | OK121600-07-0110G | OH | 1557 | 24 | 3 | 6 | 2 | 9 | 12.65 | 0.90 | 38.86 | 7.19 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | CIP | 501 | 27 | 2 | 7 | 1 | 3 | 59.28 | 35.93 | 6.19 | 3.99 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | CIP | 560 | 25 | 4 | 7 | 1 | 3 | 71.79 | 38.04 | 4.11 | 5.89 |
| Buggy Creek | OK520610-02-0120C | CGP | 948 | 13 | 0 | 3 | 0 | 1 | 84.92 | 74.26 | 15.08 | 3.59 |
| Walnut Creek | OK520610-03-0010C | CGP | 2268 | 20 | 0 | 6 | 0 | 1 | 90.39 | 81.26 | 12.17 | 2.29 |
| Trail Creek | OK520620-02-0090G | CGP | 845 | 12 | 0 | 2 | 0 | 1 | 93.37 | 90.53 | 6.63 | 0.36 |
| Lone Creek | OK520620-03-0020C | CGP | 861 | 14 | 0 | 3 | 0 | 2 | 75.61 | 38.79 | 24.27 | 0.58 |
| Hackberry Creek | OK520620-04-0050D | CGP | 265 | 6 | 0 | 1 | 0 | 1 | 75.85 | 31.70 | 47.92 | 1.89 |
| Commission Creek | OK520620-05-0160C | SWT | 117 | 10 | 0 | 4 | 0 | 1 | 57.26 | 19.66 | 42.74 | 18.80 |
| Deer Creek | OK520620-06-0010F | CGP | 3453 | 22 | 0 | 6 | 0 | 2 | 89.83 | 76.66 | 19.49 | 0.84 |

There was good consensus between the IBI scores that resulted from the two different assessment methods. Sites which were “excellent,” “good,” or “fair” in the EPA scoring were “supporting” under the state biocriteria scoring method with one exception (Buggy Creek was “fair” and “nonsupporting”). Sites which were “poor” in the EPA assessment were “nonsupporting” under the state biocriteria. The EPA methodology allowed assessment of streams which were lacking definite support assignment under the state biocriteria. Any streams with IBI scores equal to or better than the high quality streams will be examined further for possible inclusion into the high quality sites list.

Figure 4 shows the value of several important biological metrics for each site (indicated by a red dot) relative to the mean value for the high quality sites in that ecoregion (indicated by a solid line). The dashed lines in each graph represent +/- two standard deviations of the high quality site data for each parameter.

In the Central Great Plains (CGP) ecoregion, Deer Creek had the highest number of total species, sunfish species, and intolerant species. Walnut Creek had a high number of total species and sunfish species relative to the high quality means, and Lone Creek exceeded the mean value of intolerant species and was approximately equal to the high quality sites for the other parameters. No darter species were collected at any monitoring site in this region.

In the Central Irregular Plains (CIP) ecoregion, Hogshooter Creek had the lowest number of total species, while Big Creek had the highest number of species. Both values were outside of the reference range. Hominy Creek, Little Caney River, and Tar Creek had a significantly lower number of total species than the high quality site data. No darters were found at Chouteau Creek, Hominy Creek, Little Caney River, or Tar Creek, and no intolerant fish species were found at the Tar Creek site. Little Caney River had the fewest number of sunfish species and only one intolerant species. Both the Chouteau Creek and Hominy Creek sites had only one intolerant fish species as well.

In the Cross Timbers (CT) ecoregion, Buck Creek exhibited a significantly high number of total darter species and intolerant species relative to the average high quality site. Bird Creek also had a significantly high number of darter species, and Mission Creek had a high number of sunfish species.

Fourteen-Mile Creek, in the Ozark Highlands (OH) ecoregion, was found to have higher values than the mean high quality site values for all parameters. Drowning Creek had the lowest number of total species and intolerant species of the monitoring sites in this region. Fivemile Creek also had a significantly lower number of intolerant species than the high quality sites.

Ranger Creek, the only monitoring site in the Boston Mountains (BM) ecoregion, exhibited very low numbers of total species, number of darter species, and number of intolerant species relative to the reference sites. Commission Creek, in the Southwestern Tablelands (SWT) ecoregion, had approximately equal values to the high quality sites for the parameters.

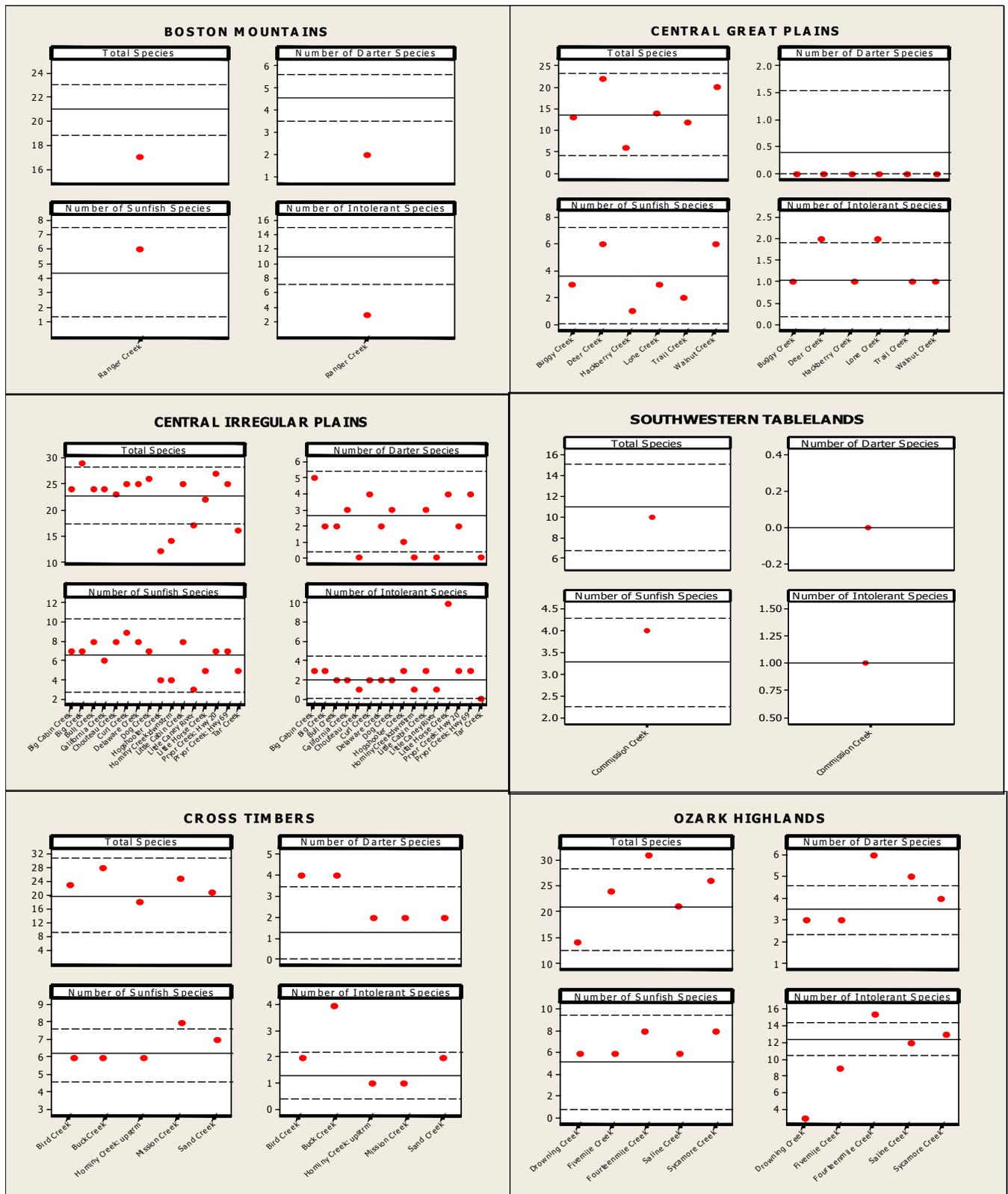


Figure 4. Selected fish metrics for each site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

Table 15 shows a comparison between fish data collected in previous projects and the rotating basin project in order to examine whether biological conditions have improved, worsened, or remained the same at a particular site. Many of the rotating basin sites had not been previously monitored; only eight sites could be compared with past data. In future reports, all sites will be compared with the data collected during the first years of the rotating basin project in order to track changes. All data was compared relative to the same mean of the high quality sites for the respective ecoregion in order to obtain the IBI (EPA’s RBP method). Although, ideally, one would use collections from the same years for comparison, multiyear collections at sites deemed “high quality” were not available.

The fish community in California Creek, Saline Creek, and Fivemile Creek remained in approximately the same condition (good, excellent, and excellent, respectively). Dog Creek and Little Horse Creek exhibited improved conditions with regard to the fish community. Particularly notable is the improvement of Little Horse Creek from “fair” in 1995 to “excellent” in 2001. Biological conditions in Chouteau Creek, Drowning Creek, and Trail Creek were worse in 2001 than in the previous collections. The fish community in Trail Creek had changed quite significantly in eight years, from “good” to “poor.”

Table 15. Comparison of fish data from previous projects to the Rotating Basin Year 1 project (2001-2002).

| SiteName | WBID | Total points | IBI | Condition | Total # Individuals | Total # Spp. | # Darter Spp. | # Sunfish Spp. | # Round Bodied Sucker Spp. | # Intolerant Spp. | Proportion Tolerant Individuals | Proportion Omnivorous Individuals | Proportion Insectivorous Cyprinid Individuals | Proportion Top Carnivore Individuals |
|-------------------------|-------------------|--------------|------|-----------|---------------------|--------------|---------------|----------------|----------------------------|-------------------|---------------------------------|-----------------------------------|---|--------------------------------------|
| Dog Creek 1999 | OK121500-02-0360D | 34 | 0.85 | good | 172 | 19 | 3 | 5 | 1 | 2 | 73.84 | 17.44 | 0.00 | 9.88 |
| Dog Creek 2002 | OK121500-02-0360D | 40 | 1.00 | excellent | 538 | 26 | 3 | 7 | 1 | 2 | 86.43 | 33.27 | 0.00 | 27.32 |
| California Creek 1999 | OK121510-02-0050C | 32 | 0.80 | good | 322 | 20 | 4 | 6 | 0 | 2 | 51.24 | 29.81 | 0.62 | 1.55 |
| California Creek 2001 | OK121510-02-0050C | 36 | 0.90 | good | 970 | 24 | 3 | 6 | 1 | 2 | 40.10 | 23.92 | 1.96 | 0.41 |
| Chouteau Creek 1998 | OK121600-01-0430M | 38 | 0.95 | excellent | 278 | 16 | 1 | 7 | 1 | 2 | 70.50 | 10.07 | 1.80 | 23.74 |
| Chouteau Creek 2001 | OK121600-01-0430M | 34 | 0.85 | good | 361 | 23 | 0 | 8 | 1 | 1 | 42.94 | 11.08 | 2.49 | 11.91 |
| Saline Creek 1998 | OK121600-02-0030D | 42 | 0.91 | excellent | 330 | 14 | 5 | 1 | 1 | 10 | 0.30 | 0.00 | 36.67 | 2.12 |
| Saline Creek 2001 | OK121600-02-0030D | 44 | 0.96 | excellent | 1095 | 21 | 5 | 6 | 2 | 12 | 0.73 | 0.00 | 29.04 | 0.46 |
| Drowning Creek 1999 | OK121600-03-0090G | 36 | 0.78 | good | 279 | 14 | 2 | 5 | 0 | 4 | 28.32 | 0.00 | 22.94 | 35.84 |
| Drowning Creek 2001 | OK121600-03-0090G | 32 | 0.70 | fair | 438 | 14 | 3 | 6 | 0 | 3 | 25.57 | 0.00 | 0.00 | 7.53 |
| Little Horse Creek 1995 | OK121600-03-0190A | 28 | 0.70 | fair | 149 | 11 | 2 | 3 | 1 | 1 | 55.03 | 22.15 | 0.00 | 8.05 |
| Little Horse Creek 1999 | OK121600-03-0190A | 34 | 0.85 | good | 169 | 14 | 3 | 5 | 0 | 1 | 65.09 | 0.59 | 2.37 | 26.63 |
| Little Horse Creek 2001 | OK121600-03-0190A | 44 | 1.10 | excellent | 428 | 22 | 4 | 5 | 0 | 10 | 9.58 | 0.47 | 47.20 | 4.21 |
| Fivemile Creek 1999 | OK121600-07-0110G | 46 | 1.00 | excellent | 513 | 15 | 3 | 4 | 2 | 10 | 9.36 | 0.00 | 39.38 | 5.07 |
| Fivemile Creek 2001 | OK121600-07-0110G | 46 | 1.00 | excellent | 1557 | 24 | 3 | 6 | 2 | 9 | 12.65 | 0.90 | 38.86 | 7.19 |
| Trail Creek 1993 | OK520620-02-0090G | 34 | 0.85 | good | 829 | 15 | 0 | 5 | 0 | 1 | 83.72 | 78.05 | 17.37 | 0.48 |
| Trail Creek 2001 | OK520620-02-0090G | 24 | 0.60 | poor | 845 | 12 | 0 | 2 | 0 | 1 | 93.37 | 90.53 | 6.63 | 0.36 |

3.2.3 Macroinvertebrate Collections

The complete macroinvertebrate data, including species and numbers captured per site, can be found in Appendix D. Macroinvertebrates were not collected for Bull Creek, California Creek, Chouteau Creek, or Little Horse Creek due to lack of flow during the collection period each year. Table 16 presents the mean values, by season and sample type, for each metric at each site for

the two-year monitoring period. Table 17 shows the overall bioassessment scores, calculated as described in the Methods section 2.2.3, assigned to each monitoring site.

Because riffle samples were collected at most sites and generally reflect the macroinvertebrate community adequately (Plafkin et al., 1989), the macroinvertebrate community of each monitoring site was compared to the average high quality site in a particular ecoregion using the riffle data where possible (Fig. 5). Summer riffle samples, as opposed to winter samples, were used for the graphic comparison since summer represents the harshest time for macroinvertebrates, thus constituting a more conservative approach in assessing the communities. Summer macroinvertebrates were collected two times during the monitoring period for most sites. For Delaware Creek, Curl Creek, Buck Creek, Drowning Creek, Pryor Creek (Hwy 20), and Pryor Creek (Hwy 69), summer riffle samples were collected only once due to no flow at one of the sampling attempts. No summer riffle data was collected for Mission Creek, Hominy Creek (downstream), or Big Creek, so these sites are not included in Figure 5.

In the Central Great Plains ecoregion, only Deer Creek had summer riffle data, so summer woody samples were substituted in the comparison for Buggy Creek, Walnut Creek, Trail Creek, Hackberry Creek, and Deer Creek. Lone Creek had no riffle or woody samples, so it is not presented in Figure 5.

Table 16. Macroinvertebrate data from each monitoring site, averaged per season and habitat.

| Site Name | WBID | Ecoregion | Sample Description | Number of organisms | Number of taxa | Modified Hilsenhoff biotic index | EPT/EPT + Chironomidae | EPT/total | EPT taxa | Dominants/total | Shannon-Weaver diversity index |
|--------------------------|-----------------|-----------|--------------------|---------------------|----------------|----------------------------------|------------------------|-----------|----------|-----------------|--------------------------------|
| Delaware Creek | 121300-01-0150H | CIP | Sum Rif | 127 | 16 | 5.52 | 0.17 | 0.09 | 6 | 0.19 | 3.22 |
| | 121300-01-0150H | CIP | Sum Wood | 87 | 12 | 5.85 | 0.06 | 0.03 | 3 | 0.36 | 2.56 |
| Bird Creek | 121300-02-0010C | CT | Sum Rif | 121 | 19 | 5.73 | 0.44 | 0.23 | 7 | 0.26 | 3.42 |
| | 121300-02-0010C | CT | Sum Veg | 129 | 20 | 5.69 | 0.21 | 0.05 | 4 | 0.35 | 3.17 |
| | 121300-02-0010C | CT | Sum Wood | 116 | 14 | 5.08 | 0.52 | 0.36 | 5 | 0.42 | 2.63 |
| | 121300-02-0010C | CT | Wint Rif | 134 | 21 | 5.00 | 0.44 | 0.16 | 8 | 0.45 | 2.97 |
| | 121300-02-0010C | CT | Wint Veg | 128 | 13 | 6.08 | 0.08 | 0.06 | 4 | 0.68 | 1.87 |
| | 121300-02-0010C | CT | Wint Wood | 117 | 14 | 5.69 | 0.19 | 0.12 | 4 | 0.47 | 2.42 |
| Hominy Creek: downstream | 121300-04-0010C | CIP | Sum Wood | 120 | 18 | 5.53 | 0.44 | 0.37 | 6 | 0.24 | 3.32 |
| | 121300-04-0010C | CIP | Wint Rif | 108 | 15 | 5.59 | 0.20 | 0.14 | 4 | 0.43 | 2.61 |
| | 121300-04-0010C | CIP | Wint Wood | 126 | 9 | 6.08 | 0.03 | 0.02 | 3 | 0.75 | 1.30 |
| Hominy Creek: upstream | 121300-04-0280G | CT | Sum Rif | 139 | 23 | 5.56 | 0.55 | 0.25 | 7 | 0.17 | 3.80 |
| | 121300-04-0280G | CT | Sum Veg | 104 | 24 | 5.56 | 0.33 | 0.19 | 9 | 0.26 | 3.64 |
| | 121300-04-0280G | CT | Sum Wood | 28 | 10 | 5.75 | 0.31 | 0.29 | 4 | 0.29 | 2.94 |
| | 121300-04-0280G | CT | Wint Rif | 113 | 22 | 5.50 | 0.45 | 0.21 | 8 | 0.30 | 3.49 |
| | 121300-04-0280G | CT | Wint Wood | 125 | 11 | 6.30 | 0.03 | 0.02 | 3 | 0.68 | 1.80 |
| Curl Creek | 121400-01-0270G | CIP | Sum Rif | 97 | 14 | 5.65 | 0.37 | 0.21 | 2 | 0.35 | 2.77 |
| | 121400-01-0270G | CIP | Wint Rif | 96 | 8 | 5.64 | 0.09 | 0.06 | 2 | 0.61 | 1.68 |
| Hogshooter Creek | 121400-01-0300D | CIP | Sum Rif | 102 | 11 | 5.27 | 0.15 | 0.08 | 3 | 0.58 | 2.11 |
| | 121400-01-0300D | CIP | Sum Wood | 92 | 11 | 6.53 | 0.09 | 0.08 | 4 | 0.50 | 2.27 |
| Little Caney River | 121400-02-0140H | CIP | Sum Rif | 96 | 17 | 5.27 | 0.76 | 0.40 | 6 | 0.29 | 3.33 |
| | 121400-02-0140H | CIP | Sum Veg | 99 | 20 | 4.54 | 0.89 | 0.75 | 7 | 0.66 | 2.28 |
| | 121400-02-0140H | CIP | Sum Wood | 112 | 15 | 6.05 | 0.26 | 0.22 | 5 | 0.39 | 2.74 |
| | 121400-02-0140H | CIP | Wint Rif | 95 | 20 | 4.86 | 0.46 | 0.21 | 5 | 0.20 | 3.65 |
| | 121400-02-0140H | CIP | Wint Wood | 126 | 15 | 5.86 | 0.14 | 0.13 | 6 | 0.44 | 2.80 |
| Mission Creek | 121400-02-0190B | CT | Wint Rif | 126 | 18 | 5.29 | 0.55 | 0.35 | 4 | 0.23 | 3.38 |
| | 121400-02-0190B | CT | Wint Wood | 110 | 9 | 7.11 | 0.00 | 0.00 | 0 | 0.51 | 2.09 |
| Buck Creek | 121400-03-0170C | CT | Sum Rif | 127 | 17 | 5.24 | 0.59 | 0.28 | 6 | 0.24 | 3.06 |
| | 121400-03-0170C | CT | Sum Wood | 124 | 16 | 5.69 | 0.36 | 0.23 | 6 | 0.33 | 3.03 |
| | 121400-03-0170C | CT | Wint Rif | 92 | 18 | 5.34 | 0.55 | 0.39 | 5 | 0.29 | 3.26 |
| Sand Creek | 121400-04-0010F | CT | Sum Rif | 127 | 15 | 5.43 | 0.44 | 0.13 | 5 | 0.38 | 2.91 |
| | 121400-04-0010F | CT | Sum Wood | 132 | 16 | 6.17 | 0.21 | 0.15 | 5 | 0.44 | 2.47 |
| | 121400-04-0010F | CT | Wint Rif | 134 | 18 | 5.07 | 0.24 | 0.04 | 4 | 0.39 | 2.89 |
| | 121400-04-0010F | CT | Wint Wood | 115 | 14 | 7.20 | 0.02 | 0.02 | 2 | 0.55 | 2.36 |
| Dog Creek | 121500-02-0360D | CIP | Sum Rif | 138 | 6 | 6.26 | 0.00 | 0.00 | 0 | 0.51 | 1.90 |
| | 121500-02-0360D | CIP | Wint Rif | 107 | 11 | 7.16 | 0.00 | 0.00 | 0 | 0.24 | 2.91 |
| Big Creek | 121510-03-0010D | CIP | Sum Veg | 96 | 12 | 5.88 | 0.08 | 0.04 | 3 | 0.31 | 2.66 |
| | 121510-03-0010D | CIP | Wint Veg | 116 | 12 | 6.67 | 0.21 | 0.10 | 2 | 0.38 | 2.51 |
| | 121510-03-0010D | CIP | Wint Wood | 105 | 13 | 6.82 | 0.16 | 0.09 | 5 | 0.44 | 2.25 |
| Ranger Creek | 121600-01-0060D | BM | Sum Rif | 144 | 23 | 5.39 | 0.54 | 0.33 | 8 | 0.25 | 3.51 |
| | 121600-01-0060D | BM | Wint Rif | 123 | 19 | 3.96 | 0.56 | 0.52 | 11 | 0.57 | 2.50 |
| | 121600-01-0060D | BM | Wint Veg | 83 | 16 | 6.77 | 0.48 | 0.17 | 8 | 0.60 | 2.25 |
| Fourteenmile Creek | 121600-01-0100G | OH | Sum Rif | 148 | 18 | 5.12 | 0.80 | 0.62 | 8 | 0.20 | 3.55 |
| | 121600-01-0100G | OH | Wint Rif | 103 | 17 | 4.63 | 0.58 | 0.52 | 11 | 0.33 | 3.20 |
| Saline Creek | 121600-02-0030D | OH | Sum Rif | 109 | 21 | 4.91 | 0.74 | 0.40 | 8 | 0.29 | 3.47 |
| | 121600-02-0030D | OH | Wint Rif | 100 | 18 | 4.79 | 0.68 | 0.53 | 9 | 0.23 | 3.30 |
| Drowning Creek | 121600-03-0090G | OH | Sum Rif | 103 | 11 | 6.94 | 0.89 | 0.23 | 4 | 0.52 | 2.19 |
| | 121600-03-0090G | OH | Wint Rif | 140 | 13 | 7.23 | 0.71 | 0.11 | 5 | 0.64 | 1.95 |
| Sycamore Creek | 121600-03-0510D | OH | Sum Rif | 124 | 23 | 5.10 | 0.79 | 0.49 | 11 | 0.27 | 3.66 |
| | 121600-03-0510D | OH | Wint Rif | 120 | 15 | 5.79 | 0.85 | 0.57 | 7 | 0.37 | 2.68 |

| Site Name | WBID | Ecoregion | Sample Description | Number of organisms | Number of taxa | Modified Hilsenhoff biotic index | EPT/EPT + Chironomidae | EPT/total | EPT taxa | Dominants/total | Shannon-Weaver diversity index |
|---------------------|-----------------|-----------|--------------------|---------------------|----------------|----------------------------------|------------------------|-----------|----------|-----------------|--------------------------------|
| Tar Creek | 121600-03-0510D | OH | Wint Veg | 102 | 13 | 5.72 | 0.58 | 0.14 | 8 | 0.37 | 2.29 |
| | 121600-04-0060D | CIP | Sum Rif | 136 | 12 | 5.24 | 0.01 | 0.00 | 1 | 0.57 | 2.08 |
| | 121600-04-0060D | CIP | Wint Rif | 115 | 7 | 5.22 | 0.00 | 0.00 | 0 | 0.81 | 1.10 |
| | 121600-04-0060D | CIP | Wint Veg | 39 | 6 | 5.14 | 0.00 | 0.00 | 0 | 0.51 | 1.79 |
| Little Cabin Creek | 121600-06-0080C | CIP | Sum Rif | 114 | 10 | 4.62 | 0.40 | 0.07 | 3 | 0.68 | 1.62 |
| | 121600-06-0080C | CIP | Wint Rif | 131 | 10 | 5.55 | 0.14 | 0.11 | 3 | 0.69 | 1.60 |
| Big Cabin Creek | 121600-06-0220I | CIP | Sum Rif | 129 | 15 | 4.52 | 0.58 | 0.15 | 6 | 0.37 | 2.81 |
| | 121600-06-0220I | CIP | Wint Rif | 138 | 17 | 5.65 | 0.12 | 0.09 | 4 | 0.58 | 2.37 |
| | 121600-06-0220I | CIP | Wint Veg | 130 | 16 | 6.89 | 0.08 | 0.03 | 3 | 0.32 | 2.69 |
| Fivemile Creek | 121600-07-0110G | OH | Sum Rif | 136 | 19 | 5.32 | 0.68 | 0.57 | 9 | 0.27 | 3.36 |
| | 121600-07-0110G | OH | Wint Rif | 124 | 18 | 5.49 | 0.85 | 0.47 | 9 | 0.36 | 2.99 |
| | 121600-07-0110G | OH | Wint Veg | 107 | 15 | 6.24 | 0.70 | 0.37 | 9 | 0.46 | 2.50 |
| Pryor Creek Hwy. 20 | 121610-00-0050D | CIP | Sum Rif | 140 | 9 | 5.79 | 0.08 | 0.06 | 2 | 0.31 | 2.45 |
| | 121610-00-0050D | CIP | Sum Wood | 138 | 9 | 5.50 | 0.10 | 0.05 | 2 | 0.46 | 2.19 |
| | 121610-00-0050D | CIP | Wint Rif | 117 | 13 | 6.56 | 0.02 | 0.01 | 1 | 0.57 | 2.11 |
| Pryor Creek Hwy. 69 | 121610-00-0050M | CIP | Sum Rif | 114 | 10 | 4.81 | 0.18 | 0.05 | 3 | 0.68 | 1.69 |
| | 121610-00-0050M | CIP | Sum Wood | 125 | 9 | 5.18 | 0.04 | 0.02 | 2 | 0.58 | 1.82 |
| | 121610-00-0050M | CIP | Wint Rif | 142 | 19 | 6.24 | 0.09 | 0.04 | 4 | 0.42 | 2.82 |
| Buggy Creek | 520610-02-0120C | CGP | Sum Veg | 131 | 18 | 6.50 | 0.41 | 0.36 | 6 | 0.48 | 2.70 |
| | 520610-02-0120C | CGP | Sum Wood | 141 | 11 | 7.31 | 0.12 | 0.11 | 4 | 0.78 | 1.39 |
| | 520610-02-0120C | CGP | Wint Veg | 93 | 12 | 6.23 | 0.05 | 0.04 | 1 | 0.68 | 1.78 |
| | 520610-02-0120C | CGP | Wint Wood | 114 | 10 | 6.03 | 0.13 | 0.12 | 2 | 0.69 | 1.54 |
| Walnut Creek | 520610-03-0010C | CGP | Sum Wood | 110 | 9 | 6.88 | 0.10 | 0.09 | 3 | 0.50 | 1.93 |
| | 520610-03-0010C | CGP | Wint Veg | 124 | 14 | 5.80 | 0.01 | 0.01 | 1 | 0.52 | 2.40 |
| | 520610-03-0010C | CGP | Wint Wood | 115 | 7 | 6.07 | 0.00 | 0.00 | 1 | 0.84 | 1.00 |
| Trail Creek | 520620-02-0090G | CGP | Sum Veg | 122 | 17 | 6.74 | 0.34 | 0.20 | 4 | 0.22 | 3.25 |
| | 520620-02-0090G | CGP | Sum Wood | 106 | 22 | 6.51 | 0.28 | 0.18 | 5 | 0.38 | 3.19 |
| | 520620-02-0090G | CGP | Wint Veg | 90 | 12 | 6.18 | 0.19 | 0.15 | 2 | 0.58 | 2.06 |
| | 520620-02-0090G | CGP | Wint Wood | 167 | 9 | 5.90 | 0.10 | 0.06 | 2 | 0.47 | 2.06 |
| Lone Creek | 520620-03-0020C | CGP | Sum Veg | 102 | 18 | 6.67 | 0.19 | 0.08 | 2 | 0.26 | 3.36 |
| | 520620-03-0020C | CGP | Wint Veg | 118 | 11 | 6.09 | 0.00 | 0.00 | 1 | 0.80 | 1.19 |
| Hackberry Creek | 520620-04-0050D | CGP | Sum Veg | 89 | 17 | 5.45 | 0.16 | 0.11 | 3 | 0.43 | 2.92 |
| | 520620-04-0050D | CGP | Sum Wood | 115 | 13 | 6.90 | 0.15 | 0.14 | 4 | 0.70 | 1.89 |
| | 520620-04-0050D | CGP | Wint Rif | 126 | 9 | 5.63 | 0.15 | 0.11 | 2 | 0.61 | 1.89 |
| | 520620-04-0050D | CGP | Wint Veg | 108 | 12 | 5.80 | 0.11 | 0.10 | 4 | 0.72 | 1.71 |
| | 520620-04-0050D | CGP | Wint Wood | 138 | 15 | 5.62 | 0.14 | 0.13 | 4 | 0.61 | 2.17 |
| Commission Creek | 520620-05-0160C | SWT | Sum Rif | 115 | 10 | 3.24 | 0.81 | 0.23 | 4 | 0.47 | 2.25 |
| | 520620-05-0160C | SWT | Sum Veg | 121 | 20 | 4.71 | 0.83 | 0.65 | 9 | 0.29 | 3.46 |
| | 520620-05-0160C | SWT | Sum Wood | 101 | 15 | 4.73 | 0.75 | 0.58 | 6 | 0.33 | 3.04 |
| | 520620-05-0160C | SWT | Wint Rif | 140 | 11 | 5.13 | 0.13 | 0.11 | 4 | 0.77 | 1.41 |
| | 520620-05-0160C | SWT | Wint Veg | 121 | 20 | 5.05 | 0.48 | 0.45 | 11 | 0.46 | 2.86 |
| Deer Creek | 520620-06-0010F | CGP | Sum Rif | 124 | 15 | 5.86 | 0.19 | 0.16 | 5 | 0.32 | 2.87 |
| | 520620-06-0010F | CGP | Sum Wood | 113 | 8 | 5.95 | 0.43 | 0.42 | 4 | 0.40 | 2.23 |
| | 520620-06-0010F | CGP | Wint Rif | 90 | 10 | 4.93 | 0.05 | 0.04 | 1 | 0.46 | 2.10 |
| | 520620-06-0010F | CGP | Wint Wood | 172 | 14 | 5.96 | 0.18 | 0.14 | 2 | 0.53 | 2.35 |

Table 17. Bioassessment of sites based on macroinvertebrates.

| Site Name | WBID | Ecoregion | Overall Biological Condition |
|--------------------------|-----------------|-----------|------------------------------|
| Delaware Creek | 121300-01-0150H | CIP | Non-impaired |
| Bird Creek | 121300-02-0010C | CT | Non-impaired |
| Hominy Creek: downstream | 121300-04-0010C | CIP | Non-impaired |
| Hominy Creek: upstream | 121300-04-0280G | CT | Non-impaired |
| Curl Creek | 121400-01-0270G | CIP | Non-impaired |
| Hogshooter Creek | 121400-01-0300D | CIP | Slightly impaired |
| Little Caney River | 121400-02-0140H | CIP | Non-impaired |
| Mission Creek | 121400-02-0190B | CT | Non-impaired |
| Buck Creek | 121400-03-0170C | CT | Non-impaired |
| Sand Creek | 121400-04-0010F | CT | Slightly impaired |
| Dog Creek | 121500-02-0360D | CIP | Moderately impaired |
| Big Creek | 121510-03-0010D | CIP | Slightly impaired |
| Ranger Creek | 121600-01-0060D | BM | Non-impaired |
| Fourteenmile Creek | 121600-01-0100G | OH | Non-impaired |
| Saline Creek | 121600-02-0030D | OH | Non-impaired |
| Drowning Creek | 121600-03-0090G | OH | Moderately impaired |
| Sycamore Creek | 121600-03-0510D | OH | Non-impaired |
| Tar Creek | 121600-04-0060D | CIP | Moderately impaired |
| Little Cabin Creek | 121600-06-0080C | CIP | Slightly impaired |
| Big Cabin Creek | 121600-06-0220I | CIP | Non-impaired |
| Fivemile Creek | 121600-07-0110G | OH | Non-impaired |
| Pryor Creek Hwy. 20 | 121610-00-0050D | CIP | Moderately impaired |
| Pryor Creek Hwy. 69 | 121610-00-0050M | CIP | Moderately impaired |
| Buggy Creek | 520610-02-0120C | CGP | Slightly impaired |
| Walnut Creek | 520610-03-0010C | CGP | Moderately impaired |
| Trail Creek | 520620-02-0090G | CGP | Non-impaired |
| Lone Creek | 520620-03-0020C | CGP | Slightly impaired |
| Hackberry Creek | 520620-04-0050D | CGP | Slightly impaired |
| Commission Creek | 520620-05-0160C | SWT | Non-impaired |
| Deer Creek | 520620-06-0010F | CGP | Slightly impaired |

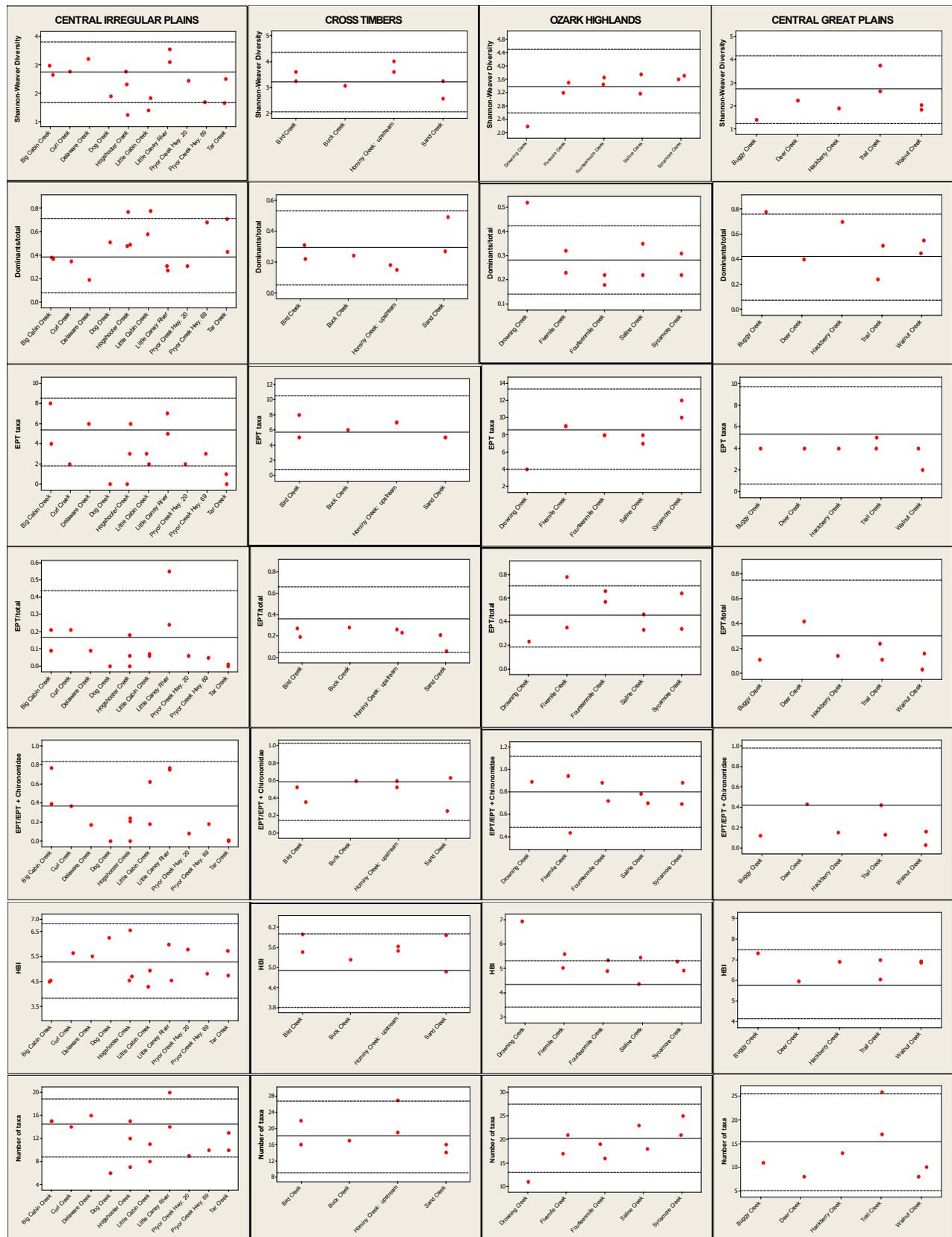


Figure 5. Macroinvertebrate metrics for summer riffle (CIP, CT, OH ecoregions) or summer woody (CGP ecoregion) collections for each site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations (if only one dashed line, the lower standard deviation was below zero).

Both Ranger Creek (Boston Mountains ecoregion) and Commission Creek (Southwestern Tablelands ecoregion) were comparable to the high quality sites in their respective ecoregions, so they are not presented in Figure 5. Both of these sites had an overall assessment of non-impaired.

In the Central Irregular Plains ecoregion, six out of the twelve sites were either slightly or moderately impaired relative to the high quality sites (Table 17). Delaware, Hominy (downstream), Curl, Little Caney, and Big Cabin Creeks were non-impaired. Both Dog Creek and Hogshooter Creek (one sample) had significantly low numbers of total taxa and EPT taxa, and Hogshooter also had a very low Shannon-Weaver diversity index (one sample) (Fig. 5). Little Cabin Creek similarly had one sample which fell below the high quality site range for total number of taxa and Shannon-Weaver diversity.

In the Cross Timbers ecoregion, only Sand Creek was classified as slightly impaired; the other sites were non-impaired (Table 17). All summer riffle data fell within the high quality range (Fig. 5). Drowning Creek, in the Ozark Highlands ecoregion, was classified as moderately impaired and had metric values outside of the high quality range for most parameters (Fig. 5). All other sites in this ecoregion were non-impaired relative to the high quality sites.

With the exception of Trail Creek, all of the Central Great Plains monitoring sites were either slightly or moderately impaired (Table 17), although none of the summer woody values were outside of the high quality site ranges (Fig. 5).

3.3 WATERSHED ASSESSMENT

Table 18 shows the landuse upstream of each monitoring site as obtained through GIS using the 1992 NRCS National Land Cover Dataset. There was little data on the Fivemile Creek (<10%) and Sycamore Creek (<50%) watersheds, but the other sites had almost complete GIS coverage. Saline Creek had the largest watershed, with 410359.98 acres, while Commission Creek had the smallest watershed, with 15534.32 acres. Both Hominy Creek (downstream) and Bird Creek had over 7600 oil and gas wells in the watershed. In contrast, Little Horse Creek had no wells, and Fourteenmile Creek had only one.

Ten sites had national pollution discharge elimination systems (NPDES) in the watershed. NPDES's are classified as either major or minor based upon their size and/or their potential to impact the receiving stream, with majors having larger effects than minors. Of the sites in this project, Dog Creek and Deer Creek each had one major NPDES, while the other sites only had minor NPDES (Table 18). To examine the effects of point source versus non-point source pollution on nutrient levels at the monitoring sites, one-way ANOVAs were performed comparing: 1) sites with a major NPDES to sites with minor NPDES and 2) sites with minor NPDES to sites with no NPDES. Table 19 presents the results of these analyses. Sites with a major NPDES had significantly higher values for all parameters examined as compared to sites with minor NPDES (as indicated by $p < 0.05$). Sites with only minor NPDES had significantly higher levels of total phosphorous, total orthophosphate, ammonia, and TKN than sites with no NPDES (as indicated by $p < 0.05$).

Biological data (fish, bugs, *Enterococcus* and *E. coli* bacteria) and habitat scores were compared as well. For all parameters, there were no significant differences between 1) sites with a major NPDES and sites with minor NPDES, 2) sites with minor NPDES and sites with no NPDES, or 3) sites with either major or minor NPDES (pooled) and sites with no NPDES.

Table 18. Watershed landuse for each Year 1 monitoring site.

| Site Name | Bare Rock/Sand/Clay | Commercial/Industrial/Transportation | Deciduous Forest | Emergent Herbaceous Wetlands | Evergreen Forest | Grasslands/Herbaceous | High Intensity Residential | Low Intensity Residential | Mixed Forest | Open Water | Pasture/Hay | Quarries/Strip Mines/Gravel Pits | Row Crops | Shrubland | Small Grains | Transitional | Urban/Recreational Grasses | Woody Wetlands | No Data | Total # Acres | # Oil and Gas | # CAFO | # NPDES | # Tot. Retention | # Active Municipal Landfills | # Land Apps. |
|------------------------|---------------------|--------------------------------------|------------------|------------------------------|------------------|-----------------------|----------------------------|---------------------------|--------------|------------|-------------|----------------------------------|-----------|-----------|--------------|--------------|----------------------------|----------------|---------|---------------|---------------|--------|---------|------------------|------------------------------|--------------|
| Big Cabin Creek | 0.10% | 0.33% | 6.43% | 0.26% | 0.14% | 25.64% | 0.24% | 0.15% | 0.16% | 1.00% | 53.83% | 0.27% | 9.47% | 0.14% | 0.17% | 0.01% | 0.05% | 1.63% | | 150288.65 | 630 | | | | | |
| Big Creek | <0.01% | 0.02% | 7.09% | 0.08% | 0.05% | 50.51% | <0.01% | <0.01% | 0.11% | 0.59% | 30.39% | 0.01% | 7.20% | 0.12% | 0.14% | <0.01% | | 1.02% | 2.66% | 95091.93 | 600 | | | | | |
| Bird Creek | 0.02% | 0.17% | 28.20% | 0.08% | 0.02% | 63.96% | 0.15% | 0.77% | 0.14% | 1.65% | 3.16% | <0.01% | 0.22% | 0.82% | 0.26% | 0.38% | <0.01% | <0.01% | | 236719.95 | 7694 | | 4 | | | |
| Buck Creek | | | 5.81% | 0.39% | 0.05% | 78.58% | | | 0.17% | 0.44% | 8.62% | | 0.57% | 5.15% | 0.03% | <0.01% | | 0.19% | <0.01% | 41101.33 | 488 | | | | | |
| Buggy Creek | 0.01% | 0.03% | 4.55% | | 5.58% | 48.72% | 0.02% | 0.42% | 0.45% | 0.61% | 9.24% | | 7.98% | 2.89% | 19.49% | | <0.01% | | | 60791.56 | 463 | 2 | 3 | | | |
| Bull Creek | | 0.42% | 3.64% | 0.49% | 0.95% | 4.68% | | 0.01% | 3.05% | 1.22% | 56.57% | | 22.02% | 0.18% | 6.57% | | | 0.19% | | 30202.22 | 406 | | | | | |
| California Creek | 0.03% | <0.01% | 3.70% | 0.07% | 0.01% | 52.96% | <0.01% | <0.01% | 0.04% | 0.65% | 39.52% | | 2.06% | 0.02% | 0.31% | 0.01% | <0.01% | 0.62% | | 37047.86 | 1853 | | | | | 1 |
| Chouteau Creek | 0.01% | 0.07% | 8.56% | 0.67% | 0.44% | 24.83% | | <0.01% | 2.33% | 1.40% | 45.29% | | 15.41% | 0.18% | 0.74% | | | 0.08% | | 25089.31 | 177 | | | | | |
| Commission Creek | 0.37% | | 0.02% | | <0.01% | 52.74% | | | 0.01% | 0.15% | 0.38% | | 8.80% | 31.95% | 5.58% | | | <0.01% | | 15534.32 | 42 | | | | | |
| Curl Creek | | 0.04% | 9.78% | 0.02% | 0.29% | 58.37% | | | 0.77% | 0.68% | 29.04% | | 0.02% | 0.42% | 0.53% | | | 0.06% | | 27038.72 | 1449 | | | | | |
| Deer Creek | 0.06% | 0.44% | 1.17% | | 1.13% | 20.41% | 0.52% | 0.66% | 0.26% | 0.18% | 6.46% | | 14.75% | 1.84% | 52.11% | | 0.01% | | | 202721.39 | 1396 | 2 | 3 | 4 | | 3 |
| Delaware Creek | <0.01% | 0.04% | 60.30% | | 0.15% | 22.27% | | 0.16% | 0.65% | 1.09% | 14.17% | | 0.15% | 0.62% | 0.09% | 0.28% | 0.02% | | | 28737.46 | 1353 | | | | | 2 |
| Dog Creek | 0.01% | 2.49% | 29.96% | 0.40% | 1.03% | 16.96% | 0.33% | 3.25% | 3.37% | 2.05% | 38.84% | 0.01% | 0.28% | 0.64% | 0.08% | | 0.06% | 0.24% | | 67267.45 | 729 | | 1 | 4 | | 1 |
| Drowning Creek | 0.01% | 0.59% | 45.61% | 0.03% | 0.02% | 0.00% | 0.57% | 1.93% | 0.37% | 0.04% | 41.57% | | 7.30% | 1.29% | 0.21% | 0.15% | 0.24% | 0.06% | | 16930.97 | 2 | | | | | |
| Fivemile Creek | 0.01% | 0.06% | 6.30% | 0.04% | <0.01% | <0.01% | <0.01% | | 0.01% | 0.01% | 2.26% | | 0.34% | 0.11% | <0.01% | 0.10% | <0.01% | 0.02% | 90.73% | 68989.85 | | | | | | |
| Fourteenmile Creek | <0.01% | 0.04% | 33.76% | 0.02% | 0.76% | <0.01% | <0.01% | <0.01% | 2.46% | 0.18% | 58.53% | | 2.86% | 1.06% | 0.24% | 0.02% | <0.01% | 0.05% | | 41726.22 | 1 | | | | | |
| Hackberry Creek | 0.18% | | 0.10% | | 0.59% | 77.89% | | | 0.25% | 0.16% | 0.41% | | 2.93% | 15.64% | 1.86% | | | | | 62110.27 | 195 | | | | | |
| Hogshooter Creek | <0.01% | 0.07% | 9.36% | 0.09% | 0.42% | 54.08% | <0.01% | 0.05% | 0.70% | 1.18% | 32.79% | 0.29% | 0.04% | 0.32% | 0.19% | <0.01% | 0.02% | 0.38% | | 27181.74 | 1555 | | | | | |
| Hominy Creek | <0.01% | 0.01% | 25.30% | 0.04% | 0.10% | 70.18% | | <0.01% | 0.10% | 0.30% | 2.45% | | 0.05% | 0.29% | 0.57% | 0.60% | | | | 45788.73 | 1907 | | | | | |
| Hominy Creek: downstrm | 0.01% | 0.18% | 34.18% | 0.02% | 0.28% | 48.20% | 0.04% | 0.39% | 0.31% | 5.45% | 7.53% | <0.01% | 0.31% | 0.55% | 0.47% | 2.07% | 0.01% | | | 219159.24 | 7939 | | 5 | | | 10 |
| Little Cabin Creek | <0.01% | 0.42% | 5.74% | 0.02% | 0.07% | 0.29% | 0.11% | 0.22% | 0.25% | 0.45% | 64.28% | 0.10% | 26.12% | 0.37% | 1.15% | 0.01% | 0.11% | 0.29% | | 86457.50 | 71 | 1 | 2 | | | |
| Little Caney River | 0.05% | 0.40% | 9.01% | 1.48% | 0.09% | 29.98% | 0.13% | 0.43% | 0.51% | 7.87% | 27.57% | | 6.25% | 0.28% | 0.46% | 0.01% | 0.19% | 1.41% | 13.90% | 71689.25 | 3232 | | 1 | | | 4 |
| Little Horse Creek | | 0.09% | 0.77% | 0.01% | 0.01% | | | | 0.12% | 0.06% | 86.17% | | 11.42% | 0.05% | 1.18% | | <0.01% | 0.11% | | 28243.92 | | | | | | |
| Lone Creek | 0.04% | | 0.01% | | 18.53% | 55.53% | | | 2.07% | 0.35% | 0.10% | | 0.38% | 18.53% | 4.45% | | | | | 17877.41 | 293 | | | | | |
| Mission Creek | <0.01% | 0.02% | 26.79% | 0.61% | 0.07% | 33.47% | 0.01% | 0.27% | 0.86% | 0.66% | 26.36% | | 2.54% | 4.55% | 0.12% | 2.84% | 0.39% | 0.45% | | 26639.04 | 637 | | | | | |
| Pryor Creek: Hwy 20 | <0.01% | 0.78% | 15.15% | 0.29% | 0.45% | 12.05% | 0.10% | 0.67% | 1.26% | 0.71% | 62.85% | 0.02% | 4.45% | 0.60% | 0.34% | 0.15% | 0.05% | 0.10% | | 127548.39 | 910 | | 2 | | | 1 |
| Pryor Creek: Hwy 69 | <0.01% | 1.54% | 20.36% | 0.45% | 1.07% | 19.77% | 0.42% | 2.72% | 2.24% | 0.70% | 45.78% | | 4.40% | 0.36% | 0.06% | | 0.02% | 0.11% | | 19906.01 | 226 | | | 3 | | |
| Ranger Creek | 0.02% | 0.25% | 26.02% | 0.02% | 1.20% | | 0.05% | 0.89% | 5.17% | 0.24% | 62.84% | | 1.99% | 0.59% | 0.26% | 0.05% | 0.18% | 0.22% | | 21532.10 | 7 | | | 1 | | |
| Saline Creek | 0.01% | 0.04% | 32.09% | <0.01% | 0.04% | <0.01% | <0.01% | 0.01% | 0.20% | 0.01% | 66.15% | <0.01% | 0.71% | 0.57% | 0.06% | 0.11% | <0.01% | <0.01% | | 410359.98 | 4 | 1 | | 1 | | |
| Sand Creek | 0.01% | 0.02% | 38.62% | 0.32% | 0.05% | 50.20% | 0.01% | 0.01% | 0.63% | 0.83% | 6.27% | 0.01% | 0.34% | 1.78% | 0.05% | 0.75% | <0.01% | 0.10% | | 145698.47 | 4159 | | | | 1 | |
| Sycamore Creek | <0.01% | 0.06% | 19.03% | <0.01% | 0.03% | | | | 0.24% | 0.07% | 26.40% | | 1.15% | 0.45% | 0.61% | <0.01% | | 0.05% | 51.91% | 29032.15 | | | | | | |
| Tar Creek | 7.23% | 2.75% | 6.18% | 1.65% | 0.04% | <0.01% | 5.15% | 3.22% | 0.11% | 1.78% | 29.55% | 0.02% | 19.31% | 0.11% | 0.06% | 0.01% | 1.65% | 0.58% | | 27500.71 | | | 4 | | | |
| Trail Creek | 0.03% | | 1.54% | | 9.33% | 50.67% | | | 1.49% | 0.23% | 1.20% | | 2.48% | 22.28% | 10.76% | | | | | 28782.02 | 436 | | | | | |
| Walnut Creek | 0.02% | 0.18% | 10.75% | 0.01% | 0.70% | 54.29% | 0.19% | 1.07% | 0.12% | 1.37% | 6.98% | | 4.24% | 4.51% | 15.58% | | 0.01% | | | 129578.42 | 1524 | 1 | 2 | 11 | | |

Table 19. Comparison of NPDES types on nutrient levels.

| Parameter | NPDES type | N | Mean | Standard Deviation | p value |
|--------------------------|------------|-----|-------|--------------------|-----------------|
| Total Nitrogen (soluble) | Major | 37 | 4.660 | 3.768 | ***0.000 |
| | Minor | 156 | 1.366 | 0.871 | |
| | Minor | 156 | 1.366 | 0.871 | 0.586 |
| | None | 470 | 1.287 | 1.746 | |
| Total Phosphorous | Major | 35 | 0.646 | 0.677 | ***0.000 |
| | Minor | 149 | 0.145 | 0.196 | |
| | Minor | 149 | 0.145 | 0.196 | ***0.006 |
| | None | 457 | 0.088 | 0.222 | |
| Ammonia | Major | 37 | 1.182 | 2.190 | ***0.000 |
| | Minor | 157 | 0.161 | 0.176 | |
| | Minor | 157 | 0.161 | 0.176 | ***0.000 |
| | None | 468 | 0.110 | 0.141 | |
| Available Nitrogen | Major | 37 | 3.909 | 3.411 | ***0.000 |
| | Minor | 157 | 0.915 | 0.655 | |
| | Minor | 157 | 0.915 | 0.655 | 0.944 |
| | None | 468 | 0.925 | 1.700 | |
| TKN | Major | 37 | 1.933 | 2.557 | ***0.000 |
| | Minor | 156 | 0.618 | 0.539 | |
| | Minor | 156 | 0.618 | 0.539 | ***0.001 |
| | None | 470 | 0.473 | 0.423 | |
| Nitrite | Major | 37 | 0.184 | 0.805 | ***0.023 |
| | Minor | 158 | 0.034 | 0.107 | |
| | Minor | 158 | 0.034 | 0.107 | 0.550 |
| | None | 472 | 0.058 | 0.503 | |
| Nitrate | Major | 37 | 2.543 | 2.246 | ***0.000 |
| | Minor | 158 | 0.724 | 0.576 | |
| | Minor | 158 | 0.724 | 0.576 | 0.802 |
| | None | 472 | 0.754 | 1.467 | |
| Total OrthoPhosphate | Major | 35 | 0.512 | 0.580 | ***0.000 |
| | Minor | 149 | 0.085 | 0.135 | |
| | Minor | 149 | 0.085 | 0.135 | ***0.023 |
| | None | 456 | 0.047 | 0.193 | |

3.4 BENEFICIAL USE SUPPORT ASSESSMENT

The beneficial uses assigned to the Rotating Basin Year 1 monitoring sites include fish and wildlife propagation (habitat limited, warm water, or cool water aquatic community), agricultural, primary body contact recreation, secondary body contact recreation, aesthetics, and public and private water supply. The beneficial uses assessed for the monitoring sites are presented below, along with the attainment status of each use. The causes and potential source(s) (if known) of any impairments are presented in Appendix E.1, and the key for the cause and source codes is given in Appendix E.2.

Table 20. Beneficial use support assessment. F=fully supporting, N=not supporting, I=insufficient information. *=attaining for all parameters assessed.

| Site Name | WBID | County | FISH AND WILDLIFE PROPAGATION - FINAL SUPPORT STATUS | PRIMARY BODY CONTACT RECREATION - FINAL SUPPORT STATUS | PUBLIC AND PRIVATE WATER SUPPLY - FINAL SUPPORT STATUS | AGRICULTURE - FINAL SUPPORT STATUS | AESTHETICS - FINAL SUPPORT STATUS | SECONDARY BODY CONTACT-FINAL SUPPORT STATUS |
|--------------------------|-------------------|------------|--|--|--|------------------------------------|-----------------------------------|---|
| Delaware Creek | OK121300-01-0150H | Tulsa | N | N | I* | N | F | |
| Bird Creek | OK121300-02-0010C | Osage | F | N | I* | F | F | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | N | N | I* | F | F | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | F | N | N | N | F | |
| Curl Creek | OK121400-01-0270G | Washington | N | N | | F | F | |
| Hogshooter Creek | OK121400-01-0300D | Washington | N | N | | F | F | |
| Little Caney River | OK121400-02-0140H | Osage | N | N | I* | F | F | |
| Mission Creek | OK121400-02-0190B | Osage | N | N | N | N | F | |
| Buck Creek | OK121400-03-0170C | Osage | F | N | N | F | F | |
| Sand Creek | OK121400-04-0010F | Osage | F | N | | N | N | |
| Bull Creek | OK121500-02-0090D | Wagoner | N | N | | N | N | |
| Dog Creek | OK121500-02-0360D | Rogers | N | N | N | N | N | |
| California Creek | OK121510-02-0050C | Nowata | N | N | N | I* | N | |
| Big Creek | OK121510-03-0010D | Nowata | F | N | | F | N | |
| Ranger Creek | OK121600-01-0060D | Cherokee | F | N | F | N | F | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | I | N | N | F | N | |
| Chouteau Creek | OK121600-01-0430M | Mayes | N | N | N | N | N | |
| Saline Creek | OK121600-02-0030D | Mayes | I | N | F | I* | F | |
| Drowning Creek | OK121600-03-0090G | Delaware | I | N | F | N | N | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | N | N | N | N | F | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | I | N | I* | F | N | |
| Tar Creek | OK121600-04-0060D | Ottawa | I | | | I* | F | N |
| Little Cabin Creek | OK121600-06-0080C | Craig | N | N | | N | N | |
| Big Cabin Creek | OK121600-06-0220I | Craig | N | | I | I | | I |
| Fivemile Creek | OK121600-07-0110G | Ottawa | I | I | F | I* | I* | |
| Pryor Creek | OK121610-00-0050 | Mayes | N | N | | N | N | |
| Buggy Creek | OK520610-02-0120C | Grady | N | N | | N | N | |
| Walnut Creek | OK520610-03-0010C | McClain | I | N | I* | F | N | |
| Trail Creek | OK520620-02-0090G | Dewey | N | N | N | N | N | |
| Lone Creek | OK520620-03-0020C | Dewey | F | N | N | I* | N | |
| Hackberry Creek | OK520620-04-0050D | Ellis | I | N | I* | | N | |
| Commission Creek | OK520620-05-0160C | Ellis | F | N | N | N | N | |
| Deer Creek | OK520620-06-0010F | Caddo | F | N | I* | N | N | |

For all assigned beneficial uses, Bull, Dog, Chouteau, Little Cabin, Pryor, Buggy, and Trail Creeks were non-supporting. No sites were fully supporting for all assigned uses, but Bird and Buck Creeks were fully supporting for 3 out of 5 assigned uses. No site was supporting for primary body contact recreation. *Enterococcus* and *E. coli* were the two most abundant impairments, listed as exceeding acceptable levels in 30 and 26 (respectively) of the 33 stream sites (Appendix E.1).

4.0 LITERATURE CITED

Gallant, A. L., T. R. Whittier, D. P. Larsen, J. M. Omernik, R. M. Hughes. 1989. Regionalization as a Tool for Managing Environmental Resources. EPA/600/3-89/060. U. S. Environmental Protection Agency, Corvallis, OR.

Minitab, Inc. 2003. *Minitab, Release 14* for Windows.

Oklahoma Conservation Commission, Water Quality Division. 2001. *Standard Operating Procedures*. Oklahoma Conservation Commission, Oklahoma City, Oklahoma.

Oklahoma Department of Environmental Quality. 2002. *Continuing Planning Process, Chapter 3: Integrated Water Quality Report Listing Methodology*, pages 168-196.

Oklahoma Water Resource Board. 2002. *Implementation of Oklahoma's Water Quality Standards, Chapter 46, Subchapter 15: Use Support Assessment Protocols (USAP)*. OAC 785:46-15.

Plafkin, J. L., M. T. Barbour, K. D. Porter, S. K. Gross, R. M. Hughes. 1989. Rapid Bioassessment Protocols for Use in Streams and Rivers. USEPA/444/4-89-001. U. S. E.P.A., Assessment and Watershed Protection Division, Washington, D. C.

USGS. 1992. National Land Coverage Dataset. <http://landcover.usgs.gov>.

Woods, A.J., Omernik, J.M., Butler, D.R., Ford, J.G., Henley, J.E., Hoagland, B.W., Arndt, D.S., and Moran, B.C. 2005. Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|--------------------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Delaware Creek | OK121300-01-0150H | Tulsa | 24240 | 17-Sep-01 | 0.02 | 84 | 889.0 | 22.7 | 5.10 | 60 | 26.60 | 7.25 | 0.247 | 0.55 | 0.01 | 0.586 | 0.807 | 1.146 | 0.005 | 0.047 | 164.80 | 15.90 | 233.00 | 468.5 | 16 | 4.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 24376 | 22-Oct-01 | 0.00 | 76 | 1124.0 | 19.8 | 3.65 | 40 | 11.00 | 7.03 | 0.231 | 0.62 | 0.01 | 0.637 | 0.861 | 1.267 | 0.005 | 0.045 | 302.30 | 12.40 | 273.80 | 664.0 | 10 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 24478 | 03-Dec-01 | 0.00 | 109 | 907.0 | 11.7 | 5.12 | 48 | 9.47 | 6.69 | 0.164 | 0.01 | 0.01 | 0.615 | 0.184 | 0.635 | 0.014 | 0.046 | 239.10 | 10.60 | 215.00 | 440.0 | 25 | 3.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 24673 | 07-Jan-02 | 0.23 | 93 | 1137.0 | 5.3 | 10.05 | 81 | 13.50 | 9.12 | 0.264 | 0.01 | 0.01 | 0.626 | 0.284 | 0.646 | 0.005 | 0.033 | 441.70 | 22.11 | 376.71 | 888.0 | 22 | 10.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 24816 | 11-Feb-02 | 2.26 | 37 | 318.3 | 4.4 | 10.44 | 82 | 37.40 | 8.03 | 0.077 | 0.94 | 0.01 | 0.541 | 1.027 | 1.491 | 0.016 | 0.062 | 89.30 | 24.01 | 104.80 | 289.0 | 17 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 24946 | 18-Mar-02 | 1.31 | 51 | 608.0 | 9.9 | 5.63 | 50 | 26.10 | 8.75 | 0.107 | 0.51 | 0.01 | 0.442 | 0.627 | 0.962 | 0.023 | 0.080 | 153.90 | 29.07 | 167.00 | 419.0 | 19 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25114 | 22-Apr-02 | 1.71 | 98 | 502.0 | 19.8 | 6.78 | 75 | 24.60 | 8.66 | 0.144 | 0.57 | 0.01 | 0.640 | 0.724 | 1.220 | 0.034 | 0.054 | 103.70 | 28.06 | 119.10 | 328.5 | 42 | 3.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25232 | 29-May-02 | 24.99 | 46 | 295.4 | 22.0 | 6.45 | 76 | 89.40 | 9.50 | 0.070 | 0.52 | 0.01 | 0.110 | 0.600 | 0.640 | 0.009 | 0.045 | 33.63 | 21.35 | 85.95 | 171.0 | 54 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25326 | 08-Jul-02 | 0.54 | 52 | 778.0 | 29.8 | 5.53 | 74 | 14.30 | 7.29 | 0.128 | 0.51 | 0.01 | 0.420 | 0.648 | 0.940 | 0.005 | 0.076 | 161.00 | 17.65 | 155.30 | 446.0 | 10 | 4.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25616 | 05-Aug-02 | 0.14 | 77 | 783.0 | 32.5 | 4.86 | 68 | 25.80 | 7.40 | 0.182 | 0.57 | 0.01 | 0.562 | 0.762 | 1.142 | 0.005 | 0.016 | 157.40 | 14.45 | 169.80 | 464.0 | 10 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25869 | 16-Sep-02 | 0.00 | | 467.3 | 21.6 | 4.22 | 48 | 23.30 | 7.02 | 0.220 | 0.54 | 0.01 | 0.573 | 0.770 | 1.123 | 0.020 | 0.025 | 72.10 | 8.15 | 132.60 | 218.0 | 11 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 25995 | 14-Oct-02 | 0.00 | 171 | 546.0 | 17.5 | 3.68 | 39 | 25.80 | 7.16 | 0.029 | 0.71 | 0.01 | 0.536 | 0.749 | 1.256 | 0.007 | 0.039 | 85.90 | 10.74 | 139.90 | 290.0 | 70 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 26132 | 18-Nov-02 | 0.00 | 74 | 607.0 | 15.2 | 2.40 | 24 | 16.50 | 8.92 | 0.023 | 0.30 | 0.01 | 0.549 | 0.333 | 0.859 | 0.057 | 0.138 | 84.16 | 15.21 | 165.90 | 335.0 | 10 | 5.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 26273 | 16-Dec-02 | 0.11 | 102 | 570.0 | 9.7 | 3.04 | 27 | 18.50 | 8.85 | 0.015 | 0.11 | 0.01 | 0.474 | 0.135 | 0.834 | 0.019 | 0.067 | 141.30 | 6.64 | 172.00 | 419.0 | 10 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 26650 | 27-Jan-03 | 0.00 | 103 | 2842.0 | 4.5 | 6.40 | 50 | 34.80 | 7.72 | 0.015 | 0.19 | 0.01 | 0.420 | 0.215 | 0.620 | 0.005 | 0.017 | 800.10 | 38.70 | 473.20 | 1619.0 | 76 | 3.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 27215 | 03-Mar-03 | 8.94 | 54 | 1855.0 | 5.5 | 12.18 | 98 | 26.40 | 7.73 | 0.015 | 0.32 | 0.01 | 0.110 | 0.345 | 0.440 | 0.005 | 0.005 | 467.00 | 47.30 | 292.40 | 921.0 | 10 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 27414 | 07-Apr-03 | 25.31 | 43 | 334.9 | 13.5 | 8.07 | 78 | 161.00 | 7.88 | 0.015 | 0.22 | 0.01 | 0.421 | 0.245 | 0.651 | 0.016 | 0.111 | 49.61 | 75.80 | 83.09 | 249.0 | 100 | 4.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 27560 | 12-May-03 | 0.42 | 56 | 799.0 | 21.8 | 4.83 | 55 | 33.10 | 7.69 | 0.093 | 0.36 | 0.02 | 0.809 | 0.473 | 1.189 | 0.031 | 0.091 | 177.60 | 24.70 | 164.60 | 489.0 | 66 | 2.0 |
| Delaware Creek | OK121300-01-0150H | Tulsa | 27748 | 16-Jun-03 | 6.98 | 59 | 537.0 | 25.4 | 4.08 | 51 | 80.40 | 7.83 | 0.044 | 0.21 | 0.01 | 0.550 | 0.264 | 0.770 | 0.026 | 0.136 | 97.20 | 23.30 | 122.20 | 327.0 | 62 | 2.3 |
| Bird Creek | OK121300-02-0010C | Osage | 23915 | 14-Aug-01 | 15.16 | 54 | 337.3 | 28.0 | 5.43 | 71 | 7.39 | 7.24 | 0.015 | 0.48 | 0.01 | 0.500 | 0.505 | 0.990 | 0.025 | 0.044 | 35.28 | 11.35 | 115.80 | 155.0 | 1 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24231 | 18-Sep-01 | 31.66 | 61 | 228.9 | 23.4 | 6.68 | 80 | 11.20 | 6.95 | 0.308 | 0.48 | 0.01 | 0.858 | 0.798 | 1.348 | 0.005 | 0.041 | 24.00 | 8.70 | 72.50 | 126.0 | 10 | 3.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24367 | 23-Oct-01 | 42.30 | 43 | 257.2 | 18.6 | 7.65 | 83 | 8.96 | 7.11 | 0.080 | 0.54 | 0.01 | 0.319 | 0.630 | 0.869 | 0.005 | 0.005 | 30.00 | 10.10 | 87.00 | 95.5 | 10 | 3.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24493 | 04-Dec-01 | 10.97 | 46 | 280.1 | 9.7 | 11.10 | 99 | 13.90 | 7.28 | 0.100 | 0.49 | 0.47 | 0.500 | 1.060 | 1.460 | 0.005 | 0.008 | 24.67 | 13.19 | 105.00 | 147.0 | 10 | 3.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24689 | 08-Jan-02 | 9.60 | 105 | 355.5 | 3.8 | 13.03 | 99 | 5.77 | 6.89 | 0.160 | 0.56 | 0.01 | 0.532 | 0.730 | 1.102 | 0.005 | 0.030 | 28.48 | 18.88 | 139.43 | 168.5 | 11 | 8.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24801 | 12-Feb-02 | 23.96 | 58 | 271.5 | 5.8 | 11.60 | 93 | 39.30 | 7.24 | 0.209 | 0.86 | 0.01 | 0.652 | 1.079 | 1.522 | 0.045 | 0.058 | 26.13 | 18.42 | 99.28 | 163.5 | 10 | 5.0 |
| Bird Creek | OK121300-02-0010C | Osage | 24937 | 19-Mar-02 | 11.98 | 48 | 334.0 | 10.9 | 10.18 | 93 | 11.00 | 7.44 | 0.174 | 0.66 | 0.01 | 0.539 | 0.844 | 1.209 | 0.005 | 0.038 | 37.22 | 19.54 | 123.70 | 179.0 | 10 | 3.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25105 | 23-Apr-02 | 8500.00 | 14 | 190.4 | 18.2 | 6.75 | 73 | 929.00 | 7.23 | 0.690 | 0.95 | 0.01 | 2.792 | 1.650 | 3.752 | 0.235 | 0.247 | 20.91 | 12.30 | 64.69 | 181.7 | 51 | 8.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25238 | 29-May-02 | 719.00 | 40 | 153.4 | 20.3 | 7.27 | 82 | 177.00 | 6.31 | 0.091 | 0.59 | 0.01 | 0.609 | 0.691 | 1.209 | 0.019 | 0.071 | 10.91 | 7.61 | 55.50 | 124.0 | 30 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25317 | 09-Jul-02 | 22.85 | 45 | 258.7 | 29.3 | 6.44 | 86 | 8.60 | 7.93 | 0.095 | 0.01 | 0.01 | 0.558 | 0.115 | 0.578 | 0.005 | 0.093 | 22.39 | 10.52 | 91.43 | 203.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25607 | 06-Aug-02 | 20.49 | 75 | 288.3 | 29.7 | 5.47 | 73 | 5.45 | 7.68 | 0.141 | 0.01 | 0.01 | 0.529 | 0.161 | 0.549 | 0.019 | 0.032 | 27.74 | 10.84 | 111.70 | 159.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25813 | 10-Sep-02 | 16.90 | 75 | 345.7 | 26.3 | 4.52 | 57 | 7.65 | 7.45 | 0.015 | 0.01 | 0.01 | 0.438 | 0.035 | 0.458 | 0.012 | 0.059 | 38.46 | 10.59 | 112.00 | 192.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 25984 | 15-Oct-02 | 15.89 | 57 | 239.2 | 15.2 | 8.20 | 83 | 9.23 | 7.50 | 0.015 | 0.59 | 0.01 | 0.362 | 0.615 | 0.962 | 0.005 | 0.024 | 21.78 | 9.72 | 80.43 | 144.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 26121 | 19-Nov-02 | 11.00 | 58 | 303.4 | 9.3 | 9.40 | 83 | 4.38 | 7.55 | 0.025 | 0.17 | 0.01 | 0.440 | 0.205 | 0.620 | 0.006 | 0.022 | 33.71 | 12.55 | 101.90 | 169.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 26264 | 17-Dec-02 | 16.28 | 86 | 360.8 | 6.9 | 11.25 | 93 | 5.84 | 7.19 | 0.015 | 0.07 | 0.01 | 0.110 | 0.095 | 0.190 | 0.005 | 0.024 | 42.54 | 13.30 | 114.60 | 201.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 27225 | 04-Mar-03 | 260.03 | 123 | 598.0 | 5.6 | 12.31 | 99 | 14.40 | 8.04 | 0.057 | 0.46 | 0.01 | 0.110 | 0.527 | 0.580 | 0.005 | 0.013 | 76.00 | 31.80 | 191.20 | 286.0 | 13 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 27424 | 08-Apr-03 | 204.15 | 105 | 374.7 | 12.9 | 9.12 | 87 | 15.80 | 7.85 | 0.015 | 0.15 | 0.01 | 0.150 | 0.175 | 0.310 | 0.005 | 0.039 | 28.41 | 19.25 | 141.10 | 240.0 | 20 | 3.2 |
| Bird Creek | OK121300-02-0010C | Osage | 27524 | 13-May-03 | 31.58 | 83 | 279.6 | 22.4 | 7.05 | 83 | 7.70 | 7.82 | 0.028 | 0.16 | 0.02 | 0.442 | 0.208 | 0.622 | 0.005 | 0.005 | 21.00 | 16.00 | 111.80 | 172.0 | 10 | 2.0 |
| Bird Creek | OK121300-02-0010C | Osage | 27724 | 17-Jun-03 | 48.53 | 68 | 248.3 | 26.3 | 6.41 | 81 | 48.30 | 7.84 | 0.039 | 0.25 | 0.01 | 0.496 | 0.299 | 0.756 | 0.012 | 0.091 | 13.90 | 10.00 | 96.60 | 159.0 | 16 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 23911 | 13-Aug-01 | 101.45 | 29 | 257.5 | 28.7 | 5.03 | 66 | 17.40 | 7.28 | 0.015 | 0.49 | 0.01 | 0.380 | 0.515 | 0.880 | 0.040 | 0.052 | 32.90 | 11.16 | 82.50 | 148.0 | 28 | 4.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24227 | 17-Sep-01 | 148.27 | 51 | 260.7 | 24.2 | 6.97 | 85 | 18.60 | 7.65 | 0.108 | 0.49 | 0.01 | 0.392 | 0.608 | 0.892 | 0.013 | 0.079 | 31.40 | 10.70 | 82.00 | 123.0 | 33 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24363 | 22-Oct-01 | 66.96 | 45 | 281.2 | 19.0 | 7.35 | 81 | 12.10 | 7.17 | 0.230 | 0.59 | 0.01 | 0.541 | 0.830 | 1.141 | 0.012 | 0.030 | 36.90 | 10.50 | 94.40 | 149.5 | 24 | 3.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24489 | 03-Dec-01 | 64.86 | 28 | 286.5 | 11.7 | 9.59 | 89 | 23.80 | 7.49 | 0.072 | 0.66 | 0.01 | 0.315 | 0.742 | 0.985 | 0.045 | 0.054 | 37.63 | 11.17 | 96.49 | 155.5 | 31 | 7.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24685 | 07-Jan-02 | 41.00 | 64 | 312.2 | 3.9 | 12.50 | 95 | 14.60 | 7.56 | 0.406 | 0.70 | 0.01 | 1.131 | 1.116 | 1.841 | 0.042 | 0.094 | 41.86 | 11.99 | 98.89 | 172.5 | 18 | 6.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24797 | 11-Feb-02 | 8.34 | 70 | 465.2 | 4.4 | 10.49 | 82 | 38.40 | 7.35 | 1.077 | 1.71 | 0.01 | | 2.797 | 1.720 | 0.184 | 0.283 | 66.10 | 30.14 | 143.40 | 272.5 | 31 | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 24933 | 18-Mar-02 | 41.14 | 40 | 317.6 | 8.5 | 10.97 | 95 | 11.50 | | | | | | | | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|--------------------------|-------------------|------------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 25313 | 08-Jul-02 | 151.82 | 37 | 275.3 | 27.8 | 6.15 | 79 | 22.90 | 9.17 | 0.133 | 0.52 | 0.01 | 0.485 | 0.663 | 1.015 | 0.022 | 0.094 | 33.72 | 11.94 | 86.96 | 145.0 | 10 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 25603 | 05-Aug-02 | 150.83 | 16 | 276.9 | 29.2 | 5.85 | 78 | 14.50 | 7.83 | 0.134 | 0.09 | 0.01 | 0.388 | 0.234 | 0.488 | 0.013 | 0.041 | 33.58 | 12.41 | 88.91 | 131.0 | 49 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 25809 | 09-Sep-02 | 170.73 | 55 | 278.0 | 26.3 | 6.52 | 82 | 20.20 | 7.79 | 0.163 | 0.46 | 0.01 | 0.364 | 0.633 | 0.834 | 0.012 | 0.024 | 33.12 | 11.36 | 86.98 | 147.0 | 46 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 25980 | 14-Oct-02 | 184.93 | 69 | 280.9 | 17.0 | 8.31 | 88 | 8.62 | 7.82 | 0.022 | 0.57 | 0.01 | 0.158 | 0.602 | 0.738 | 0.005 | 0.040 | 33.12 | 11.28 | 90.33 | 181.0 | 18 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 26117 | 18-Nov-02 | 65.44 | 64 | 305.8 | 11.4 | 9.28 | 86 | 10.70 | 7.63 | 0.025 | 0.21 | 0.01 | 0.147 | 0.245 | 0.367 | 0.030 | 0.030 | 38.97 | 12.63 | 96.77 | 195.0 | 10 | 4.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 26260 | 16-Dec-02 | 46.94 | 73 | 336.8 | 7.9 | 12.79 | 108 | 12.70 | 7.68 | 0.041 | 0.38 | 0.01 | 0.110 | 0.431 | 0.500 | 0.021 | 0.048 | 43.59 | 18.80 | 128.90 | 133.0 | 10 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 26664 | 27-Jan-03 | 52.87 | 66 | 334.8 | 2.3 | 10.19 | 75 | 11.50 | 8.24 | 0.153 | 0.43 | 0.01 | 0.160 | 0.593 | 0.600 | 0.026 | 0.783 | 43.10 | 13.90 | 104.40 | 171.0 | 27 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 27221 | 03-Mar-03 | 45.57 | 71 | 359.8 | 4.5 | 12.05 | 94 | 19.90 | 7.27 | 0.530 | 1.06 | 0.01 | 0.774 | 1.600 | 1.844 | | | 41.80 | 17.20 | 105.60 | 146.0 | 20 | 2.7 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 27420 | 07-Apr-03 | 73.37 | 66 | 319.0 | 10.5 | 9.41 | 85 | 18.30 | 7.20 | 0.031 | 0.25 | 0.01 | 0.294 | 0.291 | 0.554 | 0.020 | 0.055 | 38.10 | 14.04 | 96.38 | 179.0 | 32 | 7.1 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 27520 | 12-May-03 | 109.13 | 67 | 270.4 | 19.3 | 7.30 | 81 | 27.60 | 7.65 | 0.061 | 0.26 | 0.02 | 0.459 | 0.341 | 0.739 | | | 36.40 | 13.30 | 95.80 | 141.0 | 44 | 2.0 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 27720 | 16-Jun-03 | 97.52 | 54 | 304.6 | 24.4 | 6.20 | 75 | 33.20 | 7.46 | 0.053 | 0.19 | 0.01 | 0.444 | 0.253 | 0.644 | 0.045 | 0.105 | 37.80 | 13.80 | 94.40 | 137.0 | 55 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 23919 | 14-Aug-01 | 0.17 | 24 | 1844.0 | 31.1 | 7.18 | 100 | 4.98 | 7.13 | 0.015 | 0.48 | 0.01 | 0.400 | 0.505 | 0.890 | 0.014 | 0.033 | 542.90 | 12.71 | 379.90 | 1179.0 | 1 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24235 | 18-Sep-01 | 1.02 | 160 | 1888.0 | 24.6 | 8.92 | 109 | 4.14 | 7.41 | 0.128 | 0.48 | 0.01 | 0.252 | 0.618 | 0.742 | 0.005 | 0.020 | 602.60 | 11.40 | 440.20 | 1205.0 | 10 | 3.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24371 | 23-Oct-01 | 0.50 | 69 | 2213.0 | 21.4 | 8.30 | 96 | 2.50 | 7.61 | | 0.86 | 0.01 | 0.251 | 0.870 | 1.121 | 0.005 | 0.005 | 629.30 | 13.70 | 518.80 | 1217.5 | 10 | 3.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24497 | 04-Dec-01 | 0.98 | 71 | 1276.0 | 15.6 | 10.64 | 109 | 6.33 | 7.93 | | 0.01 | 0.01 | 0.116 | 0.020 | 0.136 | 0.010 | 0.030 | 324.60 | 22.38 | 329.00 | 723.0 | 10 | 3.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24693 | 08-Jan-02 | 1.53 | 139 | 1994.0 | 5.8 | 14.03 | 113 | 2.82 | 6.94 | 0.173 | 0.01 | 0.01 | 0.288 | 0.193 | 0.308 | 0.005 | 0.023 | 601.10 | 26.54 | 558.90 | 1182.5 | 11 | 7.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24805 | 12-Feb-02 | 3.16 | 98 | 1015.0 | 7.9 | 13.23 | 112 | 21.20 | 8.07 | 0.121 | 0.72 | 0.01 | 0.350 | 0.851 | 1.080 | 0.022 | 0.034 | 217.60 | 35.63 | 286.10 | 571.5 | 18 | 8.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 24941 | 19-Mar-02 | 6.67 | 91 | 1433.0 | 11.3 | 9.78 | 91 | 19.90 | 8.42 | 0.084 | 0.01 | 0.01 | 0.387 | 0.104 | 0.407 | 0.008 | 0.044 | 320.50 | 38.00 | 426.90 | 970.0 | 18 | 3.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25109 | 23-Apr-02 | 180.68 | 65 | 443.5 | 18.9 | 8.41 | 92 | 529.00 | 7.44 | 0.337 | 0.72 | 0.01 | 1.432 | 1.067 | 2.162 | 0.145 | 0.252 | 79.10 | 28.17 | 157.20 | 325.0 | 32 | 6.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25237 | 28-May-02 | 7.93 | 120 | 683.0 | 22.7 | 8.41 | 99 | 22.10 | 7.79 | 0.044 | 0.01 | 0.01 | 0.427 | 0.064 | 0.447 | 0.005 | 0.039 | 119.20 | 28.75 | 220.10 | 420.0 | 15 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25321 | 09-Jul-02 | 0.99 | 132 | 981.0 | 33.0 | 7.25 | 104 | 5.68 | 7.79 | 0.120 | 0.51 | 0.01 | 0.441 | 0.640 | 0.961 | 0.005 | 0.039 | 210.30 | 24.29 | 250.80 | 615.0 | 10 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25611 | 06-Aug-02 | 1.09 | 55 | 435.5 | 32.2 | 7.67 | 108 | 8.00 | 8.54 | 0.149 | 0.01 | 0.01 | 0.451 | 0.169 | 0.471 | 0.031 | 0.044 | 65.50 | 13.94 | 133.20 | 260.0 | 10 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25817 | 10-Sep-02 | 0.38 | 79 | 530.0 | 28.1 | 7.72 | 102 | 7.37 | 8.13 | 0.045 | 0.01 | 0.01 | 0.406 | 0.065 | 0.426 | 0.006 | 0.052 | 86.20 | 11.11 | 144.10 | 296.0 | 10 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 25988 | 15-Oct-02 | 0.73 | 89 | 1186.0 | 14.1 | 10.33 | 103 | 2.97 | 7.94 | 0.015 | 0.65 | 0.01 | 0.403 | 0.675 | 1.063 | 0.005 | 0.019 | 274.40 | 12.74 | 274.80 | 645.0 | 10 | 4.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 26125 | 19-Nov-02 | 1.16 | 119 | 1667.0 | 11.3 | 10.31 | 96 | 3.97 | 7.90 | 0.022 | 0.29 | 0.01 | 0.268 | 0.322 | 0.568 | 0.010 | 0.017 | 452.44 | 22.31 | 399.00 | 1004.0 | 10 | 3.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 26268 | 17-Dec-02 | 4.02 | 150 | 1464.0 | 8.6 | 12.61 | 110 | 6.06 | 8.10 | 0.015 | 0.20 | 0.01 | 0.256 | 0.225 | 0.466 | 0.005 | 0.024 | 300.40 | 36.90 | 355.40 | 797.0 | 10 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 26668 | 28-Jan-03 | 3.07 | 152 | 1271.0 | 3.6 | 12.35 | 95 | 8.62 | 8.28 | 0.015 | 0.09 | 0.01 | 0.318 | 0.115 | 0.418 | 0.005 | 0.010 | 220.20 | 44.20 | 326.70 | 558.0 | 10 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 27229 | 04-Mar-03 | 66.98 | 128 | 593.0 | 8.0 | 12.28 | 107 | 52.10 | 7.98 | 0.015 | 0.46 | 0.01 | 0.280 | 0.485 | 0.750 | 0.005 | 0.048 | 67.40 | 38.30 | 183.90 | 304.0 | 38 | 4.2 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 27428 | 08-Apr-03 | 22.90 | 179 | 836.0 | 10.9 | 10.85 | 99 | 20.20 | 8.16 | 0.015 | 0.01 | 0.02 | 0.342 | 0.045 | 0.372 | 0.005 | 0.061 | 95.33 | 47.99 | 256.00 | 436.0 | 12 | 3.7 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 27528 | 13-May-03 | 3.03 | 156 | 999.0 | 20.4 | 8.18 | 93 | 22.90 | 7.63 | 0.053 | 0.15 | 0.02 | 0.580 | 0.223 | 0.750 | 0.005 | 0.005 | 203.60 | 45.60 | 312.40 | 620.0 | 15 | 2.0 |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 27728 | 17-Jun-03 | 2.04 | 121 | 1022.0 | 30.2 | 7.99 | 109 | 12.70 | 8.01 | 0.025 | 0.04 | 0.01 | 0.611 | 0.075 | 0.661 | 0.005 | 0.058 | 191.00 | 24.50 | 245.30 | 561.0 | 12 | 2.2 |
| Curl Creek | OK121400-01-0270G | Washington | 23912 | 13-Aug-01 | 0.00 | 90 | 446.5 | 29.2 | 7.30 | 97 | 37.20 | 7.14 | 0.150 | 0.49 | 0.01 | 0.880 | 0.650 | 1.380 | 0.040 | 0.044 | 60.66 | 18.00 | 137.70 | 2.6 | 34 | 3.0 |
| Curl Creek | OK121400-01-0270G | Washington | 24228 | 17-Sep-01 | 0.00 | 105 | 451.0 | 21.9 | 4.24 | 49 | 43.50 | 7.52 | 0.202 | 0.49 | 0.01 | 1.005 | 0.702 | 1.505 | 0.019 | 0.105 | 60.00 | 13.70 | 156.90 | 241.0 | 19 | 2.0 |
| Curl Creek | OK121400-01-0270G | Washington | 24364 | 22-Oct-01 | 0.00 | 99 | 448.8 | 17.3 | 2.85 | 30 | 29.90 | 7.14 | 0.283 | 0.60 | 0.01 | 0.696 | 0.893 | 1.306 | 0.005 | 0.061 | 54.50 | 14.70 | 150.80 | 175.5 | 23 | 3.0 |
| Curl Creek | OK121400-01-0270G | Washington | 24490 | 03-Dec-01 | 0.00 | 75 | 458.5 | 8.7 | 6.55 | 57 | 10.40 | 7.04 | 0.196 | 0.01 | 0.01 | 0.654 | 0.216 | 0.674 | 0.019 | 0.063 | 46.28 | 16.84 | 144.62 | 227.0 | 12 | 4.0 |
| Curl Creek | OK121400-01-0270G | Washington | 24686 | 07-Jan-02 | 0.00 | 141 | 500.0 | 2.8 | 7.12 | 53 | 22.50 | 7.39 | 0.338 | 0.61 | 0.01 | 0.883 | 0.958 | 1.503 | 0.021 | 0.112 | 39.12 | 28.71 | 156.69 | 268.0 | 31 | 8.0 |
| Curl Creek | OK121400-01-0270G | Washington | 24798 | 11-Feb-02 | 1.10 | 33 | 217.3 | 4.4 | 11.28 | 88 | 51.10 | 7.20 | 0.178 | 0.87 | 0.33 | 0.742 | 1.378 | 1.942 | 0.053 | 0.095 | 20.90 | 24.58 | 72.30 | 155.0 | 25 | |
| Curl Creek | OK121400-01-0270G | Washington | 24934 | 18-Mar-02 | 0.03 | 37 | 334.1 | 10.8 | 9.93 | 90 | 13.60 | 7.05 | 0.158 | 0.01 | 0.13 | 0.522 | 0.298 | 0.662 | 0.050 | 0.058 | 27.22 | 43.28 | 131.30 | 185.5 | 10 | 4.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25102 | 22-Apr-02 | 10.17 | 32 | 389.4 | 17.5 | 6.56 | 70 | 55.90 | 7.60 | 0.380 | 0.61 | 0.01 | 1.220 | 1.000 | 1.840 | 0.046 | 0.049 | 46.34 | 46.99 | 116.80 | 241.5 | 24 | 8.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25233 | 28-May-02 | 15.85 | 70 | 365.3 | 21.3 | 6.35 | 73 | 45.00 | 7.50 | | 0.53 | 0.08 | | 0.610 | 0.610 | 0.005 | 0.056 | 33.71 | 40.32 | 118.10 | 217.0 | 46 | 3.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25314 | 08-Jul-02 | 0.03 | 98 | 374.2 | 31.3 | 8.54 | 118 | 43.30 | 9.35 | 0.179 | 0.01 | 0.01 | 0.823 | 0.199 | 0.843 | 0.005 | 0.160 | 35.40 | 24.47 | 116.50 | 208.0 | 10 | 2.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25604 | 05-Aug-02 | 0.00 | 73 | 233.5 | 28.2 | 6.05 | 79 | 72.90 | 7.89 | 0.236 | 0.01 | 0.01 | 1.151 | 0.256 | 1.171 | 0.025 | 0.138 | 16.94 | 9.58 | 78.72 | 162.0 | 10 | 7.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25810 | 09-Sep-02 | 0.00 | 90 | 310.0 | 25.1 | 8.48 | 105 | 19.40 | 8.36 | 0.037 | 0.01 | 0.01 | 0.881 | 0.057 | 0.901 | 0.036 | 0.128 | 21.35 | 10.31 | 94.17 | 168.0 | 11 | 4.0 |
| Curl Creek | OK121400-01-0270G | Washington | 25981 | 14-Oct-02 | 0.00 | 81 | 262.3 | 12.3 | 6.37 | 61 | 35.60 | 6.86 | 0.016 | 0.76 | 0.01 | 0.553 | 0.786 | 1.323 | 0.008 | 0.057 | 15.93 | 8.91 | 92.54 | 172.0 | 32 | 3.0 |
| Curl Creek | OK121400-01-0270G | Washington | 26118 | 18-Nov-02 | 0.00 | 148 | 492.2 | 11 | | | | | | | | | | | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|--------------------|-------------------|------------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|--------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|------------|
| Curl Creek | OK121400-01-0270G | Washington | 27222 | 03-Mar-03 | 6.61 | 59 | 800.0 | 3.9 | 11.24 | 86 | 45.80 | 7.09 | 0.015 | 0.53 | 0.01 | 0.419 | 0.555 | 0.959 | 0.042 | 0.063 | 137.60 | 80.20 | 204.60 | 428.0 | 40 | 3.8 |
| Curl Creek | OK121400-01-0270G | Washington | 27421 | 07-Apr-03 | 7.30 | 76 | 451.5 | 11.7 | 8.50 | 79 | 25.80 | 7.33 | 0.015 | 0.12 | 0.01 | 0.514 | 0.145 | 0.644 | 0.006 | 0.074 | 39.58 | 29.30 | 145.30 | 308.0 | 31 | 4.7 |
| Curl Creek | OK121400-01-0270G | Washington | 27521 | 12-May-03 | 0.01 | 109 | 481.0 | 18.8 | 5.91 | 64 | 52.50 | 7.33 | 0.389 | 0.31 | 0.02 | 0.646 | 0.719 | 0.976 | 0.026 | 0.070 | 60.00 | 36.30 | 160.10 | 272.0 | 49 | 5.7 |
| Curl Creek | OK121400-01-0270G | Washington | 27721 | 16-Jun-03 | | 83 | 269.3 | 25.7 | 6.17 | 77 | 74.10 | 7.15 | 0.018 | 0.30 | 0.01 | 0.110 | 0.328 | 0.420 | 0.037 | 0.156 | 15.10 | 27.60 | 96.20 | 152.0 | 50 | 4.5 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 23913 | 13-Aug-01 | 0.00 | 126 | 543.0 | 22.9 | 0.65 | 8 | 4.34 | 6.56 | 0.015 | 0.50 | 0.43 | 0.330 | 0.945 | 1.260 | 0.029 | 0.200 | 53.98 | 25.34 | 219.40 | 329.0 | 5 | 3.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 24229 | 17-Sep-01 | 0.00 | 128 | 467.9 | 21.2 | 3.11 | 36 | 525.00 | 7.40 | 0.913 | 0.73 | 0.01 | 2.815 | 1.653 | 3.555 | 0.205 | 0.492 | 35.30 | 14.60 | 189.20 | 159.0 | 79 | 6.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 24365 | 22-Oct-01 | 0.00 | 127 | 506.0 | 15.1 | 3.85 | 39 | 4.69 | 7.35 | 0.281 | 0.50 | 0.73 | 0.382 | 1.511 | 1.612 | 0.005 | 0.027 | 53.60 | 17.10 | 193.80 | 235.0 | 10 | 3.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 24491 | 03-Dec-01 | 0.00 | 127 | 516.0 | 9.0 | 2.46 | 22 | 2.16 | 7.04 | 0.269 | 0.01 | 0.01 | 0.421 | 0.289 | 0.441 | 0.050 | 0.088 | 42.76 | 8.53 | 196.90 | 276.5 | 10 | 4.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 24799 | 11-Feb-02 | 4.60 | 130 | 377.2 | 4.3 | 11.84 | 93 | 7.76 | 7.96 | 0.019 | 1.04 | 0.01 | 0.303 | 1.069 | 1.353 | 0.033 | 0.045 | 28.92 | 32.62 | 190.60 | 233.0 | 13 | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 24935 | 18-Mar-02 | 1.81 | 124 | 538.0 | 9.9 | 10.58 | 94 | 4.86 | 7.63 | 0.076 | 0.01 | 0.01 | 0.287 | 0.096 | 0.307 | 0.014 | 0.023 | 44.82 | 38.93 | 237.10 | 310.5 | 10 | 3.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25103 | 22-Apr-02 | 106.51 | 99 | 460.3 | 19.3 | 7.61 | 84 | 9.84 | 8.09 | 0.129 | 0.01 | 0.01 | 0.617 | 0.149 | 0.637 | 0.026 | 0.045 | 35.34 | 35.28 | 178.70 | 264.0 | 14 | 7.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25234 | 28-May-02 | 11.55 | 145 | 427.3 | 19.8 | 7.15 | 79 | 25.70 | 7.64 | 0.068 | 0.53 | 0.08 | 0.110 | 0.678 | 0.720 | 0.005 | 0.062 | 23.46 | 23.74 | 181.20 | 247.0 | 47 | 3.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25315 | 08-Jul-02 | 0.66 | 160 | 483.0 | 26.4 | 6.50 | 82 | 5.31 | 9.11 | 0.087 | 0.58 | 0.01 | 0.461 | 0.677 | 1.051 | 0.005 | 0.068 | 33.95 | 19.70 | 195.50 | 268.0 | 10 | 2.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25605 | 05-Aug-02 | 0.13 | 84 | 315.0 | 26.7 | 6.26 | 79 | 8.69 | 7.89 | 0.119 | 0.66 | 0.01 | 0.446 | 0.789 | 1.116 | 0.044 | 0.062 | 12.14 | 13.95 | 135.80 | 166.0 | 10 | 2.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25811 | 09-Sep-02 | 0.00 | 126 | 358.8 | 22.7 | 1.85 | 22 | 22.00 | 7.23 | 0.248 | 0.48 | 0.01 | 0.587 | 0.738 | 1.077 | 0.035 | 0.124 | 12.57 | 8.57 | 150.40 | 194.0 | 26 | 2.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 25982 | 14-Oct-02 | 0.00 | 125 | 323.8 | 13.1 | 4.02 | 39 | 16.90 | 7.08 | 0.015 | 0.69 | 0.01 | 0.310 | 0.715 | 1.010 | 0.005 | 0.038 | 10.93 | 9.62 | 134.70 | 188.0 | 16 | 2.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 26119 | 18-Nov-02 | | 124 | 350.3 | 10.3 | 0.70 | 6 | 19.90 | 6.87 | 0.015 | 0.23 | 0.01 | 0.371 | 0.255 | 0.611 | 0.081 | 0.136 | 12.96 | 11.03 | 146.00 | 208.0 | 26 | 7.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 26262 | 16-Dec-02 | 0.00 | 140 | 352.3 | 7.0 | 2.57 | 22 | 12.20 | 6.99 | 0.015 | 0.06 | 0.01 | 0.110 | 0.085 | 0.180 | 0.040 | 0.097 | 12.56 | 7.70 | 146.10 | 146.0 | 10 | 4.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 27223 | 03-Mar-03 | 5.99 | 148 | 629.0 | 5.1 | 11.24 | 90 | 6.12 | 7.63 | 0.015 | 0.40 | 0.01 | 0.186 | 0.425 | 0.596 | 0.007 | 0.038 | 81.30 | 15.20 | 197.80 | 296.0 | 10 | 3.6 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 27422 | 07-Apr-03 | 234.99 | 135 | 529.0 | 12.5 | 8.90 | 85 | 10.50 | 7.78 | 0.015 | 0.09 | 0.01 | 0.226 | 0.115 | 0.326 | 0.006 | 0.044 | 45.92 | 29.34 | 200.90 | 327.0 | 21 | 3.7 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 27522 | 12-May-03 | 1.78 | 188 | 559.0 | 18.3 | 7.83 | 85 | 4.66 | 7.82 | 0.038 | 0.11 | 0.02 | 0.433 | 0.168 | 0.563 | 0.005 | 0.005 | 66.20 | 25.30 | 228.30 | 337.0 | 10 | 2.0 |
| Hogshooter Creek | OK121400-01-0300D | Washington | 27722 | 16-Jun-03 | 3.28 | 132 | 450.9 | 23.8 | 6.97 | 83 | 13.70 | 7.57 | 0.025 | 0.17 | 0.05 | 0.625 | 0.245 | 0.845 | 0.024 | 0.076 | 38.60 | 20.50 | 171.30 | 240.0 | 10 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 23914 | 13-Aug-01 | 13.74 | 69 | 338.4 | 30.2 | 6.95 | 94 | 83.60 | 7.36 | 0.015 | 0.55 | 0.01 | 0.550 | 0.575 | 1.110 | | | 22.20 | 16.74 | 133.40 | 149.0 | 1 | 3.0 |
| Little Caney River | OK121400-02-0140H | Osage | 24230 | 17-Sep-01 | 11.92 | 90 | 354.5 | 23.9 | 5.95 | 71 | 109.00 | 7.68 | 0.242 | 0.64 | 0.01 | 0.623 | 0.892 | 1.273 | 0.067 | 0.125 | 24.10 | 16.80 | 148.90 | 214.5 | 65 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 24366 | 22-Oct-01 | 9.33 | 82 | 342.7 | 20.5 | 7.70 | 87 | 98.70 | 8.04 | 0.187 | 0.58 | 0.01 | 0.527 | 0.777 | 1.117 | 0.042 | 0.071 | 25.50 | 17.20 | 143.00 | 164.5 | 73 | 5.0 |
| Little Caney River | OK121400-02-0140H | Osage | 24492 | 03-Dec-01 | 3.03 | 80 | 356.2 | 9.9 | 10.95 | 97 | 60.90 | 8.00 | 0.110 | 0.56 | 0.01 | 0.507 | 0.680 | 1.077 | 0.041 | 0.058 | 34.45 | 18.17 | 154.30 | 208.5 | 46 | 3.0 |
| Little Caney River | OK121400-02-0140H | Osage | 24688 | 07-Jan-02 | 0.83 | 108 | 391.4 | 2.9 | 13.66 | 101 | 15.90 | 7.85 | 0.146 | 0.52 | 0.01 | 0.637 | 0.676 | 1.167 | 0.005 | 0.062 | 41.39 | 17.70 | 149.84 | 225.5 | 15 | 7.0 |
| Little Caney River | OK121400-02-0140H | Osage | 24800 | 11-Feb-02 | 1.70 | 110 | 415.9 | 6.4 | 11.76 | 97 | 30.60 | 7.78 | 0.129 | 0.47 | 0.36 | 0.578 | 0.959 | 1.408 | 0.030 | 0.065 | 44.25 | 19.49 | 164.50 | 228.5 | 29 | |
| Little Caney River | OK121400-02-0140H | Osage | 24936 | 18-Mar-02 | 3.37 | 88 | 383.4 | 9.8 | 10.32 | 92 | 43.80 | 7.24 | 0.248 | 0.57 | 0.01 | 0.753 | 0.828 | 1.333 | 0.033 | 0.062 | 33.73 | 18.62 | 163.60 | 220.0 | 35 | 3.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25104 | 22-Apr-02 | 5.34 | 82 | 379.4 | 20.8 | 7.45 | 84 | 193.00 | 7.93 | 0.129 | 0.66 | 0.01 | 1.548 | 0.799 | 2.218 | 0.086 | 0.104 | 31.55 | 19.60 | 139.90 | 234.9 | 72 | 5.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25240 | 29-May-02 | 1170.00 | 61 | 204.4 | 20.9 | 8.45 | 95 | 117.00 | 6.48 | 0.080 | 0.87 | 0.01 | 0.473 | 0.960 | 1.353 | 0.042 | 0.065 | 11.82 | 9.49 | 78.12 | 224.0 | 23 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25316 | 08-Jul-02 | 91.92 | 122 | 223.3 | 27.5 | 6.55 | 84 | 99.80 | 9.14 | 0.159 | 0.75 | 0.01 | 0.670 | 0.919 | 1.430 | 0.062 | 0.134 | 9.77 | 8.67 | 90.73 | 121.0 | 27 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25606 | 05-Aug-02 | 17.32 | 93 | 239.3 | 29.0 | 6.18 | 83 | 92.70 | 7.99 | 0.196 | 0.72 | 0.01 | 0.707 | 0.926 | 1.437 | 0.046 | 0.097 | 10.95 | 8.64 | 106.10 | 157.0 | 41 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25812 | 09-Sep-02 | 16.64 | 92 | 264.2 | 26.0 | 6.80 | 86 | 71.00 | 7.82 | 0.048 | 0.56 | 0.01 | 0.580 | 0.618 | 1.150 | 0.036 | 0.115 | 10.82 | 8.52 | 109.70 | 162.0 | 69 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 25983 | 14-Oct-02 | 4.48 | 97 | 276.8 | 14.5 | 10.31 | 103 | 46.40 | 7.52 | 0.015 | 0.56 | 0.01 | 0.236 | 0.585 | 0.806 | 0.021 | 0.057 | 14.90 | 9.05 | 115.30 | 183.0 | 40 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 26120 | 18-Nov-02 | 4.78 | 90 | 272.1 | 11.0 | 10.61 | 99 | 28.10 | 8.03 | 0.026 | 0.08 | 0.01 | 0.256 | 0.116 | 0.346 | 0.027 | 0.049 | 16.97 | 10.37 | 111.90 | 168.0 | 14 | 4.0 |
| Little Caney River | OK121400-02-0140H | Osage | 26263 | 16-Dec-02 | 11.42 | 106 | 365.3 | 8.9 | 9.80 | 85 | 30.30 | 7.37 | 0.015 | 0.10 | 0.01 | 0.110 | 0.125 | 0.220 | 0.005 | 0.033 | 36.17 | 11.50 | 133.50 | 209.0 | 14 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 26671 | 28-Jan-03 | 3.11 | 99 | 298.0 | 4.5 | 11.61 | 91 | 23.10 | 8.02 | 0.015 | 0.14 | 0.01 | 0.110 | 0.165 | 0.260 | 0.005 | 0.028 | 18.90 | 10.60 | 120.10 | 181.0 | 41 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 27224 | 03-Mar-03 | 2.32 | 90 | 730.0 | 6.9 | 11.34 | 94 | 100.70 | 7.27 | 0.015 | 1.07 | 0.01 | 0.172 | 1.095 | 1.252 | 0.086 | 0.119 | 133.50 | 26.00 | 160.40 | 442.0 | 46 | 3.0 |
| Little Caney River | OK121400-02-0140H | Osage | 27423 | 07-Apr-03 | 142.11 | 84 | 284.1 | 14.4 | 10.45 | 104 | 46.60 | 8.09 | 0.015 | 0.16 | 0.01 | 0.566 | 0.185 | 0.736 | 0.012 | 0.081 | 18.42 | 115.80 | 126.60 | 177.0 | 44 | 4.7 |
| Little Caney River | OK121400-02-0140H | Osage | 27523 | 12-May-03 | 46.23 | 111 | 270.6 | 21.6 | 7.72 | 89 | 89.40 | 7.81 | 0.065 | 0.27 | 0.02 | 0.445 | 0.355 | 0.735 | 0.038 | 0.045 | 17.60 | 13.40 | 119.40 | 190.0 | 43 | 2.0 |
| Little Caney River | OK121400-02-0140H | Osage | 27723 | 16-Jun-03 | | 68 | 188.6 | 26.4 | 7.81 | 99 | 60.00 | 7.64 | 0.020 | 0.33 | 0.01 | 0.585 | 0.360 | 0.925 | 0.035 | 0.115 | 7.70 | 6.40 | 79.10 | 135.0 | 22 | 3.0 |
| Mission Creek | OK121400-02-0190B | Osage | 23917 | 14-Aug-01 | 1.24 | 22 | 144.0 | 27.4 | 6.02 | 78 | 28.40 | 6.60 | 0.260 | 0.49 | 0.01 | 1.130 | 0.760 | 1.630 | 0.041 | 0.231 | 4.76 | 7.34 | 54.80 | 71.0 | 31 | 4.0 |
| Mission Creek | OK121400-02-0190B | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|---------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Mission Creek | OK121400-02-0190B | Osage | 24803 | 12-Feb-02 | 0.05 | 90 | 250.2 | 10.1 | 11.53 | 105 | 20.80 | 7.71 | 0.170 | 0.01 | 0.33 | 0.669 | 0.510 | 1.009 | 0.047 | 0.066 | 9.17 | 12.54 | 110.90 | 139.0 | 10 | 6.0 |
| Mission Creek | OK121400-02-0190B | Osage | 24939 | 19-Mar-02 | 0.20 | 93 | 327.1 | 10.9 | 7.08 | 64 | 10.80 | 7.93 | 0.125 | 0.01 | 0.01 | 0.721 | 0.145 | 0.741 | 0.010 | 0.033 | 11.68 | 15.67 | 154.20 | 178.0 | 10 | 4.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25107 | 23-Apr-02 | 0.02 | 93 | 324.1 | 23.4 | 8.86 | 106 | 15.00 | 7.86 | 0.182 | 0.54 | 0.01 | 0.674 | 0.732 | 1.224 | 0.016 | 0.041 | 13.83 | 15.77 | 137.50 | 198.5 | 14 | 5.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25235 | 28-May-02 | 37.82 | 44 | 173.1 | 21.8 | 5.30 | 61 | 50.80 | 6.79 | 0.137 | 0.75 | 0.01 | 0.218 | 0.897 | 0.978 | 0.005 | 0.069 | 7.81 | 14.66 | 64.92 | 127.0 | 22 | 2.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25319 | 09-Jul-02 | 0.00 | 131 | 310.5 | 31.8 | 6.78 | 94 | 6.97 | 7.99 | 0.267 | 0.52 | 0.01 | 0.870 | 0.797 | 1.400 | 0.005 | 0.077 | 12.02 | 10.71 | 127.70 | 205.0 | 10 | 2.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25609 | 06-Aug-02 | 0.05 | 41 | 158.8 | 29.7 | 5.72 | 77 | 5.09 | 7.29 | 0.360 | 0.58 | 0.14 | 1.515 | 1.080 | 2.235 | 0.056 | 0.115 | 7.59 | 6.57 | 63.04 | 107.0 | 10 | 7.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25815 | 10-Sep-02 | 0.00 | 63 | 236.0 | 24.5 | 4.50 | 55 | 27.20 | 7.37 | 0.015 | 0.47 | 0.01 | 1.074 | 0.495 | 1.554 | 0.044 | 0.109 | 5.43 | 8.24 | 97.61 | 140.0 | 41 | 4.0 |
| Mission Creek | OK121400-02-0190B | Osage | 25986 | 15-Oct-02 | 0.00 | 99 | 240.6 | 12.8 | 7.58 | 72 | 15.70 | 6.93 | 0.018 | 0.80 | 0.01 | 0.483 | 0.828 | 1.293 | 0.005 | 0.043 | 5.49 | 13.84 | 100.30 | 144.0 | 16 | 5.0 |
| Mission Creek | OK121400-02-0190B | Osage | 26123 | 19-Nov-02 | 0.00 | 124 | 360.0 | 9.4 | 0.50 | 4 | 5.07 | 6.97 | 0.040 | 0.09 | 0.34 | 0.607 | 0.470 | 1.037 | 0.245 | 0.309 | 8.75 | 19.95 | 153.90 | 207.0 | 10 | 15.0 |
| Mission Creek | OK121400-02-0190B | Osage | 26266 | 17-Dec-02 | 0.01 | 158 | 381.3 | 7.6 | 3.81 | 32 | 21.40 | 7.04 | 0.015 | 0.05 | 0.09 | 0.110 | 0.155 | 0.250 | 0.023 | 0.072 | 8.99 | 16.60 | 160.90 | 229.0 | 11 | 5.0 |
| Mission Creek | OK121400-02-0190B | Osage | 26670 | 28-Jan-03 | 0.00 | 243 | | 1.7 | 6.59 | 48 | 24.60 | 7.28 | 0.015 | 0.15 | 0.12 | 0.543 | 0.285 | 0.813 | 0.077 | 0.181 | 29.20 | 83.70 | 290.00 | 356.0 | 14 | 4.0 |
| Mission Creek | OK121400-02-0190B | Osage | 27227 | 04-Mar-03 | 20.91 | 51 | 257.5 | 6.6 | 10.94 | 90 | 33.50 | 7.10 | 0.015 | 0.43 | 0.01 | 0.110 | 0.455 | 0.550 | 0.005 | 0.034 | 18.00 | 25.00 | 86.20 | 126.0 | 23 | 3.4 |
| Mission Creek | OK121400-02-0190B | Osage | 27426 | 08-Apr-03 | 26.51 | 52 | 266.6 | 10.3 | 8.25 | 75 | 64.90 | 6.99 | 0.018 | 0.24 | 0.01 | 0.630 | 0.268 | 0.880 | 0.007 | 0.117 | 18.43 | 21.27 | 95.59 | 210.0 | 42 | 3.4 |
| Mission Creek | OK121400-02-0190B | Osage | 27526 | 13-May-03 | 0.38 | 71 | 191.4 | 17.9 | 6.27 | 67 | 822.00 | 7.13 | 0.200 | 0.92 | 0.02 | 1.339 | 1.140 | 2.279 | 0.296 | 0.533 | 10.30 | 14.60 | 118.50 | 177.0 | 609 | 5.6 |
| Mission Creek | OK121400-02-0190B | Osage | 27726 | 17-Jun-03 | 1.15 | 88 | 184.5 | 24.5 | 6.24 | 76 | 28.10 | 7.04 | 0.015 | 0.29 | 0.01 | 0.885 | 0.315 | 1.185 | 0.012 | 0.140 | 8.00 | 9.10 | 75.10 | 119.0 | 26 | 3.1 |
| Buck Creek | OK121400-03-0170C | Osage | 23918 | 14-Aug-01 | 0.00 | 52 | 289.6 | 29.8 | 8.51 | 115 | 16.50 | 7.22 | 0.015 | 0.51 | 0.01 | 0.540 | 0.535 | 1.060 | 0.027 | 0.059 | 9.66 | 17.02 | 106.70 | 151.0 | 1 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24234 | 18-Sep-01 | 0.00 | 101 | 339.6 | 23.5 | 6.31 | 76 | 37.90 | 6.59 | 0.269 | 0.74 | 0.01 | 0.645 | 1.019 | 1.395 | 0.005 | 0.050 | 8.00 | 37.00 | 146.10 | 195.0 | 20 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24370 | 23-Oct-01 | | 98 | 269.3 | 23.8 | 7.57 | 91 | 10.60 | 7.71 | 0.121 | 0.51 | 0.48 | 0.438 | 1.111 | 1.428 | 0.005 | 0.018 | 3.70 | 12.10 | 140.50 | 174.5 | 10 | 3.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24496 | 04-Dec-01 | 0.10 | 127 | 363.0 | 14.7 | 9.68 | 97 | 4.29 | 7.65 | 0.049 | 0.01 | 0.01 | 0.294 | 0.069 | 0.314 | 0.005 | 0.005 | 4.75 | 12.57 | 196.00 | 205.5 | 10 | 4.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24692 | 08-Jan-02 | 0.07 | 170 | 405.8 | 8.4 | 8.09 | 71 | 3.23 | 6.88 | 0.098 | 0.01 | 0.01 | 0.388 | 0.118 | 0.408 | 0.005 | 0.014 | 7.59 | 15.74 | 206.42 | 233.0 | 10 | 7.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24804 | 12-Feb-02 | 0.63 | 143 | 342.3 | 6.0 | 12.00 | 100 | 6.00 | 7.79 | 0.068 | 0.01 | 0.29 | 0.318 | 0.368 | 0.618 | 0.015 | 0.037 | 5.03 | 16.58 | 181.30 | 185.0 | 10 | 8.0 |
| Buck Creek | OK121400-03-0170C | Osage | 24940 | 19-Mar-02 | 0.30 | 129 | 378.6 | 10.6 | 8.54 | 78 | 14.60 | 7.86 | 0.113 | 0.01 | 0.10 | 0.385 | 0.223 | 0.495 | 0.008 | 0.029 | 6.12 | 18.29 | 203.00 | 211.0 | 16 | 5.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25108 | 23-Apr-02 | 1.35 | 111 | 391.6 | 20.3 | 7.20 | 82 | 8.39 | 7.77 | 0.139 | 0.53 | 0.01 | 0.460 | 0.679 | 1.000 | 0.010 | 0.037 | 14.49 | 21.80 | 171.60 | 207.0 | 10 | 6.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25236 | 28-May-02 | 86.20 | 58 | 214.4 | 21.4 | 7.42 | 86 | 72.00 | 7.36 | 0.064 | 0.73 | 0.07 | 0.478 | 0.864 | 1.278 | 0.032 | 0.096 | 2.82 | 7.46 | 100.70 | 165.0 | 45 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25320 | 09-Jul-02 | 0.92 | 170 | 370.0 | 32.4 | 8.77 | 112 | 9.71 | 7.86 | 0.092 | 0.52 | 0.01 | 0.401 | 0.622 | 0.931 | 0.005 | 0.060 | 5.28 | 15.58 | 175.60 | 220.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25610 | 06-Aug-02 | 0.00 | 102 | 319.6 | 32.0 | 7.97 | 113 | 9.69 | 8.12 | 0.111 | 0.57 | 0.01 | 0.411 | 0.691 | 0.991 | 0.020 | 0.020 | 6.55 | 15.04 | 148.60 | 310.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25816 | 10-Sep-02 | 0.00 | 74 | 273.2 | 27.7 | 8.67 | 113 | 8.86 | 7.81 | 0.015 | 0.48 | 0.01 | 0.497 | 0.505 | 0.987 | 0.017 | 0.063 | 8.02 | 16.27 | 107.90 | 157.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 25987 | 15-Oct-02 | 0.00 | 124 | 324.9 | 14.9 | 10.28 | 103 | 4.62 | 7.37 | 0.015 | 0.55 | 0.01 | 0.128 | 0.575 | 0.688 | 0.005 | 0.026 | 6.13 | 16.42 | 145.30 | 192.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 26124 | 19-Nov-02 | 0.03 | 151 | 397.8 | 12.1 | 5.82 | 56 | 2.59 | 7.40 | 0.022 | 0.05 | 0.04 | 0.211 | 0.112 | 0.301 | 0.018 | 0.029 | 7.40 | 17.43 | 186.60 | 220.0 | 10 | 5.0 |
| Buck Creek | OK121400-03-0170C | Osage | 26267 | 17-Dec-02 | 1.14 | 163 | 360.6 | 7.5 | 11.40 | 97 | 4.82 | 7.83 | 0.015 | 0.01 | 0.01 | 0.110 | 0.035 | 0.130 | 0.005 | 0.030 | 10.34 | 17.90 | 180.90 | 229.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 26669 | 28-Jan-03 | 0.78 | 185 | 487.8 | 8.6 | 11.26 | 98 | 2.95 | 8.12 | 0.015 | 0.09 | 0.01 | 0.136 | 0.115 | 0.236 | 0.005 | 0.005 | 12.70 | 22.80 | 207.10 | 230.0 | 10 | 2.0 |
| Buck Creek | OK121400-03-0170C | Osage | 27228 | 04-Mar-03 | 54.33 | 176 | 452.0 | 7.4 | 11.38 | 97 | 8.03 | 8.04 | 0.015 | 0.58 | 0.01 | 0.110 | 0.605 | 0.700 | 0.005 | 0.005 | 9.80 | 27.60 | 193.70 | 209.0 | 21 | 2.4 |
| Buck Creek | OK121400-03-0170C | Osage | 27427 | 08-Apr-03 | 27.69 | 177 | 484.1 | 10.8 | 9.85 | 90 | 10.30 | 8.10 | 0.015 | 0.05 | 0.02 | 0.141 | 0.085 | 0.211 | 0.007 | 0.044 | 19.28 | 25.91 | 215.50 | 293.0 | 10 | 3.4 |
| Buck Creek | OK121400-03-0170C | Osage | 27527 | 13-May-03 | 250.00 | 136 | 241.9 | 18.9 | 7.82 | 86 | 364.00 | 7.27 | 0.142 | 0.48 | 0.02 | 0.676 | 0.642 | 1.176 | 0.151 | 0.220 | 5.50 | 16.50 | 140.20 | 158.0 | 470 | 3.2 |
| Buck Creek | OK121400-03-0170C | Osage | 27727 | 17-Jun-03 | 12.76 | 197 | 440.6 | 27.9 | 8.19 | 106 | 6.51 | 7.97 | 0.015 | 0.03 | 0.06 | 0.250 | 0.105 | 0.340 | 0.005 | 0.046 | 6.10 | 18.80 | 205.60 | 221.0 | 10 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 23916 | 14-Aug-01 | 0.39 | 73 | 462.0 | 29.8 | 5.90 | 79 | 22.90 | 7.07 | 0.160 | 0.50 | 0.01 | 0.690 | 0.670 | 1.200 | 0.074 | 0.113 | 57.63 | 14.52 | 153.00 | 233.0 | 15 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24232 | 18-Sep-01 | 1.48 | 107 | 535.0 | 22.2 | 5.87 | 69 | | 6.63 | 0.389 | 0.73 | 0.01 | 1.180 | 1.129 | 1.920 | 0.054 | 0.125 | 73.80 | 59.60 | 172.00 | 276.0 | 70 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24368 | 23-Oct-01 | 1.31 | 99 | 476.7 | 18.5 | 7.70 | 83 | 11.30 | 7.19 | 0.172 | 0.54 | 0.01 | 0.406 | 0.722 | 0.956 | 0.005 | 0.016 | 59.10 | 25.60 | 170.60 | 224.5 | 10 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24494 | 04-Dec-01 | 0.68 | 102 | 601.0 | 11.1 | 9.13 | 85 | 11.30 | 7.30 | 0.084 | 0.01 | 0.01 | 0.562 | 0.104 | 0.582 | 0.005 | 0.006 | 81.65 | 19.87 | 216.60 | 330.5 | 10 | 5.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24690 | 08-Jan-02 | 1.10 | 150 | 592.0 | 3.9 | 11.39 | 87 | 8.59 | 7.04 | 0.152 | 0.53 | 0.01 | 0.528 | 0.692 | 1.068 | 0.005 | 0.033 | 69.45 | 22.12 | 212.03 | 322.0 | 13 | 7.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24802 | 12-Feb-02 | 14.08 | 65 | 415.4 | 5.0 | 12.69 | 102 | 19.60 | 7.29 | 0.154 | 0.58 | 0.01 | 0.466 | 0.744 | 1.056 | 0.018 | 0.038 | 56.50 | 29.74 | 136.20 | 233.0 | 10 | 7.0 |
| Sand Creek | OK121400-04-0010F | Osage | 24938 | 19-Mar-02 | 2.82 | 54 | 459.3 | 10.9 | 8.44 | 77 | 27.40 | 7.61 | 0.156 | 0.51 | 0.01 | 0.543 | 0.676 | 1.063 | 0.015 | 0.085 | 59.40 | 27.63 | 156.30 | 255.0 | 22 | 4.0 |
| Sand Creek | OK121400-04-0010F | Osage | 25106 | 23-Apr-02 | 29.16 | 56 | 492.9 | 19.2 | 6.56 | 73 | | 7.48 | 0.289 | 0.65 | 0.01 | 1.087 | 0.949 | 1.747 | 0.144 | 0.149 | 64.68 | 47.90 | 147.50 | 286.5 | 46 | 4.0 |
| Sand Creek | OK121400-04-0010F | Osage | 25239 | 29-May-02 | 410.19 | 49 | 215.0 | 20.6 | 7.20 | 81 | 71.20 | 6.56 | 0.065 | 0.58 | 0.06 | 0.147 | 0.705 | 0.787 | 0.005 | 0.040 | 14.92 | 15.49 | 80.40 | 157.0 | 39 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 25318 | 09-Jul-02 | 3.13 | 113 | 316.6 | 30.3 | 4.59 | 62 | 16.40 | 7.80 | 0.184 | 0.01 | 0.01 | 0.715 | 0.204 | 0.735 | 0.005 | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|------------|-------------------|---------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|-------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Sand Creek | OK121400-04-0010F | Osage | 25985 | 15-Oct-02 | 0.43 | 104 | 401.2 | 11.7 | 7.75 | 72 | 20.60 | 7.35 | 0.023 | 0.60 | 0.01 | 0.275 | 0.633 | 0.885 | 0.006 | 0.039 | 46.09 | 13.43 | 138.40 | 234.0 | 20 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 26122 | 19-Nov-02 | 0.21 | 118 | 557.0 | 7.3 | 7.30 | 62 | 15.10 | 7.35 | 0.029 | 0.13 | 0.01 | 0.482 | 0.169 | 0.622 | 0.020 | 0.045 | 80.36 | 17.94 | 179.10 | 289.0 | 10 | 5.0 |
| Sand Creek | OK121400-04-0010F | Osage | 26265 | 17-Dec-02 | 2.59 | 108 | 493.6 | 7.2 | 8.90 | 75 | 18.10 | 7.08 | 0.015 | 0.11 | 0.01 | 0.110 | 0.135 | 0.230 | 0.005 | 0.036 | 65.46 | 16.20 | 149.20 | 271.0 | 10 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 26667 | 27-Jan-03 | 3.21 | 99 | 592.0 | 4.8 | 11.14 | 87 | 5.83 | 7.57 | 0.015 | 0.09 | 0.01 | 0.177 | 0.115 | 0.277 | 0.005 | 0.016 | 83.50 | 32.00 | 162.20 | 254.0 | 10 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 27226 | 04-Mar-03 | 120.80 | 86 | 519.0 | 6.0 | 11.77 | 97 | 15.30 | 7.70 | 0.015 | 0.34 | 0.01 | 0.110 | 0.365 | 0.460 | 0.005 | 0.020 | 71.50 | 34.20 | 151.80 | 249.0 | 26 | 3.6 |
| Sand Creek | OK121400-04-0010F | Osage | 27425 | 08-Apr-03 | 128.64 | 90 | 381.4 | 12.1 | 9.41 | 90 | 18.70 | 7.56 | 0.015 | 0.09 | 0.01 | 0.354 | 0.115 | 0.454 | 0.005 | 0.077 | 30.86 | 27.13 | 139.30 | 250.0 | 12 | 3.1 |
| Sand Creek | OK121400-04-0010F | Osage | 27525 | 13-May-03 | 7.72 | 118 | 396.8 | 22.1 | 6.05 | 71 | 21.40 | 7.42 | 0.023 | 0.16 | 0.02 | 0.460 | 0.203 | 0.640 | 0.005 | 0.006 | 36.80 | 21.80 | 156.90 | 208.0 | 18 | 2.0 |
| Sand Creek | OK121400-04-0010F | Osage | 27725 | 17-Jun-03 | 28.76 | 93 | 232.7 | 26.9 | 5.37 | 68 | 29.30 | 7.39 | 0.015 | 0.09 | 0.06 | 1.261 | 0.165 | 1.411 | 0.007 | 0.091 | 16.00 | 10.80 | 103.20 | 132.0 | 21 | 5.2 |
| Bull Creek | OK121500-02-0090D | Wagoner | 23925 | 14-Aug-01 | 0.00 | 90 | 379.7 | 26.0 | 1.83 | 23 | 54.50 | 10.66 | 0.570 | 0.49 | 0.01 | 1.280 | 1.070 | 1.780 | 0.038 | 0.218 | 23.90 | 58.23 | 130.80 | 251.0 | 73 | 3.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 24241 | 18-Sep-01 | 0.00 | 67 | 365.2 | 22.1 | 5.01 | 59 | 73.10 | 8.01 | 0.333 | 0.61 | 0.01 | 1.147 | 0.953 | 1.767 | 0.017 | 0.111 | 20.10 | 48.80 | 136.10 | 201.5 | 58 | 5.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 24377 | 23-Oct-01 | 0.00 | 28 | 255.0 | 19.5 | 4.51 | 50 | 81.50 | 7.87 | 0.495 | 0.73 | 0.01 | 1.233 | 1.235 | 1.973 | 0.016 | 0.113 | 15.40 | 53.80 | 97.20 | 160.0 | 45 | 3.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 24479 | 04-Dec-01 | 0.19 | 31 | 209.9 | 12.4 | 7.00 | 66 | 41.10 | 8.86 | 0.217 | 0.59 | 0.48 | 0.950 | 1.287 | 2.020 | 0.030 | 0.080 | 11.49 | 55.45 | 178.50 | 171.5 | 21 | 8.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 24674 | 08-Jan-02 | 0.00 | 95 | 208.6 | 1.9 | 10.95 | 79 | 61.70 | 9.47 | 0.311 | 0.66 | 0.01 | 0.756 | 0.981 | 1.426 | 0.008 | 0.056 | 20.16 | 92.30 | 133.88 | 238.5 | 12 | 14.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 24817 | 12-Feb-02 | 0.00 | 84 | 262.0 | 4.5 | 9.73 | 76 | 37.80 | 8.33 | 0.211 | 0.70 | 0.01 | 0.875 | 0.921 | 1.585 | 0.018 | 0.133 | 22.41 | 95.20 | 132.70 | 260.5 | 18 | |
| Bull Creek | OK121500-02-0090D | Wagoner | 24947 | 19-Mar-02 | 22.31 | 53 | 294.5 | 11.0 | 6.11 | 57 | 86.80 | 8.18 | 0.725 | 0.66 | 0.01 | 0.959 | 1.395 | 1.629 | 0.070 | 0.125 | 16.24 | 92.00 | 140.40 | 234.5 | 64 | 2.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25115 | 23-Apr-02 | 132.69 | 45 | 181.5 | 16.3 | 8.68 | 90 | 188.90 | 8.89 | 0.553 | 1.16 | 0.01 | 2.565 | 1.723 | 3.735 | 0.174 | 0.418 | 9.54 | 41.89 | 68.09 | 143.5 | 11 | 6.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25229 | 29-May-02 | 37.37 | 81 | 178.7 | 21.3 | 6.40 | 73 | 62.80 | 8.53 | 0.167 | 0.64 | 0.09 | 1.240 | 0.897 | 1.970 | 0.074 | 0.158 | 5.84 | 25.73 | 57.52 | 169.0 | 18 | 4.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25327 | 09-Jul-02 | 0.00 | 67 | 405.8 | 28.8 | 3.01 | 39 | 46.30 | 7.59 | 0.472 | 0.53 | 0.01 | 1.420 | 1.012 | 1.960 | 0.006 | 0.109 | 22.89 | 68.09 | 117.70 | 248.0 | 12 | 2.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25617 | 06-Aug-02 | 0.00 | 115 | 418.6 | 27.5 | 2.41 | 31 | 56.40 | 7.45 | 0.436 | 0.56 | 0.01 | 1.470 | 1.006 | 2.040 | 0.033 | 0.038 | 25.72 | 50.42 | 129.60 | 263.0 | 10 | 3.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25870 | 17-Sep-02 | 0.00 | 87 | 316.2 | 22.1 | 2.33 | 27 | 20.10 | 8.34 | 0.655 | 0.51 | 0.45 | 1.555 | 1.615 | 2.515 | 0.054 | 0.068 | 14.19 | 34.04 | 116.20 | 138.0 | 19 | 3.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 25996 | 15-Oct-02 | 0.00 | 121 | 363.7 | 9.8 | 4.46 | 39 | 21.70 | 7.82 | 0.133 | 1.03 | 0.01 | 0.955 | 1.173 | 1.995 | 0.013 | 0.061 | 16.55 | 37.12 | 127.20 | 242.0 | 19 | 3.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 26133 | 19-Nov-02 | 0.00 | 36 | 319.5 | 8.5 | 4.97 | 43 | 31.40 | 9.10 | 0.030 | 0.36 | 0.01 | 0.995 | 0.400 | 0.765 | 0.021 | 0.059 | 14.19 | 44.88 | 112.10 | 202.0 | 26 | 5.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 26274 | 17-Dec-02 | 0.00 | 82 | 224.2 | 8.4 | 5.17 | 45 | 37.90 | | 0.015 | 0.22 | 0.01 | 0.110 | 0.245 | 0.340 | 0.014 | 0.043 | 15.44 | 42.40 | 98.80 | 196.0 | 10 | 6.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 26651 | 28-Jan-03 | 0.00 | 93 | 522.0 | 4.3 | 6.01 | 47 | 28.50 | 7.94 | 0.015 | 0.27 | 0.01 | 0.730 | 0.295 | 1.010 | 0.005 | 0.044 | 40.20 | 105.20 | 154.00 | 276.0 | 10 | 2.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 27216 | 04-Mar-03 | 3.28 | 62 | 354.0 | 6.3 | 5.45 | 45 | 52.50 | 7.74 | 0.015 | 0.79 | 0.01 | 0.110 | 0.815 | 0.910 | 0.034 | 0.096 | 15.00 | 85.40 | 100.70 | 175.0 | 10 | 4.6 |
| Bull Creek | OK121500-02-0090D | Wagoner | 27415 | 08-Apr-03 | 8.56 | 102 | 370.2 | 11.1 | 6.90 | 64 | 36.90 | 7.95 | 0.015 | 0.17 | 0.01 | 0.664 | 0.195 | 0.844 | 0.007 | 0.094 | 18.06 | 84.80 | 118.90 | 261.0 | 31 | 3.9 |
| Bull Creek | OK121500-02-0090D | Wagoner | 27561 | 13-May-03 | 0.00 | 85 | 676.0 | 20.2 | 4.02 | 45 | 28.40 | 7.78 | 0.043 | 0.21 | 0.02 | 0.608 | 0.273 | 0.838 | 0.019 | 0.070 | 43.70 | 153.00 | 206.90 | 399.0 | 30 | 2.0 |
| Bull Creek | OK121500-02-0090D | Wagoner | 27749 | 17-Jun-03 | 2.37 | 30 | 242.1 | 24.4 | 4.71 | 57 | 52.30 | 8.13 | 0.045 | 0.35 | 0.01 | 0.588 | 0.045 | 0.948 | 0.043 | 0.141 | 12.20 | 40.30 | 77.50 | 172.0 | 27 | 2.9 |
| Dog Creek | OK121500-02-0360D | Rogers | 23926 | 14-Aug-01 | 5.91 | 65 | 449.9 | 26.1 | 3.83 | 48 | 30.60 | 8.02 | 0.350 | 2.40 | 0.01 | 1.240 | 2.760 | 3.650 | 0.971 | 1.360 | 41.37 | 41.56 | 113.60 | 268.0 | 38 | |
| Dog Creek | OK121500-02-0360D | Rogers | 23997 | 21-Aug-01 | 4.19 | 147 | 559.0 | 25.9 | 1.74 | 22 | 21.50 | 7.54 | 7.699 | 0.54 | 0.01 | 9.169 | 8.249 | 9.719 | 1.962 | 2.368 | 46.30 | 28.10 | 136.40 | | 6 | |
| Dog Creek | OK121500-02-0360D | Rogers | 24378 | 23-Oct-01 | 9.32 | 58 | 466.0 | 17.9 | 4.97 | 53 | 9.03 | 7.27 | 2.051 | 3.77 | 0.01 | 2.935 | 5.831 | 6.715 | 1.045 | 1.122 | 54.40 | 54.30 | 137.20 | 327.5 | 10 | 2.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 24480 | 04-Dec-01 | 7.26 | 64 | 418.5 | 9.6 | 8.10 | 72 | 10.10 | 8.77 | 1.743 | 6.69 | 0.75 | 2.946 | 9.183 | 10.386 | 1.065 | 1.419 | 61.38 | 56.92 | 135.40 | 314.5 | 10 | 7.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 24675 | 08-Jan-02 | 14.99 | 75 | 268.9 | 1.6 | 13.43 | 97 | 13.90 | 9.50 | 2.422 | 4.08 | 0.01 | 3.001 | 6.512 | 7.091 | 0.854 | 0.936 | 40.88 | 48.21 | 125.69 | 240.5 | 11 | 14.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 24818 | 12-Feb-02 | 20.25 | 76 | 253.3 | 4.4 | 8.76 | 68 | 15.50 | 7.88 | 0.533 | 2.96 | 0.01 | 1.334 | 3.503 | 4.304 | 0.650 | 0.732 | 22.53 | 55.09 | 127.60 | 293.0 | 10 | 6.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 24948 | 19-Mar-02 | | 81 | 299.7 | 10.6 | 5.52 | 50 | 18.90 | 8.73 | 0.464 | 3.19 | 0.01 | 1.462 | 3.664 | 4.662 | 0.687 | 0.815 | 27.49 | 50.49 | 128.20 | 217.0 | 20 | 2.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 25328 | 09-Jul-02 | 15.24 | 106 | 440.0 | 28.2 | 4.98 | 65 | 15.50 | 7.66 | 4.054 | 0.83 | 0.21 | 5.317 | 5.094 | 6.357 | 0.830 | 1.378 | 29.06 | 35.63 | 119.50 | 240.0 | 10 | 4.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 25618 | 06-Aug-02 | 17.84 | 131 | 627.0 | 28.3 | 1.76 | 23 | 24.60 | 7.34 | 6.593 | 0.58 | 0.01 | 8.596 | 7.183 | 9.186 | 1.110 | 1.382 | 37.99 | 30.49 | 133.60 | 265.0 | 10 | 10.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 25871 | 17-Sep-02 | 13.99 | 119 | 519.0 | 22.5 | 1.11 | 13 | 14.40 | 8.36 | 8.165 | 0.56 | 4.87 | 9.737 | 13.595 | 15.167 | 1.759 | 2.025 | 42.29 | 31.52 | 143.20 | 202.0 | 10 | 6.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 25997 | 15-Oct-02 | 7.91 | 108 | 609.0 | 12.3 | 2.22 | 21 | 8.73 | 7.65 | 0.346 | 5.43 | 0.01 | 4.294 | 5.786 | 9.734 | 1.748 | 1.838 | 58.79 | 47.87 | 131.90 | 331.0 | 10 | 3.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 26134 | 19-Nov-02 | 16.54 | 61 | 424.4 | 7.9 | 4.79 | 40 | 4.60 | 9.94 | 0.132 | 4.63 | 0.01 | 1.387 | 4.772 | 6.027 | 1.555 | 1.650 | 60.48 | 61.83 | 157.10 | 376.0 | 10 | 3.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 26275 | 17-Dec-02 | 4.91 | 83 | 300.7 | 7.3 | 6.41 | 54 | 12.60 | | 0.179 | 5.16 | 0.01 | 0.368 | 5.349 | 5.538 | 0.487 | 0.578 | 33.27 | 55.10 | 131.10 | 279.0 | 10 | 2.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 26652 | 28-Jan-03 | 19.17 | 80 | | 1.8 | 6.51 | 47 | 17.40 | 7.78 | 2.326 | 12.39 | 0.01 | 3.331 | 14.726 | 15.731 | | | 62.30 | 79.20 | 180.40 | 411.0 | 10 | 2.0 |
| Dog Creek | OK121500-02-0360D | Rogers | 27217 | 04-Mar-03 | 32.86 | 101 | 412.1 | 6.5 | 7.41 | 61 | 31.00 | 7.89 | 0.054 | 2.21 | 0.01 | 0.896 | 2.274 | 3.116 | 0.281 | 0.390 | 28.60 | 59.90 | 119.60 | 258.0 | 10 | 4.4 |
| Dog Creek | OK121500-02-0360D | Rogers | 27416 | 08-Apr-03 | 64.61 | 48 | 274.8 | 12.7 | 8.13 | 77 | 38.50 | 8.05 | 0.109 | 0.86 | 0.01 | 0.837 | 0.979 | 1.707 | 0.197 | 0.219 | 13.53 | 37.33 | 92.95 | 190.0 | 27 | 3.9 |
| Dog Creek | OK121500-02-0360D | Rogers | 27562 | 13-May-03 | 20.40 | 122 | 513.0 | 20.1 | 4.43 | 50 | 9.45 | 7.69 | 4.296 | 4.50 | 0.02 | 4.317 | 8.816 | 8.837</ | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|------------------|-------------------|----------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| California Creek | OK121510-02-0050C | Nowata | 24375 | 22-Oct-01 | 0.00 | 92 | 811.0 | 17.9 | 3.01 | 32 | 7.89 | 7.30 | 0.218 | 0.57 | 0.01 | 0.504 | 0.798 | 1.084 | 0.005 | 0.013 | 168.10 | 20.20 | 263.60 | 500.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 24477 | 03-Dec-01 | 0.06 | 94 | 678.0 | 9.8 | 7.01 | 62 | 27.60 | 6.60 | 0.371 | 0.01 | 0.01 | 0.589 | 0.391 | 0.609 | 0.007 | 0.014 | 139.40 | 21.36 | 303.50 | 229.5 | 12 | 4.0 |
| California Creek | OK121510-02-0050C | Nowata | 24672 | 07-Jan-02 | 0.00 | 198 | 460.0 | 4.0 | 4.59 | 36 | 39.80 | 8.91 | 0.250 | 0.62 | 0.01 | 0.696 | 0.880 | 1.326 | 0.036 | 0.099 | 86.00 | 41.81 | 322.87 | 462.5 | 168 | 8.0 |
| California Creek | OK121510-02-0050C | Nowata | 24815 | 11-Feb-02 | 0.30 | 84 | 296.1 | 5.7 | 8.93 | 72 | 97.70 | 8.91 | 0.244 | 0.95 | 0.01 | 0.880 | 1.204 | 1.840 | 0.077 | 0.169 | 42.00 | 45.34 | 136.50 | 292.4 | 69 | |
| California Creek | OK121510-02-0050C | Nowata | 24945 | 18-Mar-02 | 0.00 | 97 | 370.4 | 10.0 | 5.14 | 47 | 8.99 | 8.79 | 0.149 | 0.01 | 0.01 | 0.529 | 0.169 | 0.549 | 0.011 | 0.033 | 43.98 | 46.48 | 190.90 | 278.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 25113 | 22-Apr-02 | 0.00 | 101 | 499.0 | 23.1 | 9.70 | 116 | 19.90 | 8.46 | 0.176 | 0.01 | 0.01 | 0.553 | 0.196 | 0.573 | 0.008 | 0.015 | 47.46 | 32.71 | 178.70 | 276.0 | 10 | 3.0 |
| California Creek | OK121510-02-0050C | Nowata | 25227 | 28-May-02 | 13.43 | 69 | 389.4 | 21.4 | 5.63 | 65 | 141.30 | 8.40 | 0.093 | 0.60 | 0.09 | 0.278 | 0.783 | 0.968 | 0.005 | 0.051 | 15.06 | 28.41 | 139.80 | 190.0 | 30 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 25325 | 08-Jul-02 | 0.00 | 103 | 313.2 | 27.1 | 2.37 | 31 | 9.70 | 8.59 | 0.190 | 0.54 | 0.01 | 0.699 | 0.740 | 1.249 | 0.007 | 0.026 | 15.03 | 25.82 | 140.90 | 172.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 25615 | 05-Aug-02 | 0.47 | 56 | 250.5 | 28.3 | 5.25 | 69 | 100.00 | 7.34 | 0.194 | 0.11 | 0.01 | 0.776 | 0.314 | 0.896 | 0.021 | 0.034 | 11.07 | 17.32 | 96.32 | 151.0 | 10 | 5.0 |
| California Creek | OK121510-02-0050C | Nowata | 25868 | 16-Sep-02 | 0.00 | 109 | 396.7 | 20.6 | 4.01 | 45 | 12.60 | 7.39 | 0.323 | 0.77 | 0.11 | 0.772 | 1.203 | 1.652 | 0.028 | 0.052 | 39.55 | 9.89 | 160.10 | 204.0 | 17 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 25994 | 14-Oct-02 | 0.00 | 62 | 233.9 | 13.6 | 6.78 | 66 | 6.64 | 7.30 | 0.022 | 0.56 | 0.01 | 0.180 | 0.592 | 0.750 | 0.005 | 0.026 | 8.65 | 11.87 | 92.44 | 144.0 | 12 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 26131 | 18-Nov-02 | 0.00 | 61 | 341.7 | 13.0 | 6.71 | 65 | 4.28 | 8.04 | 0.025 | 0.10 | 0.01 | 0.250 | 0.135 | 0.360 | 0.017 | 0.027 | 13.82 | 15.89 | 144.70 | 203.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 26272 | 16-Dec-02 | 0.00 | 107 | 241.7 | 7.5 | 3.10 | 26 | 4.64 | 8.69 | | 0.39 | 0.01 | | 0.400 | 0.400 | 0.009 | 0.037 | 13.98 | 20.10 | 148.60 | 206.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 26649 | 27-Jan-03 | 0.00 | 131 | 480.7 | 4.8 | 9.76 | 76 | 9.36 | 8.07 | 0.015 | 0.11 | 0.01 | 0.250 | 0.135 | 0.370 | 0.005 | 0.022 | 34.60 | 36.70 | 187.30 | 246.0 | 10 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 27214 | 03-Mar-03 | 9.17 | 127 | 439.9 | 6.4 | 10.87 | 90 | 42.40 | 8.29 | 0.015 | 0.39 | 0.01 | 0.110 | 0.415 | 0.510 | 0.009 | 0.046 | 24.20 | 53.10 | 172.70 | 206.0 | 11 | 4.7 |
| California Creek | OK121510-02-0050C | Nowata | 27413 | 07-Apr-03 | 27.11 | 80 | 295.7 | 10.8 | 8.84 | 80 | 318.00 | 8.23 | 0.015 | 0.28 | 0.38 | 0.897 | 0.675 | 1.557 | 0.023 | 0.166 | 14.17 | 2466.10 | 116.70 | 305.0 | 253 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 27559 | 12-May-03 | 2.14 | 69 | 468.1 | 20.2 | 5.03 | 57 | 18.00 | 8.13 | 0.043 | 0.18 | 0.02 | 0.427 | 0.243 | 0.627 | | | 28.70 | 37.60 | 189.70 | 270.0 | 18 | 2.0 |
| California Creek | OK121510-02-0050C | Nowata | 27747 | 16-Jun-03 | 2.80 | 143 | 409.4 | 26.0 | 4.75 | 60 | 15.10 | 8.23 | 0.033 | 0.13 | 0.06 | 0.110 | 0.223 | 0.300 | 0.007 | 0.064 | 26.20 | 25.20 | 164.30 | 229.0 | 10 | 2.1 |
| Big Creek | OK121510-03-0010D | Nowata | 23922 | 13-Aug-01 | 0.00 | 86 | 273.9 | 29.4 | 4.11 | 55 | 13.80 | 8.38 | 0.240 | 0.46 | 0.01 | 0.600 | 0.710 | 1.070 | 0.085 | 0.095 | 5.60 | 11.86 | 112.90 | 153.0 | 18 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 24238 | 17-Sep-01 | 0.00 | 67 | 260.4 | 22.1 | 4.13 | 49 | 73.40 | 7.48 | 0.867 | 0.54 | 0.01 | 2.776 | 1.417 | 3.326 | 0.045 | 0.218 | 9.40 | 22.30 | 105.90 | 152.5 | 23 | 7.0 |
| Big Creek | OK121510-03-0010D | Nowata | 24374 | 22-Oct-01 | 1.46 | 95 | 308.4 | 17.7 | 8.37 | 89 | 12.20 | 7.46 | 0.251 | 0.61 | 0.01 | 0.607 | 0.871 | 1.227 | 0.005 | 0.036 | 3.40 | 18.70 | 186.50 | 202.5 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 24476 | 03-Dec-01 | 1.34 | 134 | 290.9 | 8.5 | 9.20 | 80 | 4.13 | 6.58 | 0.051 | 0.01 | 0.01 | 0.343 | 0.071 | 0.363 | 0.010 | 0.035 | 5.43 | 20.33 | 212.60 | 220.5 | 14 | 3.0 |
| Big Creek | OK121510-03-0010D | Nowata | 24671 | 07-Jan-02 | 3.74 | 160 | 273.9 | 2.8 | 13.27 | 98 | 7.75 | 9.04 | 0.176 | 0.48 | 0.01 | 0.453 | 0.666 | 0.943 | 0.005 | 0.017 | 3.94 | 21.03 | 224.89 | 257.0 | 10 | 7.0 |
| Big Creek | OK121510-03-0010D | Nowata | 24814 | 11-Feb-02 | 12.13 | 37 | 260.1 | 4.9 | 10.40 | 81 | 13.30 | 8.43 | 0.024 | 0.56 | 0.26 | 0.266 | 0.844 | 1.086 | 0.009 | 0.052 | 3.62 | 18.73 | 204.90 | 245.5 | 10 | |
| Big Creek | OK121510-03-0010D | Nowata | 24944 | 18-Mar-02 | 6.08 | 130 | 296.2 | 10.8 | 6.11 | 56 | 9.68 | 8.63 | 0.151 | 0.01 | 0.09 | 0.335 | 0.251 | 0.435 | 0.010 | 0.029 | 4.09 | 21.08 | 200.70 | 212.0 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25112 | 22-Apr-02 | 16.42 | 119 | 310.4 | 20.0 | 7.19 | 81 | 59.90 | 8.46 | 0.226 | 0.57 | 0.13 | 0.801 | 0.926 | 1.501 | 0.024 | 0.125 | 3.60 | 16.27 | 155.30 | 181.4 | 35 | 3.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25226 | 28-May-02 | 111.43 | 101 | 294.8 | 21.3 | 5.83 | 67 | 89.10 | 8.33 | 0.067 | 0.56 | 0.07 | 0.510 | 0.697 | 1.140 | 0.019 | 0.068 | 3.04 | 9.42 | 135.20 | 210.0 | 20 | 3.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25324 | 08-Jul-02 | 1.68 | 144 | 406.2 | 29.8 | 6.79 | 91 | 6.79 | 7.19 | 0.122 | 0.51 | 0.01 | 0.423 | 0.642 | 0.943 | 0.005 | 0.014 | 5.44 | 14.28 | 202.00 | 247.0 | 10 | 3.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25614 | 05-Aug-02 | 2.83 | 126 | 356.3 | 29.5 | 5.73 | 77 | 7.16 | 7.25 | 0.138 | 0.56 | 0.01 | 0.550 | 0.708 | 1.120 | 0.036 | 0.037 | 4.51 | 11.62 | 169.60 | 207.0 | 10 | 5.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25867 | 16-Sep-02 | 0.00 | 132 | 299.7 | 22.7 | 3.22 | 38 | 9.67 | 6.39 | 0.352 | 0.50 | 0.15 | 0.811 | 1.002 | 1.461 | 0.024 | 0.045 | 6.40 | 11.60 | 145.80 | 162.0 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 25993 | 14-Oct-02 | 0.00 | 106 | 358.5 | 15.6 | 8.40 | 85 | 9.50 | 7.35 | 0.028 | 0.71 | 0.01 | 0.423 | 0.748 | 1.143 | 0.005 | 0.042 | 18.38 | 12.21 | 146.10 | 205.0 | 19 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 26130 | 18-Nov-02 | 0.00 | 72 | 455.2 | 13.0 | 7.56 | 74 | 6.53 | 8.93 | 0.029 | 0.05 | 0.11 | 0.344 | 0.189 | 0.504 | 0.012 | 0.030 | 19.58 | 23.77 | 207.90 | 226.0 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 26271 | 16-Dec-02 | 0.00 | 136 | 265.3 | 7.8 | 5.46 | 46 | 3.67 | 8.45 | 0.015 | 0.12 | 0.01 | 0.206 | 0.145 | 0.336 | 0.005 | 0.031 | 16.12 | 13.30 | 175.00 | 239.0 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 26648 | 27-Jan-03 | 2.26 | 134 | 407.4 | 3.9 | 13.31 | 102 | 5.87 | 8.39 | 0.015 | 0.14 | 0.01 | 0.110 | 0.165 | 0.260 | 0.005 | 0.008 | 6.10 | 28.00 | 200.00 | 235.0 | 10 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 27213 | 03-Mar-03 | 40.69 | 137 | 397.4 | 6.2 | 10.97 | 90 | 11.50 | 8.56 | 0.015 | 0.65 | 0.01 | 0.110 | 0.675 | 0.770 | 0.005 | 0.005 | 7.10 | 24.90 | 191.50 | 144.0 | 10 | 4.1 |
| Big Creek | OK121510-03-0010D | Nowata | 27412 | 07-Apr-03 | 78.52 | 109 | 425.6 | 11.4 | 7.92 | 74 | 29.10 | 8.48 | 0.015 | 0.01 | 0.31 | 0.224 | 0.335 | 0.544 | 0.005 | 0.071 | 6.50 | 1962.50 | 203.70 | 335.0 | 31 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 27558 | 12-May-03 | 12.82 | 56 | 365.7 | 21.2 | 4.59 | 53 | 34.70 | 8.23 | 0.025 | 0.29 | 0.02 | 0.662 | 0.335 | 0.972 | 0.017 | 0.099 | 5.30 | 18.60 | 177.10 | 233.0 | 32 | 2.0 |
| Big Creek | OK121510-03-0010D | Nowata | 27746 | 16-Jun-03 | 2.70 | 135 | 424.1 | 26.9 | 4.67 | 59 | 13.80 | 8.25 | 0.036 | 0.05 | 0.11 | 0.383 | 0.196 | 0.543 | 0.005 | 0.075 | 6.30 | 17.60 | 202.80 | 236.0 | 10 | 2.8 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 23935 | 14-Aug-01 | 0.00 | 78 | 226.7 | 25.7 | 3.75 | 47 | 6.80 | 7.41 | 0.110 | 0.47 | 0.01 | 0.750 | 0.590 | 1.230 | 0.030 | 0.039 | 5.21 | 5.49 | 101.50 | 132.0 | 3 | 5.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24250 | 18-Sep-01 | 0.15 | 84 | 238.9 | 23.5 | 7.55 | 90 | 8.42 | 7.78 | 0.084 | 0.50 | 0.01 | 0.335 | 0.594 | 0.845 | 0.018 | 0.058 | 4.90 | 15.20 | 111.30 | 121.5 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24386 | 23-Oct-01 | 0.00 | 117 | 357.0 | 23.0 | 9.61 | 115 | 3.17 | 7.75 | 0.016 | 0.51 | 0.43 | 0.309 | 0.956 | 1.249 | 0.030 | 0.041 | 4.40 | 15.00 | 149.70 | 173.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24488 | 04-Dec-01 | 0.00 | 141 | 454.6 | 14.8 | 10.90 | 108 | 2.86 | 7.97 | 0.015 | 0.52 | 0.01 | 0.161 | 0.545 | 0.691 | 0.017 | 0.032 | 4.77 | 24.57 | 194.40 | 214.0 | 10 | 9.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24698 | 08-Jan-02 | 5.69 | 125 | 414.0 | 4.4 | 13.02 | 102 | 1.17 | 8.18 | 0.080 | 0.88 | 0.01 | 0.140 | 0.970 | 1.030 | 0.013 | 0.022 | 4.42 | 19.80 | 168.93 | 197.0 | 10 | 7.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24825 | 12-Feb-02 | 9.91 | 119 | 346.1 | 4.3 | 13.96 | 109 | 2.07 | 8.17 | 0.015 | 0.48 | 0.01 | 0.184 | 0.505 | 0.674 | 0.005 | 0.020 | 4.31 | 26.85 | 167.30 | 180.5 | 10 | 4.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 24958 | 19-Mar-02 | 110.78 | 139 | 309.7 | 11.6 | 9.78 | 91 | 15.50 | 7.60 | 0.304 | 0.76 | 0.01 | 0.785 | 1.074 | 1.555 | 0.073 | 0.123 | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|--------------------|-------------------|----------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Ranger Creek | OK121600-01-0060D | Cherokee | 25310 | 09-Jul-02 | 1.37 | 86 | 210.8 | 27.9 | 4.14 | 53 | 6.01 | 7.65 | 0.174 | 0.55 | 0.01 | 0.415 | 0.734 | 0.975 | 0.044 | 0.089 | 4.53 | 8.72 | 110.10 | 137.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 25627 | 06-Aug-02 | 0.00 | 84 | 224.4 | 27.7 | 4.72 | 61 | 7.04 | 8.01 | 0.134 | 0.56 | 0.01 | 0.576 | 0.704 | 1.146 | 0.046 | 0.048 | 4.09 | 7.29 | 96.78 | 115.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 25860 | 10-Sep-02 | 0.20 | 91 | 225.0 | 24.9 | 5.39 | 66 | 4.07 | | 0.076 | 0.01 | 0.01 | 0.342 | 0.096 | 0.362 | | | 4.28 | 8.48 | 100.80 | 129.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 25978 | 15-Oct-02 | 0.00 | 118 | 213.5 | 14.8 | 9.52 | 95 | 2.43 | | 0.015 | 0.59 | 0.01 | 0.179 | 0.615 | 0.779 | 0.013 | 0.039 | 5.12 | 7.86 | 7.99 | 151.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 26142 | 19-Nov-02 | 0.40 | 110 | 333.1 | 8.0 | 9.92 | 86 | 3.50 | 7.17 | 0.020 | 0.01 | 0.01 | 0.126 | 0.040 | 0.146 | 0.038 | 0.044 | 7.02 | 21.43 | 162.10 | 191.0 | 10 | 4.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 26286 | 17-Dec-02 | 3.65 | 112 | 351.1 | 8.9 | 10.45 | 90 | 2.75 | 7.32 | 0.015 | 0.20 | 0.01 | 0.127 | 0.225 | 0.337 | 0.005 | 0.063 | 6.12 | 25.30 | 170.10 | 169.0 | 10 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 26661 | 28-Jan-03 | 3.32 | 115 | 304.1 | 2.6 | 13.02 | 96 | 1.98 | 7.27 | 0.015 | 0.05 | 0.01 | 0.110 | 0.075 | 0.170 | 0.005 | 0.009 | 5.60 | 21.30 | 150.00 | 158.0 | 15 | 2.0 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 27200 | 04-Mar-03 | 21.07 | 121 | 211.3 | 7.2 | 11.77 | 99 | 3.39 | 7.84 | 0.015 | 0.59 | 0.01 | 0.110 | 0.615 | 0.710 | 0.005 | 0.005 | 5.30 | 23.40 | 153.90 | 112.0 | 10 | 4.1 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 27402 | 08-Apr-03 | 8.77 | 122 | 310.9 | 11.5 | 8.40 | 78 | 4.13 | 7.35 | 0.015 | 0.01 | 0.03 | 0.110 | 0.055 | 0.150 | 0.005 | 0.059 | 4.99 | 21.34 | 149.20 | 168.0 | 10 | 2.5 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 27578 | 13-May-03 | | 93 | 2833.0 | 19.7 | 5.98 | 66 | 65.80 | 7.83 | 0.098 | 0.32 | 0.02 | 0.242 | 0.438 | 0.582 | 0.086 | 0.091 | 4.90 | 14.80 | 126.60 | 187.0 | 58 | 5.4 |
| Ranger Creek | OK121600-01-0060D | Cherokee | 27736 | 17-Jun-03 | 1.62 | 124 | 301.8 | 28.1 | 5.19 | 68 | 9.46 | 7.78 | 0.020 | 0.08 | 0.11 | 0.451 | 0.210 | 0.641 | 0.045 | 0.139 | 4.70 | 11.80 | 143.60 | 211.0 | 18 | 3.3 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 23936 | 14-Aug-01 | 7.25 | 68 | 191.0 | 25.9 | 5.91 | 73 | 3.18 | 7.64 | 0.015 | 0.49 | 0.01 | 0.170 | 0.515 | 0.670 | 0.026 | 0.138 | 5.83 | 5.23 | 84.90 | 116.0 | 2 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24251 | 18-Sep-01 | 11.70 | 73 | 180.4 | 23.3 | 6.45 | 77 | 3.05 | 7.45 | 0.015 | 0.55 | 0.01 | 0.110 | 0.575 | 0.670 | 0.028 | 0.031 | 5.70 | 5.70 | 78.70 | 91.5 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24385 | 23-Oct-01 | 16.20 | 67 | 232.3 | 22.7 | 10.15 | 119 | 1.38 | 7.80 | 0.015 | 0.89 | 0.01 | 0.581 | 0.915 | 1.481 | 0.025 | 0.027 | 5.50 | 8.10 | 82.70 | 110.5 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24487 | 04-Dec-01 | 22.67 | 63 | 243.3 | 15.0 | 11.61 | 118 | 1.91 | 7.59 | 0.015 | 0.77 | 0.01 | 0.110 | 0.795 | 0.890 | 0.019 | 0.028 | 5.80 | 9.73 | 87.79 | 87.0 | 10 | 9.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24697 | 08-Jan-02 | 22.14 | 59 | 204.9 | 6.2 | 13.62 | 112 | 1.66 | 7.82 | 0.015 | 1.11 | 0.01 | 0.135 | 1.135 | 1.255 | 0.020 | 0.030 | 5.04 | 9.36 | 76.68 | 100.0 | 10 | 6.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24826 | 12-Feb-02 | 31.00 | 68 | 185.3 | 8.1 | 13.89 | 120 | 1.30 | 8.16 | 0.049 | 0.85 | 0.01 | 0.143 | 0.909 | 1.003 | 0.010 | 0.026 | 4.92 | 11.05 | 81.05 | 81.5 | 10 | 3.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 24959 | 19-Mar-02 | 190.35 | 73 | 167.8 | 11.0 | 9.15 | 85 | 49.00 | 7.79 | 0.290 | 0.91 | 0.01 | 0.896 | 1.210 | 1.816 | 0.062 | 0.134 | 4.07 | 11.65 | 73.07 | 119.0 | 80 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25100 | 23-Apr-02 | 87.71 | 66 | 160.7 | 17.3 | 8.96 | 95 | | 7.57 | 0.034 | 0.88 | 0.11 | 0.344 | 1.024 | 1.334 | 0.033 | 0.074 | 3.67 | 8.19 | 68.50 | 98.5 | 10 | 5.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25248 | 29-May-02 | 106.66 | 68 | 162.7 | 19.0 | 8.99 | 99 | 5.34 | 7.34 | 0.015 | 0.88 | 0.01 | 0.110 | 0.905 | 1.000 | 0.011 | 0.066 | 3.31 | 7.52 | 70.54 | 104.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25311 | 09-Jul-02 | 8.61 | 63 | 195.3 | 26.8 | 6.87 | 87 | 2.54 | 7.48 | 0.102 | 0.68 | 0.01 | 0.246 | 0.792 | 0.936 | 0.041 | 0.049 | 5.00 | 6.56 | 82.67 | 108.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25628 | 06-Aug-02 | 4.97 | 80 | 203.0 | 26.5 | 6.26 | 79 | 2.21 | 7.56 | 0.015 | 0.64 | 0.01 | 0.110 | 0.665 | 0.760 | 0.038 | 0.041 | 5.39 | 5.80 | 88.84 | 102.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25861 | 10-Sep-02 | 4.52 | 75 | 201.5 | 25.1 | 7.03 | 87 | 1.70 | | 0.015 | 0.01 | 0.01 | 0.136 | 0.035 | 0.156 | 0.032 | 0.029 | 5.48 | 6.23 | 88.32 | 121.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 25979 | 15-Oct-02 | 4.65 | 78 | 189.6 | 17.9 | 9.77 | 104 | 0.79 | | 0.015 | 0.60 | 0.01 | 0.110 | 0.625 | 0.720 | 0.010 | 0.044 | 6.06 | 5.78 | 80.97 | 104.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 26143 | 19-Nov-02 | 6.74 | 62 | 190.5 | 10.3 | 9.80 | 89 | 0.51 | 7.48 | 0.018 | 0.12 | 0.01 | 0.110 | 0.148 | 0.240 | 0.022 | 0.028 | 7.31 | 7.04 | 85.01 | 85.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 26285 | 17-Dec-02 | 11.74 | 62 | 197.1 | 10.0 | 11.78 | 107 | 0.58 | 7.18 | 0.015 | 0.28 | 0.01 | 0.110 | 0.305 | 0.400 | 0.005 | 0.027 | 7.74 | 8.90 | 87.00 | 96.0 | 20 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 26662 | 28-Jan-03 | 9.67 | 67 | 190.5 | 6.5 | 12.71 | 105 | 0.81 | 7.18 | 0.015 | 0.34 | 0.01 | 0.110 | 0.365 | 0.460 | 0.005 | 0.005 | 7.40 | 11.00 | 86.20 | 102.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 27201 | 04-Mar-03 | 44.39 | 59 | 125.6 | 7.6 | 12.66 | 107 | 12.90 | 7.92 | 0.015 | 0.99 | 0.01 | 0.110 | 1.015 | 1.110 | 0.005 | 0.005 | 6.60 | 13.10 | 82.60 | 118.0 | 18 | 2.6 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 27401 | 07-Apr-03 | 30.14 | 77 | 188.3 | 18.4 | 12.33 | 133 | 1.76 | 8.59 | 0.015 | 0.30 | 0.01 | 0.245 | 0.325 | 0.555 | 0.005 | 0.054 | 6.20 | 12.54 | 80.94 | 126.0 | 10 | 3.3 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 27577 | 13-May-03 | 10.92 | 69 | 216.3 | 19.7 | 8.23 | 91 | 3.44 | 7.71 | 0.033 | 0.28 | 0.02 | 0.110 | 0.333 | 0.410 | | | 6.00 | 10.50 | 93.60 | 111.0 | 10 | 2.0 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 27735 | 17-Jun-03 | 8.25 | 75 | 186.9 | 25.4 | 9.93 | 123 | 1.88 | 8.04 | 0.015 | 0.08 | 0.01 | 0.245 | 0.105 | 0.335 | 0.011 | 0.049 | 5.70 | 8.40 | 91.80 | 102.0 | 10 | 2.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 23929 | 14-Aug-01 | 0.00 | 88 | 265.1 | 29.0 | 4.88 | 65 | 16.60 | 8.05 | 0.320 | 0.46 | 0.43 | 0.760 | 1.210 | 1.650 | 0.043 | 0.098 | 6.25 | 23.12 | 92.60 | 108.0 | 22 | 2.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24244 | 18-Sep-01 | 0.00 | 79 | 270.4 | 24.5 | 4.01 | 49 | 15.70 | 7.27 | 0.131 | 0.49 | 0.01 | 0.679 | 0.631 | 1.179 | 0.005 | 0.102 | 6.50 | 21.20 | 113.40 | 120.5 | 10 | 5.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24381 | 23-Oct-01 | 0.00 | 62 | 246.1 | 21.3 | 4.01 | 46 | 12.30 | 7.11 | 0.173 | 0.65 | 0.01 | 0.707 | 0.833 | 1.367 | 0.005 | 0.068 | 5.80 | 26.30 | 108.00 | 164.0 | 19 | 3.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24483 | 04-Dec-01 | 0.00 | 84 | 150.3 | 12.2 | 6.21 | 59 | 31.00 | 8.95 | 0.199 | 0.60 | 0.45 | 0.856 | 1.249 | 1.906 | 0.043 | 0.122 | 6.40 | 20.71 | 75.40 | 102.5 | 17 | 2.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24678 | 08-Jan-02 | 0.00 | 44 | 134.0 | 4.6 | 7.34 | 57 | 55.20 | 9.75 | 0.358 | 0.83 | 0.01 | 1.143 | 1.198 | 1.983 | 0.028 | 0.108 | 7.50 | 36.65 | 69.28 | 149.5 | 22 | 9.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24821 | 12-Feb-02 | 3.62 | 77 | 152.0 | 5.8 | 8.52 | 68 | 46.30 | 8.12 | 0.158 | 0.86 | 0.01 | 0.609 | 1.028 | 1.479 | 0.023 | 0.065 | 5.78 | 52.02 | 71.74 | 160.0 | 23 | 5.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 24951 | 19-Mar-02 | 21.06 | 75 | 269.0 | 10.4 | 6.75 | 61 | 79.80 | 8.71 | 0.239 | 0.65 | 0.01 | 0.902 | 0.899 | 1.562 | 0.049 | 0.095 | 8.08 | 84.99 | 114.90 | 201.0 | 28 | 4.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 25116 | 23-Apr-02 | 205.60 | 61 | 218.1 | 18.4 | 7.66 | 83 | 191.40 | 8.64 | 0.637 | 1.06 | 0.01 | 2.404 | 1.707 | 3.474 | 0.186 | 0.451 | 6.30 | 47.08 | 78.45 | 169.2 | 126 | 5.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 25231 | 29-May-02 | 200.69 | 37 | 216.9 | 21.8 | 5.43 | 62 | 67.70 | 8.89 | 0.125 | 0.68 | 0.09 | 0.359 | 0.895 | 1.129 | 0.036 | 0.097 | 6.29 | 31.79 | 70.97 | 152.0 | 57 | 3.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 25621 | 06-Aug-02 | 0.00 | 94 | 266.1 | 29.1 | 3.88 | 52 | 17.90 | 7.37 | 0.293 | 0.01 | 0.01 | 1.051 | 0.313 | 1.071 | 0.046 | 0.048 | 6.61 | 12.93 | 105.90 | 163.0 | 10 | 4.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 25874 | 17-Sep-02 | 0.00 | 101 | 258.8 | 23.3 | 1.41 | 17 | 25.70 | 7.11 | 0.907 | 1.19 | 0.01 | 1.669 | 2.107 | 2.869 | 0.017 | 0.072 | 5.56 | 12.96 | 108.00 | 167.0 | 26 | 2.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 26000 | 15-Oct-02 | 0.00 | | 274.3 | 12.0 | 4.44 | 42 | 26.80 | 7.78 | 0.020 | 1.18 | 0.01 | 0.577 | 1.210 | 1.767 | 0.014 | 0.057 | 5.95 | 12.73 | 103.80 | 155.0 | 60 | 5.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 26137 | 19-Nov-02 | 0.00 | 83 | 230.2 | 8.7 | 1.98 | 17 | 11.10 | 9.88 | 0.023 | 0.27 | 0.14 | 0.168 | 0.433 | 0.578 | 0.058 | 0.091 | 23.57 | 32.70 | 110.00 | 221.0 | 10 | 10.0 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 26277 | 17-Dec-02 | | 93 | 445.6 | 6.9 | 4.39 | 36 | 24.60 | | 0.015 | 0.33 | 0.01 | 0.230 | 0.355 | 0.570 | 0.005 | 0.049 | 27.53 | 81.30 | 127.70 | 318.0 | 18 | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | eBOD5 |
|--------------------|-------------------|----------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Chouteau Creek | OK121600-01-0430M | Mayes | 27419 | 08-Apr-03 | 210.65 | 37 | 188.7 | 10.2 | 6.60 | 60 | 61.90 | 7.85 | 0.029 | 0.47 | 0.01 | 0.899 | 0.509 | 1.379 | 0.032 | 0.151 | 5.20 | 35.72 | 55.96 | 176.0 | 28 | 4.1 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 27565 | 13-May-03 | 2.26 | 101 | 333.4 | 19.6 | 2.31 | 26 | 17.70 | 7.53 | 0.416 | 0.80 | 0.02 | 1.024 | 1.236 | 1.844 | 0.029 | 0.098 | 13.30 | 37.40 | 115.30 | 193.0 | 13 | 2.8 |
| Chouteau Creek | OK121600-01-0430M | Mayes | 27752 | 17-Jun-03 | | 61 | 215.7 | 25.0 | 3.36 | 42 | 45.50 | 7.53 | 0.019 | 0.35 | 0.01 | 0.736 | 0.379 | 1.096 | 0.019 | 0.141 | 8.80 | 34.60 | 69.00 | 127.0 | 23 | 4.3 |
| Saline Creek | OK121600-02-0030D | Mayes | 23937 | 14-Aug-01 | 8.13 | 92 | 215.1 | 24.7 | 8.49 | 103 | 2.79 | 7.70 | 0.015 | 0.74 | 0.01 | 0.140 | 0.765 | 0.890 | 0.011 | 0.011 | 7.32 | 4.70 | 107.30 | 134.0 | 1 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 24252 | 18-Sep-01 | 19.18 | 129 | 234.2 | 22.6 | 6.26 | 73 | 1.81 | 7.62 | 0.015 | 0.68 | 0.01 | 0.110 | 0.705 | 0.800 | 0.007 | 0.011 | 7.70 | 4.80 | 132.90 | 129.5 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 23518 | 23-Oct-01 | 28.61 | 129 | 243.8 | 20.3 | 9.64 | 109 | 2.01 | 7.82 | 0.015 | 0.71 | 0.01 | 0.110 | 0.735 | 0.830 | 0.005 | 0.005 | 8.90 | 5.40 | 115.10 | 149.5 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 24500 | 04-Dec-01 | 23.55 | 112 | 243.1 | 17.0 | 7.50 | 80 | 1.12 | 8.01 | 0.082 | 0.74 | 0.01 | 0.110 | 0.832 | 0.860 | 0.005 | 0.005 | 9.55 | 5.32 | 116.70 | 136.5 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 24701 | 08-Jan-02 | 19.30 | 111 | 245.8 | 10.4 | 12.17 | 111 | 0.90 | 8.17 | 0.071 | 0.99 | 0.01 | 0.110 | 1.071 | 1.110 | 0.005 | 0.006 | 9.19 | 6.58 | 112.98 | 141.5 | 10 | 6.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 24822 | 11-Feb-02 | 25.90 | 81 | 227.9 | 8.3 | 11.43 | 99 | 1.05 | 8.08 | 0.015 | 1.07 | 0.01 | 0.110 | 1.095 | 1.190 | 0.005 | 0.012 | 7.94 | 6.30 | 104.80 | 130.5 | 10 | |
| Saline Creek | OK121600-02-0030D | Mayes | 24957 | 18-Mar-02 | 23.63 | 99 | 232.8 | 11.4 | 11.93 | 111 | 0.80 | 8.08 | 0.032 | 0.87 | 0.01 | 0.124 | 0.912 | 1.004 | 0.008 | 0.010 | 8.60 | 6.16 | 103.80 | 132.5 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25098 | 22-Apr-02 | 25.92 | 125 | 217.1 | 18.3 | 11.01 | 119 | | 7.60 | 0.015 | 0.92 | 0.01 | 0.110 | 0.945 | 1.040 | 0.005 | 0.005 | 7.13 | 6.28 | 94.16 | 125.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25249 | 29-May-02 | 98.64 | 61 | 209.0 | 18.4 | 11.37 | 123 | 0.88 | 7.51 | 0.027 | 0.85 | 0.01 | 0.124 | 0.887 | 0.984 | 0.005 | 0.032 | 5.24 | 5.73 | 93.71 | 113.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25312 | 09-Jul-02 | 24.04 | 75 | 231.8 | 23.6 | 9.61 | 115 | 0.98 | 7.19 | 0.150 | 0.81 | 0.01 | 0.110 | 0.970 | 0.930 | 0.015 | 0.017 | 5.56 | 5.45 | 103.90 | 133.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25629 | 06-Aug-02 | 10.82 | 102 | 237.3 | 24.2 | 9.30 | 113 | 0.90 | 7.38 | 0.015 | 0.79 | 0.01 | 0.112 | 0.815 | 0.912 | 0.010 | 0.017 | 5.80 | 5.22 | 112.20 | 136.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25859 | 09-Sep-02 | 8.84 | 98 | 243.8 | 26.0 | 9.21 | 117 | 0.82 | | 0.015 | 0.69 | 0.01 | 0.125 | 0.715 | 0.825 | 0.013 | 0.009 | 6.65 | 5.30 | 108.50 | 150.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 25976 | 14-Oct-02 | 9.03 | 112 | 234.1 | 19.9 | 8.94 | 99 | 0.51 | | 0.015 | 0.77 | 0.01 | 0.110 | 0.795 | 0.890 | 0.005 | 0.019 | 6.94 | 5.16 | 105.70 | 145.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 26141 | 18-Nov-02 | 14.52 | 92 | 229.4 | 16.4 | 10.72 | 111 | 0.47 | 7.32 | 0.021 | 0.32 | 0.05 | 0.110 | 0.391 | 0.480 | 0.007 | 0.011 | 8.65 | 5.72 | 110.20 | 110.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 26279 | 16-Dec-02 | 22.09 | 77 | 235.3 | 13.4 | 11.64 | 113 | 0.33 | 7.44 | 0.015 | 0.43 | 0.01 | 0.110 | 0.455 | 0.550 | 0.005 | 0.024 | 9.08 | 6.10 | 108.60 | 129.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 26663 | 28-Jan-03 | 18.78 | 88 | 234.3 | 9.5 | 12.88 | 114 | 0.42 | 7.04 | 0.015 | 0.48 | 0.01 | 0.110 | 0.505 | 0.600 | 0.005 | 0.005 | 10.70 | 6.20 | 110.30 | 121.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 27199 | 03-Mar-03 | 93.02 | 119 | 169.5 | 10.9 | 12.10 | 110 | 1.19 | 8.13 | 0.015 | 0.91 | 0.01 | 0.110 | 0.935 | 1.030 | 0.005 | 0.005 | 11.00 | 7.10 | 104.90 | 139.0 | 10 | 3.4 |
| Saline Creek | OK121600-02-0030D | Mayes | 27400 | 07-Apr-03 | 66.76 | 85 | 230.0 | 15.0 | 11.48 | 117 | 0.61 | 8.17 | 0.015 | 0.59 | 0.01 | 0.110 | 0.615 | 0.710 | 0.005 | 0.053 | 11.07 | 7.40 | 101.30 | 153.0 | 10 | 2.7 |
| Saline Creek | OK121600-02-0030D | Mayes | 27576 | 13-May-03 | 38.84 | 76 | 253.2 | 16.9 | 9.50 | 99 | 0.63 | 7.89 | 0.025 | 0.44 | 0.06 | 0.110 | 0.525 | 0.610 | 0.005 | 0.005 | 11.30 | 6.50 | 109.10 | 136.0 | 10 | 2.0 |
| Saline Creek | OK121600-02-0030D | Mayes | 27734 | 17-Jun-03 | 43.68 | 102 | 244.1 | 19.1 | 8.92 | 99 | 0.80 | 7.72 | 0.015 | 0.49 | 0.01 | 0.110 | 0.515 | 0.610 | 0.005 | 0.036 | 7.10 | 6.20 | 112.30 | 121.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 23934 | 13-Aug-01 | 1.17 | 122 | 451.9 | 21.9 | 12.02 | 139 | 2.14 | | 0.015 | 2.55 | 0.47 | 0.210 | 3.035 | 3.230 | 0.067 | 0.112 | 30.95 | 13.66 | 160.40 | 231.0 | 5 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 24249 | 17-Sep-01 | 1.60 | 129 | 461.0 | 18.7 | 8.83 | 53 | 2.49 | 7.43 | 0.015 | 3.63 | 0.01 | 0.190 | 3.655 | 3.830 | 0.057 | 0.060 | 40.00 | 17.00 | 192.80 | 258.5 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 23511 | 22-Oct-01 | 5.03 | | 467.8 | 17.1 | 10.33 | 110 | 1.19 | 7.47 | 0.015 | 4.74 | 0.01 | 0.110 | 4.765 | 4.860 | 0.035 | 0.049 | 37.90 | 17.20 | 181.10 | 261.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 24499 | 04-Dec-01 | 4.23 | 114 | 435.1 | 16.5 | 7.83 | 82 | 1.22 | 7.88 | 0.025 | 3.98 | 0.01 | 0.110 | 4.015 | 4.100 | 0.065 | 0.064 | 30.84 | 14.72 | 172.40 | 245.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 24700 | 08-Jan-02 | 3.30 | 115 | 327.5 | 12.7 | 9.62 | 92 | 1.31 | 7.83 | 0.072 | 3.61 | 0.01 | 0.110 | 3.692 | 3.730 | 0.011 | 0.071 | 20.41 | 12.91 | 137.76 | 207.5 | 10 | 7.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 24824 | 11-Feb-02 | 5.25 | 76 | 280.0 | 12.0 | 9.56 | 91 | 1.25 | 8.27 | 0.015 | 3.08 | 0.01 | 0.110 | 3.105 | 3.200 | 0.072 | 0.081 | 14.52 | 11.10 | 109.20 | 160.5 | 10 | |
| Drowning Creek | OK121600-03-0090G | Delaware | 24956 | 18-Mar-02 | 5.67 | 105 | 190.2 | 12.2 | 9.70 | 93 | 0.94 | 7.74 | 0.015 | 2.70 | 0.01 | 0.110 | 2.725 | 2.820 | 0.067 | 0.068 | 20.12 | 12.81 | 129.40 | 181.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25097 | 22-Apr-02 | 7.96 | 115 | 285.8 | 15.0 | 9.56 | 98 | | 7.70 | 0.015 | 2.06 | 0.01 | 0.115 | 2.085 | 2.185 | 0.063 | 0.074 | 14.10 | 10.34 | 111.30 | 167.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25246 | 28-May-02 | 16.60 | 91 | 258.1 | 14.9 | 8.75 | 87 | 1.03 | 7.30 | 0.019 | 1.66 | 0.01 | 0.195 | 1.689 | 1.865 | 0.027 | 0.083 | 9.41 | 9.15 | 100.50 | 134.0 | 10 | 7.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25309 | 08-Jul-02 | 2.95 | 105 | 317.1 | 18.1 | 10.40 | 113 | 1.65 | 6.86 | 0.058 | 1.44 | 0.01 | 0.132 | 1.508 | 1.582 | 0.079 | 0.089 | 16.22 | 13.02 | 130.20 | 177.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25626 | 05-Aug-02 | 3.92 | 130 | 345.3 | 20.3 | 12.08 | 137 | 0.91 | 6.91 | 0.015 | 1.52 | 0.01 | 0.174 | 1.545 | 1.704 | 0.046 | 0.060 | 24.59 | 18.07 | 156.90 | 221.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25858 | 09-Sep-02 | 0.13 | 125 | 393.3 | 21.3 | 9.52 | 110 | 1.09 | | 0.015 | 1.72 | 0.01 | 0.147 | 1.745 | 1.877 | | | 35.89 | 25.09 | 171.80 | 268.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 25977 | 14-Oct-02 | 0.11 | 132 | 469.0 | 18.1 | 10.94 | 119 | 1.75 | | 0.025 | 1.98 | 0.01 | 0.179 | 2.015 | 2.169 | 0.044 | 0.067 | 42.23 | 30.93 | 174.20 | 273.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 26140 | 18-Nov-02 | 0.48 | 131 | 479.3 | 15.0 | 9.33 | 95 | 0.87 | 7.15 | 0.032 | 3.00 | 0.06 | 0.104 | 3.092 | 3.164 | 0.063 | 0.070 | 41.22 | 33.37 | 176.50 | 273.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 26280 | 16-Dec-02 | 1.61 | 89 | 454.0 | 14.1 | 8.94 | 89 | 0.71 | 7.90 | 0.015 | 3.44 | 0.01 | 0.110 | 3.465 | 3.560 | 0.032 | 0.051 | 37.03 | 32.80 | 164.40 | 236.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 26660 | 27-Jan-03 | 1.70 | 95 | 384.6 | 12.1 | 10.28 | 98 | 1.00 | 7.52 | 0.015 | 2.69 | 0.01 | 0.110 | 2.715 | 2.810 | 0.052 | 0.076 | 28.60 | 24.90 | 144.30 | 217.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 27198 | 03-Mar-03 | 13.77 | 105 | 247.2 | 12.2 | 12.70 | 121 | 1.96 | 7.63 | 0.015 | 2.69 | 0.01 | 0.110 | 2.715 | 2.810 | 0.053 | 0.066 | 21.40 | 19.60 | 121.90 | 176.0 | 10 | 3.6 |
| Drowning Creek | OK121600-03-0090G | Delaware | 27398 | 07-Apr-03 | 8.97 | 68 | 260.1 | 13.5 | 9.65 | 94 | 2.46 | 7.53 | 0.015 | 1.57 | 0.01 | 0.110 | 1.595 | 1.690 | 0.059 | 0.060 | 14.57 | 13.18 | 99.10 | 167.0 | 10 | 2.3 |
| Drowning Creek | OK121600-03-0090G | Delaware | 27575 | 13-May-03 | 0.34 | 99 | 320.8 | 14.6 | 8.53 | 85 | 1.43 | 7.37 | 0.027 | 1.06 | 0.05 | 0.110 | 1.137 | 1.220 | 0.054 | 0.044 | 17.60 | 14.20 | 122.40 | 155.0 | 10 | 2.0 |
| Drowning Creek | OK121600-03-0090G | Delaware | 27733 | 16-Jun-03 | 7.86 | 86 | 232.4 | 16.1 | 8.45 | 88 | 1.57 | 7.20 | 0.015 | 0.95 | 0.01 | 0.194 | 0.975 | 1.154 | 0.063 | 0.116 | 10.40 | 10.30 | 102.80 | 123.0 | 10 | 2.0 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 23930 | 13-Aug-01 | 0.00 | 76 | 293.5 | 25.6 | 2.89 | 36 | 10.60 | 7.37 | 0.360 | 0.47 | 0.48 | 1.470 | 1.310 | 2.420 | 0.093 | 0.135 | 15.22 | 15.90 | 114.40 | 141.0 | 20 | 3.0 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 24245 | 17-Sep-01 | | 18 | 121.4 | 19.8 | 5.81 | 65 | 21.50 | 6.20 | 0.401 | 0.93 | 0.43 | 0.798 | 1.761 | 2.158 | 0.236 | 0.257 | 2.90 | 9. | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 | | |
|--------------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|----|-----|
| Little Horse Creek | OK121600-03-0190A | Ottawa | 24696 | 08-Jan-02 | 0.00 | 125 | 483.3 | 3.6 | 13.09 | 100 | 6.79 | 7.61 | 0.063 | 1.20 | 0.01 | 0.482 | 1.273 | 1.692 | 0.049 | 0.076 | 14.43 | 24.91 | 177.64 | 232.5 | 10 | 6.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 24829 | 12-Feb-02 | 0.30 | 107 | 425.2 | 7.3 | 12.03 | 102 | 11.00 | | 0.121 | 1.05 | 0.36 | 0.509 | 1.531 | 1.919 | 0.057 | 0.099 | 12.89 | 28.04 | 153.90 | 204.5 | 14 | 4.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 24952 | 18-Mar-02 | 1.71 | 115 | 387.0 | 9.0 | 10.38 | 93 | 8.19 | 6.28 | 0.176 | 0.61 | 0.01 | 0.588 | 0.796 | 1.208 | 0.033 | 0.068 | 17.78 | 25.82 | 165.50 | 213.5 | 10 | 2.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25093 | 22-Apr-02 | 1.73 | 82 | 397.1 | 16.7 | 6.62 | 69 | | 7.05 | 0.262 | 0.61 | 0.12 | 0.885 | 0.992 | 1.615 | 0.073 | 0.087 | 17.74 | 19.72 | 156.10 | 227.0 | 10 | 4.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25242 | 28-May-02 | 95.23 | 45 | 138.9 | 18.8 | 6.30 | 69 | 46.90 | 6.87 | 0.121 | 0.65 | 0.10 | 0.645 | 0.871 | 1.395 | 0.217 | 0.333 | 4.19 | 6.79 | 54.23 | 118.0 | 18 | 9.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25305 | 08-Jul-02 | 0.00 | 108 | 342.5 | 24.8 | 3.76 | 46 | 20.60 | 7.20 | 0.340 | 0.56 | 0.01 | 1.335 | 0.910 | 1.905 | 0.063 | 0.213 | 13.06 | 9.89 | 137.70 | 201.0 | 10 | 3.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25622 | 05-Aug-02 | 0.00 | 132 | 328.7 | 25.9 | 2.83 | 35 | 6.53 | 7.15 | 0.277 | 0.61 | 0.01 | 0.979 | 0.897 | 1.599 | 0.256 | 0.263 | 13.38 | 11.53 | 134.30 | 192.0 | 10 | 3.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25854 | 09-Sep-02 | 0.00 | 121 | 315.9 | 24.3 | 3.02 | 37 | 23.40 | | 0.106 | 0.50 | 0.01 | 0.872 | 0.616 | 1.382 | 0.005 | 0.120 | 25.76 | 10.06 | 149.30 | 200.0 | 24 | 3.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 25974 | 14-Oct-02 | 0.00 | 124 | 370.5 | 10.1 | 6.94 | 63 | 10.70 | | 0.087 | 0.80 | 0.01 | 0.725 | 0.897 | 1.535 | 0.060 | 0.128 | 22.41 | 26.38 | 156.30 | 241.0 | 10 | 2.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 26138 | 18-Nov-02 | 0.00 | 103 | 634.0 | 7.2 | 10.15 | 86 | 2.27 | 7.09 | 0.035 | 0.09 | 0.01 | 0.171 | 0.135 | 0.271 | 0.018 | 0.033 | 26.86 | 124.23 | 271.10 | 368.0 | 10 | 4.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 26284 | 16-Dec-02 | 0.00 | 88 | 713.0 | 8.0 | 6.55 | 57 | 1.98 | 6.53 | 0.015 | 0.35 | 0.01 | 0.110 | 0.375 | 0.470 | 0.005 | 0.036 | 65.69 | 122.70 | 268.10 | 445.0 | 10 | 2.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 26656 | 27-Jan-03 | 0.00 | 69 | 382.2 | 4.8 | 8.89 | 70 | 1.81 | 6.35 | 0.015 | 9.85 | 10.80 | 0.110 | 20.665 | 20.760 | 0.005 | 0.029 | 26.60 | 18.40 | 177.00 | 144.0 | 10 | 2.0 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 27196 | 03-Mar-03 | 4.06 | 74 | 188.1 | 3.8 | 14.60 | 112 | 21.40 | 7.37 | 0.273 | 2.68 | 0.01 | 1.006 | 2.963 | 3.696 | 0.138 | 0.172 | 22.00 | 29.80 | 135.20 | 184.0 | 16 | 4.7 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 27399 | 07-Apr-03 | 7.10 | 65 | 240.5 | 14.4 | 7.45 | 75 | 42.40 | 6.97 | 0.445 | 1.75 | 0.01 | 0.430 | 2.205 | 2.190 | 0.410 | 0.497 | 14.84 | 15.91 | 83.97 | 172.0 | 17 | 4.5 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 27571 | 12-May-03 | 0.34 | 114 | 365.6 | 17.9 | 5.11 | 55 | 3.32 | 7.17 | 0.116 | 0.75 | 0.02 | 0.944 | 0.886 | 1.714 | 0.185 | 0.165 | 18.60 | 11.30 | 141.90 | 214.0 | 10 | 4.1 | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 27729 | 16-Jun-03 | 1.47 | 88 | 271.8 | 23.3 | 5.81 | 70 | 19.70 | 7.20 | 0.041 | 0.71 | 0.01 | 0.668 | 0.761 | 1.388 | 0.178 | 0.280 | 16.20 | 15.60 | 106.10 | 183.0 | 19 | 3.4 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 23933 | 13-Aug-01 | 4.85 | 106 | 162.1 | 26.9 | 6.11 | 78 | 2.10 | | 0.015 | 0.95 | 0.01 | 0.110 | 0.975 | 1.070 | 0.020 | 0.016 | 7.74 | 4.57 | 119.00 | 123.0 | 4 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 24248 | 17-Sep-01 | 14.33 | 129 | 252.1 | 21.1 | 6.75 | 78 | 7.41 | 7.63 | 0.015 | 1.08 | 0.01 | 0.119 | 1.105 | 1.209 | 0.005 | 0.020 | 7.30 | 5.40 | 117.80 | 130.0 | 10 | 5.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 23509 | 22-Oct-01 | 14.45 | 123 | 277.0 | 17.0 | 10.52 | 112 | 2.19 | 7.48 | 0.015 | 2.23 | 0.01 | 0.110 | 2.255 | 2.350 | 0.005 | 0.016 | 7.90 | 6.10 | 139.40 | 171.5 | 13 | 4.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 24498 | 04-Dec-01 | 15.98 | 117 | 290.4 | 13.8 | 9.78 | 96 | 1.79 | 7.82 | 0.022 | 2.25 | 0.43 | 0.110 | 2.702 | 2.790 | | 0.023 | 7.63 | 5.68 | 140.80 | 146.0 | 10 | 6.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 24699 | 08-Jan-02 | 19.05 | 112 | 296.5 | 6.1 | 12.83 | 106 | 1.16 | 8.01 | 0.058 | 2.38 | 0.01 | 0.162 | 2.448 | 2.552 | 0.011 | 0.014 | 7.38 | 6.17 | 133.17 | 187.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 24823 | 11-Feb-02 | 38.98 | 87 | 252.9 | 9.4 | 13.12 | 117 | 1.51 | 8.19 | 0.015 | 2.49 | 0.01 | 0.128 | 2.515 | 2.628 | 0.011 | 0.030 | 6.48 | 5.84 | 114.80 | 132.5 | 10 | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 24955 | 18-Mar-02 | 28.67 | 98 | 276.4 | 11.1 | 12.04 | 113 | 1.54 | 7.85 | 0.015 | 2.01 | 0.09 | 0.153 | 2.115 | 2.253 | 0.012 | 0.017 | 7.30 | 5.89 | 123.90 | 152.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25096 | 22-Apr-02 | 31.73 | 101 | 270.2 | 18.0 | 11.85 | 129 | | 7.80 | 0.015 | 1.80 | 0.01 | 0.273 | 1.825 | 2.083 | 0.005 | 0.005 | 7.05 | 5.54 | 120.10 | 161.5 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25245 | 28-May-02 | 109.95 | 76 | 226.7 | 15.8 | 8.81 | 100 | 280.00 | | 0.020 | 7.59 | 0.20 | 1.78 | 0.01 | 0.110 | 1.810 | 1.903 | 0.005 | 0.040 | 5.17 | 5.19 | 99.20 | 127.0 | 10 | 7.0 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25308 | 08-Jul-02 | 16.75 | 99 | 272.2 | 25.3 | 10.42 | 130 | 4.55 | 7.16 | 0.039 | 1.81 | 0.01 | 0.138 | 1.859 | 1.958 | 0.025 | 0.036 | 7.34 | 4.94 | 123.90 | 157.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25625 | 05-Aug-02 | 9.51 | 134 | 285.0 | 26.1 | 8.09 | 103 | 2.07 | 7.21 | 0.015 | 1.56 | 0.01 | 0.164 | 1.585 | 1.734 | 0.005 | 0.016 | 7.82 | 4.86 | 129.80 | 162.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25857 | 09-Sep-02 | 8.09 | 110 | 276.1 | 24.4 | 7.39 | 91 | 2.32 | | 0.015 | 1.26 | 0.01 | 0.131 | 1.285 | 1.401 | | | 8.02 | 4.71 | 124.80 | 150.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25975 | 14-Oct-02 | 5.95 | 118 | 294.5 | 14.0 | 9.22 | 92 | 0.78 | | 0.015 | 1.63 | 0.01 | 0.063 | 1.655 | 1.703 | 0.005 | 0.029 | 8.44 | 5.07 | 131.60 | 181.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 26139 | 18-Nov-02 | 6.36 | 104 | 305.2 | 11.1 | 10.51 | 98 | 0.67 | 7.31 | 0.018 | 1.60 | 0.05 | 0.110 | 1.668 | 1.760 | 0.015 | 0.018 | 10.87 | 5.76 | 140.30 | 174.0 | 10 | 3.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 26281 | 16-Dec-02 | 6.34 | 96 | 302.9 | 10.0 | 12.30 | 112 | 0.69 | 7.46 | 0.015 | 1.94 | 0.01 | 0.110 | 1.965 | 2.060 | 0.005 | 0.025 | 11.20 | 6.00 | 138.50 | 143.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 26659 | 27-Jan-03 | 6.15 | 79 | 289.9 | 3.9 | 14.19 | 109 | 0.43 | 7.71 | 0.015 | 2.20 | 0.01 | 0.110 | 2.225 | 2.320 | 0.005 | 0.005 | 11.30 | 6.00 | 132.00 | 164.0 | 10 | 2.0 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 27197 | 03-Mar-03 | 38.56 | 124 | 184.4 | 7.2 | 17.89 | 152 | 1.69 | 8.31 | 0.015 | 2.99 | 0.01 | 0.110 | 3.015 | 3.110 | 0.005 | 0.005 | 12.10 | 6.90 | 122.50 | 152.0 | 10 | 4.1 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 27397 | 07-Apr-03 | 38.46 | 85 | 263.4 | 15.0 | 12.50 | 128 | 2.32 | 8.29 | 0.015 | 2.24 | 0.02 | 0.110 | 2.275 | 2.370 | 0.005 | 0.025 | 11.03 | 8.09 | 117.00 | 169.0 | 10 | 2.4 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 27574 | 12-May-03 | 11.10 | 107 | 276.7 | 21.6 | 9.91 | 115 | 1.69 | 7.88 | 0.048 | 1.31 | 0.02 | 0.281 | 1.378 | 1.611 | | | 10.90 | 5.80 | 129.10 | 164.0 | 10 | 2.1 | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 27732 | 16-Jun-03 | 74.56 | 90 | 253.4 | 22.2 | 10.10 | 119 | 3.54 | 7.12 | 0.015 | 1.93 | 0.04 | 0.211 | 1.985 | 2.181 | 0.019 | 0.056 | 7.10 | 6.10 | 116.60 | 141.0 | 10 | 2.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 23931 | 13-Aug-01 | 8.94 | 67 | 1510.0 | 25.9 | 6.45 | 80 | 5.09 | 7.44 | 0.170 | 1.59 | 0.01 | 0.700 | 1.770 | 2.300 | 0.250 | 0.357 | 24.35 | 832.00 | 948.00 | 1263.0 | 7 | 2.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24246 | 17-Sep-01 | 128.08 | 30 | 370.9 | 20.3 | 8.04 | 91 | 93.10 | 7.01 | 0.535 | 2.44 | 0.01 | 1.986 | 2.985 | 4.436 | 0.662 | 0.864 | 21.60 | 93.40 | 147.00 | 215.5 | 116 | 7.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24382 | 23-Oct-01 | 6.78 | 94 | 1560.0 | 18.7 | 7.09 | 77 | 8.35 | 6.74 | 0.220 | 1.55 | 0.01 | 0.816 | 1.780 | 2.376 | 0.252 | 0.302 | 34.40 | 756.30 | 846.50 | 1230.5 | 13 | 2.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24484 | 04-Dec-01 | 2.85 | 103 | 2105.0 | 12.1 | 8.55 | 82 | 5.84 | 6.69 | 0.102 | 1.69 | 0.01 | 0.336 | 1.802 | 2.036 | 0.227 | 0.229 | 39.23 | 964.00 | 1097.80 | 1550.0 | 10 | 9.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24694 | 08-Jan-02 | 3.92 | 113 | | 1.7 | 12.56 | 91 | 12.20 | 6.96 | 0.357 | 1.35 | 0.01 | 0.750 | 1.717 | 2.110 | 0.161 | 0.182 | 37.22 | 870.80 | 1024.30 | 1465.0 | 10 | 7.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24828 | 12-Feb-02 | 12.60 | 94 | 18.6 | 7.1 | 13.23 | 112 | 8.24 | | 0.400 | 0.94 | 0.01 | 0.717 | 1.350 | 1.667 | 0.064 | 0.093 | 22.98 | 643.30 | 754.30 | 1069.0 | 10 | 5.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 24953 | 18-Mar-02 | 12.55 | 84 | 155.2 | 10.2 | 10.68 | 97 | 6.27 | 6.82 | 0.202 | 1.14 | 0.01 | 0.573 | 1.352 | 1.723 | 0.066 | 0.090 | 39.21 | 596.80 | 772.90 | 1145.0 | 10 | 2.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 25094 | 22-Apr-02 | 14.74 | 128 | 968.0 | 18.8 | 8.40 | 91 | | 7.45 | 0.231 | 0.85 | 0.01 | 0.985 | 1.091 | 1.845 | 0.113 | 0.148 | 19.76 | 345.10 | 416.50 | 681.0 | 12 | 3.0 | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 25243 | 28-May-02 | | 80 | 614.0 | 20.7 | 6.94 | 79 | 29.90 | 7.13 | 0.095 | 0.70 | 0.01 | 0.353 | 0.805 | 1.063 | 0.047 | 0 | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|--------------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Tar Creek | OK121600-04-0060D | Ottawa | 25855 | 09-Sep-02 | 5.60 | 91 | 1893.0 | 24.5 | 8.19 | 100 | 2.51 | | 0.046 | 2.12 | 0.01 | 0.598 | 2.176 | 2.728 | 0.287 | 0.268 | 42.14 | 908.30 | 1038.00 | 1571.0 | 10 | 3.0 |
| Tar Creek | OK121600-04-0060D | Ottawa | 25989 | 14-Oct-02 | 2.80 | 93 | 2062.0 | 11.0 | 8.72 | 81 | 2.12 | 8.69 | 0.015 | 2.42 | 0.01 | 0.423 | 2.445 | 2.853 | 0.592 | 0.639 | 50.00 | 845.10 | 1090.10 | 1660.0 | 10 | 2.0 |
| Tar Creek | OK121600-04-0060D | Ottawa | 26126 | 18-Nov-02 | 3.51 | 79 | 1714.0 | 9.3 | 8.80 | 78 | 16.60 | 8.94 | 0.098 | 3.48 | 0.12 | 0.480 | 3.698 | 4.080 | 0.603 | 0.626 | 63.06 | 683.62 | 828.10 | 1340.0 | 16 | 4.0 |
| Tar Creek | OK121600-04-0060D | Ottawa | 26283 | 16-Dec-02 | 4.45 | 88 | 1782.0 | 7.9 | 11.26 | 96 | 6.36 | 7.09 | 0.197 | 4.08 | 0.01 | 0.579 | 4.287 | 4.669 | 0.313 | 0.359 | 60.86 | 737.00 | 841.60 | 1342.0 | 10 | 2.0 |
| Tar Creek | OK121600-04-0060D | Ottawa | 26657 | 27-Jan-03 | 2.43 | 77 | 1844.0 | 1.2 | 14.39 | 104 | 8.68 | 6.84 | 0.291 | 2.17 | 0.01 | 0.553 | 2.471 | 2.733 | 0.535 | 0.740 | 77.30 | 790.10 | 934.20 | 1412.0 | 10 | 2.0 |
| Tar Creek | OK121600-04-0060D | Ottawa | 27209 | 03-Mar-03 | 10.49 | 80 | 1117.0 | 3.6 | 10.89 | 83 | 14.00 | 7.71 | | 1.30 | 0.01 | | 1.310 | 1.310 | 0.066 | 0.108 | 46.30 | 482.80 | 581.70 | 922.0 | 10 | 2.9 |
| Tar Creek | OK121600-04-0060D | Ottawa | 27396 | 07-Apr-03 | 152.83 | 74 | 941.0 | 11.5 | 10.44 | 98 | 67.60 | 6.97 | 0.110 | 0.59 | 0.01 | 0.110 | 0.710 | 0.710 | 0.055 | 0.201 | 20.17 | 323.10 | 386.70 | 666.0 | 50 | 3.4 |
| Tar Creek | OK121600-04-0060D | Ottawa | 27572 | 12-May-03 | 12.24 | 101 | 1255.0 | 19.8 | 8.59 | 95 | 18.50 | 7.47 | 0.136 | 1.21 | 0.02 | 0.474 | 1.366 | 1.704 | | | 23.70 | 464.40 | 585.90 | 895.0 | 10 | 3.6 |
| Tar Creek | OK121600-04-0060D | Ottawa | 27730 | 16-Jun-03 | 8.60 | 99 | 1516.0 | 25.2 | 8.15 | 102 | 5.44 | 7.65 | 0.025 | 0.32 | 0.01 | 0.458 | 0.355 | 0.788 | 0.042 | 0.100 | 22.20 | 749.30 | 846.10 | 1224.0 | 10 | 3.1 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 23921 | 13-Aug-01 | 0.00 | 98 | 266.9 | 26.1 | 3.46 | 44 | 13.70 | 8.53 | 0.280 | 0.54 | 0.40 | 0.670 | 1.220 | 1.610 | 0.037 | 0.064 | 6.25 | 22.60 | 110.60 | 166.0 | 17 | 3.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24237 | 17-Sep-01 | 0.00 | 74 | 206.4 | 21.0 | 3.81 | 44 | 20.90 | 7.65 | 0.234 | 0.52 | 0.01 | 0.778 | 0.764 | 1.308 | 0.005 | 0.071 | 4.70 | 13.10 | 78.40 | 125.0 | 13 | 6.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24373 | 22-Oct-01 | 1.11 | 19 | 196.8 | 16.5 | 4.98 | 52 | 32.50 | 7.56 | 0.249 | 0.74 | 0.01 | 0.763 | 0.999 | 1.513 | 0.024 | 0.082 | 6.40 | 34.60 | 93.70 | 141.0 | 10 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24475 | 03-Dec-01 | 0.47 | 53 | 210.8 | 9.1 | 7.24 | 64 | 5.80 | 6.30 | 0.142 | 0.01 | 0.01 | 0.534 | 0.162 | 0.554 | 0.012 | 0.039 | 9.70 | 34.75 | 121.30 | 168.5 | 10 | 5.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24670 | 07-Jan-02 | 0.86 | 95 | 174.2 | 0.7 | 12.26 | 86 | 37.20 | 8.27 | 0.266 | 1.02 | 0.01 | 1.012 | 1.296 | 2.042 | 0.012 | 0.124 | 8.32 | 63.94 | 116.87 | 133.0 | 199 | 11.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24813 | 11-Feb-02 | 12.28 | 96 | 189.6 | 3.2 | 11.92 | 91 | 45.00 | 8.48 | 0.218 | 1.16 | 0.01 | 0.695 | 1.388 | 1.865 | 0.043 | 0.150 | 9.71 | 80.75 | 121.30 | 203.5 | 18 | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 24943 | 18-Mar-02 | 5.90 | 51 | 265.1 | 9.8 | 5.79 | 51 | 43.70 | 8.72 | 0.259 | 0.88 | 0.01 | 0.821 | 1.149 | 1.711 | 0.037 | 0.080 | 9.70 | 79.40 | 137.10 | 224.0 | 22 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25111 | 22-Apr-02 | 21.70 | 66 | 955.6 | 19.8 | 6.70 | 74 | 81.10 | 8.51 | 0.278 | 0.71 | 0.01 | 0.988 | 0.998 | 1.708 | 0.035 | 0.057 | 7.89 | 88.65 | 138.00 | 270.0 | 38 | 5.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25225 | 28-May-02 | 163.22 | 53 | 210.6 | 20.2 | 4.46 | 50 | 145.00 | 8.46 | 0.121 | 0.82 | 0.09 | 0.429 | 1.031 | 1.339 | 0.038 | 0.106 | 4.50 | 30.09 | 74.97 | 123.0 | 97 | 3.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25323 | 08-Jul-02 | 0.16 | 44 | 298.1 | 25.9 | 5.12 | 64 | 18.70 | 7.17 | 0.227 | 0.53 | 0.01 | 0.815 | 0.767 | 1.355 | 0.011 | 0.064 | 8.04 | 35.36 | 113.50 | 185.0 | 14 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25613 | 05-Aug-02 | 1.89 | 55 | 215.0 | 26.7 | 4.26 | 54 | 20.40 | 7.34 | 0.159 | 0.20 | 0.01 | 0.654 | 0.369 | 0.864 | 0.046 | 0.057 | 6.07 | 26.13 | 77.03 | 130.0 | 10 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25866 | 16-Sep-02 | 0.05 | 69 | 253.8 | 20.1 | 3.94 | 45 | 11.70 | 7.11 | 0.178 | 0.52 | 0.01 | 0.504 | 0.708 | 1.034 | 0.028 | 0.040 | 7.72 | 23.37 | 111.20 | 138.0 | 10 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 25992 | 14-Oct-02 | 0.00 | 75 | 760.0 | 11.1 | 7.61 | 71 | 17.40 | 7.65 | 0.020 | 0.61 | 0.01 | 0.258 | 0.640 | 0.878 | 0.022 | 0.051 | 10.13 | 206.00 | 198.30 | 496.0 | 87 | 3.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 26129 | 18-Nov-02 | 0.00 | 51 | 612.0 | 11.7 | 2.30 | 21 | 8.24 | 7.98 | 0.022 | 0.05 | 1.00 | 0.586 | 1.072 | 1.636 | 0.109 | 0.165 | 11.41 | 129.22 | 187.80 | 369.0 | 12 | 23.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 26270 | 16-Dec-02 | 0.00 | 188 | 230.6 | 8.6 | 1.15 | 10 | 17.10 | 8.90 | 0.015 | 0.09 | 0.05 | 0.519 | 0.155 | 0.659 | 0.301 | 0.424 | 7.75 | 8.60 | 144.00 | 197.0 | 76 | 7.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 26647 | 27-Jan-03 | 0.00 | 87 | 570.0 | 3.6 | 7.99 | 61 | 6.37 | 7.87 | 0.015 | 0.12 | 0.01 | 0.202 | 0.145 | 0.332 | 0.005 | 0.015 | 27.20 | 119.90 | 238.40 | 351.0 | 10 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 27212 | 03-Mar-03 | 19.10 | 89 | 443.8 | 4.4 | 11.73 | 92 | 33.10 | 8.33 | 0.015 | 1.56 | 0.01 | 0.110 | 1.585 | 1.680 | 0.005 | 0.040 | 19.40 | 62.70 | 177.20 | 288.0 | 20 | 6.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 27411 | 07-Apr-03 | 5.96 | 90 | 416.0 | 10.9 | 6.07 | 55 | 51.70 | 7.86 | 0.028 | 0.33 | 0.01 | 0.882 | 0.368 | 1.222 | 0.019 | 0.131 | 24.19 | 95.60 | 141.70 | 248.0 | 50 | 4.5 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 27557 | 12-May-03 | 20.97 | 43 | 267.9 | 19.2 | 3.44 | 38 | 218.00 | 7.76 | 0.412 | 1.46 | 0.02 | 1.687 | 1.892 | 3.167 | 0.084 | 0.172 | 10.80 | 53.90 | 88.60 | 212.0 | 110 | 2.0 |
| Little Cabin Creek | OK121600-06-0080C | Craig | 27745 | 16-Jun-03 | 6.59 | 63 | 233.3 | 23.9 | 3.15 | 38 | 55.00 | 7.79 | 0.084 | 0.58 | 0.01 | 1.230 | 0.674 | 1.820 | 0.063 | 0.190 | 6.80 | 32.30 | 89.50 | 150.0 | 27 | 3.1 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 23920 | 13-Aug-01 | 0.00 | 86 | 525.0 | 26.3 | 5.81 | 74 | 14.40 | 9.26 | 0.320 | 10.35 | 0.01 | 0.990 | 10.680 | 11.350 | 1.849 | 1.918 | 50.60 | 128.50 | 202.70 | 417.0 | 12 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24236 | 17-Sep-01 | 0.00 | 69 | 611.0 | 24.8 | 4.11 | 50 | 9.32 | 7.81 | 0.547 | 5.40 | 0.01 | 1.393 | 5.957 | 6.803 | 1.799 | 2.402 | 50.00 | 97.30 | 178.10 | 375.5 | 17 | 3.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24372 | 22-Oct-01 | 4.08 | 22 | 493.0 | 15.6 | 7.65 | 78 | 34.50 | 9.12 | 0.084 | 0.75 | 0.01 | 0.560 | 0.844 | 1.320 | 0.016 | 0.062 | 4.30 | 207.70 | 298.20 | 392.0 | 10 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24474 | 03-Dec-01 | 3.80 | 85 | 929.0 | 9.2 | 9.59 | 85 | 11.90 | 6.34 | 0.268 | 0.01 | 0.01 | 0.447 | 0.288 | 0.467 | 0.007 | 0.008 | 6.34 | 591.00 | 715.70 | 958.0 | 10 | 6.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24669 | 07-Jan-02 | 5.46 | 102 | 488.0 | 10.0 | 12.98 | 118 | 9.73 | 8.67 | 0.299 | 0.63 | 0.01 | 0.667 | 0.939 | 1.307 | 0.010 | 0.049 | 5.71 | 330.40 | 483.21 | 596.5 | 10 | 10.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24812 | 11-Feb-02 | 19.31 | 92 | 467.0 | 3.7 | 10.99 | 84 | 20.70 | 8.49 | 0.106 | 0.77 | 0.01 | 0.373 | 0.886 | 1.153 | 0.027 | 0.082 | 5.77 | 273.10 | 418.30 | 507.0 | 21 | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 24942 | 18-Mar-02 | 17.11 | 84 | 601.0 | 9.6 | 6.48 | 57 | 13.50 | 8.77 | 0.126 | 0.54 | 0.01 | 0.479 | 0.676 | 1.029 | 0.016 | 0.057 | 6.68 | 256.90 | 418.80 | 508.0 | 14 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25110 | 22-Apr-02 | 21.90 | 59 | 654.0 | 20.1 | 7.84 | 89 | 64.40 | 8.59 | 0.291 | 0.70 | 0.01 | 0.900 | 1.001 | 1.610 | 0.042 | 0.118 | 5.51 | 222.00 | 321.40 | 502.7 | 27 | 4.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25224 | 28-May-02 | 166.83 | 63 | 420.9 | 20.1 | 5.75 | 65 | 106.00 | 8.52 | 0.130 | 0.72 | 0.09 | 0.556 | 0.940 | 1.366 | 0.041 | 0.104 | 4.23 | 106.40 | 176.40 | 291.0 | 23 | 3.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25322 | 08-Jul-02 | 1.65 | 80 | 982.0 | 26.5 | 5.91 | 75 | 8.61 | 7.12 | 0.279 | 0.53 | 0.01 | 0.697 | 0.819 | 1.237 | 0.005 | 0.018 | 5.21 | 380.60 | 527.40 | 724.0 | 10 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25612 | 05-Aug-02 | 6.13 | 44 | 658.0 | 27.2 | 5.93 | 76 | 13.40 | 7.42 | 0.153 | 0.60 | 0.01 | 0.566 | 0.763 | 1.176 | 0.037 | 0.040 | 5.52 | 218.70 | 292.10 | 436.0 | 10 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25865 | 16-Sep-02 | 0.12 | 52 | 409.0 | 20.1 | 4.64 | 52 | 17.90 | 7.13 | 0.317 | 17.28 | 0.11 | 1.403 | 17.707 | 18.793 | 1.957 | 1.910 | 48.95 | 85.90 | 181.90 | 393.0 | 10 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 25991 | 14-Oct-02 | 0.00 | 58 | 653.0 | 18.8 | 8.58 | 93 | 1.76 | 7.83 | 0.085 | 19.68 | 0.01 | 0.518 | 19.775 | 20.208 | 2.389 | 2.455 | 46.91 | 67.03 | 158.80 | 403.0 | 10 | 3.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 26128 | 18-Nov-02 | 0.00 | 65 | 654.0 | 17.0 | 7.49 | 80 | 4.16 | 8.48 | 0.222 | 0.61 | 0.01 | 0.758 | 0.842 | 1.378 | 0.103 | 0.153 | 44.27 | 84.99 | 184.80 | 385.0 | 10 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 26269 | 16-Dec-02 | 0.54 | 131 | 415.2 | 7.7 | 4.89 | 41 | 5.47 | 8.15 | 0.015 | 0.01 | 0.01 | 0.251 | 0.035 | 0.271 | 0.006 | 0.039 | 54.85 | 100.40 | 224.30 | 336.0 | 24 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 26646 | 27-Jan-03 | 1.73 | 122 | | 0.8 | 11.72 | 82 | 8.68 | 8.13 | 0.015 | 0.04 | 0.08 | 0.110 | 0.135 | 0.230 | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|---------------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Big Cabin Creek | OK121600-06-0220I | Craig | 27556 | 12-May-03 | 13.92 | 124 | 882.0 | 19.4 | 4.22 | 47 | 26.60 | 7.93 | 0.126 | 0.57 | 0.02 | 0.471 | 0.716 | 1.061 | | | 7.10 | 314.30 | 429.50 | 673.0 | 27 | 2.0 |
| Big Cabin Creek | OK121600-06-0220I | Craig | 27744 | 16-Jun-03 | 10.03 | 55 | 356.6 | 23.5 | 4.05 | 48 | 55.40 | 7.96 | 0.081 | 0.47 | 0.01 | 0.737 | 0.561 | 1.217 | 0.045 | 0.132 | 4.70 | 96.50 | 157.80 | 209.0 | 45 | 3.1 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 23932 | 13-Aug-01 | 1.33 | 111 | 264.0 | 27.7 | 8.45 | 110 | 1.64 | 8.01 | 0.015 | 0.54 | 0.01 | 0.110 | 0.565 | 0.660 | 0.021 | 0.032 | 6.05 | 5.34 | 127.50 | 130.0 | 3 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24247 | 17-Sep-01 | 1.57 | 109 | 278.7 | 21.6 | 6.76 | 78 | 2.59 | 7.62 | 0.015 | 0.57 | 0.01 | 0.110 | 0.595 | 0.690 | 0.020 | 0.020 | 5.80 | 4.90 | 137.10 | 138.0 | 10 | 4.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24383 | 23-Oct-01 | 10.27 | 110 | 337.0 | 17.9 | 8.36 | 89 | 0.58 | 7.67 | 0.015 | 0.79 | 0.01 | 0.110 | 0.815 | 0.910 | 0.005 | 0.011 | 5.70 | 7.50 | 138.00 | 175.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24485 | 04-Dec-01 | 3.90 | 112 | 357.2 | 12.2 | 10.16 | 97 | 0.43 | 7.61 | 0.015 | 0.65 | 0.01 | 0.110 | 0.675 | 0.770 | 0.008 | 0.011 | 6.06 | 6.51 | 147.70 | 146.0 | 10 | 9.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24695 | 08-Jan-02 | 8.26 | 115 | 348.8 | 4.4 | 12.88 | 101 | 0.16 | 7.61 | 0.015 | 0.79 | 0.01 | 0.110 | 0.815 | 0.910 | 0.011 | 0.012 | 6.10 | 8.15 | 141.49 | 169.5 | 10 | 5.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24827 | 12-Feb-02 | 16.44 | 108 | 312.1 | 6.6 | 12.11 | 100 | 0.30 | | 0.020 | 0.88 | 0.01 | 0.135 | 0.910 | 1.025 | 0.009 | 0.016 | 5.59 | 7.53 | 123.70 | 130.5 | 10 | 3.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 24954 | 18-Mar-02 | 18.31 | 103 | 274.0 | 10.0 | 11.37 | 104 | 0.63 | 7.88 | 0.015 | 0.77 | 0.01 | 0.110 | 0.795 | 0.890 | 0.009 | 0.009 | 6.61 | 7.59 | 130.90 | 144.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25095 | 22-Apr-02 | 14.17 | 112 | 279.4 | 18.2 | 10.13 | 111 | | 8.10 | 0.015 | 0.66 | 0.01 | 0.133 | 0.685 | 0.803 | 0.005 | 0.005 | 6.56 | 6.27 | 129.90 | 154.5 | 10 | 4.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25244 | 28-May-02 | 45.92 | 85 | 229.3 | 17.5 | 9.03 | 96 | 0.79 | 7.65 | 0.015 | 0.68 | 0.01 | 0.110 | 0.705 | 0.800 | 0.005 | 0.017 | 4.67 | 5.84 | 104.20 | 132.0 | 10 | 6.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25307 | 08-Jul-02 | 11.10 | 97 | 266.5 | 25.7 | 8.18 | 102 | 0.39 | 7.49 | 0.015 | 0.77 | 0.01 | 0.110 | 0.795 | 0.890 | 0.019 | 0.024 | 5.13 | 6.03 | 124.70 | 134.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25624 | 05-Aug-02 | 6.71 | 132 | 295.3 | 27.1 | 8.30 | 108 | 0.59 | 7.57 | 0.015 | 0.82 | 0.01 | 0.110 | 0.845 | 0.940 | 0.005 | 0.007 | 5.56 | 5.87 | 140.70 | 161.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25856 | 09-Sep-02 | 0.66 | 115 | 289.2 | 26.3 | 10.10 | 129 | 0.52 | | 0.015 | 0.64 | 0.01 | 0.110 | 0.665 | 0.760 | | | 5.88 | 5.47 | 134.80 | 144.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 25990 | 14-Oct-02 | 1.87 | 113 | 297.0 | 15.9 | 9.85 | 101 | 0.58 | 9.09 | 0.015 | 0.73 | 0.01 | 0.110 | 0.755 | 0.850 | 0.019 | 0.025 | 5.83 | 6.43 | 144.00 | 157.0 | 10 | 3.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 26127 | 18-Nov-02 | 2.33 | 55 | 312.2 | 11.2 | 11.50 | 108 | 2.30 | 8.93 | 0.015 | 0.27 | 0.01 | 0.110 | 0.295 | 0.390 | 0.012 | 0.020 | 6.80 | 6.60 | 158.60 | 173.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 26282 | 16-Dec-02 | 3.69 | 115 | 309.5 | 8.5 | 13.00 | 113 | 0.33 | 7.63 | 0.015 | 0.38 | 0.01 | 0.110 | 0.405 | 0.500 | 0.005 | 0.024 | 7.01 | 10.50 | 164.80 | 187.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 26658 | 27-Jan-03 | 3.68 | 105 | 304.6 | 3.7 | 14.83 | 114 | 0.57 | 8.15 | 0.015 | 0.21 | 0.01 | 0.110 | 0.235 | 0.330 | 0.005 | 0.005 | 6.00 | 8.80 | 160.80 | 140.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 27210 | 03-Mar-03 | 7.33 | 120 | 310.8 | 5.0 | 11.90 | 96 | 0.64 | 8.53 | 0.015 | 0.52 | 0.01 | 0.110 | 0.545 | 0.640 | 0.005 | 0.005 | 10.20 | 8.80 | 150.50 | 193.0 | 10 | 2.0 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 27395 | 07-Apr-03 | 36.67 | 91 | 263.9 | 12.6 | 11.72 | 112 | 0.84 | 7.38 | 0.015 | 0.40 | 0.01 | 0.110 | 0.425 | 0.520 | 0.005 | 0.015 | 11.83 | 8.63 | 121.70 | 182.0 | 10 | 2.3 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 27573 | 12-May-03 | 39.30 | 95 | 256.1 | 19.7 | 9.09 | 101 | 0.91 | 8.03 | 0.024 | 0.41 | 0.06 | 0.110 | 0.494 | 0.580 | | | 7.30 | 8.30 | 121.10 | 136.0 | 10 | 4.6 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 27731 | 16-Jun-03 | 9.91 | 128 | 2355.0 | 23.9 | 9.91 | 119 | 0.40 | 8.04 | 0.015 | 0.30 | 0.01 | 0.110 | 0.325 | 0.420 | 0.005 | 0.046 | 7.20 | 8.10 | 168.00 | 158.0 | 10 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 23927 | 14-Aug-01 | 0.98 | 74 | 400.3 | 26.6 | 2.74 | 35 | 28.90 | 7.67 | 0.530 | 0.65 | 0.01 | 1.110 | 1.190 | 1.770 | 0.069 | 0.056 | 40.44 | 26.18 | 111.20 | 239.0 | 21 | 4.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 24242 | 18-Sep-01 | 0.05 | 88 | 325.6 | 21.9 | 4.91 | 56 | 46.30 | 7.66 | 0.402 | 0.54 | 0.01 | 1.124 | 0.952 | 1.674 | 0.007 | 0.072 | 22.50 | 18.80 | 115.60 | 182.5 | 29 | 5.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 24379 | 23-Oct-01 | 0.60 | 85 | 508.0 | 18.3 | 5.59 | 60 | 27.50 | 7.30 | 0.180 | 0.59 | 0.01 | 0.578 | 0.780 | 1.178 | 0.005 | 0.032 | 122.70 | 20.10 | 139.00 | 365.5 | 16 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 24481 | 04-Dec-01 | 0.07 | 94 | 1101.0 | 10.9 | 6.19 | 56 | 28.20 | 8.65 | 0.212 | 0.51 | 0.01 | 0.838 | 0.732 | 1.358 | 0.031 | 0.047 | 333.10 | 19.67 | 174.50 | 741.5 | 15 | 4.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 24676 | 08-Jan-02 | 0.19 | 90 | 269.8 | 4.2 | 9.85 | 77 | 39.60 | 9.58 | 0.385 | 0.85 | 0.01 | 1.325 | 1.245 | 2.185 | 0.041 | 0.137 | 36.38 | 53.50 | 122.68 | 279.5 | 22 | 12.0 |
| Pryor Creek: HWY 20 | OK121610-00-0050D | Mayes | 24819 | 12-Feb-02 | 9.69 | 33 | 180.1 | 4.5 | 9.74 | 76 | 43.00 | 8.08 | 0.193 | 0.96 | 0.01 | 0.729 | 1.163 | 1.699 | 0.051 | 0.094 | 20.23 | 49.33 | 83.78 | 211.0 | 10 | 7.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 24949 | 19-Mar-02 | 23.47 | 67 | 249.9 | 10.7 | 6.77 | 61 | 72.80 | 8.70 | 0.241 | 0.70 | 0.01 | 0.892 | 0.951 | 1.602 | 0.075 | 0.108 | 26.89 | 55.04 | 99.70 | 192.5 | 39 | 3.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 25230 | 29-May-02 | 150.93 | 31 | 191.9 | 21.4 | 5.56 | 64 | 147.00 | 8.49 | 0.073 | 0.68 | 0.09 | 0.501 | 0.843 | 1.271 | 0.129 | 0.228 | 5.21 | 13.84 | 42.15 | 148.0 | 152 | 5.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 25329 | 09-Jul-02 | 0.26 | 77 | 328.1 | 27.3 | 4.18 | 54 | 19.40 | 7.72 | 0.394 | 0.53 | 0.01 | 1.188 | 0.934 | 1.728 | 0.022 | 0.107 | 25.73 | 29.38 | 101.30 | 204.0 | 10 | 5.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 25619 | 06-Aug-02 | 0.10 | 146 | 290.3 | 28.1 | 5.18 | 68 | 18.80 | 7.37 | 0.200 | 0.20 | 0.01 | 0.682 | 0.410 | 0.892 | 0.047 | 0.067 | 20.76 | 20.65 | 111.70 | 198.0 | 10 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 25872 | 17-Sep-02 | 0.00 | 78 | 872.0 | 22.6 | 2.31 | 27 | 29.90 | 6.38 | 0.393 | 0.52 | 0.36 | 0.848 | 1.273 | 1.728 | 0.019 | 0.062 | 181.00 | 17.84 | 137.90 | 363.0 | 12 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 25998 | 15-Oct-02 | 0.00 | 69 | 836.0 | 13.5 | 3.02 | 29 | 22.00 | 7.46 | 0.164 | 0.77 | 0.01 | 0.866 | 0.944 | 1.646 | 0.058 | 0.076 | 165.60 | 17.61 | 121.50 | 407.0 | 20 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 26135 | 19-Nov-02 | 0.00 | 61 | 690.0 | 9.4 | 2.99 | 26 | 5.90 | 9.84 | 0.014 | 0.09 | 0.07 | 0.632 | 0.174 | 0.792 | 0.072 | 0.113 | 202.26 | 16.34 | 133.00 | 486.0 | 17 | 12.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 26276 | 17-Dec-02 | 1.08 | 97 | 695.0 | 7.6 | 6.47 | 55 | 21.90 | | 0.024 | 0.47 | 0.01 | 0.545 | 0.504 | 1.025 | 0.040 | 0.148 | 198.50 | 29.90 | 135.60 | 569.0 | 32 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 26653 | 28-Jan-03 | 1.24 | | 665.0 | 4.6 | 8.76 | 68 | 15.40 | 7.82 | 0.015 | 0.35 | 0.01 | 0.541 | 0.375 | 0.901 | 0.013 | 0.029 | 95.60 | 49.00 | 145.20 | 360.0 | 10 | 2.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 27218 | 04-Mar-03 | 28.96 | 44 | 330.2 | 5.4 | 7.06 | 57 | 46.80 | 7.55 | 0.084 | 0.89 | 0.01 | 1.156 | 0.984 | 2.056 | 0.031 | 0.113 | 21.90 | 60.50 | 94.40 | 207.0 | 18 | 3.0 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 27417 | 08-Apr-03 | 51.30 | 41 | 217.0 | 11.1 | 8.37 | 78 | 73.10 | 7.73 | 0.055 | 0.59 | 0.01 | 0.987 | 0.655 | 1.587 | 0.074 | 0.185 | 11.89 | 36.47 | 64.62 | 196.0 | 59 | 4.3 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 27563 | 13-May-03 | 1.18 | | 348.5 | 20.1 | 3.02 | 34 | 35.00 | 7.63 | 0.107 | 0.47 | 0.01 | 0.613 | 0.597 | 1.103 | | | 27.00 | 37.20 | 104.60 | 210.0 | 33 | 2.1 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 27750 | 17-Jun-03 | 22.27 | 39 | 181.2 | 23.6 | 4.88 | 58 | 49.80 | 7.63 | 0.078 | 0.43 | 0.01 | 0.268 | 0.518 | 0.708 | 0.078 | 0.176 | 11.00 | 23.90 | 60.30 | 114.0 | 27 | 2.7 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 23928 | 14-Aug-01 | 1.37 | 64 | 299.3 | 27.0 | 5.97 | 77 | 22.50 | 7.76 | 0.340 | 0.47 | 0.01 | 0.810 | 0.820 | 1.290 | 0.060 | 0.055 | 14.49 | 38.94 | 104.90 | 202.0 | 23 | 3.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 24243 | 18-Sep-01 | 0.00 | 58 | 393.1 | 24.3 | 2.98 | 36 | 43.10 | 7.37 | 0.396 | 0.49 | 0.01 | 0.955 | 0.896 | 1.455 | 0.005 | 0.098 | 36.20 | 33.10 | 123.80 | 197.0 | 81 | 3.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 24380 | 23-Oct-01 | 0.19 | 88 | 733.0 | 20.4 | 4.59 | 52 | 6.73 | 7.34 | 0.389 | 0.53 | 0.01 | 1.019 | 0.929 | 1.559 | 0.058 | 0.143 | 151.30 | 23.60 | 159.40 | 415.0 | 10 | 6.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 24482 | 04-Dec-01 | 0.35 | 56 | | | | | | | | | | | | | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|---------------------|-------------------|---------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 24950 | 19-Mar-02 | 16.34 | 49 | 241.3 | 10.7 | 6.34 | 58 | 51.30 | 8.63 | 0.255 | 0.73 | 0.01 | 0.732 | 0.995 | 1.472 | 0.049 | 0.087 | 24.22 | 56.49 | 98.80 | 188.0 | 33 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 25330 | 09-Jul-02 | 0.49 | 70 | 285.5 | 28.4 | 4.85 | 63 | 7.72 | 7.44 | 0.283 | 0.54 | 0.01 | 0.864 | 0.833 | 1.414 | 0.020 | 0.153 | 17.66 | 34.85 | 97.46 | 182.0 | 10 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 25620 | 06-Aug-02 | 0.00 | 70 | 327.8 | 29.3 | 2.78 | 37 | 12.50 | 7.35 | 0.215 | 0.01 | 0.01 | 0.819 | 0.235 | 0.839 | 0.021 | 0.030 | 19.41 | 28.09 | 106.20 | 188.0 | 10 | 3.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 25873 | 17-Sep-02 | 0.00 | 98 | 445.5 | 23.3 | 4.13 | 49 | 9.90 | 8.39 | 0.240 | 0.70 | 0.01 | 0.664 | 0.950 | 1.374 | 0.013 | 0.036 | 54.04 | 27.76 | 135.80 | 187.0 | 71 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 25999 | 15-Oct-02 | 0.00 | 74 | 671.0 | 9.4 | 5.94 | 53 | 17.00 | 7.93 | 0.021 | 0.72 | 0.01 | 0.261 | 0.751 | 0.991 | | | 55.61 | 63.56 | 172.70 | 365.0 | 26 | 3.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 26136 | 19-Nov-02 | 0.00 | 66 | 974.0 | 10.7 | 5.13 | 47 | 3.57 | 9.96 | 0.034 | 0.07 | 0.06 | 0.617 | 0.164 | 0.747 | 0.030 | 0.068 | 319.71 | 32.35 | 173.20 | 714.0 | 12 | 5.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 26278 | 17-Dec-02 | 0.30 | 79 | 731.0 | 8.1 | 6.44 | 56 | 11.40 | | 0.015 | 0.19 | 0.01 | 0.414 | 0.215 | 0.614 | 0.012 | 0.061 | 202.20 | 28.80 | 145.70 | 604.0 | 11 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 26654 | 28-Jan-03 | 1.44 | 110 | 495.3 | 2.7 | 11.79 | 87 | 19.80 | 7.92 | 0.015 | 0.36 | 0.01 | 0.433 | 0.385 | 0.803 | 0.005 | 0.077 | 52.80 | 48.60 | 124.50 | 284.0 | 10 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 27219 | 04-Mar-03 | 15.20 | 49 | 325.4 | 5.8 | 8.01 | 64 | 54.20 | 7.59 | 0.075 | 0.95 | 0.01 | 0.547 | 1.035 | 1.507 | 0.027 | 0.104 | 21.70 | 60.80 | 91.50 | 204.0 | 10 | 3.4 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 27418 | 08-Apr-03 | 66.44 | 39 | 209.6 | 11.1 | 8.14 | 76 | 75.20 | 7.79 | 0.052 | 0.57 | 0.01 | 1.189 | 0.632 | 1.769 | 0.054 | 0.235 | 11.34 | 35.08 | 63.00 | 182.0 | 67 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 27564 | 13-May-03 | 6.50 | | 327.4 | 19.6 | 5.01 | 55 | 25.40 | 7.79 | 0.092 | 0.34 | 0.02 | 0.711 | 0.452 | 1.071 | 0.040 | 0.053 | 21.90 | 37.60 | 102.10 | 205.0 | 21 | 2.0 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 27751 | 17-Jun-03 | 14.63 | 46 | 192.3 | 22.9 | 5.02 | 59 | 47.70 | 7.65 | 0.074 | 0.43 | 0.01 | 0.830 | 0.514 | 1.270 | 0.083 | 0.181 | 10.90 | 23.90 | 60.70 | 133.0 | 25 | 2.5 |
| Buggy Creek | OK520610-02-0120C | Grady | 23943 | 14-Aug-01 | 6.65 | 218 | 581.0 | 32.3 | 6.65 | 96 | 52.70 | 7.90 | 0.540 | 1.01 | 0.01 | 1.170 | 1.560 | 2.190 | 0.210 | 0.248 | 30.81 | 457.63 | 513.10 | 980.0 | 78 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 24258 | 18-Sep-01 | 20.56 | 225 | 912.0 | 21.4 | 6.90 | 81 | 737.00 | 7.81 | 0.763 | 1.04 | 0.01 | 2.704 | 1.813 | 3.754 | 0.387 | 0.570 | 36.40 | 501.50 | 530.10 | 866.0 | 214 | 3.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 24358 | 22-Oct-01 | 4.81 | 290 | 1832.0 | 23.4 | 8.90 | 109 | 6.51 | 7.98 | 0.076 | 0.86 | 0.01 | 0.419 | 0.946 | 1.289 | 0.057 | 0.088 | 47.50 | 614.80 | 698.50 | 1300.5 | 16 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 24469 | 03-Dec-01 | 7.87 | 283 | 1448.0 | 13.2 | 9.94 | 99 | 9.32 | 8.24 | 0.042 | 1.09 | 0.01 | 0.367 | 1.142 | 1.467 | 0.035 | 0.082 | 38.01 | 408.00 | 581.00 | 940.0 | 16 | 4.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 24680 | 07-Jan-02 | 8.32 | 279 | 1107.0 | 7.1 | 11.61 | 100 | 18.30 | 8.37 | 0.232 | 1.25 | 0.01 | 0.542 | 1.492 | 1.802 | 0.060 | 0.088 | 36.04 | 346.80 | 519.61 | 892.0 | 30 | 9.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 24807 | 11-Feb-02 | 11.03 | 299 | 1206.0 | 9.7 | 11.44 | 104 | 25.40 | 8.27 | 0.168 | 1.13 | 0.01 | 0.625 | 1.308 | 1.765 | 0.091 | 0.145 | 32.37 | 338.80 | 616.40 | 909.0 | 40 | |
| Buggy Creek | OK520610-02-0120C | Grady | 24965 | 19-Mar-02 | 33.38 | 218 | 947.0 | 11.8 | 9.95 | 95 | 195.00 | 8.01 | 0.491 | 1.28 | 0.01 | 1.790 | 1.781 | 3.080 | 0.204 | 0.310 | 26.38 | 208.50 | 406.90 | 656.9 | 66 | 9.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 25066 | 23-Apr-02 | 11.04 | 309 | 1258.0 | 19.4 | 9.39 | 106 | 37.90 | 8.21 | 0.141 | 1.03 | 0.01 | 0.455 | 1.181 | 1.495 | 0.133 | 0.143 | 31.65 | 360.70 | 531.70 | 974.2 | 58 | 3.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 25222 | 29-May-02 | 9.76 | 279 | 1308.0 | 26.9 | 8.08 | 105 | 11.60 | 7.99 | 0.032 | 0.86 | 0.01 | 0.360 | 0.902 | 1.230 | 0.072 | 0.139 | 34.28 | 381.50 | 579.50 | 953.0 | 40 | |
| Buggy Creek | OK520610-02-0120C | Grady | 25337 | 09-Jul-02 | 4.52 | 273 | 1447.0 | 34.2 | 8.82 | 131 | 5.49 | 7.69 | 0.123 | 0.66 | 0.01 | 0.495 | 0.793 | 1.165 | 0.128 | 0.176 | 48.24 | 527.80 | 617.70 | 1148.0 | 10 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 25631 | 06-Aug-02 | 2.34 | 227 | 1798.0 | 34.2 | 11.51 | 171 | 2.09 | 8.52 | 0.081 | 0.56 | 0.01 | 0.541 | 0.651 | 1.111 | | | 59.00 | 695.30 | 652.40 | 1453.0 | 10 | 3.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 25819 | 09-Sep-02 | 1.82 | 233 | 2120.0 | 27.6 | 12.54 | 165 | 2.74 | 8.52 | 0.041 | 0.59 | 0.01 | 0.456 | 0.641 | 1.056 | | | 71.85 | 842.50 | 735.90 | 1614.0 | 10 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 26007 | 15-Oct-02 | 3.69 | 297 | 1689.0 | 15.0 | 10.41 | 108 | 2.69 | 8.37 | 0.036 | 0.86 | 0.01 | 0.247 | 0.906 | 1.117 | 0.053 | 0.090 | 45.39 | 504.00 | 565.20 | 1220.0 | 20 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 26145 | 18-Nov-02 | 6.92 | 281 | 1286.0 | 13.3 | 9.85 | 98 | 4.66 | 8.01 | 0.039 | 0.42 | 0.01 | 0.270 | 0.469 | 0.700 | 0.038 | 0.062 | 38.36 | 423.11 | 466.20 | 1024.0 | 12 | 4.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 26293 | 17-Dec-02 | 8.48 | 274 | 1258.0 | 9.4 | 12.80 | 116 | 8.74 | 7.98 | 0.015 | 0.52 | 0.01 | 0.186 | 0.545 | 0.716 | 0.005 | 0.036 | 35.21 | 357.40 | 519.90 | 894.0 | 19 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 26645 | 28-Jan-03 | 10.77 | 289 | 1270.0 | 10.7 | 12.64 | 118 | 10.70 | 8.21 | 0.015 | 0.81 | 0.01 | 0.131 | 0.835 | 0.951 | 0.007 | 0.036 | 33.60 | 375.30 | 549.60 | 900.0 | 16 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 27203 | 03-Mar-03 | 9.93 | 281 | 1242.0 | 8.5 | 12.88 | 114 | 12.50 | 8.08 | 0.048 | 0.96 | 0.01 | 0.110 | 1.018 | 1.080 | 0.040 | 0.050 | 31.20 | 301.90 | 529.90 | 789.0 | 16 | 4.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 27404 | 07-Apr-03 | 9.59 | 234 | 1217.0 | 15.5 | 8.68 | 90 | 34.70 | 8.12 | 0.228 | 1.00 | 0.01 | 0.261 | 1.238 | 1.271 | 0.154 | 0.213 | 36.99 | 314.70 | 363.70 | 820.0 | 42 | 4.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 27514 | 12-May-03 | 8.54 | 221 | 963.0 | 23.1 | 7.24 | 89 | 53.10 | 7.96 | 0.569 | 1.65 | 0.02 | 1.186 | 2.239 | 2.856 | | | 29.30 | 311.60 | 442.10 | 816.0 | 60 | 2.0 |
| Buggy Creek | OK520610-02-0120C | Grady | 27738 | 16-Jun-03 | 6.11 | 269 | 1293.0 | 27.2 | 7.38 | 97 | 18.20 | 8.06 | 0.110 | 0.92 | 0.01 | 0.595 | 1.040 | 1.525 | 0.171 | 0.253 | 37.40 | 360.20 | 544.60 | 932.0 | 34 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 23942 | 14-Aug-01 | 9.64 | 279 | 707.0 | 27.1 | 4.72 | 62 | 23.10 | 8.18 | 0.110 | 0.50 | 0.01 | 0.600 | 0.620 | 1.110 | 0.072 | 0.088 | 28.56 | 51.01 | 258.10 | 382.0 | 25 | 5.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 24257 | 18-Sep-01 | 5.00 | | 119.3 | 20.1 | 6.73 | 77 | | | 0.883 | 0.85 | 0.01 | 3.938 | 1.743 | 4.798 | 0.881 | 1.593 | 4.00 | 7.80 | 87.80 | 47.0 | 341 | 4.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 24357 | 22-Oct-01 | 17.58 | 362 | 897.0 | 20.8 | 9.15 | 105 | 14.10 | 7.89 | 0.071 | 0.55 | 0.01 | 0.379 | 0.631 | 0.939 | 0.016 | 0.061 | 30.00 | 59.90 | 407.80 | 505.5 | 22 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 24468 | 03-Dec-01 | 22.53 | 363 | 922.0 | 12.4 | 10.30 | 99 | 10.30 | 7.83 | 0.022 | 0.62 | 0.49 | 0.272 | 1.132 | 1.382 | 0.027 | 0.032 | 28.45 | 51.54 | 430.50 | 443.5 | 19 | 3.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 24679 | 07-Jan-02 | 21.79 | 384 | 897.0 | 5.5 | 13.10 | 107 | 7.73 | 8.48 | 0.160 | 0.74 | 0.01 | 0.297 | 0.910 | 1.047 | 0.018 | 0.046 | 26.11 | 50.25 | 374.46 | 437.0 | 11 | 8.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 24806 | 11-Feb-02 | 21.04 | 383 | 192.3 | 5.5 | 10.92 | 89 | 8.71 | 8.36 | 0.113 | 0.63 | 0.01 | 0.432 | 0.753 | 1.072 | 0.042 | 0.065 | 34.64 | 51.58 | 413.90 | 496.5 | 18 | |
| Walnut Creek | OK520610-03-0010C | McClain | 24964 | 19-Mar-02 | 301.42 | 262 | 430.6 | 12.0 | 8.71 | 84 | 257.00 | 8.07 | 0.551 | 1.28 | 0.01 | 3.233 | 1.841 | 4.523 | 0.302 | 0.535 | 22.20 | 36.52 | 297.10 | 361.4 | 15 | 9.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 25065 | 23-Apr-02 | 35.29 | 378 | 809.0 | 18.4 | 8.18 | 90 | 22.40 | 7.82 | 0.145 | 0.58 | 0.15 | 0.255 | 0.875 | 0.985 | 0.059 | 0.086 | 25.07 | 42.90 | 400.30 | 470.5 | 27 | 5.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 25223 | 29-May-02 | 231.55 | 144 | 278.4 | 20.2 | 6.08 | 70 | | 7.76 | 0.458 | 0.78 | 0.12 | 0.534 | 1.358 | 1.434 | 0.423 | 0.594 | 7.37 | 12.33 | 136.90 | 156.0 | 301 | 6.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 25336 | 09-Jul-02 | 19.03 | 330 | 749.0 | 27.9 | 7.17 | 94 | 8.69 | 8.03 | 0.078 | 0.53 | 0.01 | 0.347 | 0.618 | 0.887 | 0.052 | 0.099 | 29.25 | 44.95 | 294.00 | 416.0 | 10 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 25630 | 06-Aug-02 | 8.15 | 328 | 740.0 | 30.1 | 10.60 | 146 | 3.62 | 8.12 | 0.015 | 0.56 | 0.01 | 0.336 | 0.585 | 0.906 | 0.035 | 0.050 | 32.47 | 50.11 | 347.90 | 436.0 | 10 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 25818 | 09-Sep-02 | 7.80 | 329 | 792.0 | 24.0 | 8.66 | 107 | 3.98 | 8.37 | 0.015 | 0.48 | 0.01 | 0.294 | 0.505 | 0.784 | | | 33.66 | 51.00 | 318.30 | 429.0 | 10 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 26006 | 15-Oct-02 | 12.73 | 399 | 8 | | | | | | | | | | | | | | | | | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|--------------|-------------------|---------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Walnut Creek | OK520610-03-0010C | McClain | 26644 | 28-Jan-03 | 22.85 | 397 | 894.0 | 5.1 | 12.57 | 102 | 5.83 | 8.42 | 0.015 | 0.26 | 0.01 | 0.110 | 0.285 | 0.380 | 0.005 | 0.009 | 27.31 | 50.63 | 409.00 | 453.0 | 24 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 27202 | 03-Mar-03 | 23.33 | 382 | 803.0 | 5.1 | 13.52 | 110 | 5.94 | 8.36 | 0.015 | 0.40 | 0.01 | 0.110 | 0.425 | 0.520 | 0.005 | 0.005 | 27.90 | 48.80 | 378.70 | 387.0 | 15 | 5.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 27403 | 07-Apr-03 | 72.44 | 248 | 569.0 | 13.5 | 8.85 | 87 | 506.00 | 8.17 | 0.062 | 0.83 | 0.01 | 0.110 | 0.902 | 0.950 | 0.155 | 0.355 | 18.79 | 24.29 | 255.70 | 314.0 | 447 | 4.3 |
| Walnut Creek | OK520610-03-0010C | McClain | 27513 | 12-May-03 | 9.98 | 365 | 831.0 | 18.5 | 9.78 | 107 | 10.10 | 8.23 | 0.041 | 0.13 | 0.02 | 0.364 | 0.191 | 0.514 | 0.031 | 0.024 | 29.70 | 45.20 | 381.90 | 491.0 | 10 | 2.0 |
| Walnut Creek | OK520610-03-0010C | McClain | 27737 | 16-Jun-03 | 42.46 | 237 | 551.0 | 23.6 | 7.12 | 86 | 97.20 | 7.80 | 0.140 | 0.58 | 0.01 | 0.661 | 0.730 | 1.251 | 0.187 | 0.280 | 15.50 | 21.60 | 246.10 | 347.0 | 95 | 2.8 |
| Trail Creek | OK520620-02-0090G | Dewey | 23998 | 27-Aug-01 | 1.28 | 110 | 2311.0 | 20.8 | 7.32 | 86 | 14.30 | 7.83 | 0.285 | 0.60 | 0.01 | 0.691 | 0.895 | 1.301 | 0.053 | 0.062 | 26.30 | 1298.50 | 1375.20 | | 31 | |
| Trail Creek | OK520620-02-0090G | Dewey | 24318 | 02-Oct-01 | 2.65 | 176 | 2081.0 | 12.7 | 8.06 | 80 | 8.19 | 7.69 | 0.165 | 0.60 | 0.01 | 0.392 | 0.775 | 1.002 | 0.016 | 0.020 | 25.10 | 1606.30 | 1632.50 | 2503.5 | 10 | |
| Trail Creek | OK520620-02-0090G | Dewey | 24452 | 06-Nov-01 | 3.96 | 183 | 2777.0 | 16.6 | 9.88 | 107 | 5.62 | 8.11 | 0.049 | 0.52 | 0.01 | 0.308 | 0.579 | 0.838 | 0.009 | 0.021 | 24.91 | 1496.00 | 1833.70 | 2550.5 | 17 | |
| Trail Creek | OK520620-02-0090G | Dewey | 24601 | 17-Dec-01 | 5.03 | 162 | 2853.0 | 7.5 | 11.52 | 101 | 4.28 | 8.10 | 0.110 | 0.73 | 0.01 | 0.110 | 0.850 | 0.850 | 0.030 | 0.032 | 25.86 | 1493.50 | 1803.90 | 2509.0 | 10 | |
| Trail Creek | OK520620-02-0090G | Dewey | 24756 | 23-Jan-02 | 4.46 | 161 | 2753.0 | 6.9 | 11.44 | 98 | 4.06 | 8.16 | 0.015 | 0.74 | 0.01 | 0.310 | 0.765 | 1.060 | 0.023 | 0.028 | 25.46 | 1456.00 | 1892.00 | 2554.5 | 15 | |
| Trail Creek | OK520620-02-0090G | Dewey | 24911 | 26-Feb-02 | 4.50 | 157 | 2816.0 | 1.4 | 12.72 | 95 | 6.53 | 8.01 | 0.158 | 0.64 | 0.01 | 0.220 | 0.808 | 0.870 | 0.040 | 0.049 | 26.47 | 1562.00 | 1901.10 | 2532.5 | 19 | |
| Trail Creek | OK520620-02-0090G | Dewey | 25041 | 02-Apr-02 | 4.80 | 133 | 2780.0 | 12.0 | 10.91 | 108 | 3.25 | 8.22 | 0.024 | 0.01 | 0.01 | 0.204 | 0.044 | 0.224 | 0.016 | 0.019 | 24.85 | 1481.50 | 1737.00 | 2562.0 | 10 | |
| Trail Creek | OK520620-02-0090G | Dewey | 25064 | 23-Apr-02 | 4.66 | 139 | 2626.0 | 25.9 | 11.85 | 153 | 4.45 | 8.28 | 0.059 | 0.01 | 0.01 | 0.376 | 0.079 | 0.396 | 0.039 | 0.040 | 25.49 | 1537.50 | 1648.70 | 2618.0 | 23 | 5.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 25221 | 29-May-02 | 8.26 | 167 | 2352.0 | 26.1 | 6.97 | 92 | 87.80 | 7.89 | 0.140 | 0.60 | 0.01 | 0.395 | 0.750 | 1.005 | 0.083 | 0.170 | 23.51 | 1347.00 | 1578.80 | 2334.0 | 25 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 25334 | 09-Jul-02 | 1.56 | 170 | 2626.0 | 32.9 | 7.53 | 110 | 5.26 | | 0.179 | 0.58 | 0.01 | 0.486 | 0.769 | 1.076 | 0.049 | 0.086 | 23.94 | 1500.50 | 1676.60 | 2562.0 | 26 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 25635 | 06-Aug-02 | 0.23 | 177 | 2583.0 | 27.1 | 8.93 | 119 | 2.10 | 7.99 | 0.038 | 0.01 | 0.01 | 0.462 | 0.058 | 0.482 | 0.061 | 0.061 | 18.39 | 1479.50 | 1737.10 | 2544.0 | 10 | 4.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 25821 | 10-Sep-02 | 0.95 | 170 | 2524.0 | 21.0 | 7.83 | 93 | 4.35 | 7.92 | 0.045 | 0.49 | 0.01 | 0.433 | 0.545 | 0.933 | | | 23.78 | 1368.50 | 1521.30 | 2390.0 | 24 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 26005 | 15-Oct-02 | 1.63 | 166 | 2705.0 | 14.5 | 9.73 | 100 | 14.70 | 8.05 | 0.082 | 0.78 | 0.01 | 0.192 | 0.872 | 0.982 | 0.034 | 0.064 | 23.98 | 1437.10 | 1665.00 | 2477.0 | 26 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 26147 | 19-Nov-02 | 3.18 | 178 | 2116.0 | 5.6 | 10.95 | 91 | 3.17 | 7.79 | 0.058 | 0.21 | 0.01 | 0.160 | 0.278 | 0.380 | 0.023 | 0.042 | 27.20 | 1005.89 | 1751.30 | 2541.0 | 10 | 3.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 26291 | 17-Dec-02 | 4.62 | 173 | 2732.0 | 8.4 | 11.40 | 102 | 5.26 | 8.07 | 0.048 | 0.28 | 0.01 | 0.110 | 0.338 | 0.400 | 0.005 | 0.036 | 27.76 | 1508.20 | 1763.60 | 2447.0 | 14 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 26642 | 27-Jan-03 | 8.89 | 176 | 2202.0 | 3.2 | 13.12 | 104 | 39.70 | 8.09 | 0.093 | 0.57 | 0.01 | 0.214 | 0.673 | 0.794 | 0.037 | 0.074 | 28.40 | 1552.00 | 1768.50 | 2469.0 | 157 | 3.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 27208 | 04-Mar-03 | 10.31 | 152 | 2636.0 | 14.4 | 10.79 | 111 | 11.60 | 8.16 | 0.032 | 0.44 | 0.01 | 0.110 | 0.482 | 0.560 | 0.017 | 0.019 | 26.90 | 1426.20 | 1860.10 | 2385.0 | 56 | 3.6 |
| Trail Creek | OK520620-02-0090G | Dewey | 27409 | 08-Apr-03 | 3.96 | 147 | 2641.0 | 15.9 | 10.42 | 110 | 3.85 | 8.22 | 0.015 | 0.03 | 0.01 | 0.181 | 0.055 | 0.221 | 0.022 | 0.033 | 27.12 | 3042.80 | 1737.40 | 2536.0 | 20 | 2.5 |
| Trail Creek | OK520620-02-0090G | Dewey | 27519 | 13-May-03 | 2.65 | 153 | 2616.0 | 27.2 | 11.37 | 152 | 3.93 | 8.20 | 0.021 | 0.12 | 0.02 | 0.326 | 0.161 | 0.466 | 0.006 | 0.005 | 24.40 | 1518.70 | 1695.10 | 2642.0 | 10 | 2.0 |
| Trail Creek | OK520620-02-0090G | Dewey | 27743 | 17-Jun-03 | 3.25 | 156 | 2513.0 | 29.3 | 7.84 | 109 | 24.10 | 8.00 | 0.074 | 0.30 | 0.01 | 0.486 | 0.384 | 0.796 | 0.038 | 0.110 | 23.70 | 1494.30 | 1734.10 | 2412.0 | 64 | 2.7 |
| Lone Creek | OK520620-03-0020C | Dewey | 23940 | 14-Aug-01 | 0.13 | 117 | 2910.0 | 33.7 | 9.14 | 136 | 2.21 | 8.01 | 0.015 | 1.22 | 0.01 | 0.610 | 1.245 | 1.840 | | | 49.24 | 1746.00 | 1912.30 | 2536.0 | 11 | 2.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24255 | 18-Sep-01 | 15.45 | 75 | 907.0 | 21.9 | 7.12 | 85 | | 7.88 | 0.705 | 0.82 | 0.01 | 4.232 | 1.535 | 0.062 | 0.775 | 1.295 | 9.70 | 393.90 | 468.60 | 422.0 | 249 | 3.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24361 | 23-Oct-01 | 0.68 | 169 | 2160.0 | 21.2 | 8.54 | 102 | 28.90 | 7.96 | 0.563 | 1.35 | 0.01 | 1.610 | 1.923 | 2.970 | 0.005 | 0.065 | 40.50 | 1635.50 | 1933.60 | 1783.0 | 40 | 3.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24472 | 04-Dec-01 | 1.41 | 174 | 2945.0 | 14.6 | 9.55 | 99 | 2.45 | 8.10 | 0.016 | 0.85 | 0.01 | 0.186 | 0.876 | 1.046 | 0.005 | 0.005 | 37.69 | 1673.30 | 1899.60 | 2588.0 | 10 | 6.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24683 | 08-Jan-02 | 1.64 | 188 | 2460.0 | 9.2 | 11.85 | 109 | 6.72 | 8.18 | 0.127 | 0.88 | 0.01 | 0.325 | 1.017 | 1.215 | 0.005 | 0.020 | 38.42 | 1578.00 | 1831.50 | 2584.5 | 20 | 8.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24810 | 12-Feb-02 | 1.97 | 192 | 2817.0 | 8.8 | 11.89 | 107 | 15.60 | 8.25 | 0.142 | 0.81 | 0.01 | 0.539 | 0.962 | 1.359 | 0.023 | 0.043 | 38.96 | 1495.00 | 1927.90 | 2652.5 | 29 | 4.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 24962 | 19-Mar-02 | 2.20 | 172 | 3021.0 | 10.6 | 11.21 | 106 | 2.86 | 8.15 | 0.015 | 0.76 | 0.01 | 0.308 | 0.785 | 1.078 | 0.007 | 0.021 | 39.31 | 1543.00 | 1752.00 | 2687.0 | 10 | 3.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 25063 | 23-Apr-02 | 2.12 | 149 | 2793.0 | 27.0 | 9.67 | 130 | 2.00 | 8.15 | 0.089 | 0.67 | 0.01 | 0.365 | 0.769 | 1.045 | 0.005 | 0.010 | 40.99 | 1609.00 | 1733.70 | 2788.0 | 18 | 6.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 25220 | 29-May-02 | 1.87 | 117 | 2525.0 | 28.5 | 10.31 | 141 | 3.24 | 8.39 | 0.021 | 0.59 | 0.01 | 0.534 | 0.621 | 1.134 | 0.005 | 0.016 | 34.35 | 1514.00 | 1652.40 | 2491.0 | 10 | 2.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 25333 | 09-Jul-02 | 2.05 | 175 | 2609.0 | 32.1 | 6.79 | 99 | 14.90 | | 0.117 | 0.72 | 0.01 | 0.518 | 0.847 | 1.248 | 0.033 | 0.096 | 35.28 | 1474.50 | 1597.10 | 2476.0 | 10 | 2.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 25634 | 06-Aug-02 | 0.56 | 167 | 2854.0 | 25.9 | 7.87 | 102 | 1.42 | 8.03 | 0.015 | 0.85 | 0.01 | 0.359 | 0.875 | 1.219 | 0.029 | 0.035 | 41.93 | 1589.00 | 1789.90 | 2701.0 | 10 | 4.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 25822 | 10-Sep-02 | 0.37 | 145 | 2850.0 | 24.9 | 8.47 | 108 | 5.91 | 8.11 | 0.015 | 0.79 | 0.01 | 0.703 | 0.815 | 1.503 | 0.012 | 0.045 | 40.80 | 1515.50 | 1679.70 | 2600.0 | 10 | 3.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 26004 | 15-Oct-02 | 0.79 | 167 | 2841.0 | 16.4 | 9.46 | 102 | 7.06 | 8.21 | 0.015 | 0.89 | 0.01 | 0.153 | 0.915 | 1.053 | 0.005 | 0.034 | 36.86 | 1429.90 | 1726.50 | 2573.0 | 36 | 3.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 26148 | 19-Nov-02 | 1.49 | 207 | 2810.0 | 10.1 | 10.47 | 99 | 9.59 | 7.96 | 0.024 | 0.54 | 0.05 | 0.794 | 0.614 | 1.384 | 0.015 | 0.034 | 39.90 | 1842.47 | 1786.90 | 2711.0 | 37 | 5.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 26290 | 17-Dec-02 | 2.35 | 199 | 2903.0 | 9.5 | 11.29 | 104 | 5.82 | 8.16 | 0.015 | 0.39 | 0.01 | 0.110 | 0.415 | 0.510 | 0.005 | 0.109 | 39.51 | 1597.80 | 1838.50 | 2643.0 | 10 | 2.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 26641 | 27-Jan-03 | 2.10 | 206 | 2921.0 | 5.0 | 12.10 | 101 | 12.60 | 8.17 | 0.015 | 0.52 | 0.01 | 0.246 | 0.545 | 0.776 | 0.005 | 0.005 | 38.80 | 1633.90 | 1949.80 | 2709.0 | 51 | 2.0 |
| Lone Creek | OK520620-03-0020C | Dewey | 27207 | 04-Mar-03 | 3.08 | 189 | 2848.0 | 14.7 | 10.04 | 104 | 8.74 | 8.21 | 0.039 | 0.53 | 0.01 | 0.110 | 0.579 | 0.650 | 0.005 | 0.005 | 37.30 | 1558.90 | 1849.00 | 2613.0 | 32 | 5.2 |
| Lone Creek | OK520620-03-0020C | Dewey | 27408 | 08-Apr-03 | 1.89 | 178 | 3017.0 | 16.3 | 10.00 | 108 | 3.16 | 8.16 | 0.015 | 0.25 | 0.01 | 0.189 | 0.275 | 0.449 | 0.005 | 0.020 | 40.55 | 1603.70 | 1831.60 | 2759.0 | 10 | 2.7 |
| Lone Creek | OK520620-03-0020C | Dewey | 27518 | 13-May-03 | 1.10 | 176 | 2823.0 | 27.4 | 7.40 | 99 | 4.06 | 8.02 | 0.046 | 0.52 | 0.02 | 0.488 | 0.586 | 1.028 | 0.013 | 0.005 | 38.90 | 3264.00 | 1993.70 | 2890.0 | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotBisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|------------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|-------|
| Hackberry Creek | OK520620-04-0050D | Ellis | 24359 | 23-Oct-01 | 0.62 | 243 | 1865.0 | 12.6 | 9.85 | 98 | 1.09 | 7.78 | 0.105 | 0.55 | 0.01 | 0.411 | 0.665 | 0.971 | 0.005 | 0.005 | 76.40 | 1945.50 | 2121.70 | 3147.5 | 10 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 24470 | 04-Dec-01 | 2.25 | 276 | 2989.0 | 12.2 | 11.36 | 113 | 2.19 | 8.09 | 0.063 | 0.01 | 0.01 | 0.389 | 0.083 | 0.409 | 0.005 | 0.005 | 75.76 | 1476.30 | 1732.40 | 2482.5 | 10 | 6.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 24681 | 08-Jan-02 | 2.77 | 286 | 2720.0 | 2.4 | 13.05 | 101 | 10.90 | 8.27 | 0.138 | 0.53 | 0.01 | 0.416 | 0.678 | 0.956 | 0.015 | 0.026 | 66.40 | 1165.30 | 1355.00 | 2092.5 | 15 | 9.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 24808 | 12-Feb-02 | 4.04 | 281 | 2307.0 | 4.5 | 12.06 | 99 | 12.30 | 8.27 | 0.142 | 0.47 | 0.01 | 0.579 | 0.622 | 1.059 | 0.021 | 0.027 | 83.00 | 1140.50 | 1484.60 | 2135.0 | 18 | 4.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 24960 | 19-Mar-02 | 2.91 | 262 | 2638.0 | 10.1 | 10.35 | 99 | 6.53 | 8.02 | 0.058 | 0.51 | 0.01 | 0.467 | 0.578 | 0.987 | 0.008 | 0.024 | 65.40 | 1147.00 | 1382.50 | 2149.0 | 10 | 7.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 25061 | 23-Apr-02 | 3.30 | 241 | 2450.0 | 17.5 | 11.54 | 128 | 9.46 | 8.18 | 0.085 | 0.01 | 0.01 | 0.503 | 0.105 | 0.523 | 0.028 | 0.031 | 67.40 | 1311.00 | 1330.60 | 2294.5 | 19 | 7.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 25218 | 29-May-02 | 4.70 | 251 | 1867.0 | 20.8 | 8.89 | 105 | 37.90 | 8.18 | 0.083 | 0.50 | 0.01 | 0.905 | 0.593 | 1.415 | 0.019 | 0.076 | 58.10 | 778.00 | 968.10 | 1556.0 | 10 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 25331 | 09-Jul-02 | 3.75 | 263 | 2493.0 | 24.7 | 7.31 | 93 | 10.60 | | 0.277 | 0.59 | 0.01 | 0.832 | 0.877 | 1.432 | 0.041 | 0.080 | 66.98 | 1160.00 | 1326.30 | 2188.0 | 18 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 26002 | 15-Oct-02 | 4.03 | 278 | 2906.0 | 12.1 | 9.91 | 99 | 4.13 | 8.11 | 0.021 | 0.67 | 0.01 | 0.552 | 0.701 | 1.232 | 0.012 | 0.029 | 80.22 | 1305.70 | 1565.00 | 2465.0 | 20 | 3.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 26150 | 19-Nov-02 | 6.67 | 288 | 2404.0 | 11.0 | 11.31 | 110 | 10.50 | 7.91 | 0.024 | 0.09 | 0.01 | 0.406 | 0.124 | 0.506 | 0.018 | 0.028 | 75.47 | 1078.48 | 1248.40 | 2066.0 | 30 | 3.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 26288 | 17-Dec-02 | 5.51 | 302 | 2530.0 | 7.1 | 11.08 | 98 | 10.40 | 8.24 | 0.015 | 0.13 | 0.01 | 0.390 | 0.155 | 0.530 | 0.005 | 0.030 | 73.19 | 1073.40 | 1343.90 | 2051.0 | 10 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 26639 | 27-Jan-03 | 5.79 | 293 | | 1.6 | 13.05 | 99 | 12.30 | 8.04 | 0.015 | 0.15 | 0.01 | 0.318 | 0.175 | 0.478 | 0.005 | 0.005 | 72.90 | 1114.60 | 1335.40 | 1914.0 | 18 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 27205 | 04-Mar-03 | 5.39 | 283 | 2186.0 | 8.0 | 11.55 | 105 | 7.33 | 8.28 | 0.015 | 0.28 | 0.01 | 0.110 | 0.305 | 0.400 | 0.005 | 0.005 | 67.80 | 861.10 | 1112.60 | 1755.0 | 12 | 2.3 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 27406 | 08-Apr-03 | 2.04 | 253 | 2693.0 | 7.4 | 12.50 | 111 | 2.28 | 8.18 | 0.015 | 0.04 | 0.01 | 0.110 | 0.065 | 0.160 | 0.005 | 0.020 | 76.07 | 1193.30 | 1457.90 | 2270.0 | 10 | 2.3 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 27516 | 13-May-03 | 1.41 | 267 | 2825.0 | 17.6 | 8.59 | 96 | 3.14 | 8.04 | 0.015 | 0.02 | 0.02 | 0.273 | 0.055 | 0.313 | 0.005 | 0.005 | 77.80 | 1447.00 | 1702.30 | 2765.0 | 10 | 2.0 |
| Hackberry Creek | OK520620-04-0050D | Ellis | 27740 | 17-Jun-03 | 5.20 | 268 | 1725.0 | 21.0 | 7.75 | 93 | 55.40 | 8.15 | 0.030 | 0.11 | 0.01 | 0.855 | 0.150 | 0.975 | 0.056 | 0.130 | 51.50 | 634.80 | 867.30 | 1312.0 | 78 | 2.1 |
| Commission Creek | OK520620-05-0160C | Ellis | 23939 | 14-Aug-01 | 2.97 | 222 | 852.0 | 23.8 | 9.09 | 115 | 16.80 | 8.34 | 0.015 | 0.68 | 0.01 | 0.330 | 0.705 | 1.020 | 0.030 | 0.051 | 104.15 | 33.65 | 230.30 | 488.0 | 33 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24254 | 18-Sep-01 | 4.23 | 226 | 879.0 | 21.7 | 8.87 | 108 | 23.40 | 8.36 | 0.049 | 0.75 | 0.01 | 0.563 | 0.809 | 1.323 | 0.015 | 0.070 | 185.70 | 48.20 | 287.60 | 488.0 | 44 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24360 | 23-Oct-01 | 5.34 | 241 | 944.0 | 15.0 | 10.29 | 111 | 7.28 | 8.21 | 0.015 | 0.01 | 0.01 | 0.730 | 0.035 | 0.750 | 0.010 | 0.005 | 103.90 | 27.60 | 0.26 | 511.5 | 18 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24471 | 04-Dec-01 | 7.25 | 246 | 8.9 | 12.6 | 9.83 | 99 | 9.82 | 8.23 | 0.023 | 0.87 | 0.01 | 0.202 | 0.903 | 1.082 | 0.008 | 0.027 | 95.60 | 25.92 | 276.00 | 503.0 | 22 | 8.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24682 | 08-Jan-02 | 6.69 | 248 | 876.0 | 6.5 | 11.86 | 103 | 9.26 | 8.41 | 0.098 | 0.93 | 0.01 | 0.280 | 1.038 | 1.220 | 0.010 | 0.044 | 88.70 | 27.35 | 223.61 | 481.5 | 20 | 8.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24809 | 12-Feb-02 | 8.00 | 241 | 789.0 | 5.9 | 11.64 | 99 | 6.52 | 8.45 | 0.015 | 0.80 | 0.01 | 0.280 | 0.825 | 1.090 | 0.013 | 0.029 | 88.30 | 27.93 | 263.00 | 473.0 | 16 | 4.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 24961 | 19-Mar-02 | 7.23 | 230 | 869.0 | 9.6 | 10.09 | 95 | 6.14 | 8.27 | 0.130 | 0.83 | 0.01 | 0.288 | 0.970 | 1.128 | 0.011 | 0.024 | 87.10 | 25.98 | 251.20 | 443.5 | 11 | 4.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 25062 | 23-Apr-02 | 6.87 | 227 | 819.0 | 17.9 | 9.97 | 112 | 12.20 | 8.34 | 0.077 | 0.64 | 0.01 | 0.535 | 0.727 | 1.185 | 0.028 | 0.051 | 88.00 | 26.84 | 223.60 | 464.0 | 35 | 4.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 25219 | 29-May-02 | 10.38 | 228 | 796.0 | 20.9 | 8.85 | 106 | 26.30 | 8.20 | 0.036 | 0.69 | 0.01 | 0.170 | 0.736 | 0.870 | 0.005 | 0.040 | 85.40 | 21.31 | 218.40 | 435.0 | 10 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 25332 | 09-Jul-02 | 5.63 | 234 | 866.0 | 24.6 | 7.90 | 102 | 30.70 | | 0.114 | 0.75 | 0.01 | 0.584 | 0.874 | 1.344 | 0.038 | 0.112 | 95.70 | 25.63 | 224.60 | 488.0 | 13 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 25633 | 06-Aug-02 | 2.21 | 220 | 860.0 | 21.4 | 7.93 | 97 | 11.00 | 8.16 | 0.015 | 0.75 | 0.01 | 0.319 | 0.775 | 1.079 | | | 113.90 | 31.28 | 241.60 | 493.0 | 25 | 3.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 25823 | 10-Sep-02 | 3.46 | 224 | 875.0 | 23.4 | 7.95 | 101 | 10.90 | 8.37 | 0.015 | 0.66 | 0.01 | 0.295 | 0.685 | 0.965 | 0.008 | 0.079 | 102.90 | 27.41 | 232.20 | 459.0 | 12 | 3.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 26003 | 15-Oct-02 | 5.23 | 225 | 918.0 | 12.5 | 10.58 | 107 | 4.79 | 8.35 | 0.015 | 0.88 | 0.01 | 0.204 | 0.905 | 1.094 | 0.005 | 0.019 | 109.40 | 29.95 | 226.70 | 499.0 | 10 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 26149 | 19-Nov-02 | 6.60 | 231 | 838.0 | 9.9 | 11.28 | 106 | 4.91 | 7.85 | 0.017 | 0.50 | 0.01 | 0.219 | 0.527 | 0.729 | 0.007 | 0.023 | 113.56 | 34.25 | 212.70 | 536.0 | 10 | 3.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 26289 | 17-Dec-02 | 7.44 | 258 | 919.0 | 8.1 | 11.27 | 103 | 6.38 | 8.40 | 0.015 | 0.52 | 0.01 | 0.231 | 0.545 | 0.761 | 0.005 | 0.028 | 105.60 | 37.70 | 277.70 | 475.0 | 10 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 26640 | 27-Jan-03 | 7.38 | 255 | 906.0 | 3.8 | 11.98 | 97 | 12.70 | 8.34 | 0.015 | 0.64 | 0.01 | 0.341 | 0.665 | 0.991 | 0.005 | 0.005 | 102.60 | 35.20 | 277.20 | 475.0 | 27 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 27206 | 04-Mar-03 | 7.06 | 246 | 874.0 | 9.2 | 10.48 | 98 | 36.20 | 8.34 | 0.022 | 0.74 | 0.01 | 0.110 | 0.772 | 0.860 | 0.009 | 0.010 | 97.80 | 29.90 | 255.50 | 489.0 | 62 | 3.4 |
| Commission Creek | OK520620-05-0160C | Ellis | 27407 | 08-Apr-03 | 6.78 | 233 | 841.0 | 9.8 | 11.90 | 112 | 11.00 | 8.45 | 0.015 | 0.28 | 0.01 | 0.234 | 0.305 | 0.524 | 0.005 | 0.024 | 94.12 | 27.15 | 239.40 | 473.0 | 29 | 2.7 |
| Commission Creek | OK520620-05-0160C | Ellis | 27517 | 13-May-03 | 5.02 | 231 | 816.0 | 19.9 | 9.25 | 108 | 24.70 | 8.34 | 0.018 | 0.38 | 0.02 | 0.345 | 0.418 | 0.745 | 0.013 | 0.005 | 97.70 | 28.90 | 234.40 | 483.0 | 61 | 2.0 |
| Commission Creek | OK520620-05-0160C | Ellis | 27741 | 17-Jun-03 | 7.88 | 237 | 843.0 | 20.1 | 8.86 | 106 | 34.50 | 8.22 | 0.015 | 0.42 | 0.01 | 0.270 | 0.445 | 0.700 | 0.027 | 0.063 | 99.40 | 33.10 | 256.10 | 483.0 | 73 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 23941 | 14-Aug-01 | 30.86 | 151 | 1000.0 | 33.9 | 7.73 | 114 | 19.70 | 8.26 | 0.015 | 1.26 | 0.01 | 0.560 | 1.285 | 1.830 | 0.143 | 0.204 | 15.52 | 362.60 | 506.40 | 728.0 | 73 | 3.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24256 | 18-Sep-01 | 50.93 | 142 | 1055.0 | 27.0 | 7.58 | 101 | 117.00 | 8.06 | 0.620 | 1.33 | 0.01 | 1.273 | 1.960 | 2.613 | 0.157 | 0.277 | 15.50 | 372.60 | 512.30 | 743.0 | 139 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24362 | 23-Oct-01 | 36.85 | 155 | 1206.0 | 24.5 | 10.87 | 137 | 6.36 | 8.26 | 0.021 | 1.15 | 0.01 | 0.442 | 1.181 | 1.602 | 0.042 | 0.074 | 17.80 | 447.00 | 608.10 | 852.5 | 13 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24473 | 04-Dec-01 | 40.55 | 187 | 1358.0 | 15.8 | 9.10 | 95 | 9.00 | 8.24 | 0.215 | 2.08 | 0.46 | 0.396 | 2.755 | 2.936 | 0.089 | 0.098 | 18.35 | 502.40 | 712.80 | 957.0 | 15 | 7.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24684 | 08-Jan-02 | 43.34 | 189 | 1418.0 | 9.2 | 11.32 | 103 | 9.55 | 8.27 | 0.119 | 2.43 | 0.01 | 0.395 | 2.559 | 2.835 | 0.009 | 0.108 | 18.77 | 528.10 | 674.80 | 1030.0 | 17 | 9.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24811 | 12-Feb-02 | 36.55 | 178 | 1367.0 | 10.3 | 11.56 | 108 | 12.30 | 8.29 | 0.095 | 2.09 | 0.01 | 0.538 | 2.195 | 2.638 | 0.023 | 0.036 | 20.22 | 660.00 | 786.40 | 1018.5 | 27 | 4.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 24963 | 19-Mar-02 | 56.44 | 161 | 1047.0 | 12.1 | 10.21 | 100 | 21.40 | 8.20 | 0.252 | 1.91 | 0.01 | 0.891 | 2.172 | 2.811 | 0.073 | 0.100 | 1973.00 | 402.90 | 573.70 | 854.5 | 54 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 25060 | 22-Apr-02 | 46.22 | 192 | 1342.0 | 24.0 | 8.33 | 105 | 19.10 | 8.22 | 0.119 | 1.71 | 0.18 | 0.613 | 2.009 | 2.503 | 0.173 | 0.213 | 19.92 | 521.90 | 683.5 | | | |

Appendix A.1. Raw chemical and physical water quality data. *sum of ammonia, nitrite, nitrate. **sum of nitrite, nitrate, TKN.

| SiteName | WBID | County | SAMPLEID | Date | Discharge (cfs) | Alkalinity (CaCO3) | Cond (uS/cm) | Temp (°C) | DO (mg/L) | DO (% Sat.) | Turb (NTU) | pH | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (mg/L) | Available N (mg/L)* | Total N (mg/L)** | TotOrthoPhos (mg/L) | TotPhosphorus (mg/L) | Chloride (mg/L) | Sulfate (mg/L) | TotHardness (mg/L as CaCO3) | TotDisSolids (mg/L) | TotSusSolids (mg/L) | cBOD5 |
|------------|-------------------|--------|----------|-----------|-----------------|--------------------|--------------|-----------|-----------|-------------|------------|------|----------------|----------------|----------------|--------------|---------------------|------------------|---------------------|----------------------|-----------------|----------------|-----------------------------|---------------------|---------------------|------------|
| Deer Creek | OK520620-06-0010F | Caddo | 25820 | 09-Sep-02 | 26.25 | 151 | 981.0 | 26.1 | 9.02 | 118 | 8.04 | 8.39 | 0.015 | 0.81 | 0.01 | 0.452 | 0.835 | 1.272 | | | 20.40 | 311.50 | 460.50 | 666.0 | 19 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 26001 | 14-Oct-02 | 30.05 | 180 | 1126.0 | 19.3 | 9.06 | 103 | 12.00 | 8.25 | 0.016 | 1.83 | 0.01 | 0.064 | 1.856 | 1.904 | 0.082 | 0.112 | 17.13 | 364.30 | 528.30 | 679.0 | 10 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 26146 | 19-Nov-02 | 34.64 | 183 | 1219.0 | 5.9 | 11.98 | 99 | 7.72 | 7.79 | 0.025 | 1.93 | 0.01 | 0.216 | 1.965 | 2.156 | 0.082 | 0.101 | 20.80 | 466.58 | 604.30 | 925.0 | 35 | 3.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 26287 | 17-Dec-02 | 40.52 | 195 | 1399.0 | 5.7 | 14.80 | 123 | 7.08 | 8.25 | 0.015 | 2.07 | 0.01 | 0.110 | 2.095 | 2.190 | 0.057 | 0.083 | 23.24 | 501.60 | 709.30 | 989.0 | 10 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 26643 | 27-Jan-03 | 45.60 | 199 | 1447.0 | 6.7 | 12.44 | 106 | 8.05 | 8.29 | 0.159 | 2.69 | 0.01 | 0.359 | 2.859 | 3.059 | 0.046 | 0.075 | 22.29 | 549.90 | 756.10 | 1055.0 | 46 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 27204 | 03-Mar-03 | 45.45 | 195 | 1436.0 | 11.7 | 11.39 | 109 | 8.30 | 8.30 | 0.080 | 2.67 | 0.01 | 0.110 | 2.760 | 2.790 | 0.068 | 0.089 | 22.00 | 553.50 | 751.40 | 1094.0 | 19 | 2.7 |
| Deer Creek | OK520620-06-0010F | Caddo | 27405 | 07-Apr-03 | 47.51 | 153 | 1130.0 | 18.4 | 9.91 | 111 | 11.20 | 8.23 | 0.015 | 1.24 | 0.01 | 0.110 | 1.265 | 1.360 | 0.084 | 0.124 | 22.55 | 566.50 | 660.00 | 1113.0 | 26 | 3.7 |
| Deer Creek | OK520620-06-0010F | Caddo | 27515 | 12-May-03 | 33.65 | 168 | 1292.0 | 26.0 | 9.38 | 122 | 15.50 | 8.20 | 0.064 | 1.11 | 0.02 | 0.217 | 1.194 | 1.347 | 0.117 | 0.123 | 22.80 | 501.10 | 661.80 | 1054.0 | 29 | 2.0 |
| Deer Creek | OK520620-06-0010F | Caddo | 27739 | 16-Jun-03 | 75.49 | 114 | 682.0 | 26.5 | 6.28 | 82 | 431.00 | 7.67 | 0.087 | 1.97 | 0.01 | 1.861 | 2.067 | 3.841 | 0.253 | 0.511 | 11.40 | 207.70 | 335.70 | 468.0 | 513 | 7.3 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|--------------------------|-------------------|------------|-----------|-----------|---------|--------------|
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 17-Sep-01 | 100 | 20 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 22-Oct-01 | 10 | 10 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 22-Apr-02 | 60 | 70 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 29-May-02 | 790 | 330 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 08-Jul-02 | 80 | 100 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 05-Aug-02 | 130 | 10 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 16-Sep-02 | 20 | 20 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 14-Oct-02 | 20 | 20 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 07-Apr-03 | 1180 | 490 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 12-May-03 | 30 | 40 |
| Delaware Creek | OK121300-01-0150H | Tulsa | CentlrPl | 16-Jun-03 | 60 | 100 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 14-Aug-01 | 5 | 55 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 18-Sep-01 | 75 | 55 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 23-Oct-01 | 10 | 20 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 23-Apr-02 | 1600 | 300 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 29-May-02 | 800 | 1530 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 09-Jul-02 | 50 | 40 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 06-Aug-02 | 10 | 80 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 10-Sep-02 | 10 | 30 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 15-Oct-02 | 60 | 20 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 08-Apr-03 | 70 | 70 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 13-May-03 | 10 | 30 |
| Bird Creek | OK121300-02-0010C | Osage | CrossTimb | 17-Jun-03 | 20 | 80 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 13-Aug-01 | 80 | 50 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 17-Sep-01 | 70 | 50 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 22-Oct-01 | 100 | 30 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 22-Apr-02 | 40 | 110 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 08-Jul-02 | 80 | 90 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 05-Aug-02 | 40 | 80 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 09-Sep-02 | 30 | 70 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 14-Oct-02 | 140 | 60 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 07-Apr-03 | 40 | 100 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 12-May-03 | 40 | 170 |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | CentlrPl | 16-Jun-03 | 20 | 180 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 14-Aug-01 | 5 | 70 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 18-Sep-01 | 40 | 20 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 23-Oct-01 | 10 | 20 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 23-Apr-02 | 800 | 540 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 28-May-02 | 220 | 150 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 09-Jul-02 | 10 | 50 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 06-Aug-02 | 30 | 70 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 10-Sep-02 | 10 | 10 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 15-Oct-02 | 20 | 20 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 08-Apr-03 | 260 | 190 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 13-May-03 | 110 | 560 |
| Hominy Creek | OK121300-04-0280G | Osage | CrossTimb | 17-Jun-03 | 60 | 20 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 13-Aug-01 | 10 | 80 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 17-Sep-01 | 800 | 600 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 22-Oct-01 | 110 | 20 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 22-Apr-02 | 360 | 180 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 28-May-02 | 280 | 190 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 08-Jul-02 | 70 | 1065 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 05-Aug-02 | 590 | 130 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|--------------------|-------------------|------------|-----------|-----------|---------|--------------|
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 09-Sep-02 | 10 | 100 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 14-Oct-02 | 280 | 200 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 07-Apr-03 | 270 | 220 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 12-May-03 | 30 | 80 |
| Curl Creek | OK121400-01-0270G | Washington | CentlrPl | 16-Jun-03 | 360 | 310 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 13-Aug-01 | 130 | 215 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 17-Sep-01 | 800 | 600 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 22-Oct-01 | 10 | 10 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 22-Apr-02 | 80 | 110 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 28-May-02 | 610 | 750 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 08-Jul-02 | 130 | 30 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 05-Aug-02 | 1210 | 300 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 09-Sep-02 | 60 | 40 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 14-Oct-02 | 20 | 20 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 07-Apr-03 | 80 | 60 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 12-May-03 | 100 | 100 |
| Hogshooter Creek | OK121400-01-0300D | Washington | CentlrPl | 16-Jun-03 | 220 | 280 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 13-Aug-01 | 35 | 30 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 17-Sep-01 | 90 | 50 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 22-Oct-01 | 100 | 40 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 22-Apr-02 | 50 | 90 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 29-May-02 | 70 | 70 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 08-Jul-02 | 20 | 20 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 05-Aug-02 | 200 | 30 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 09-Sep-02 | 40 | 60 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 14-Oct-02 | 880 | 60 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 07-Apr-03 | 360 | 130 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 12-May-03 | 30 | 100 |
| Little Caney River | OK121400-02-0140H | Osage | CentlrPl | 16-Jun-03 | 40 | 20 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 14-Aug-01 | 20 | 70 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 18-Sep-01 | 610 | 850 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 23-Oct-01 | 10 | 30 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 23-Apr-02 | 530 | 340 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 28-May-02 | 190 | 290 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 09-Jul-02 | 10 | 10 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 06-Aug-02 | 100 | 30 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 10-Sep-02 | 10 | 20 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 15-Oct-02 | 40 | 20 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 08-Apr-03 | 1280 | 610 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 13-May-03 | 2000 | 2000 |
| Mission Creek | OK121400-02-0190B | Osage | CrossTimb | 17-Jun-03 | 20 | 20 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 14-Aug-01 | 5 | 5 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 18-Sep-01 | 800 | 220 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 23-Oct-01 | 10 | 50 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 23-Apr-02 | 90 | 50 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 28-May-02 | 800 | 170 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 09-Jul-02 | 10 | 20 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 10-Sep-02 | 10 | 10 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 15-Oct-02 | 20 | 20 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 08-Apr-03 | 10 | 40 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 13-May-03 | 2000 | 2000 |
| Buck Creek | OK121400-03-0170C | Osage | CrossTimb | 17-Jun-03 | 80 | 40 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 14-Aug-01 | 5 | 25 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|------------------|-------------------|---------|-----------|-----------|---------|--------------|
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 18-Sep-01 | 1770 | 630 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 23-Oct-01 | 60 | 80 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 23-Apr-02 | 180 | 340 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 29-May-02 | 1060 | 800 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 09-Jul-02 | 50 | 40 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 06-Aug-02 | 60 | 60 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 10-Sep-02 | 10 | 270 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 15-Oct-02 | 280 | 20 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 08-Apr-03 | 310 | 200 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 13-May-03 | 70 | 140 |
| Sand Creek | OK121400-04-0010F | Osage | CrossTimb | 17-Jun-03 | 40 | 60 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 14-Aug-01 | 65 | 20 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 18-Sep-01 | 800 | 1000 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 23-Oct-01 | 800 | 1310 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 23-Apr-02 | 1600 | 745 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 29-May-02 | 800 | 820 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 09-Jul-02 | 160 | 240 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 06-Aug-02 | 170 | 230 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 17-Sep-02 | 900 | 200 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 15-Oct-02 | 1180 | 20 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 08-Apr-03 | 400 | 150 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 13-May-03 | 50 | 20 |
| Bull Creek | OK121500-02-0090D | Wagoner | CentlrPl | 17-Jun-03 | 400 | 460 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 23-Oct-01 | 110 | 40 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 09-Jul-02 | 1340 | 280 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 06-Aug-02 | 800 | 390 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 17-Sep-02 | 400 | 540 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 15-Oct-02 | 40 | 80 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 08-Apr-03 | 740 | 230 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 13-May-03 | 10 | 90 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 14-Aug-01 | 150 | 295 |
| Dog Creek | OK121500-02-0360D | Rogers | CentlrPl | 21-Aug-01 | 690 | 250 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 13-Aug-01 | 105 | 10 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 17-Sep-01 | 70 | 100 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 22-Oct-01 | 10 | 30 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 22-Apr-02 | 10 | 100 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 28-May-02 | 340 | 375 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 08-Jul-02 | 310 | 240 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 05-Aug-02 | 50 | 10 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 16-Sep-02 | 20 | 20 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 14-Oct-02 | 20 | 60 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 07-Apr-03 | 75000 | 630 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 12-May-03 | 10 | 60 |
| California Creek | OK121510-02-0050C | Nowata | CentlrPl | 16-Jun-03 | 20 | 20 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 17-Sep-01 | 650 | 830 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 22-Oct-01 | 110 | 80 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 22-Apr-02 | 300 | 110 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 28-May-02 | 910 | 330 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 08-Jul-02 | 70 | 220 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 05-Aug-02 | 140 | 70 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 16-Sep-02 | 20 | 20 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 14-Oct-02 | 20 | 20 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 07-Apr-03 | 380 | 170 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|--------------------|-------------------|----------|-----------|-----------|---------|--------------|
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 12-May-03 | 80 | 10 |
| Big Creek | OK121510-03-0010D | Nowata | CentlrPl | 16-Jun-03 | 180 | 60 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 14-Aug-01 | 5 | 35 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 18-Sep-01 | 870 | 150 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 23-Oct-01 | 90 | 50 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 23-Apr-02 | 340 | 220 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 29-May-02 | 1780 | 900 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 09-Jul-02 | 50 | 70 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 06-Aug-02 | 10 | 70 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 10-Sep-02 | 10 | 40 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 15-Oct-02 | 20 | 20 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 08-Apr-03 | 10 | 10 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 13-May-03 | 810 | 850 |
| Ranger Creek | OK121600-01-0060D | Cherokee | BostonMtn | 17-Jun-03 | 80 | 20 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 14-Aug-01 | 55 | 155 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 18-Sep-01 | 510 | 320 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 23-Oct-01 | 70 | 20 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 23-Apr-02 | 1460 | 710 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 29-May-02 | 340 | 180 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 09-Jul-02 | 490 | 120 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 06-Aug-02 | 100 | 150 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 10-Sep-02 | 110 | 110 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 15-Oct-02 | 20 | 20 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 07-Apr-03 | 30 | 20 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 13-May-03 | 170 | 50 |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | OzarkHigh | 17-Jun-03 | 20 | 20 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 14-Aug-01 | 35 | 10 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 18-Sep-01 | 800 | 90 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 23-Oct-01 | 220 | 95 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 23-Apr-02 | 800 | 600 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 29-May-02 | 800 | 310 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 06-Aug-02 | 90 | 70 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 17-Sep-02 | 20 | 60 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 15-Oct-02 | 60 | 20 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 08-Apr-03 | 1760 | 470 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 13-May-03 | 20 | 170 |
| Chouteau Creek | OK121600-01-0430M | Mayes | CentlrPl | 17-Jun-03 | 280 | 400 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 14-Aug-01 | 20 | 38 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 18-Sep-01 | 60 | 80 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 23-Oct-01 | 30 | 10 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 22-Apr-02 | 10 | 10 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 09-Jul-02 | 10 | 30 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 06-Aug-02 | 10 | 70 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 09-Sep-02 | 10 | 40 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 14-Oct-02 | 20 | 20 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 07-Apr-03 | 10 | 10 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 13-May-03 | 20 | 20 |
| Saline Creek | OK121600-02-0030D | Mayes | OzarkHigh | 17-Jun-03 | 40 | 40 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 13-Aug-01 | 25 | 40 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 17-Sep-01 | 1040 | 220 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 22-Oct-01 | 100 | 20 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 22-Apr-02 | 10 | 10 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 28-May-02 | 40 | 150 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|--------------------|-------------------|----------|-----------|-----------|---------|--------------|
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 08-Jul-02 | 10 | 30 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 05-Aug-02 | 100 | 10 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 09-Sep-02 | 20 | 40 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 14-Oct-02 | 40 | 20 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 07-Apr-03 | 80 | 70 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 13-May-03 | 10 | 10 |
| Drowning Creek | OK121600-03-0090G | Delaware | OzarkHigh | 16-Jun-03 | 20 | 40 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 13-Aug-01 | 5 | 160 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 17-Sep-01 | 600 | 600 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 23-Oct-01 | 50 | 110 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 22-Apr-02 | 50 | 40 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 28-May-02 | 800 | 950 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 08-Jul-02 | 20 | 40 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 05-Aug-02 | 15 | 80 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 09-Sep-02 | 10 | 50 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 14-Oct-02 | 20 | 20 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 07-Apr-03 | 2500 | 660 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 12-May-03 | 10 | 80 |
| Little Horse Creek | OK121600-03-0190A | Ottawa | CentlrPl | 16-Jun-03 | 100 | 160 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 13-Aug-01 | 5 | 70 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 17-Sep-01 | 610 | 1630 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 22-Oct-01 | 40 | 30 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 22-Apr-02 | 10 | 20 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 28-May-02 | 120 | 100 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 08-Jul-02 | 20 | 30 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 05-Aug-02 | 50 | 10 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 09-Sep-02 | 10 | 40 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 14-Oct-02 | 40 | 20 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 07-Apr-03 | 10 | 20 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 12-May-03 | 10 | 10 |
| Sycamore Creek | OK121600-03-0510D | Ottawa | OzarkHigh | 16-Jun-03 | 20 | 40 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 13-Aug-01 | 400 | 250 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 17-Sep-01 | 800 | 580 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 23-Oct-01 | 1730 | 390 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 22-Apr-02 | 960 | 200 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 28-May-02 | 1970 | 610 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 08-Jul-02 | 360 | 120 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 05-Aug-02 | 330 | 230 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 09-Sep-02 | 70 | 30 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 14-Oct-02 | 360 | 40 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 07-Apr-03 | 2000 | 430 |
| Tar Creek | OK121600-04-0060D | Ottawa | CentlrPl | 12-May-03 | 760 | 385 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 13-Aug-01 | 250 | 300 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 17-Sep-01 | 1680 | 400 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 22-Oct-01 | 130 | 80 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 22-Apr-02 | 60 | 60 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 28-May-02 | 800 | 860 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 08-Jul-02 | 110 | 230 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 05-Aug-02 | 40 | 10 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 16-Sep-02 | 120 | 200 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 14-Oct-02 | 40 | 20 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 07-Apr-03 | 1100 | 190 |
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPl | 12-May-03 | 330 | 650 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|---------------------|-------------------|--------|-----------|-----------|---------|--------------|
| Little Cabin Creek | OK121600-06-0080C | Craig | CentlrPI | 16-Jun-03 | 80 | 60 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 13-Aug-01 | 400 | 15 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 17-Sep-01 | 800 | 110 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 22-Oct-01 | 210 | 120 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 22-Apr-02 | 160 | 90 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 28-May-02 | 800 | 230 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 08-Jul-02 | 440 | 180 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 05-Aug-02 | 90 | 10 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 16-Sep-02 | 1160 | 200 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 14-Oct-02 | 1600 | 1160 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 07-Apr-03 | 1480 | 145 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 12-May-03 | 210 | 120 |
| Big Cabin Creek | OK121600-06-0220I | Craig | CentlrPI | 16-Jun-03 | 220 | 20 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 13-Aug-01 | 20 | 65 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 17-Sep-01 | 100 | 210 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 23-Oct-01 | 40 | 30 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 22-Apr-02 | 10 | 10 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 28-May-02 | 10 | 10 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 08-Jul-02 | 10 | 10 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 05-Aug-02 | 10 | 20 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 09-Sep-02 | 10 | 40 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 14-Oct-02 | 20 | 20 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 07-Apr-03 | 20 | 10 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 12-May-03 | 10 | 40 |
| Fivemile Creek | OK121600-07-0110G | Ottawa | OzarkHigh | 16-Jun-03 | 20 | 40 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 14-Aug-01 | 60 | 105 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 18-Sep-01 | 150 | 90 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 23-Oct-01 | 410 | 140 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 29-May-02 | 800 | 1240 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 09-Jul-02 | 120 | 100 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 06-Aug-02 | 10 | 80 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 17-Sep-02 | 20 | 60 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 15-Oct-02 | 20 | 60 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 08-Apr-03 | 3250 | 290 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 13-May-03 | 10 | 70 |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | CentlrPI | 17-Jun-03 | 100 | 480 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 14-Aug-01 | 470 | 275 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 18-Sep-01 | 150 | 50 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 23-Oct-01 | 210 | 160 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 09-Jul-02 | 70 | 190 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 06-Aug-02 | 30 | 10 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 17-Sep-02 | 80 | 20 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 15-Oct-02 | 1600 | 20 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 08-Apr-03 | 3000 | 400 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 13-May-03 | 10 | 190 |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | CentlrPI | 17-Jun-03 | 120 | 420 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 14-Aug-01 | 460 | 163 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 18-Sep-01 | 1600 | 1510 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 22-Oct-01 | 100 | 110 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 23-Apr-02 | 230 | 160 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 29-May-02 | 300 | 130 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 09-Jul-02 | 60 | 280 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 06-Aug-02 | 155 | 315 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|------------------|-------------------|---------|-----------|-----------|---------|--------------|
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 09-Sep-02 | 40 | 30 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 15-Oct-02 | 20 | 60 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 07-Apr-03 | 1800 | 310 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 12-May-03 | 670 | 340 |
| Buggy Creek | OK520610-02-0120C | Grady | CentGrPI | 16-Jun-03 | 60 | 220 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 14-Aug-01 | 355 | 90 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 18-Sep-01 | 20 | |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 22-Oct-01 | 150 | 70 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 23-Apr-02 | 190 | 190 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 29-May-02 | 800 | 2360 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 09-Jul-02 | 260 | 310 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 06-Aug-02 | 130 | 190 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 09-Sep-02 | 210 | 440 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 15-Oct-02 | 40 | 20 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 07-Apr-03 | 3000 | 510 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 12-May-03 | 20 | 40 |
| Walnut Creek | OK520610-03-0010C | McClain | CentGrPI | 16-Jun-03 | 760 | 1220 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 23-Apr-02 | 350 | 140 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 29-May-02 | 350 | 140 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 09-Jul-02 | 140 | 130 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 06-Aug-02 | 610 | 610 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 10-Sep-02 | 300 | 220 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 15-Oct-02 | 20 | 220 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 08-Apr-03 | 60 | 60 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 13-May-03 | 470 | 130 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 17-Jun-03 | 190 | 130 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 27-Aug-01 | 1040 | 500 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 02-Oct-01 | 230 | 370 |
| Trail Creek | OK520620-02-0090G | Dewey | CentGrPI | 06-Nov-01 | 30 | 100 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 14-Aug-01 | 155 | 125 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 18-Sep-01 | 71600 | 1310 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 23-Oct-01 | 1010 | 320 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 23-Apr-02 | 80 | 260 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 29-May-02 | 160 | 210 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 09-Jul-02 | 280 | 330 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 06-Aug-02 | 520 | 900 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 10-Sep-02 | 180 | 210 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 15-Oct-02 | 120 | 80 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 08-Apr-03 | 200 | 30 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 13-May-03 | 1320 | 90 |
| Lone Creek | OK520620-03-0020C | Dewey | CentGrPI | 17-Jun-03 | 100 | 120 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 14-Aug-01 | 105 | 435 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 18-Sep-01 | 1120 | 520 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 23-Oct-01 | 100 | 120 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 23-Apr-02 | 320 | 250 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 29-May-02 | 950 | 140 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 09-Jul-02 | 440 | 310 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 15-Oct-02 | 160 | 100 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 08-Apr-03 | 30 | 30 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 13-May-03 | 100 | 50 |
| Hackberry Creek | OK520620-04-0050D | Ellis | CentGrPI | 17-Jun-03 | 500 | 580 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 14-Aug-01 | 40 | 150 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 18-Sep-01 | 620 | 580 |

Appendix A.2. Raw bacterial data.

| SiteName | WBID | County | Ecoregion | Date | E. Coli | Enterococcus |
|------------------|-------------------|--------|-----------|-----------|---------|--------------|
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 23-Oct-01 | 140 | 120 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 23-Apr-02 | 10 | 80 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 29-May-02 | 270 | 130 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 09-Jul-02 | 280 | 90 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 06-Aug-02 | 180 | 200 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 10-Sep-02 | 70 | 200 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 15-Oct-02 | 20 | 200 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 08-Apr-03 | 15 | 15 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 13-May-03 | 120 | 20 |
| Commission Creek | OK520620-05-0160C | Ellis | SWTable | 17-Jun-03 | 140 | 200 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 14-Aug-01 | 55 | 55 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 18-Sep-01 | 7800 | 610 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 23-Oct-01 | 50 | 20 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 22-Apr-02 | 10 | 10 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 28-May-02 | 540 | 40 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 09-Jul-02 | 650 | 70 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 06-Aug-02 | 80 | 120 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 09-Sep-02 | 10 | 140 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 14-Oct-02 | 20 | 20 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 07-Apr-03 | 10 | 10 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 12-May-03 | 20 | 10 |
| Deer Creek | OK520620-06-0010F | Caddo | CentGrPI | 16-Jun-03 | 1620 | 540 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|-----------------------------|---------------------|----------------------|----|-------|--------|---------|---------|---------|--------|--------|--------|---------|
| Delaware Creek | OK121300-01-0150H | Alkalinity (CaCO | 18 | 1 | 76.94 | 7.72 | 32.75 | 37.00 | 51.75 | 75.00 | 99.00 | 171.00 |
| | OK121300-01-0150H | Ammonia (mg/L) | 19 | 0 | 0.11 | 0.02 | 0.09 | 0.02 | 0.02 | 0.09 | 0.18 | 0.26 |
| | OK121300-01-0150H | Avail-N | 19 | 0 | 0.53 | 0.06 | 0.27 | 0.14 | 0.26 | 0.60 | 0.76 | 1.03 |
| | OK121300-01-0150H | cBOD5 (mg/l) | 18 | 0 | 3.41 | 0.50 | 2.14 | 2.00 | 2.00 | 2.65 | 4.00 | 10.00 |
| | OK121300-01-0150H | Chloride (mg/L) | 19 | 0 | 201.10 | 43.20 | 188.20 | 33.60 | 85.90 | 153.90 | 239.10 | 800.10 |
| | OK121300-01-0150H | Cond (uS/cm) | 19 | 0 | 837.00 | 140.00 | 608.00 | 295.00 | 502.00 | 608.00 | 907.00 | 2842.00 |
| | OK121300-01-0150H | Enterococcus | 11 | 0 | 110 | 47.1 | 156.1 | 10 | 20 | 40 | 100 | 490 |
| | OK121300-01-0150H | E. coli | 11 | 0 | 225 | 117 | 387 | 10 | 20 | 60 | 130 | 1180 |
| | OK121300-01-0150H | Discharge (cfs) | 19 | 0 | 3.84 | 1.81 | 7.90 | 0.00 | 0.00 | 0.23 | 2.26 | 25.31 |
| | OK121300-01-0150H | Final DO (mg/l) | 19 | 0 | 5.92 | 0.60 | 2.62 | 2.40 | 4.08 | 5.12 | 6.78 | 12.18 |
| | OK121300-01-0150H | % DO Sat. | 19 | 0 | 59.16 | 4.60 | 20.06 | 24.00 | 48.00 | 55.00 | 76.00 | 98.00 |
| | OK121300-01-0150H | Nitrate (mg/L) | 19 | 0 | 0.41 | 0.06 | 0.25 | 0.01 | 0.21 | 0.51 | 0.57 | 0.94 |
| | OK121300-01-0150H | Nitrite (mg/L) | 19 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121300-01-0150H | pH (SU) | 19 | 0 | 7.92 | 0.19 | 0.82 | 6.69 | 7.25 | 7.73 | 8.75 | 9.50 |
| | OK121300-01-0150H | Sulfate (mg/L) | 19 | 0 | 23.48 | 3.75 | 16.34 | 6.64 | 12.40 | 21.35 | 28.06 | 75.80 |
| | OK121300-01-0150H | Temp (°C) | 19 | 0 | 16.45 | 1.96 | 8.56 | 4.40 | 9.70 | 17.50 | 22.00 | 32.50 |
| | OK121300-01-0150H | TKN (mg/L) | 19 | 0 | 0.52 | 0.04 | 0.18 | 0.11 | 0.42 | 0.55 | 0.63 | 0.81 |
| | OK121300-01-0150H | TotDisSolids (mg/L) | 19 | 0 | 497.10 | 77.50 | 337.90 | 171.00 | 290.00 | 419.00 | 489.00 | 1619.00 |
| | OK121300-01-0150H | TotHardness (mg/L) | 19 | 0 | 191.90 | 23.20 | 101.00 | 83.10 | 122.20 | 165.90 | 233.00 | 473.20 |
| | OK121300-01-0150H | Tot-N | 19 | 0 | 0.94 | 0.07 | 0.29 | 0.44 | 0.65 | 0.94 | 1.19 | 1.49 |
| | OK121300-01-0150H | TotOrthoPhos (mg/L) | 19 | 0 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.06 |
| | OK121300-01-0150H | TotPhosphorus (mg/L) | 19 | 0 | 0.06 | 0.01 | 0.04 | 0.01 | 0.03 | 0.05 | 0.08 | 0.14 |
| OK121300-01-0150H | TotSusSolids (mg/L) | 19 | 0 | 33.68 | 6.56 | 28.61 | 10.00 | 10.00 | 19.00 | 62.00 | 100.00 | |
| OK121300-01-0150H | Turb (NTU) | 19 | 0 | 36.74 | 8.42 | 36.68 | 9.47 | 16.50 | 25.80 | 34.80 | 161.00 | |
| Bird Creek | OK121300-02-0010C | Alkalinity (CaCO | 19 | 0 | 65.47 | 6.07 | 26.45 | 14.00 | 46.00 | 58.00 | 83.00 | 123.00 |
| | OK121300-02-0010C | Ammonia (mg/L) | 19 | 0 | 0.12 | 0.04 | 0.16 | 0.02 | 0.02 | 0.08 | 0.16 | 0.69 |
| | OK121300-02-0010C | Avail-N | 19 | 0 | 0.55 | 0.10 | 0.42 | 0.04 | 0.18 | 0.53 | 0.80 | 1.65 |
| | OK121300-02-0010C | cBOD5 (mg/l) | 19 | 0 | 3.12 | 0.43 | 1.88 | 2.00 | 2.00 | 2.40 | 3.00 | 8.00 |
| | OK121300-02-0010C | Chloride (mg/L) | 19 | 0 | 29.66 | 3.17 | 13.82 | 10.91 | 21.78 | 27.74 | 35.28 | 76.00 |
| | OK121300-02-0010C | Cond (uS/cm) | 19 | 0 | 300.30 | 21.40 | 93.10 | 153.40 | 248.30 | 280.10 | 345.70 | 598.00 |
| | OK121300-02-0010C | Discharge (cfs) | 19 | 0 | 527.00 | 445.00 | 1938.00 | 10.00 | 15.00 | 23.00 | 49.00 | 8500.00 |
| | OK121300-02-0010C | Enterococcus | 12 | 0 | 193 | 124 | 428 | 20 | 30 | 55 | 80 | 1530 |
| | OK121300-02-0010C | E. coli | 12 | 0 | 227 | 140 | 486 | 5 | 10 | 35 | 74 | 1600 |
| | OK121300-02-0010C | Final DO (mg/l) | 19 | 0 | 8.41 | 0.58 | 2.55 | 4.52 | 6.44 | 7.65 | 11.10 | 13.03 |
| | OK121300-02-0010C | % DO Sat. | 19 | 0 | 84.11 | 2.48 | 10.81 | 57.00 | 80.00 | 83.00 | 93.00 | 99.00 |
| | OK121300-02-0010C | Nitrate (mg/L) | 19 | 0 | 0.39 | 0.07 | 0.29 | 0.01 | 0.15 | 0.48 | 0.59 | 0.95 |
| | OK121300-02-0010C | Nitrite (mg/L) | 19 | 0 | 0.03 | 0.02 | 0.11 | 0.01 | 0.01 | 0.01 | 0.01 | 0.47 |
| | OK121300-02-0010C | pH (SU) | 19 | 0 | 7.40 | 0.10 | 0.43 | 6.31 | 7.19 | 7.44 | 7.82 | 8.04 |
| | OK121300-02-0010C | Sulfate (mg/L) | 19 | 0 | 13.93 | 1.31 | 5.71 | 7.61 | 10.10 | 12.30 | 18.42 | 31.80 |
| | OK121300-02-0010C | Temp (°C) | 19 | 0 | 16.98 | 2.02 | 8.80 | 3.80 | 9.30 | 18.20 | 26.30 | 29.70 |
| | OK121300-02-0010C | TKN (mg/L) | 19 | 0 | 0.58 | 0.13 | 0.57 | 0.11 | 0.36 | 0.50 | 0.56 | 2.79 |
| | OK121300-02-0010C | TotDisSolids (mg/L) | 19 | 0 | 171.85 | 9.73 | 42.40 | 95.50 | 147.00 | 168.50 | 192.00 | 286.00 |
| | OK121300-02-0010C | TotHardness (mg/L) | 19 | 0 | 106.09 | 7.04 | 30.69 | 55.50 | 87.00 | 105.00 | 115.80 | 191.20 |
| | OK121300-02-0010C | Tot-N | 19 | 0 | 1.01 | 0.18 | 0.77 | 0.19 | 0.58 | 0.87 | 1.21 | 3.75 |
| | OK121300-02-0010C | TotOrthoPhos (mg/L) | 19 | 0 | 0.02 | 0.01 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.24 |
| | OK121300-02-0010C | TotPhosphorus (mg/L) | 19 | 0 | 0.05 | 0.01 | 0.05 | 0.01 | 0.02 | 0.04 | 0.06 | 0.25 |
| OK121300-02-0010C | TotSusSolids (mg/L) | 19 | 0 | 13.79 | 2.44 | 10.63 | 1.00 | 10.00 | 10.00 | 13.00 | 51.00 | |
| OK121300-02-0010C | Turb (NTU) | 19 | 0 | 70.00 | 48.60 | 211.70 | 4.40 | 7.40 | 9.20 | 15.80 | 929.00 | |
| Hominy Creek: downstream | OK121300-04-0010C | Alkalinity (CaCO | 20 | 0 | 53.59 | 3.68 | 16.45 | 16.00 | 41.25 | 56.50 | 66.75 | 73.00 |
| | OK121300-04-0010C | Ammonia (mg/L) | 20 | 0 | 0.19 | 0.06 | 0.25 | 0.02 | 0.04 | 0.13 | 0.21 | 1.08 |
| | OK121300-04-0010C | Avail-N | 20 | 0 | 0.76 | 0.13 | 0.59 | 0.23 | 0.36 | 0.62 | 0.83 | 2.80 |
| | OK121300-04-0010C | cBOD5 (mg/l) | 19 | 0 | 3.31 | 0.42 | 1.84 | 2.00 | 2.00 | 2.00 | 4.00 | 7.10 |
| | OK121300-04-0010C | Chloride (mg/L) | 20 | 0 | 37.42 | 2.16 | 9.64 | 12.07 | 33.12 | 37.27 | 41.85 | 66.10 |
| | OK121300-04-0010C | Cond (uS/cm) | 20 | 0 | 300.40 | 11.50 | 51.40 | 207.20 | 275.70 | 283.90 | 318.70 | 465.20 |
| | OK121300-04-0010C | Discharge (cfs) | 20 | 0 | 94.10 | 11.30 | 50.60 | 8.30 | 48.40 | 85.40 | 144.00 | 184.90 |
| | OK121300-04-0010C | Enterococcus | 11 | 0 | 90 | 14.5 | 48.2 | 30 | 50 | 80 | 110 | 180 |
| | OK121300-04-0010C | E. coli | 11 | 0 | 61.8 | 10.9 | 36 | 20 | 40 | 40 | 80 | 140 |
| | OK121300-04-0010C | Final DO (mg/l) | 20 | 0 | 8.61 | 0.52 | 2.33 | 5.03 | 6.63 | 8.08 | 10.42 | 12.79 |
| | OK121300-04-0010C | % DO Sat. | 20 | 0 | 84.40 | 2.02 | 9.02 | 66.00 | 79.50 | 82.50 | 88.75 | 108.00 |
| | OK121300-04-0010C | Nitrate (mg/L) | 20 | 0 | 0.56 | 0.08 | 0.36 | 0.09 | 0.29 | 0.51 | 0.68 | 1.71 |
| | OK121300-04-0010C | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121300-04-0010C | pH (SU) | 20 | 0 | 7.58 | 0.12 | 0.55 | 6.19 | 7.29 | 7.60 | 7.81 | 9.17 |
| | OK121300-04-0010C | Sulfate (mg/L) | 20 | 0 | 13.92 | 0.98 | 4.38 | 10.50 | 11.30 | 12.69 | 14.12 | 30.14 |
| | OK121300-04-0010C | Temp (°C) | 20 | 0 | 15.91 | 2.02 | 9.04 | 2.30 | 8.05 | 16.85 | 24.35 | 29.20 |
| | OK121300-04-0010C | TKN (mg/L) | 19 | 1 | 0.41 | 0.06 | 0.25 | 0.11 | 0.16 | 0.39 | 0.51 | 1.13 |
| | OK121300-04-0010C | TotDisSolids (mg/L) | 20 | 0 | 162.75 | 7.41 | 33.14 | 123.00 | 142.00 | 152.50 | 178.38 | 272.50 |
| | OK121300-04-0010C | TotHardness (mg/L) | 20 | 0 | 97.66 | 3.46 | 15.46 | 80.49 | 87.46 | 95.10 | 103.02 | 143.40 |
| | OK121300-04-0010C | Tot-N | 19 | 1 | 0.91 | 0.09 | 0.41 | 0.37 | 0.60 | 0.83 | 1.14 | 1.84 |
| | OK121300-04-0010C | TotOrthoPhos (mg/L) | 18 | 2 | 0.04 | 0.01 | 0.04 | 0.01 | 0.01 | 0.03 | 0.05 | 0.18 |
| | OK121300-04-0010C | TotPhosphorus (mg/L) | 18 | 2 | 0.12 | 0.04 | 0.18 | 0.02 | 0.04 | 0.06 | 0.10 | 0.78 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|---------------------------|----------------------|---------------------|----|-------|---------|---------|--------|---------|--------|---------|---------|---------|
| | OK121300-04-0010C | TotSusSolids (mg/L) | 20 | 0 | 28.45 | 3.09 | 13.80 | 10.00 | 18.00 | 27.50 | 41.25 | 55.00 |
| | OK121300-04-0010C | Turb (NTU) | 20 | 0 | 32.40 | 13.50 | 60.40 | 8.60 | 12.30 | 18.50 | 24.00 | 287.00 |
| Hominy Creek: upstream | OK121300-04-0280G | Alkalinity (CaCO | 20 | 0 | 109.85 | 9.21 | 41.20 | 24.00 | 73.00 | 119.50 | 147.25 | 179.00 |
| | OK121300-04-0280G | Ammonia (mg/L) | 18 | 2 | 0.08 | 0.02 | 0.08 | 0.02 | 0.02 | 0.04 | 0.12 | 0.34 |
| | OK121300-04-0280G | Avail-N | 18 | 2 | 0.36 | 0.07 | 0.31 | 0.05 | 0.10 | 0.23 | 0.63 | 1.07 |
| | OK121300-04-0280G | cBOD5 (mg/l) | 20 | 0 | 3.31 | 0.40 | 1.77 | 2.00 | 2.00 | 3.00 | 3.93 | 8.00 |
| | OK121300-04-0280G | Chloride (mg/L) | 20 | 0 | 280.20 | 42.50 | 190.20 | 65.50 | 101.30 | 218.90 | 420.50 | 629.30 |
| | OK121300-04-0280G | Cond (uS/cm) | 20 | 0 | 1189.00 | 119.00 | 534.00 | 436.00 | 721.00 | 1104.00 | 1616.00 | 2213.00 |
| | OK121300-04-0280G | Discharge (cfs) | 20 | 0 | 15.45 | 9.33 | 41.70 | 0.17 | 0.98 | 1.79 | 6.01 | 180.68 |
| | OK121300-04-0280G | <i>Enterococcus</i> | 12 | 0 | 143.3 | 57.2 | 198 | 10 | 20 | 60 | 180 | 560 |
| | OK121300-04-0280G | <i>E. coli</i> | 12 | 0 | 131.3 | 65.6 | 227.3 | 5 | 10 | 35 | 192.5 | 800 |
| | OK121300-04-0280G | Final DO (mg/l) | 20 | 0 | 9.82 | 0.48 | 2.15 | 7.18 | 8.04 | 9.35 | 11.92 | 14.03 |
| | OK121300-04-0280G | % DO Sat. | 20 | 0 | 102.35 | 1.57 | 7.04 | 91.00 | 96.00 | 102.50 | 109.00 | 113.00 |
| | OK121300-04-0280G | Nitrate (mg/L) | 20 | 0 | 0.29 | 0.07 | 0.29 | 0.01 | 0.01 | 0.18 | 0.50 | 0.86 |
| | OK121300-04-0280G | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121300-04-0280G | pH (SU) | 20 | 0 | 7.86 | 0.09 | 0.41 | 6.94 | 7.62 | 7.94 | 8.12 | 8.54 |
| | OK121300-04-0280G | Sulfate (mg/L) | 20 | 0 | 26.96 | 2.72 | 12.17 | 11.11 | 13.76 | 25.52 | 37.73 | 47.99 |
| | OK121300-04-0280G | Temp (°C) | 20 | 0 | 17.99 | 2.14 | 9.57 | 3.60 | 9.18 | 17.25 | 27.23 | 33.00 |
| | OK121300-04-0280G | TKN (mg/L) | 20 | 0 | 0.41 | 0.06 | 0.27 | 0.12 | 0.27 | 0.37 | 0.44 | 1.43 |
| | OK121300-04-0280G | TotDisSolids (mg/L) | 20 | 0 | 694.50 | 73.20 | 327.20 | 260.00 | 424.00 | 617.50 | 995.50 | 1217.50 |
| | OK121300-04-0280G | TotHardness (mg/L) | 20 | 0 | 309.90 | 26.70 | 119.30 | 133.20 | 226.40 | 299.30 | 394.20 | 558.90 |
| | OK121300-04-0280G | Tot-N | 20 | 0 | 0.71 | 0.10 | 0.44 | 0.14 | 0.42 | 0.61 | 0.94 | 2.16 |
| OK121300-04-0280G | TotOrthoPhos (mg/L) | 20 | 0 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.15 | |
| OK121300-04-0280G | TotPhosphorus (mg/L) | 20 | 0 | 0.04 | 0.01 | 0.05 | 0.01 | 0.02 | 0.03 | 0.05 | 0.25 | |
| OK121300-04-0280G | TotSusSolids (mg/L) | 20 | 0 | 13.60 | 1.83 | 8.20 | 1.00 | 10.00 | 10.00 | 15.00 | 38.00 | |
| OK121300-04-0280G | Turb (NTU) | 20 | 0 | 38.20 | 26.00 | 116.10 | 2.50 | 4.40 | 7.70 | 21.00 | 529.00 | |
| Curl Creek | OK121400-01-0270G | Alkalinity (CaCO | 20 | 0 | 94.70 | 10.40 | 46.60 | 32.00 | 70.80 | 86.50 | 108.00 | 203.00 |
| | OK121400-01-0270G | Ammonia (mg/L) | 19 | 1 | 0.15 | 0.03 | 0.13 | 0.02 | 0.02 | 0.16 | 0.24 | 0.39 |
| | OK121400-01-0270G | Avail-N | 19 | 1 | 0.51 | 0.09 | 0.38 | 0.06 | 0.20 | 0.33 | 0.79 | 1.38 |
| | OK121400-01-0270G | cBOD5 (mg/l) | 19 | 0 | 4.56 | 0.46 | 2.00 | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 |
| | OK121400-01-0270G | Chloride (mg/L) | 20 | 0 | 40.54 | 6.15 | 27.49 | 15.10 | 21.01 | 34.56 | 52.46 | 137.60 |
| | OK121400-01-0270G | Cond (uS/cm) | 20 | 0 | 418.30 | 30.30 | 135.50 | 217.30 | 316.00 | 447.70 | 485.00 | 800.00 |
| | OK121400-01-0270G | Discharge (cfs) | 19 | 1 | 2.16 | 1.03 | 4.50 | 0.00 | 0.00 | 0.00 | 1.10 | 15.85 |
| | OK121400-01-0270G | <i>Enterococcus</i> | 12 | 0 | 264.6 | 84.7 | 293.5 | 20 | 85 | 185 | 287.5 | 1065 |
| | OK121400-01-0270G | <i>E. coli</i> | 12 | 0 | 264.2 | 70.6 | 244.5 | 10 | 40 | 275 | 360 | 800 |
| | OK121400-01-0270G | Final DO (mg/l) | 20 | 0 | 6.73 | 0.59 | 2.64 | 0.00 | 5.84 | 6.46 | 8.50 | 11.28 |
| | OK121400-01-0270G | % DO Sat. | 20 | 0 | 68.90 | 6.00 | 26.83 | 0.00 | 53.00 | 71.50 | 87.50 | 118.00 |
| | OK121400-01-0270G | Nitrate (mg/L) | 20 | 0 | 0.33 | 0.06 | 0.29 | 0.01 | 0.02 | 0.31 | 0.58 | 0.87 |
| | OK121400-01-0270G | Nitrite (mg/L) | 20 | 0 | 0.04 | 0.02 | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.33 |
| | OK121400-01-0270G | pH (SU) | 20 | 0 | 7.44 | 0.13 | 0.56 | 6.86 | 7.10 | 7.31 | 7.52 | 9.35 |
| | OK121400-01-0270G | Sulfate (mg/L) | 20 | 0 | 27.77 | 3.88 | 17.33 | 8.90 | 13.95 | 26.09 | 38.48 | 80.20 |
| | OK121400-01-0270G | Temp (°C) | 20 | 0 | 15.80 | 2.04 | 9.13 | 2.80 | 9.03 | 14.80 | 24.30 | 31.30 |
| | OK121400-01-0270G | TKN (mg/L) | 19 | 1 | 0.67 | 0.07 | 0.31 | 0.11 | 0.51 | 0.65 | 0.88 | 1.22 |
| | OK121400-01-0270G | TotDisSolids (mg/L) | 20 | 0 | 222.10 | 19.20 | 85.70 | 2.60 | 169.00 | 222.00 | 271.00 | 428.00 |
| | OK121400-01-0270G | TotHardness (mg/L) | 20 | 0 | 130.96 | 7.69 | 34.40 | 72.30 | 101.28 | 132.45 | 155.22 | 204.60 |
| | OK121400-01-0270G | Tot-N | 19 | 1 | 1.03 | 0.11 | 0.49 | 0.17 | 0.66 | 0.96 | 1.38 | 1.94 |
| OK121400-01-0270G | TotOrthoPhos (mg/L) | 20 | 0 | 0.03 | 0.00 | 0.02 | 0.01 | 0.01 | 0.03 | 0.04 | 0.07 | |
| OK121400-01-0270G | TotPhosphorus (mg/L) | 20 | 0 | 0.14 | 0.05 | 0.23 | 0.04 | 0.06 | 0.07 | 0.12 | 1.11 | |
| OK121400-01-0270G | TotSusSolids (mg/L) | 20 | 0 | 32.65 | 7.01 | 31.33 | 10.00 | 11.25 | 28.00 | 38.50 | 153.00 | |
| OK121400-01-0270G | Turb (NTU) | 20 | 0 | 37.95 | 4.00 | 17.88 | 10.40 | 23.33 | 36.40 | 49.78 | 74.10 | |
| Hogshooter Creek | OK121400-01-0300D | Alkalinity (CaCO | 18 | 0 | 130.44 | 4.52 | 19.17 | 84.00 | 124.75 | 127.50 | 141.25 | 168.00 |
| | OK121400-01-0300D | Ammonia (mg/L) | 18 | 0 | 0.13 | 0.05 | 0.22 | 0.02 | 0.02 | 0.05 | 0.16 | 0.91 |
| | OK121400-01-0300D | Avail-N | 18 | 0 | 0.59 | 0.11 | 0.48 | 0.09 | 0.17 | 0.56 | 0.83 | 1.65 |
| | OK121400-01-0300D | cBOD5 (mg/l) | 17 | 0 | 3.49 | 0.41 | 1.69 | 2.00 | 2.00 | 3.00 | 4.00 | 7.00 |
| | OK121400-01-0300D | Chloride (mg/L) | 18 | 0 | 35.85 | 4.74 | 20.10 | 10.93 | 12.86 | 35.32 | 47.84 | 81.30 |
| | OK121400-01-0300D | Cond (uS/cm) | 18 | 0 | 454.80 | 21.60 | 91.70 | 315.00 | 357.20 | 464.10 | 531.30 | 629.00 |
| | OK121400-01-0300D | Discharge (cfs) | 17 | 1 | 21.80 | 14.70 | 60.60 | 0.00 | 0.00 | 0.70 | 5.30 | 235.00 |
| | OK121400-01-0300D | <i>Enterococcus</i> | 12 | 0 | 209.6 | 69.6 | 241 | 10 | 32.5 | 105 | 295 | 750 |
| | OK121400-01-0300D | <i>E. coli</i> | 12 | 0 | 288 | 110 | 381 | 10 | 65 | 115 | 513 | 1210 |
| | OK121400-01-0300D | Final DO (mg/l) | 18 | 0 | 5.78 | 0.84 | 3.55 | 0.65 | 2.54 | 6.38 | 8.10 | 11.84 |
| | OK121400-01-0300D | % DO Sat. | 18 | 0 | 58.22 | 7.68 | 32.59 | 6.00 | 22.00 | 79.00 | 85.00 | 94.00 |
| | OK121400-01-0300D | Nitrate (mg/L) | 18 | 0 | 0.38 | 0.07 | 0.30 | 0.01 | 0.08 | 0.44 | 0.60 | 1.04 |
| | OK121400-01-0300D | Nitrite (mg/L) | 18 | 0 | 0.08 | 0.04 | 0.19 | 0.01 | 0.01 | 0.01 | 0.03 | 0.73 |
| | OK121400-01-0300D | pH (SU) | 18 | 0 | 7.54 | 0.14 | 0.57 | 6.56 | 7.07 | 7.60 | 7.84 | 9.11 |
| | OK121400-01-0300D | Sulfate (mg/L) | 18 | 0 | 19.84 | 2.29 | 9.72 | 7.70 | 10.68 | 18.40 | 26.34 | 38.93 |
| | OK121400-01-0300D | Temp (°C) | 18 | 0 | 15.97 | 1.72 | 7.32 | 4.30 | 9.68 | 16.70 | 22.75 | 26.70 |
| | OK121400-01-0300D | TKN (mg/L) | 18 | 0 | 0.50 | 0.14 | 0.60 | 0.11 | 0.27 | 0.38 | 0.49 | 2.82 |
| | OK121400-01-0300D | TotDisSolids (mg/L) | 18 | 0 | 245.80 | 14.20 | 60.40 | 146.00 | 192.50 | 243.50 | 299.60 | 337.00 |
| | OK121400-01-0300D | TotHardness (mg/L) | 18 | 0 | 182.98 | 7.21 | 30.60 | 134.70 | 149.33 | 189.90 | 198.58 | 237.10 |
| | OK121400-01-0300D | Tot-N | 18 | 0 | 0.96 | 0.18 | 0.76 | 0.18 | 0.53 | 0.78 | 1.15 | 3.56 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|--------------------|----------------------|----------------------|----|-------|--------|---------|--------|---------|--------|--------|--------|---------|
| | OK121400-01-0300D | TotOrthoPhos (mg/L) | 18 | 0 | 0.03 | 0.01 | 0.05 | 0.01 | 0.01 | 0.03 | 0.04 | 0.21 |
| | OK121400-01-0300D | TotPhosphorus (mg/L) | 18 | 0 | 0.09 | 0.03 | 0.11 | 0.01 | 0.04 | 0.06 | 0.10 | 0.49 |
| | OK121400-01-0300D | TotSusSolids (mg/L) | 18 | 0 | 18.72 | 4.23 | 17.95 | 5.00 | 10.00 | 10.00 | 22.25 | 79.00 |
| | OK121400-01-0300D | Turb (NTU) | 18 | 0 | 39.10 | 28.60 | 121.40 | 2.20 | 4.80 | 9.30 | 17.70 | 525.00 |
| Little Caney River | OK121400-02-0140H | Alkalinity (CaCO | 20 | 0 | 91.10 | 3.48 | 15.56 | 61.00 | 82.00 | 90.00 | 104.25 | 122.00 |
| | OK121400-02-0140H | Ammonia (mg/L) | 20 | 0 | 0.09 | 0.02 | 0.08 | 0.02 | 0.02 | 0.07 | 0.16 | 0.25 |
| | OK121400-02-0140H | Avail-N | 20 | 0 | 0.63 | 0.07 | 0.31 | 0.12 | 0.36 | 0.68 | 0.91 | 1.10 |
| | OK121400-02-0140H | cBOD5 (mg/l) | 19 | 0 | 3.09 | 0.33 | 1.43 | 2.00 | 2.00 | 3.00 | 4.00 | 7.00 |
| | OK121400-02-0140H | Chloride (mg/L) | 20 | 0 | 28.23 | 6.06 | 27.10 | 7.70 | 12.59 | 20.55 | 34.27 | 133.50 |
| | OK121400-02-0140H | Cond (uS/cm) | 20 | 0 | 328.90 | 25.70 | 115.10 | 188.60 | 265.80 | 318.20 | 375.90 | 730.00 |
| | OK121400-02-0140H | Discharge (cfs) | 19 | 1 | 82.10 | 61.00 | 265.90 | 0.80 | 3.10 | 9.30 | 17.30 | 1170.00 |
| | OK121400-02-0140H | Enterococcus | 12 | 0 | 58.33 | 9.91 | 34.33 | 20 | 30 | 55 | 85 | 130 |
| | OK121400-02-0140H | E. coli | 12 | 0 | 159.6 | 71.2 | 246.7 | 20 | 36.3 | 60 | 175 | 880 |
| | OK121400-02-0140H | Final DO (mg/l) | 20 | 0 | 9.12 | 0.50 | 2.22 | 5.95 | 7.08 | 9.13 | 10.87 | 13.66 |
| | OK121400-02-0140H | % DO Sat. | 20 | 0 | 91.75 | 1.84 | 8.21 | 71.00 | 85.25 | 93.00 | 98.50 | 104.00 |
| | OK121400-02-0140H | Nitrate (mg/L) | 20 | 0 | 0.51 | 0.06 | 0.26 | 0.08 | 0.29 | 0.56 | 0.66 | 1.07 |
| | OK121400-02-0140H | Nitrite (mg/L) | 20 | 0 | 0.03 | 0.02 | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.36 |
| | OK121400-02-0140H | pH (SU) | 20 | 0 | 7.75 | 0.11 | 0.51 | 6.48 | 7.41 | 7.82 | 8.02 | 9.14 |
| | OK121400-02-0140H | Sulfate (mg/L) | 20 | 0 | 19.13 | 5.22 | 23.33 | 6.40 | 9.16 | 15.00 | 18.51 | 115.80 |
| | OK121400-02-0140H | Temp (°C) | 20 | 0 | 16.80 | 1.98 | 8.87 | 2.90 | 9.13 | 17.50 | 25.48 | 30.20 |
| | OK121400-02-0140H | TKN (mg/L) | 20 | 0 | 0.53 | 0.07 | 0.31 | 0.11 | 0.30 | 0.56 | 0.63 | 1.55 |
| | OK121400-02-0140H | TotDisSolids (mg/L) | 20 | 0 | 199.60 | 14.70 | 66.00 | 121.00 | 162.10 | 186.50 | 223.00 | 442.00 |
| | OK121400-02-0140H | TotHardness (mg/L) | 20 | 0 | 127.42 | 5.92 | 26.47 | 78.12 | 110.25 | 130.00 | 149.61 | 164.50 |
| | OK121400-02-0140H | Tot-N | 20 | 0 | 1.07 | 0.11 | 0.47 | 0.22 | 0.75 | 1.13 | 1.35 | 2.22 |
| OK121400-02-0140H | TotOrthoPhos (mg/L) | 19 | 1 | 0.04 | 0.01 | 0.02 | 0.01 | 0.02 | 0.04 | 0.05 | 0.09 | |
| OK121400-02-0140H | TotPhosphorus (mg/L) | 19 | 1 | 0.08 | 0.01 | 0.03 | 0.03 | 0.06 | 0.07 | 0.12 | 0.13 | |
| OK121400-02-0140H | TotSusSolids (mg/L) | 20 | 0 | 38.00 | 4.60 | 20.55 | 1.00 | 22.25 | 40.50 | 46.00 | 73.00 | |
| OK121400-02-0140H | Turb (NTU) | 20 | 0 | 72.35 | 9.58 | 42.85 | 15.90 | 33.90 | 65.95 | 99.53 | 193.00 | |
| Mission Creek | OK121400-02-0190B | Alkalinity (CaCO | 20 | 0 | 93.00 | 11.80 | 52.70 | 22.00 | 51.30 | 89.00 | 123.30 | 243.00 |
| | OK121400-02-0190B | Ammonia (mg/L) | 20 | 0 | 0.15 | 0.03 | 0.13 | 0.02 | 0.02 | 0.15 | 0.26 | 0.36 |
| | OK121400-02-0190B | Avail-N | 20 | 0 | 0.62 | 0.07 | 0.30 | 0.15 | 0.34 | 0.62 | 0.85 | 1.14 |
| | OK121400-02-0190B | cBOD5 (mg/l) | 20 | 0 | 4.83 | 0.66 | 2.95 | 2.00 | 3.18 | 4.00 | 5.45 | 15.00 |
| | OK121400-02-0190B | Chloride (mg/L) | 20 | 0 | 13.47 | 2.97 | 13.30 | 4.70 | 7.65 | 9.74 | 13.38 | 64.40 |
| | OK121400-02-0190B | Cond (uS/cm) | 19 | 1 | 262.10 | 19.50 | 84.90 | 144.00 | 184.50 | 250.20 | 327.10 | 408.00 |
| | OK121400-02-0190B | Discharge (cfs) | 20 | 0 | 4.46 | 2.39 | 10.70 | 0.00 | 0.00 | 0.04 | 1.06 | 37.82 |
| | OK121400-02-0190B | Enterococcus | 12 | 0 | 358 | 169 | 585 | 10 | 20 | 50 | 543 | 2000 |
| | OK121400-02-0190B | E. coli | 12 | 0 | 402 | 183 | 633 | 10 | 13 | 70 | 590 | 2000 |
| | OK121400-02-0190B | Final DO (mg/l) | 20 | 0 | 6.57 | 0.55 | 2.47 | 0.50 | 5.20 | 6.37 | 8.08 | 11.53 |
| | OK121400-02-0190B | % DO Sat. | 20 | 0 | 67.70 | 5.30 | 23.68 | 4.00 | 56.25 | 69.50 | 77.75 | 106.00 |
| | OK121400-02-0190B | Nitrate (mg/L) | 20 | 0 | 0.40 | 0.06 | 0.28 | 0.01 | 0.11 | 0.48 | 0.58 | 0.92 |
| | OK121400-02-0190B | Nitrite (mg/L) | 20 | 0 | 0.06 | 0.02 | 0.10 | 0.01 | 0.01 | 0.01 | 0.07 | 0.34 |
| | OK121400-02-0190B | pH (SU) | 20 | 0 | 7.16 | 0.10 | 0.46 | 6.18 | 6.94 | 7.07 | 7.35 | 7.99 |
| | OK121400-02-0190B | Sulfate (mg/L) | 20 | 0 | 17.23 | 3.65 | 16.34 | 6.57 | 9.88 | 14.22 | 16.42 | 83.70 |
| | OK121400-02-0190B | Temp (°C) | 20 | 0 | 16.56 | 1.97 | 8.80 | 1.70 | 9.58 | 15.35 | 24.23 | 31.80 |
| | OK121400-02-0190B | TKN (mg/L) | 20 | 0 | 0.71 | 0.08 | 0.37 | 0.11 | 0.51 | 0.67 | 0.94 | 1.52 |
| | OK121400-02-0190B | TotDisSolids (mg/L) | 20 | 0 | 168.80 | 14.50 | 64.80 | 71.00 | 120.80 | 160.50 | 209.30 | 356.00 |
| | OK121400-02-0190B | TotHardness (mg/L) | 20 | 0 | 121.70 | 12.70 | 57.00 | 54.80 | 77.90 | 110.00 | 154.10 | 290.00 |
| | OK121400-02-0190B | Tot-N | 20 | 0 | 1.18 | 0.12 | 0.52 | 0.25 | 0.83 | 1.19 | 1.50 | 2.28 |
| OK121400-02-0190B | TotOrthoPhos (mg/L) | 20 | 0 | 0.05 | 0.02 | 0.08 | 0.01 | 0.01 | 0.01 | 0.05 | 0.30 | |
| OK121400-02-0190B | TotPhosphorus (mg/L) | 20 | 0 | 0.12 | 0.03 | 0.12 | 0.02 | 0.04 | 0.07 | 0.13 | 0.53 | |
| OK121400-02-0190B | TotSusSolids (mg/L) | 20 | 0 | 48.20 | 29.60 | 132.40 | 10.00 | 10.00 | 14.00 | 29.80 | 609.00 | |
| OK121400-02-0190B | Turb (NTU) | 20 | 0 | 63.60 | 40.10 | 179.50 | 3.80 | 7.90 | 21.10 | 32.20 | 822.00 | |
| Buck Creek | OK121400-03-0170C | Alkalinity (CaCO | 20 | 0 | 132.20 | 9.48 | 42.39 | 52.00 | 101.25 | 132.50 | 170.00 | 197.00 |
| | OK121400-03-0170C | Ammonia (mg/L) | 20 | 0 | 0.07 | 0.01 | 0.07 | 0.02 | 0.02 | 0.06 | 0.11 | 0.27 |
| | OK121400-03-0170C | Avail-N | 20 | 0 | 0.46 | 0.07 | 0.33 | 0.04 | 0.11 | 0.53 | 0.67 | 1.11 |
| | OK121400-03-0170C | cBOD5 (mg/l) | 20 | 0 | 3.35 | 0.42 | 1.88 | 2.00 | 2.00 | 2.20 | 4.75 | 8.00 |
| | OK121400-03-0170C | Chloride (mg/L) | 20 | 0 | 7.96 | 0.88 | 3.94 | 2.82 | 5.34 | 6.98 | 9.77 | 19.28 |
| | OK121400-03-0170C | Cond (uS/cm) | 20 | 0 | 357.30 | 17.10 | 76.40 | 214.40 | 297.10 | 361.80 | 403.80 | 487.80 |
| | OK121400-03-0170C | Discharge (cfs) | 19 | 1 | 23.00 | 13.70 | 59.50 | 0.00 | 0.00 | 0.60 | 12.80 | 250.00 |
| | OK121400-03-0170C | Enterococcus | 12 | 0 | 220 | 163 | 565 | 5 | 13 | 40 | 140 | 2000 |
| | OK121400-03-0170C | E. coli | 12 | 0 | 320 | 175 | 608 | 5 | 10 | 15 | 623 | 2000 |
| | OK121400-03-0170C | Final DO (mg/l) | 20 | 0 | 8.79 | 0.39 | 1.75 | 5.82 | 7.63 | 8.35 | 10.17 | 12.00 |
| | OK121400-03-0170C | % DO Sat. | 20 | 0 | 93.35 | 3.49 | 15.61 | 56.00 | 83.00 | 97.00 | 105.25 | 115.00 |
| | OK121400-03-0170C | Nitrate (mg/L) | 20 | 0 | 0.32 | 0.06 | 0.28 | 0.01 | 0.02 | 0.48 | 0.55 | 0.74 |
| | OK121400-03-0170C | Nitrite (mg/L) | 20 | 0 | 0.06 | 0.03 | 0.12 | 0.01 | 0.01 | 0.01 | 0.06 | 0.48 |
| | OK121400-03-0170C | pH (SU) | 20 | 0 | 7.64 | 0.09 | 0.42 | 6.59 | 7.36 | 7.78 | 7.94 | 8.12 |
| | OK121400-03-0170C | Sulfate (mg/L) | 20 | 0 | 18.44 | 1.41 | 6.31 | 7.46 | 15.62 | 16.80 | 21.05 | 37.00 |
| | OK121400-03-0170C | Temp (°C) | 20 | 0 | 17.94 | 2.00 | 8.96 | 6.00 | 9.10 | 16.90 | 26.73 | 32.40 |
| | OK121400-03-0170C | TKN (mg/L) | 20 | 0 | 0.35 | 0.04 | 0.18 | 0.11 | 0.16 | 0.39 | 0.47 | 0.68 |
| | OK121400-03-0170C | TotDisSolids (mg/L) | 20 | 0 | 208.30 | 9.17 | 40.99 | 151.00 | 177.13 | 208.00 | 227.00 | 310.00 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|-------------------|----------------------|----------------------|----|-------|--------|---------|--------|---------|--------|--------|--------|---------|
| | OK121400-03-0170C | TotHardness (mg/L) | 20 | 0 | 167.97 | 8.10 | 36.20 | 100.70 | 141.70 | 178.25 | 201.25 | 215.50 |
| | OK121400-03-0170C | Tot-N | 20 | 0 | 0.73 | 0.09 | 0.42 | 0.13 | 0.32 | 0.69 | 1.05 | 1.43 |
| | OK121400-03-0170C | TotOrthoPhos (mg/L) | 20 | 0 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.02 | 0.15 |
| | OK121400-03-0170C | TotPhosphorus (mg/L) | 20 | 0 | 0.04 | 0.01 | 0.05 | 0.01 | 0.02 | 0.03 | 0.06 | 0.22 |
| | OK121400-03-0170C | TotSusSolids (mg/L) | 20 | 0 | 35.70 | 22.90 | 102.60 | 1.00 | 10.00 | 10.00 | 14.50 | 470.00 |
| | OK121400-03-0170C | Turb (NTU) | 20 | 0 | 30.30 | 17.90 | 80.10 | 2.60 | 4.70 | 8.60 | 13.60 | 364.00 |
| Sand Creek | OK121400-04-0010F | Alkalinity (CaCO | 20 | 0 | 93.45 | 5.54 | 24.78 | 49.00 | 76.25 | 97.00 | 107.75 | 150.00 |
| | OK121400-04-0010F | Ammonia (mg/L) | 20 | 0 | 0.10 | 0.02 | 0.10 | 0.02 | 0.02 | 0.07 | 0.16 | 0.39 |
| | OK121400-04-0010F | Avail-N | 20 | 0 | 0.46 | 0.07 | 0.32 | 0.10 | 0.15 | 0.43 | 0.71 | 1.13 |
| | OK121400-04-0010F | cBOD5 (mg/l) | 20 | 0 | 3.40 | 0.38 | 1.70 | 2.00 | 2.00 | 2.55 | 4.75 | 7.00 |
| | OK121400-04-0010F | Chloride (mg/L) | 20 | 0 | 53.47 | 4.83 | 21.58 | 14.92 | 32.35 | 58.37 | 70.99 | 83.50 |
| | OK121400-04-0010F | Cond (uS/cm) | 20 | 0 | 442.20 | 25.30 | 113.10 | 215.00 | 382.90 | 460.70 | 531.00 | 601.00 |
| | OK121400-04-0010F | Discharge (cfs) | 20 | 0 | 38.00 | 21.30 | 95.30 | 0.20 | 0.80 | 3.00 | 25.10 | 410.20 |
| | OK121400-04-0010F | <i>Enterococcus</i> | 12 | 0 | 222.1 | 73.3 | 253.9 | 20 | 45 | 110 | 322.5 | 800 |
| | OK121400-04-0010F | <i>E. coli</i> | 12 | 0 | 325 | 156 | 541 | 5 | 43 | 65 | 303 | 1770 |
| | OK121400-04-0010F | Final DO (mg/l) | 20 | 0 | 7.80 | 0.57 | 2.54 | 3.73 | 5.88 | 7.50 | 9.34 | 12.69 |
| | OK121400-04-0010F | % DO Sat. | 20 | 0 | 76.75 | 2.91 | 13.01 | 46.00 | 69.00 | 76.00 | 86.50 | 102.00 |
| | OK121400-04-0010F | Nitrate (mg/L) | 20 | 0 | 0.34 | 0.06 | 0.25 | 0.01 | 0.09 | 0.40 | 0.57 | 0.73 |
| | OK121400-04-0010F | Nitrite (mg/L) | 20 | 0 | 0.02 | 0.00 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.06 |
| | OK121400-04-0010F | pH (SU) | 20 | 0 | 7.31 | 0.07 | 0.32 | 6.56 | 7.11 | 7.35 | 7.57 | 7.80 |
| | OK121400-04-0010F | Sulfate (mg/L) | 20 | 0 | 23.65 | 2.83 | 12.66 | 10.80 | 14.09 | 20.84 | 29.21 | 59.60 |
| | OK121400-04-0010F | Temp (°C) | 20 | 0 | 16.21 | 2.07 | 9.24 | 3.90 | 7.23 | 15.30 | 24.15 | 30.30 |
| | OK121400-04-0010F | TKN (mg/L) | 20 | 0 | 0.54 | 0.07 | 0.33 | 0.11 | 0.29 | 0.51 | 0.68 | 1.26 |
| | OK121400-04-0010F | TotHardness (mg/L) | 20 | 0 | 149.34 | 7.34 | 32.84 | 80.40 | 132.00 | 150.50 | 168.50 | 216.60 |
| | OK121400-04-0010F | Tot-N | 20 | 0 | 0.89 | 0.10 | 0.45 | 0.23 | 0.59 | 0.84 | 1.07 | 1.92 |
| | OK121400-04-0010F | TotOrthoPhos (mg/L) | 20 | 0 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.02 | 0.14 |
| OK121400-04-0010F | TotPhosphorus (mg/L) | 20 | 0 | 0.06 | 0.01 | 0.04 | 0.01 | 0.02 | 0.04 | 0.09 | 0.15 | |
| OK121400-04-0010F | TotSusSolids (mg/L) | 20 | 0 | 21.90 | 3.42 | 15.29 | 10.00 | 10.00 | 17.50 | 27.50 | 70.00 | |
| OK121400-04-0010F | Turb (NTU) | 18 | 2 | 22.60 | 3.55 | 15.04 | 5.83 | 14.15 | 19.15 | 27.88 | 71.20 | |
| Bull Creek | OK121500-02-0090D | Alkalinity (CaCO | 20 | 0 | 72.70 | 6.30 | 28.16 | 28.00 | 47.00 | 81.50 | 92.25 | 121.00 |
| | OK121500-02-0090D | Ammonia (mg/L) | 20 | 0 | 0.27 | 0.05 | 0.24 | 0.02 | 0.03 | 0.21 | 0.49 | 0.73 |
| | OK121500-02-0090D | Avail-N | 20 | 0 | 0.90 | 0.10 | 0.46 | 0.20 | 0.40 | 0.97 | 1.22 | 1.72 |
| | OK121500-02-0090D | cBOD5 (mg/l) | 19 | 0 | 4.34 | 0.65 | 2.85 | 2.00 | 2.90 | 3.00 | 5.00 | 14.00 |
| | OK121500-02-0090D | Chloride (mg/L) | 20 | 0 | 19.16 | 2.07 | 9.25 | 5.84 | 14.19 | 16.40 | 22.77 | 43.70 |
| | OK121500-02-0090D | Cond (uS/cm) | 20 | 0 | 327.40 | 27.20 | 121.80 | 178.70 | 228.70 | 317.90 | 377.30 | 676.00 |
| | OK121500-02-0090D | Discharge (cfs) | 20 | 0 | 10.34 | 6.78 | 30.31 | 0.00 | 0.00 | 0.00 | 3.05 | 132.69 |
| | OK121500-02-0090D | <i>Enterococcus</i> | 12 | 0 | 435 | 125 | 433 | 20 | 53 | 235 | 801 | 1310 |
| | OK121500-02-0090D | <i>E. coli</i> | 12 | 0 | 610 | 140 | 485 | 50 | 163 | 600 | 875 | 1600 |
| | OK121500-02-0090D | Final DO (mg/l) | 20 | 0 | 5.48 | 0.53 | 2.39 | 1.83 | 4.13 | 5.09 | 6.78 | 10.95 |
| | OK121500-02-0090D | % DO Sat. | 20 | 0 | 52.75 | 4.01 | 17.95 | 23.00 | 40.00 | 48.50 | 65.50 | 90.00 |
| | OK121500-02-0090D | Nitrate (mg/L) | 20 | 0 | 0.56 | 0.06 | 0.26 | 0.17 | 0.35 | 0.58 | 0.69 | 1.16 |
| | OK121500-02-0090D | Nitrite (mg/L) | 20 | 0 | 0.06 | 0.03 | 0.14 | 0.01 | 0.01 | 0.01 | 0.01 | 0.48 |
| | OK121500-02-0090D | pH (SU) | 19 | 1 | 8.35 | 0.18 | 0.78 | 7.45 | 7.82 | 8.13 | 8.86 | 10.66 |
| | OK121500-02-0090D | Sulfate (mg/L) | 20 | 0 | 65.45 | 7.00 | 31.32 | 25.73 | 42.02 | 54.63 | 90.35 | 153.00 |
| | OK121500-02-0090D | Temp (°C) | 20 | 0 | 15.32 | 1.90 | 8.48 | 1.90 | 8.43 | 14.35 | 22.10 | 28.80 |
| | OK121500-02-0090D | TKN (mg/L) | 20 | 0 | 0.98 | 0.13 | 0.56 | 0.11 | 0.62 | 0.95 | 1.27 | 2.57 |
| | OK121500-02-0090D | TotDisSolids (mg/L) | 20 | 0 | 220.10 | 13.60 | 60.60 | 138.00 | 171.60 | 218.30 | 258.10 | 399.00 |
| | OK121500-02-0090D | TotHardness (mg/L) | 20 | 0 | 121.74 | 7.81 | 34.94 | 57.52 | 99.28 | 123.05 | 135.55 | 206.90 |
| | OK121500-02-0090D | Tot-N | 20 | 0 | 1.60 | 0.17 | 0.77 | 0.34 | 0.92 | 1.70 | 1.99 | 3.74 |
| OK121500-02-0090D | TotOrthoPhos (mg/L) | 20 | 0 | 0.03 | 0.01 | 0.04 | 0.01 | 0.01 | 0.02 | 0.04 | 0.17 | |
| OK121500-02-0090D | TotPhosphorus (mg/L) | 20 | 0 | 0.11 | 0.02 | 0.09 | 0.04 | 0.06 | 0.10 | 0.13 | 0.42 | |
| OK121500-02-0090D | TotSusSolids (mg/L) | 20 | 0 | 26.20 | 4.28 | 19.15 | 10.00 | 11.25 | 19.00 | 30.75 | 73.00 | |
| OK121500-02-0090D | Turb (NTU) | 20 | 0 | 55.03 | 8.20 | 36.69 | 20.10 | 32.78 | 49.30 | 62.53 | 188.90 | |
| Dog Creek | OK121500-02-0360D | Alkalinity (CaCO | 17 | 0 | 89.71 | 6.93 | 28.59 | 48.00 | 64.50 | 81.00 | 113.50 | 147.00 |
| | OK121500-02-0360D | Ammonia (mg/L) | 17 | 0 | 2.44 | 0.67 | 2.76 | 0.05 | 0.26 | 1.74 | 4.18 | 8.17 |
| | OK121500-02-0360D | Avail-N | 17 | 0 | 6.37 | 0.90 | 3.71 | 0.98 | 3.58 | 5.79 | 8.54 | 14.73 |
| | OK121500-02-0360D | cBOD5 (mg/l) | 15 | 0 | 4.80 | 0.88 | 3.42 | 2.00 | 2.00 | 3.90 | 6.00 | 14.00 |
| | OK121500-02-0360D | Chloride (mg/L) | 17 | 0 | 40.89 | 3.57 | 14.71 | 13.53 | 28.83 | 40.88 | 56.60 | 62.30 |
| | OK121500-02-0360D | Cond (uS/cm) | 16 | 1 | 427.20 | 30.20 | 121.00 | 253.30 | 299.80 | 432.20 | 517.50 | 627.00 |
| | OK121500-02-0360D | Discharge (cfs) | 16 | 1 | 17.21 | 3.67 | 14.68 | 4.19 | 7.42 | 15.12 | 19.98 | 64.61 |
| | OK121500-02-0360D | <i>Enterococcus</i> | 9 | 0 | 243.9 | 53.4 | 160.2 | 40 | 85 | 250 | 342.5 | 540 |
| | OK121500-02-0360D | <i>E. coli</i> | 9 | 0 | 476 | 150 | 450 | 10 | 75 | 400 | 770 | 1340 |
| | OK121500-02-0360D | Final DO (mg/l) | 17 | 0 | 5.54 | 0.76 | 3.12 | 1.11 | 3.03 | 4.98 | 7.76 | 13.43 |
| | OK121500-02-0360D | % DO Sat. | 17 | 0 | 50.65 | 5.40 | 22.28 | 13.00 | 31.50 | 50.00 | 66.50 | 97.00 |
| | OK121500-02-0360D | Nitrate (mg/L) | 17 | 0 | 3.58 | 0.72 | 2.98 | 0.54 | 0.85 | 3.19 | 4.90 | 12.39 |
| | OK121500-02-0360D | Nitrite (mg/L) | 17 | 0 | 0.35 | 0.29 | 1.18 | 0.01 | 0.01 | 0.01 | 0.02 | 4.87 |
| | OK121500-02-0360D | pH (SU) | 16 | 1 | 8.13 | 0.19 | 0.76 | 7.27 | 7.65 | 7.89 | 8.64 | 9.94 |
| | OK121500-02-0360D | Sulfate (mg/L) | 17 | 0 | 48.83 | 3.25 | 13.41 | 28.10 | 36.48 | 50.49 | 56.76 | 79.20 |
| | OK121500-02-0360D | Temp (°C) | 17 | 0 | 14.34 | 2.26 | 9.31 | 1.60 | 6.90 | 12.30 | 24.20 | 28.30 |
| | OK121500-02-0360D | TKN (mg/L) | 17 | 0 | 3.60 | 0.73 | 3.01 | 0.37 | 1.29 | 2.95 | 4.82 | 9.74 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|-------------------|----------------------|----------------------|----|-------|--------|---------|--------|---------|--------|--------|--------|---------|
| | OK121500-02-0360D | TotDisSolids (mg/L) | 16 | 1 | 281.50 | 15.10 | 60.50 | 190.00 | 240.10 | 273.50 | 324.30 | 411.00 |
| | OK121500-02-0360D | TotHardness (mg/L) | 17 | 0 | 132.63 | 4.49 | 18.52 | 92.95 | 122.65 | 131.90 | 139.25 | 180.40 |
| | OK121500-02-0360D | Tot-N | 17 | 0 | 7.53 | 0.95 | 3.90 | 1.71 | 4.48 | 6.72 | 9.73 | 15.73 |
| | OK121500-02-0360D | TotOrthoPhos (mg/L) | 16 | 1 | 1.01 | 0.13 | 0.52 | 0.20 | 0.66 | 0.96 | 1.44 | 1.96 |
| | OK121500-02-0360D | TotPhosphorus (mg/L) | 16 | 1 | 1.23 | 0.15 | 0.59 | 0.22 | 0.75 | 1.37 | 1.61 | 2.37 |
| | OK121500-02-0360D | TotSusSolids (mg/L) | 17 | 0 | 13.06 | 1.95 | 8.03 | 6.00 | 10.00 | 10.00 | 10.50 | 38.00 |
| | OK121500-02-0360D | Turb (NTU) | 17 | 0 | 17.43 | 2.23 | 9.19 | 4.60 | 9.78 | 15.50 | 23.05 | 38.50 |
| California Creek | OK121510-02-0050C | Alkalinity (CaCO | 20 | 0 | 99.00 | 7.41 | 33.13 | 56.00 | 71.75 | 97.00 | 108.50 | 198.00 |
| | OK121510-02-0050C | Ammonia (mg/L) | 19 | 1 | 0.15 | 0.03 | 0.12 | 0.02 | 0.03 | 0.18 | 0.24 | 0.37 |
| | OK121510-02-0050C | Avail-N | 19 | 1 | 0.57 | 0.08 | 0.35 | 0.14 | 0.22 | 0.59 | 0.81 | 1.20 |
| | OK121510-02-0050C | cBOD5 (mg/l) | 19 | 0 | 2.88 | 0.37 | 1.61 | 2.00 | 2.00 | 2.00 | 4.00 | 8.00 |
| | OK121510-02-0050C | Chloride (mg/L) | 20 | 0 | 44.96 | 9.58 | 42.84 | 8.65 | 14.39 | 31.65 | 54.92 | 168.10 |
| | OK121510-02-0050C | Cond (uS/cm) | 20 | 0 | 418.40 | 32.30 | 144.30 | 233.90 | 300.40 | 403.10 | 477.60 | 811.00 |
| | OK121510-02-0050C | Discharge (cfs) | 20 | 0 | 2.77 | 1.50 | 6.72 | 0.00 | 0.00 | 0.00 | 1.72 | 27.11 |
| | OK121510-02-0050C | Enterococcus | 12 | 0 | 137.9 | 54.8 | 189.7 | 10 | 20 | 60 | 205 | 630 |
| | OK121510-02-0050C | E. coli | 12 | 0 | 6330 | 6243 | 21626 | 10 | 13 | 35 | 259 | 75000 |
| | OK121510-02-0050C | Final DO (mg/l) | 20 | 0 | 5.99 | 0.56 | 2.49 | 2.37 | 4.08 | 5.20 | 8.38 | 10.87 |
| | OK121510-02-0050C | % DO Sat. | 20 | 0 | 59.65 | 4.87 | 21.77 | 26.00 | 45.50 | 61.00 | 71.25 | 116.00 |
| | OK121510-02-0050C | Nitrate (mg/L) | 20 | 0 | 0.37 | 0.06 | 0.28 | 0.01 | 0.11 | 0.39 | 0.57 | 0.95 |
| | OK121510-02-0050C | Nitrite (mg/L) | 20 | 0 | 0.04 | 0.02 | 0.09 | 0.01 | 0.01 | 0.01 | 0.02 | 0.38 |
| | OK121510-02-0050C | pH (SU) | 20 | 0 | 8.06 | 0.15 | 0.65 | 6.60 | 7.35 | 8.23 | 8.56 | 8.91 |
| | OK121510-02-0050C | Sulfate (mg/L) | 20 | 0 | 150.00 | 122.00 | 545.00 | 10.00 | 20.00 | 27.00 | 41.00 | 2466.00 |
| | OK121510-02-0050C | Temp (°C) | 20 | 0 | 15.82 | 1.82 | 8.15 | 4.00 | 8.08 | 15.75 | 22.68 | 28.30 |
| | OK121510-02-0050C | TKN (mg/L) | 19 | 1 | 0.52 | 0.06 | 0.26 | 0.11 | 0.25 | 0.55 | 0.72 | 0.90 |
| | OK121510-02-0050C | TotDisSolids (mg/L) | 20 | 0 | 255.80 | 20.30 | 90.90 | 144.00 | 203.30 | 236.00 | 288.80 | 500.00 |
| | OK121510-02-0050C | TotHardness (mg/L) | 20 | 0 | 176.20 | 13.50 | 60.40 | 92.40 | 140.10 | 168.50 | 190.50 | 322.90 |
| | OK121510-02-0050C | Tot-N | 19 | 1 | 0.93 | 0.11 | 0.47 | 0.30 | 0.55 | 0.90 | 1.27 | 1.84 |
| OK121510-02-0050C | TotOrthoPhos (mg/L) | 18 | 2 | 0.02 | 0.00 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.08 | |
| OK121510-02-0050C | TotPhosphorus (mg/L) | 18 | 2 | 0.05 | 0.01 | 0.05 | 0.01 | 0.03 | 0.04 | 0.06 | 0.17 | |
| OK121510-02-0050C | TotSusSolids (mg/L) | 20 | 0 | 36.30 | 14.00 | 62.60 | 10.00 | 10.00 | 11.50 | 23.80 | 253.00 | |
| OK121510-02-0050C | Turb (NTU) | 20 | 0 | 48.50 | 16.50 | 73.80 | 4.30 | 9.10 | 19.00 | 55.10 | 318.00 | |
| Big Creek | OK121510-03-0010D | Alkalinity (CaCO | 20 | 0 | 110.80 | 7.34 | 32.83 | 37.00 | 88.25 | 122.50 | 134.75 | 160.00 |
| | OK121510-03-0010D | Ammonia (mg/L) | 20 | 0 | 0.14 | 0.04 | 0.20 | 0.02 | 0.02 | 0.06 | 0.21 | 0.87 |
| | OK121510-03-0010D | Avail-N | 20 | 0 | 0.58 | 0.08 | 0.35 | 0.07 | 0.21 | 0.68 | 0.82 | 1.42 |
| | OK121510-03-0010D | cBOD5 (mg/l) | 19 | 0 | 3.05 | 0.37 | 1.62 | 2.00 | 2.00 | 2.00 | 3.00 | 7.00 |
| | OK121510-03-0010D | Chloride (mg/L) | 20 | 0 | 7.19 | 1.10 | 4.94 | 3.04 | 3.98 | 5.52 | 6.95 | 19.58 |
| | OK121510-03-0010D | Cond (uS/cm) | 20 | 0 | 336.50 | 14.30 | 64.00 | 260.10 | 278.20 | 309.40 | 404.00 | 455.20 |
| | OK121510-03-0010D | Discharge (cfs) | 20 | 0 | 14.71 | 6.60 | 29.53 | 0.00 | 0.00 | 2.48 | 12.65 | 111.43 |
| | OK121510-03-0010D | Enterococcus | 12 | 0 | 161.3 | 66.9 | 231.8 | 10 | 20 | 75 | 207.5 | 830 |
| | OK121510-03-0010D | E. coli | 12 | 0 | 253.3 | 79 | 273.6 | 20 | 72.5 | 160 | 360 | 910 |
| | OK121510-03-0010D | Final DO (mg/l) | 20 | 0 | 7.36 | 0.65 | 2.92 | 3.22 | 4.87 | 6.99 | 9.00 | 13.31 |
| | OK121510-03-0010D | % DO Sat. | 20 | 0 | 72.25 | 4.12 | 18.41 | 38.00 | 55.25 | 75.50 | 88.00 | 102.00 |
| | OK121510-03-0010D | Nitrate (mg/L) | 20 | 0 | 0.37 | 0.06 | 0.25 | 0.01 | 0.07 | 0.49 | 0.56 | 0.71 |
| | OK121510-03-0010D | Nitrite (mg/L) | 20 | 0 | 0.07 | 0.02 | 0.09 | 0.01 | 0.01 | 0.01 | 0.11 | 0.31 |
| | OK121510-03-0010D | pH (SU) | 20 | 0 | 8.01 | 0.17 | 0.75 | 6.39 | 7.38 | 8.36 | 8.48 | 9.04 |
| | OK121510-03-0010D | Sulfate (mg/L) | 20 | 0 | 114.90 | 97.20 | 434.90 | 9.40 | 12.50 | 18.70 | 22.00 | 1962.50 |
| | OK121510-03-0010D | Temp (°C) | 20 | 0 | 16.28 | 2.02 | 9.02 | 2.80 | 7.98 | 16.65 | 22.55 | 29.80 |
| | OK121510-03-0010D | TKN (mg/L) | 20 | 0 | 0.55 | 0.13 | 0.56 | 0.11 | 0.28 | 0.42 | 0.61 | 2.78 |
| | OK121510-03-0010D | TotDisSolids (mg/L) | 20 | 0 | 215.17 | 9.88 | 44.18 | 144.00 | 186.68 | 216.25 | 238.25 | 335.00 |
| | OK121510-03-0010D | TotHardness (mg/L) | 20 | 0 | 178.02 | 7.62 | 34.06 | 105.90 | 148.40 | 189.00 | 203.48 | 224.89 |
| | OK121510-03-0010D | Tot-N | 20 | 0 | 0.98 | 0.15 | 0.67 | 0.26 | 0.51 | 0.96 | 1.14 | 3.33 |
| OK121510-03-0010D | TotOrthoPhos (mg/L) | 20 | 0 | 0.02 | 0.00 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.09 | |
| OK121510-03-0010D | TotPhosphorus (mg/L) | 20 | 0 | 0.06 | 0.01 | 0.05 | 0.01 | 0.03 | 0.04 | 0.07 | 0.22 | |
| OK121510-03-0010D | TotSusSolids (mg/L) | 20 | 0 | 15.60 | 1.89 | 8.44 | 10.00 | 10.00 | 10.00 | 19.75 | 35.00 | |
| OK121510-03-0010D | Turb (NTU) | 20 | 0 | 21.08 | 5.49 | 24.56 | 3.67 | 6.88 | 10.59 | 25.28 | 89.10 | |
| Ranger Creek | OK121600-01-0060D | Alkalinity (CaCO | 20 | 0 | 111.05 | 4.16 | 18.59 | 78.00 | 91.50 | 117.00 | 123.50 | 141.00 |
| | OK121600-01-0060D | Ammonia (mg/L) | 20 | 0 | 0.07 | 0.02 | 0.07 | 0.02 | 0.02 | 0.03 | 0.09 | 0.30 |
| | OK121600-01-0060D | Avail-N | 20 | 0 | 0.54 | 0.07 | 0.32 | 0.04 | 0.22 | 0.59 | 0.74 | 1.07 |
| | OK121600-01-0060D | cBOD5 (mg/l) | 20 | 0 | 3.47 | 0.43 | 1.93 | 2.00 | 2.00 | 2.75 | 4.08 | 9.00 |
| | OK121600-01-0060D | Chloride (mg/L) | 20 | 0 | 4.76 | 0.20 | 0.91 | 2.63 | 4.29 | 4.74 | 5.19 | 7.02 |
| | OK121600-01-0060D | Cond (uS/cm) | 20 | 0 | 413.00 | 129.00 | 575.00 | 126.00 | 225.00 | 303.00 | 350.00 | 2833.00 |
| | OK121600-01-0060D | Discharge (cfs) | 19 | 1 | 16.25 | 7.97 | 34.72 | 0.00 | 0.00 | 1.62 | 9.91 | 113.98 |
| | OK121600-01-0060D | Enterococcus | 12 | 0 | 202.9 | 92.3 | 319.8 | 10 | 23.8 | 60 | 202.5 | 900 |
| | OK121600-01-0060D | E. coli | 12 | 0 | 340 | 159 | 550 | 5 | 10 | 65 | 693 | 1780 |
| | OK121600-01-0060D | Final DO (mg/l) | 20 | 0 | 8.73 | 0.69 | 3.09 | 3.75 | 5.54 | 9.57 | 10.79 | 13.96 |
| | OK121600-01-0060D | % DO Sat. | 20 | 0 | 85.55 | 4.39 | 19.65 | 47.00 | 66.50 | 90.00 | 101.25 | 115.00 |
| | OK121600-01-0060D | Nitrate (mg/L) | 20 | 0 | 0.42 | 0.06 | 0.27 | 0.01 | 0.11 | 0.51 | 0.59 | 0.88 |
| | OK121600-01-0060D | Nitrite (mg/L) | 20 | 0 | 0.05 | 0.02 | 0.10 | 0.01 | 0.01 | 0.01 | 0.03 | 0.43 |
| | OK121600-01-0060D | pH (SU) | 18 | 2 | 7.69 | 0.07 | 0.30 | 7.17 | 7.40 | 7.74 | 7.87 | 8.18 |
| | OK121600-01-0060D | Sulfate (mg/L) | 20 | 0 | 16.60 | 1.58 | 7.09 | 5.49 | 9.49 | 15.10 | 22.91 | 27.32 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|--------------------|----------------------|----------------------|----|-------|--------|---------|--------|---------|--------|--------|--------|---------|
| | OK121600-02-0030D | pH (SU) | 18 | 2 | 7.72 | 0.08 | 0.35 | 7.04 | 7.43 | 7.71 | 8.08 | 8.17 |
| | OK121600-02-0030D | Sulfate (mg/L) | 20 | 0 | 5.88 | 0.16 | 0.72 | 4.70 | 5.31 | 5.92 | 6.30 | 7.40 |
| | OK121600-02-0030D | Temp (°C) | 20 | 0 | 17.32 | 1.21 | 5.40 | 8.30 | 11.90 | 17.65 | 22.03 | 26.00 |
| | OK121600-02-0030D | TKN (mg/L) | 20 | 0 | 0.11 | 0.00 | 0.01 | 0.11 | 0.11 | 0.11 | 0.11 | 0.14 |
| | OK121600-02-0030D | TotDisSolids (mg/L) | 20 | 0 | 133.25 | 2.60 | 11.61 | 110.00 | 126.00 | 133.50 | 140.88 | 153.00 |
| | OK121600-02-0030D | TotHardness (mg/L) | 20 | 0 | 108.42 | 1.86 | 8.32 | 93.71 | 104.13 | 108.55 | 112.28 | 132.90 |
| | OK121600-02-0030D | Tot-N | 20 | 0 | 0.84 | 0.04 | 0.20 | 0.48 | 0.64 | 0.88 | 1.00 | 1.19 |
| | OK121600-02-0030D | TotOrthoPhos (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121600-02-0030D | TotPhosphorus (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121600-02-0030D | TotSusSolids (mg/L) | 20 | 0 | 9.55 | 0.45 | 2.01 | 1.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| OK121600-02-0030D | Turb (NTU) | 19 | 1 | 1.00 | 0.14 | 0.61 | 0.33 | 0.61 | 0.88 | 1.12 | 2.79 | |
| Drowning Creek | OK121600-03-0090G | Alkalinity (CaCO | 19 | 1 | 106.95 | 4.41 | 19.24 | 68.00 | 91.00 | 105.00 | 125.00 | 132.00 |
| | OK121600-03-0090G | Ammonia (mg/L) | 20 | 0 | 0.02 | 0.00 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.07 |
| | OK121600-03-0090G | Avail-N | 20 | 0 | 2.57 | 0.23 | 1.04 | 0.98 | 1.62 | 2.72 | 3.38 | 4.77 |
| | OK121600-03-0090G | cBOD5 (mg/l) | 19 | 0 | 2.63 | 0.36 | 1.59 | 2.00 | 2.00 | 2.00 | 2.00 | 7.00 |
| | OK121600-03-0090G | Chloride (mg/L) | 20 | 0 | 25.40 | 2.45 | 10.95 | 9.41 | 14.98 | 23.00 | 36.75 | 42.23 |
| | OK121600-03-0090G | Cond (uS/cm) | 20 | 0 | 353.00 | 20.90 | 93.60 | 190.20 | 265.10 | 336.40 | 453.50 | 479.30 |
| | OK121600-03-0090G | Discharge (cfs) | 20 | 0 | 4.63 | 1.01 | 4.53 | 0.11 | 1.28 | 3.61 | 7.31 | 16.60 |
| | OK121600-03-0090G | Enterococcus | 12 | 0 | 55 | 18.7 | 64.9 | 10 | 12.5 | 35 | 62.5 | 220 |
| | OK121600-03-0090G | E. coli | 12 | 0 | 124.6 | 83.8 | 290.2 | 10 | 12.5 | 32.5 | 95 | 1040 |
| | OK121600-03-0090G | Final DO (mg/l) | 20 | 0 | 9.65 | 0.38 | 1.70 | 4.83 | 8.80 | 9.59 | 10.38 | 12.70 |
| | OK121600-03-0090G | % DO Sat. | 20 | 0 | 99.70 | 4.45 | 19.89 | 53.00 | 88.25 | 94.50 | 112.25 | 139.00 |
| | OK121600-03-0090G | Nitrate (mg/L) | 20 | 0 | 2.50 | 0.23 | 1.04 | 0.95 | 1.59 | 2.62 | 3.35 | 4.74 |
| | OK121600-03-0090G | Nitrite (mg/L) | 20 | 0 | 0.04 | 0.02 | 0.10 | 0.01 | 0.01 | 0.01 | 0.01 | 0.47 |
| | OK121600-03-0090G | pH (SU) | 17 | 3 | 7.51 | 0.09 | 0.37 | 6.86 | 7.25 | 7.52 | 7.79 | 8.27 |
| | OK121600-03-0090G | Sulfate (mg/L) | 20 | 0 | 17.72 | 1.71 | 7.65 | 9.15 | 12.84 | 14.46 | 23.58 | 33.37 |
| | OK121600-03-0090G | Temp (°C) | 20 | 0 | 15.82 | 0.70 | 3.12 | 12.00 | 12.90 | 15.00 | 18.10 | 21.90 |
| | OK121600-03-0090G | TKN (mg/L) | 20 | 0 | 0.14 | 0.01 | 0.04 | 0.10 | 0.11 | 0.11 | 0.18 | 0.21 |
| | OK121600-03-0090G | TotDisSolids (mg/L) | 20 | 0 | 206.60 | 10.80 | 48.20 | 123.00 | 167.00 | 212.30 | 255.10 | 273.00 |
| | OK121600-03-0090G | TotHardness (mg/L) | 20 | 0 | 142.97 | 6.77 | 30.28 | 99.10 | 113.95 | 141.03 | 172.25 | 192.80 |
| | OK121600-03-0090G | Tot-N | 20 | 0 | 2.68 | 0.23 | 1.03 | 1.15 | 1.74 | 2.81 | 3.48 | 4.86 |
| OK121600-03-0090G | TotOrthoPhos (mg/L) | 19 | 1 | 0.05 | 0.00 | 0.02 | 0.01 | 0.04 | 0.06 | 0.07 | 0.08 | |
| OK121600-03-0090G | TotPhosphorus (mg/L) | 19 | 1 | 0.07 | 0.00 | 0.02 | 0.04 | 0.06 | 0.07 | 0.08 | 0.12 | |
| OK121600-03-0090G | TotSusSolids (mg/L) | 20 | 0 | 9.75 | 0.25 | 1.12 | 5.00 | 10.00 | 10.00 | 10.00 | 10.00 | |
| OK121600-03-0090G | Turb (NTU) | 19 | 1 | 1.42 | 0.12 | 0.53 | 0.71 | 1.00 | 1.25 | 1.75 | 2.49 | |
| Little Horse Creek | OK121600-03-0190A | Alkalinity (CaCO | 20 | 0 | 93.25 | 7.01 | 31.35 | 18.00 | 71.00 | 95.50 | 119.50 | 141.00 |
| | OK121600-03-0190A | Ammonia (mg/L) | 20 | 0 | 0.18 | 0.03 | 0.13 | 0.02 | 0.07 | 0.13 | 0.28 | 0.45 |
| | OK121600-03-0190A | Avail-N | 20 | 0 | 2.07 | 0.99 | 4.42 | 0.14 | 0.77 | 0.91 | 1.48 | 20.67 |
| | OK121600-03-0190A | cBOD5 (mg/l) | 20 | 0 | 3.89 | 0.46 | 2.05 | 2.00 | 2.25 | 3.20 | 4.40 | 9.00 |
| | OK121600-03-0190A | Chloride (mg/L) | 20 | 0 | 18.71 | 2.87 | 12.82 | 2.90 | 13.14 | 15.71 | 22.31 | 65.69 |
| | OK121600-03-0190A | Cond (uS/cm) | 20 | 0 | 359.30 | 32.30 | 144.30 | 121.40 | 277.20 | 354.10 | 418.20 | 713.00 |
| | OK121600-03-0190A | Discharge (cfs) | 19 | 1 | 5.89 | 4.98 | 21.71 | 0.00 | 0.00 | 0.00 | 1.71 | 95.23 |
| | OK121600-03-0190A | Enterococcus | 12 | 0 | 245.8 | 89.4 | 309.7 | 20 | 42.5 | 95 | 490 | 950 |
| | OK121600-03-0190A | E. coli | 12 | 0 | 348 | 210 | 727 | 5 | 11 | 35 | 475 | 2500 |
| | OK121600-03-0190A | Final DO (mg/l) | 20 | 0 | 7.32 | 0.75 | 3.36 | 2.83 | 5.29 | 6.59 | 9.84 | 14.60 |
| | OK121600-03-0190A | % DO Sat. | 20 | 0 | 69.50 | 4.92 | 21.99 | 35.00 | 55.50 | 69.00 | 85.25 | 112.00 |
| | OK121600-03-0190A | Nitrite (mg/L) | 20 | 0 | 0.62 | 0.54 | 2.40 | 0.01 | 0.01 | 0.01 | 0.12 | 10.80 |
| | OK121600-03-0190A | pH (SU) | 17 | 3 | 6.99 | 0.10 | 0.41 | 6.20 | 6.70 | 7.15 | 7.23 | 7.61 |
| | OK121600-03-0190A | Sulfate (mg/L) | 20 | 0 | 27.86 | 7.47 | 33.39 | 6.79 | 11.36 | 17.16 | 26.24 | 124.23 |
| | OK121600-03-0190A | Temp (°C) | 20 | 0 | 15.03 | 1.74 | 7.79 | 3.60 | 7.48 | 15.55 | 22.68 | 25.90 |
| | OK121600-03-0190A | TKN (mg/L) | 20 | 0 | 0.69 | 0.08 | 0.37 | 0.11 | 0.44 | 0.67 | 0.93 | 1.47 |
| | OK121600-03-0190A | TotDisSolids (mg/L) | 20 | 0 | 203.50 | 18.80 | 84.10 | 37.00 | 169.00 | 196.00 | 223.80 | 445.00 |
| | OK121600-03-0190A | TotHardness (mg/L) | 20 | 0 | 144.20 | 12.90 | 57.70 | 31.20 | 108.40 | 145.60 | 165.00 | 271.10 |
| | OK121600-03-0190A | Tot-N | 20 | 0 | 2.58 | 0.97 | 4.34 | 0.27 | 1.38 | 1.61 | 2.10 | 20.76 |
| | OK121600-03-0190A | TotOrthoPhos (mg/L) | 20 | 0 | 0.11 | 0.02 | 0.11 | 0.01 | 0.03 | 0.07 | 0.18 | 0.41 |
| OK121600-03-0190A | TotPhosphorus (mg/L) | 20 | 0 | 0.16 | 0.03 | 0.12 | 0.03 | 0.07 | 0.13 | 0.25 | 0.50 | |
| OK121600-03-0190A | TotSusSolids (mg/L) | 20 | 0 | 13.30 | 1.01 | 4.52 | 10.00 | 10.00 | 10.00 | 17.75 | 24.00 | |
| OK121600-03-0190A | Turb (NTU) | 19 | 1 | 14.59 | 2.95 | 12.85 | 1.81 | 4.10 | 10.70 | 21.40 | 46.90 | |
| Sycamore Creek | OK121600-03-0510D | Alkalinity (CaCO | 20 | 0 | 104.75 | 3.68 | 16.45 | 76.00 | 91.50 | 105.00 | 117.75 | 134.00 |
| | OK121600-03-0510D | Ammonia (mg/L) | 20 | 0 | 0.02 | 0.00 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.06 |
| | OK121600-03-0510D | Avail-N | 20 | 0 | 1.94 | 0.12 | 0.53 | 0.98 | 1.61 | 1.92 | 2.28 | 3.02 |
| | OK121600-03-0510D | cBOD5 (mg/l) | 19 | 0 | 2.93 | 0.36 | 1.55 | 2.00 | 2.00 | 2.00 | 4.00 | 7.00 |
| | OK121600-03-0510D | Chloride (mg/L) | 20 | 0 | 8.50 | 0.44 | 1.96 | 5.17 | 7.30 | 7.78 | 10.89 | 12.10 |
| | OK121600-03-0510D | Cond (uS/cm) | 20 | 0 | 265.40 | 8.30 | 37.13 | 162.10 | 253.03 | 276.25 | 290.28 | 305.20 |
| | OK121600-03-0510D | Discharge (cfs) | 20 | 0 | 24.99 | 5.90 | 26.40 | 4.85 | 6.79 | 15.22 | 36.78 | 109.95 |
| | OK121600-03-0510D | Enterococcus | 12 | 0 | 168 | 133 | 461 | 10 | 20 | 30 | 63 | 1630 |
| | OK121600-03-0510D | E. coli | 12 | 0 | 78.8 | 49.2 | 170.3 | 5 | 10 | 20 | 47.5 | 610 |
| | OK121600-03-0510D | Final DO (mg/l) | 20 | 0 | 10.77 | 0.61 | 2.74 | 6.11 | 9.36 | 10.47 | 12.45 | 17.89 |
| | OK121600-03-0510D | % DO Sat. | 20 | 0 | 108.90 | 4.05 | 18.12 | 78.00 | 96.50 | 110.50 | 118.50 | 152.00 |
| | OK121600-03-0510D | Nitrate (mg/L) | 20 | 0 | 1.87 | 0.11 | 0.51 | 0.95 | 1.57 | 1.87 | 2.24 | 2.99 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|--------------------|----------------------|----------------------|----|-------|---------|---------|--------|---------|--------|---------|---------|---------|
| | OK121600-03-0510D | Nitrite (mg/L) | 20 | 0 | 0.04 | 0.02 | 0.09 | 0.01 | 0.01 | 0.01 | 0.02 | 0.43 |
| | OK121600-03-0510D | pH (SU) | 17 | 3 | 7.70 | 0.09 | 0.38 | 7.12 | 7.39 | 7.71 | 7.95 | 8.31 |
| | OK121600-03-0510D | Sulfate (mg/L) | 20 | 0 | 5.69 | 0.19 | 0.85 | 4.50 | 4.97 | 5.78 | 6.08 | 8.09 |
| | OK121600-03-0510D | Temp (°C) | 20 | 0 | 16.00 | 1.57 | 7.03 | 3.90 | 10.28 | 15.40 | 22.05 | 26.90 |
| | OK121600-03-0510D | TKN (mg/L) | 20 | 0 | 0.14 | 0.01 | 0.06 | 0.06 | 0.11 | 0.11 | 0.16 | 0.28 |
| | OK121600-03-0510D | TotDisSolids (mg/L) | 20 | 0 | 154.38 | 4.03 | 18.04 | 123.00 | 141.50 | 154.50 | 167.75 | 187.00 |
| | OK121600-03-0510D | TotHardness (mg/L) | 20 | 0 | 125.71 | 2.34 | 10.48 | 99.20 | 118.10 | 124.35 | 132.88 | 140.80 |
| | OK121600-03-0510D | Tot-N | 20 | 0 | 2.05 | 0.12 | 0.52 | 1.07 | 1.71 | 2.07 | 2.37 | 3.11 |
| | OK121600-03-0510D | TotOrthoPhos (mg/L) | 17 | 3 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.03 |
| | OK121600-03-0510D | TotPhosphorus (mg/L) | 18 | 2 | 0.02 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.06 |
| OK121600-03-0510D | TotSusSolids (mg/L) | 20 | 0 | 9.85 | 0.34 | 1.53 | 4.00 | 10.00 | 10.00 | 10.00 | 13.00 | |
| OK121600-03-0510D | Turb (NTU) | 19 | 1 | 16.80 | 14.60 | 63.80 | 0.40 | 1.20 | 1.80 | 2.30 | 280.00 | |
| Tar Creek | OK121600-04-0060D | Alkalinity (CaCO | 20 | 0 | 88.25 | 4.92 | 22.02 | 30.00 | 77.50 | 89.50 | 100.50 | 128.00 |
| | OK121600-04-0060D | Ammonia (mg/L) | 19 | 1 | 0.18 | 0.03 | 0.14 | 0.02 | 0.10 | 0.14 | 0.23 | 0.54 |
| | OK121600-04-0060D | Avail-N | 19 | 1 | 1.85 | 0.23 | 1.00 | 0.36 | 1.12 | 1.77 | 2.45 | 4.29 |
| | OK121600-04-0060D | cBOD5 (mg/l) | 20 | 0 | 3.75 | 0.50 | 2.24 | 2.00 | 2.00 | 3.00 | 4.75 | 9.00 |
| | OK121600-04-0060D | Chloride (mg/L) | 20 | 0 | 37.05 | 3.86 | 17.26 | 8.77 | 22.40 | 38.22 | 47.25 | 77.30 |
| | OK121600-04-0060D | Cond (uS/cm) | 19 | 1 | 1294.00 | 146.00 | 634.00 | 19.00 | 941.00 | 1510.00 | 1792.00 | 2105.00 |
| | OK121600-04-0060D | Discharge (cfs) | 19 | 1 | 21.20 | 9.73 | 42.40 | 2.43 | 3.52 | 6.78 | 12.55 | 152.83 |
| | OK121600-04-0060D | Enterococcus | 12 | 0 | 277.1 | 58.3 | 201.9 | 30 | 75 | 240 | 420 | 610 |
| | OK121600-04-0060D | E. coli | 12 | 0 | 818 | 204 | 708 | 70 | 338 | 580 | 1538 | 2000 |
| | OK121600-04-0060D | Final DO (mg/l) | 20 | 0 | 9.19 | 0.53 | 2.36 | 6.04 | 7.33 | 8.57 | 10.84 | 14.39 |
| | OK121600-04-0060D | % DO Sat. | 20 | 0 | 89.65 | 2.36 | 10.55 | 77.00 | 79.25 | 91.00 | 97.75 | 112.00 |
| | OK121600-04-0060D | Nitrate (mg/L) | 20 | 0 | 1.64 | 0.21 | 0.95 | 0.32 | 0.95 | 1.45 | 2.16 | 4.08 |
| | OK121600-04-0060D | Nitrite (mg/L) | 20 | 0 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.12 |
| | OK121600-04-0060D | pH (SU) | 18 | 2 | 7.35 | 0.15 | 0.62 | 6.69 | 6.93 | 7.24 | 7.52 | 8.94 |
| | OK121600-04-0060D | Sulfate (mg/L) | 20 | 0 | 633.30 | 54.50 | 244.00 | 93.40 | 469.00 | 710.30 | 821.60 | 964.00 |
| | OK121600-04-0060D | Temp (°C) | 20 | 0 | 15.10 | 1.91 | 8.53 | 1.20 | 8.25 | 15.40 | 23.55 | 26.90 |
| | OK121600-04-0060D | TKN (mg/L) | 19 | 1 | 0.63 | 0.09 | 0.38 | 0.11 | 0.46 | 0.55 | 0.72 | 1.99 |
| | OK121600-04-0060D | TotDisSolids (mg/L) | 20 | 0 | 1126.40 | 87.40 | 390.90 | 215.50 | 901.80 | 1227.30 | 1408.80 | 1660.00 |
| | OK121600-04-0060D | TotHardness (mg/L) | 20 | 0 | 749.00 | 61.30 | 274.30 | 147.00 | 582.80 | 834.90 | 944.60 | 1097.80 |
| | OK121600-04-0060D | Tot-N | 19 | 1 | 2.30 | 0.26 | 1.12 | 0.71 | 1.67 | 2.11 | 2.73 | 4.67 |
| OK121600-04-0060D | TotOrthoPhos (mg/L) | 19 | 1 | 0.25 | 0.05 | 0.20 | 0.04 | 0.07 | 0.23 | 0.31 | 0.66 | |
| OK121600-04-0060D | TotPhosphorus (mg/L) | 19 | 1 | 0.33 | 0.05 | 0.23 | 0.09 | 0.12 | 0.27 | 0.41 | 0.86 | |
| OK121600-04-0060D | TotSusSolids (mg/L) | 20 | 0 | 18.45 | 5.55 | 24.81 | 7.00 | 10.00 | 10.00 | 12.75 | 116.00 | |
| OK121600-04-0060D | Turb (NTU) | 19 | 1 | 16.63 | 5.47 | 23.86 | 2.12 | 5.09 | 8.24 | 16.60 | 93.10 | |
| Little Cabin Creek | OK121600-06-0080C | Alkalinity (CaCO | 20 | 0 | 72.95 | 7.70 | 34.43 | 19.00 | 51.50 | 67.50 | 89.75 | 188.00 |
| | OK121600-06-0080C | Ammonia (mg/L) | 20 | 0 | 0.16 | 0.03 | 0.12 | 0.02 | 0.02 | 0.17 | 0.26 | 0.41 |
| | OK121600-06-0080C | Avail-N | 20 | 0 | 0.87 | 0.11 | 0.49 | 0.15 | 0.44 | 0.89 | 1.20 | 1.89 |
| | OK121600-06-0080C | cBOD5 (mg/l) | 19 | 0 | 4.93 | 1.14 | 4.97 | 2.00 | 2.00 | 3.00 | 6.00 | 23.00 |
| | OK121600-06-0080C | Chloride (mg/L) | 20 | 0 | 10.33 | 1.38 | 6.15 | 4.50 | 6.50 | 8.18 | 10.63 | 27.20 |
| | OK121600-06-0080C | Cond (uS/cm) | 20 | 0 | 348.80 | 48.20 | 215.60 | 174.20 | 210.70 | 259.50 | 436.90 | 955.60 |
| | OK121600-06-0080C | Discharge (cfs) | 20 | 0 | 13.01 | 8.08 | 36.13 | 0.00 | 0.00 | 0.99 | 10.86 | 163.22 |
| | OK121600-06-0080C | Enterococcus | 12 | 0 | 255 | 76.6 | 265.4 | 10 | 60 | 195 | 375 | 860 |
| | OK121600-06-0080C | E. coli | 12 | 0 | 395 | 151 | 525 | 40 | 65 | 125 | 683 | 1680 |
| | OK121600-06-0080C | Final DO (mg/l) | 20 | 0 | 5.87 | 0.71 | 3.16 | 1.15 | 3.55 | 5.05 | 7.52 | 12.26 |
| | OK121600-06-0080C | % DO Sat. | 20 | 0 | 55.25 | 4.75 | 21.26 | 10.00 | 44.00 | 53.00 | 69.25 | 92.00 |
| | OK121600-06-0080C | Nitrate (mg/L) | 20 | 0 | 0.62 | 0.10 | 0.44 | 0.01 | 0.23 | 0.56 | 0.87 | 1.56 |
| | OK121600-06-0080C | Nitrite (mg/L) | 20 | 0 | 0.09 | 0.05 | 0.23 | 0.01 | 0.01 | 0.01 | 0.02 | 1.00 |
| | OK121600-06-0080C | pH (SU) | 20 | 0 | 7.91 | 0.14 | 0.64 | 6.30 | 7.58 | 7.87 | 8.48 | 8.90 |
| | OK121600-06-0080C | Sulfate (mg/L) | 20 | 0 | 62.00 | 10.90 | 48.60 | 8.60 | 27.10 | 44.60 | 86.70 | 206.00 |
| | OK121600-06-0080C | Temp (°C) | 20 | 0 | 14.63 | 1.86 | 8.33 | 0.70 | 8.73 | 14.10 | 20.80 | 26.70 |
| | OK121600-06-0080C | TKN (mg/L) | 20 | 0 | 0.71 | 0.08 | 0.36 | 0.11 | 0.51 | 0.68 | 0.87 | 1.69 |
| | OK121600-06-0080C | TotDisSolids (mg/L) | 20 | 0 | 209.90 | 23.90 | 106.70 | 13.00 | 138.80 | 191.00 | 264.50 | 496.00 |
| | OK121600-06-0080C | TotHardness (mg/L) | 20 | 0 | 127.97 | 9.85 | 44.04 | 74.97 | 90.55 | 119.09 | 143.43 | 238.40 |
| | OK121600-06-0080C | Tot-N | 20 | 0 | 1.42 | 0.14 | 0.63 | 0.33 | 0.92 | 1.43 | 1.71 | 3.17 |
| OK121600-06-0080C | TotOrthoPhos (mg/L) | 20 | 0 | 0.05 | 0.01 | 0.07 | 0.01 | 0.01 | 0.03 | 0.05 | 0.30 | |
| OK121600-06-0080C | TotPhosphorus (mg/L) | 20 | 0 | 0.11 | 0.02 | 0.09 | 0.02 | 0.05 | 0.08 | 0.15 | 0.42 | |
| OK121600-06-0080C | TotSusSolids (mg/L) | 20 | 0 | 42.50 | 10.90 | 48.90 | 10.00 | 10.50 | 19.00 | 69.50 | 199.00 | |
| OK121600-06-0080C | Turb (NTU) | 20 | 0 | 44.10 | 11.70 | 52.10 | 5.80 | 14.60 | 26.70 | 50.00 | 218.00 | |
| Big Cabin Creek | OK121600-06-0220I | Alkalinity (CaCO | 20 | 0 | 88.80 | 12.50 | 55.90 | 22.00 | 58.30 | 82.00 | 99.50 | 295.00 |
| | OK121600-06-0220I | Ammonia (mg/L) | 20 | 0 | 0.18 | 0.03 | 0.14 | 0.02 | 0.08 | 0.13 | 0.29 | 0.55 |
| | OK121600-06-0220I | Avail-N | 20 | 0 | 3.22 | 1.31 | 5.87 | 0.04 | 0.50 | 0.83 | 0.99 | 19.78 |
| | OK121600-06-0220I | cBOD5 (mg/l) | 19 | 0 | 3.20 | 0.47 | 2.04 | 2.00 | 2.00 | 2.00 | 3.20 | 10.00 |
| | OK121600-06-0220I | Chloride (mg/L) | 20 | 0 | 19.24 | 4.54 | 20.32 | 4.23 | 5.51 | 6.64 | 46.25 | 54.85 |
| | OK121600-06-0220I | Cond (uS/cm) | 19 | 1 | 640.60 | 49.90 | 217.30 | 356.60 | 467.00 | 611.00 | 864.00 | 1107.00 |
| | OK121600-06-0220I | Discharge (cfs) | 20 | 0 | 19.96 | 8.82 | 39.47 | 0.00 | 0.23 | 4.77 | 18.76 | 166.83 |
| | OK121600-06-0220I | Enterococcus | 12 | 0 | 200 | 89.7 | 310.7 | 10 | 37.5 | 120 | 195 | 1160 |
| | OK121600-06-0220I | E. coli | 12 | 0 | 631 | 154 | 533 | 90 | 210 | 420 | 1070 | 1600 |
| | OK121600-06-0220I | Final DO (mg/l) | 20 | 0 | 7.28 | 0.59 | 2.64 | 4.05 | 5.11 | 6.76 | 9.34 | 12.98 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|---------------------|-------------------|----------------------|----|-------|--------|---------|--------|---------|--------|--------|--------|---------|
| | OK121600-06-0220I | % DO Sat. | 20 | 0 | 71.85 | 4.23 | 18.91 | 41.00 | 53.25 | 75.50 | 83.50 | 118.00 |
| | OK121600-06-0220I | Nitrate (mg/L) | 20 | 0 | 3.02 | 1.30 | 5.83 | 0.01 | 0.46 | 0.61 | 0.77 | 19.68 |
| | OK121600-06-0220I | Nitrite (mg/L) | 20 | 0 | 0.02 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.11 |
| | OK121600-06-0220I | pH (SU) | 20 | 0 | 8.08 | 0.16 | 0.72 | 6.34 | 7.71 | 8.14 | 8.57 | 9.26 |
| | OK121600-06-0220I | Sulfate (mg/L) | 20 | 0 | 243.40 | 35.80 | 160.20 | 67.00 | 98.10 | 220.40 | 326.40 | 591.80 |
| | OK121600-06-0220I | Temp (°C) | 20 | 0 | 15.84 | 1.82 | 8.16 | 0.80 | 9.30 | 17.90 | 22.65 | 27.20 |
| | OK121600-06-0220I | TKN (mg/L) | 20 | 0 | 0.61 | 0.08 | 0.35 | 0.11 | 0.39 | 0.56 | 0.75 | 1.40 |
| | OK121600-06-0220I | TotDisSolids (mg/L) | 20 | 0 | 526.70 | 49.20 | 219.90 | 209.00 | 386.80 | 469.40 | 653.90 | 1063.00 |
| | OK121600-06-0220I | TotHardness (mg/L) | 20 | 0 | 353.90 | 41.30 | 184.50 | 157.80 | 182.60 | 309.80 | 469.80 | 773.90 |
| | OK121600-06-0220I | Tot-N | 20 | 0 | 3.65 | 1.35 | 6.02 | 0.23 | 0.68 | 1.23 | 1.55 | 20.21 |
| | OK121600-06-0220I | TotOrthoPhos (mg/L) | 19 | 1 | 0.44 | 0.19 | 0.83 | 0.01 | 0.01 | 0.03 | 0.10 | 2.39 |
| | OK121600-06-0220I | TotPhosphorus (mg/L) | 19 | 1 | 0.51 | 0.20 | 0.89 | 0.01 | 0.04 | 0.08 | 0.15 | 2.46 |
| | OK121600-06-0220I | TotSusSolids (mg/L) | 20 | 0 | 18.95 | 3.34 | 14.93 | 10.00 | 10.00 | 11.00 | 23.75 | 69.00 |
| OK121600-06-0220I | Turb (NTU) | 20 | 0 | 25.22 | 5.98 | 26.74 | 1.76 | 8.84 | 13.95 | 32.53 | 106.00 | |
| Fivemile Creek | OK121600-07-0110G | Alkalinity (CaCO | 20 | 0 | 106.55 | 3.72 | 16.62 | 55.00 | 98.50 | 110.50 | 115.00 | 132.00 |
| | OK121600-07-0110G | Ammonia (mg/L) | 20 | 0 | 0.02 | 0.00 | 0.00 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| | OK121600-07-0110G | Avail-N | 20 | 0 | 0.62 | 0.04 | 0.20 | 0.24 | 0.45 | 0.68 | 0.80 | 0.91 |
| | OK121600-07-0110G | cBOD5 (mg/l) | 20 | 0 | 3.15 | 0.41 | 1.84 | 2.00 | 2.00 | 2.00 | 4.00 | 9.00 |
| | OK121600-07-0110G | Chloride (mg/L) | 20 | 0 | 6.66 | 0.38 | 1.68 | 4.67 | 5.73 | 6.08 | 7.15 | 11.83 |
| | OK121600-07-0110G | Cond (uS/cm) | 20 | 0 | 397.00 | 103.00 | 462.00 | 229.00 | 268.00 | 296.00 | 312.00 | 2355.00 |
| | OK121600-07-0110G | Discharge (cfs) | 20 | 0 | 12.17 | 2.99 | 13.36 | 0.66 | 2.67 | 7.80 | 15.87 | 45.92 |
| | OK121600-07-0110G | <i>Enterococcus</i> | 12 | 0 | 42.1 | 16 | 55.6 | 10 | 10 | 25 | 40 | 210 |
| | OK121600-07-0110G | <i>E. coli</i> | 12 | 0 | 23.33 | 7.42 | 25.7 | 10 | 10 | 15 | 20 | 100 |
| | OK121600-07-0110G | Final DO (mg/l) | 20 | 0 | 10.38 | 0.45 | 2.01 | 6.76 | 8.60 | 10.12 | 11.86 | 14.83 |
| | OK121600-07-0110G | % DO Sat. | 20 | 0 | 104.45 | 2.48 | 11.08 | 78.00 | 97.75 | 103.00 | 111.75 | 129.00 |
| | OK121600-07-0110G | Nitrate (mg/L) | 20 | 0 | 0.59 | 0.05 | 0.20 | 0.21 | 0.40 | 0.65 | 0.77 | 0.88 |
| | OK121600-07-0110G | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.06 |
| | OK121600-07-0110G | pH (SU) | 18 | 2 | 7.94 | 0.11 | 0.48 | 7.38 | 7.61 | 7.78 | 8.11 | 9.09 |
| | OK121600-07-0110G | Sulfate (mg/L) | 20 | 0 | 7.16 | 0.33 | 1.46 | 4.90 | 5.91 | 7.05 | 8.26 | 10.50 |
| | OK121600-07-0110G | Temp (°C) | 20 | 0 | 15.79 | 1.79 | 7.99 | 3.70 | 8.88 | 16.70 | 23.33 | 27.70 |
| | OK121600-07-0110G | TKN (mg/L) | 20 | 0 | 0.11 | 0.00 | 0.01 | 0.11 | 0.11 | 0.11 | 0.11 | 0.14 |
| | OK121600-07-0110G | TotDisSolids (mg/L) | 20 | 0 | 154.23 | 4.46 | 19.95 | 130.00 | 136.50 | 150.25 | 172.13 | 193.00 |
| | OK121600-07-0110G | TotHardness (mg/L) | 20 | 0 | 138.51 | 3.69 | 16.50 | 104.20 | 125.40 | 137.55 | 149.80 | 168.00 |
| | OK121600-07-0110G | Tot-N | 20 | 0 | 0.71 | 0.05 | 0.20 | 0.33 | 0.54 | 0.77 | 0.89 | 1.03 |
| | OK121600-07-0110G | TotOrthoPhos (mg/L) | 18 | 2 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK121600-07-0110G | TotPhosphorus (mg/L) | 18 | 2 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.05 |
| | OK121600-07-0110G | TotSusSolids (mg/L) | 20 | 0 | 9.65 | 0.35 | 1.57 | 3.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| OK121600-07-0110G | Turb (NTU) | 19 | 1 | 0.80 | 0.15 | 0.66 | 0.16 | 0.40 | 0.58 | 0.84 | 2.59 | |
| Pryor Creek Hwy. 20 | OK121610-00-0050D | Alkalinity (CaCO | 17 | 2 | 71.41 | 7.07 | 29.14 | 31.00 | 42.50 | 74.00 | 89.00 | 146.00 |
| | OK121610-00-0050D | Ammonia (mg/L) | 19 | 0 | 0.20 | 0.04 | 0.16 | 0.01 | 0.07 | 0.18 | 0.39 | 0.53 |
| | OK121610-00-0050D | Avail-N | 19 | 0 | 0.80 | 0.07 | 0.31 | 0.17 | 0.52 | 0.84 | 0.98 | 1.27 |
| | OK121610-00-0050D | cBOD5 (mg/l) | 19 | 0 | 4.31 | 0.70 | 3.06 | 2.00 | 2.00 | 3.70 | 5.00 | 12.00 |
| | OK121610-00-0050D | Chloride (mg/L) | 19 | 0 | 82.60 | 21.20 | 92.30 | 5.20 | 20.80 | 27.00 | 165.60 | 333.10 |
| | OK121610-00-0050D | Cond (uS/cm) | 19 | 0 | 456.80 | 62.60 | 272.70 | 180.10 | 249.90 | 330.20 | 690.00 | 1101.00 |
| | OK121610-00-0050D | Discharge (cfs) | 19 | 0 | 15.39 | 8.18 | 35.67 | 0.00 | 0.07 | 0.98 | 22.27 | 150.93 |
| | OK121610-00-0050D | <i>Enterococcus</i> | 11 | 0 | 247 | 107 | 353 | 60 | 70 | 100 | 290 | 1240 |
| | OK121610-00-0050D | <i>E. coli</i> | 11 | 0 | 450 | 289 | 959 | 10 | 20 | 100 | 410 | 3250 |
| | OK121610-00-0050D | Final DO (mg/l) | 19 | 0 | 5.66 | 0.54 | 2.35 | 2.31 | 3.02 | 5.56 | 7.06 | 9.85 |
| | OK121610-00-0050D | % DO Sat. | 19 | 0 | 54.68 | 3.86 | 16.82 | 26.00 | 35.00 | 57.00 | 68.00 | 78.00 |
| | OK121610-00-0050D | Nitrate (mg/L) | 19 | 0 | 0.57 | 0.05 | 0.22 | 0.09 | 0.47 | 0.54 | 0.70 | 0.96 |
| | OK121610-00-0050D | Nitrite (mg/L) | 19 | 0 | 0.04 | 0.02 | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.36 |
| | OK121610-00-0050D | pH (SU) | 18 | 1 | 7.96 | 0.20 | 0.83 | 6.38 | 7.53 | 7.70 | 8.53 | 9.84 |
| | OK121610-00-0050D | Sulfate (mg/L) | 19 | 0 | 31.33 | 3.47 | 15.13 | 13.84 | 18.80 | 26.18 | 49.00 | 60.50 |
| | OK121610-00-0050D | Temp (°C) | 19 | 0 | 15.36 | 1.93 | 8.43 | 4.20 | 7.60 | 13.50 | 22.60 | 28.10 |
| | OK121610-00-0050D | TKN (mg/L) | 19 | 0 | 0.81 | 0.06 | 0.28 | 0.27 | 0.58 | 0.84 | 1.11 | 1.33 |
| | OK121610-00-0050D | TotDisSolids (mg/L) | 19 | 0 | 298.60 | 37.00 | 161.20 | 114.00 | 196.00 | 211.00 | 365.50 | 741.50 |
| | OK121610-00-0050D | TotHardness (mg/L) | 19 | 0 | 110.46 | 7.41 | 32.32 | 42.15 | 94.40 | 111.70 | 135.60 | 174.50 |
| | OK121610-00-0050D | Tot-N | 19 | 0 | 1.42 | 0.10 | 0.43 | 0.71 | 1.03 | 1.59 | 1.73 | 2.19 |
| | OK121610-00-0050D | TotOrthoPhos (mg/L) | 18 | 1 | 0.05 | 0.01 | 0.03 | 0.01 | 0.02 | 0.04 | 0.07 | 0.13 |
| | OK121610-00-0050D | TotPhosphorus (mg/L) | 18 | 1 | 0.10 | 0.01 | 0.06 | 0.03 | 0.06 | 0.10 | 0.14 | 0.23 |
| | OK121610-00-0050D | TotSusSolids (mg/L) | 19 | 0 | 29.05 | 7.40 | 32.24 | 10.00 | 12.00 | 20.00 | 32.00 | 152.00 |
| OK121610-00-0050D | Turb (NTU) | 19 | 0 | 40.59 | 7.18 | 31.31 | 5.90 | 21.90 | 29.90 | 46.80 | 147.00 | |
| Pryor Creek Hwy. 69 | OK121610-00-0050M | Alkalinity (CaCO | 17 | 1 | 66.41 | 5.25 | 21.65 | 27.00 | 49.00 | 66.00 | 82.50 | 110.00 |
| | OK121610-00-0050M | Ammonia (mg/L) | 18 | 0 | 0.18 | 0.03 | 0.15 | 0.02 | 0.05 | 0.17 | 0.30 | 0.45 |
| | OK121610-00-0050M | Avail-N | 18 | 0 | 0.71 | 0.08 | 0.32 | 0.16 | 0.44 | 0.79 | 0.96 | 1.19 |
| | OK121610-00-0050M | cBOD5 (mg/l) | 18 | 0 | 3.22 | 0.36 | 1.53 | 2.00 | 2.00 | 3.00 | 3.80 | 7.00 |
| | OK121610-00-0050M | Chloride (mg/L) | 18 | 0 | 70.80 | 20.70 | 88.00 | 10.90 | 17.30 | 30.20 | 79.50 | 319.70 |
| | OK121610-00-0050M | Cond (uS/cm) | 18 | 0 | 436.00 | 56.00 | 237.70 | 169.10 | 256.80 | 327.60 | 686.00 | 974.00 |
| | OK121610-00-0050M | Discharge (cfs) | 18 | 0 | 7.35 | 3.73 | 15.84 | 0.00 | 0.00 | 0.86 | 9.49 | 66.44 |
| | OK121610-00-0050M | <i>Enterococcus</i> | 10 | 0 | 173.5 | 48.6 | 153.6 | 10 | 20 | 175 | 306.3 | 420 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|-------------------|----------------------|----------------------|----|-------|---------|---------|--------|---------|---------|---------|---------|---------|
| | OK121610-00-0050M | <i>E. coli</i> | 10 | 0 | 574 | 309 | 976 | 10 | 60 | 135 | 753 | 3000 |
| | OK121610-00-0050M | Final DO (mg/l) | 18 | 0 | 6.45 | 0.61 | 2.57 | 2.78 | 4.79 | 5.96 | 8.09 | 11.79 |
| | OK121610-00-0050M | % DO Sat. | 18 | 0 | 61.50 | 3.59 | 15.24 | 36.00 | 51.25 | 58.50 | 77.00 | 87.00 |
| | OK121610-00-0050M | Nitrate (mg/L) | 18 | 0 | 0.52 | 0.06 | 0.26 | 0.01 | 0.36 | 0.51 | 0.72 | 0.95 |
| | OK121610-00-0050M | Nitrite (mg/L) | 18 | 0 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.06 |
| | OK121610-00-0050M | pH (SU) | 17 | 1 | 8.08 | 0.19 | 0.77 | 7.34 | 7.52 | 7.79 | 8.51 | 9.96 |
| | OK121610-00-0050M | Sulfate (mg/L) | 18 | 0 | 38.71 | 3.06 | 12.98 | 23.60 | 28.01 | 34.97 | 49.29 | 63.56 |
| | OK121610-00-0050M | Temp (°C) | 18 | 0 | 15.21 | 2.16 | 9.15 | 2.50 | 7.53 | 11.85 | 23.55 | 29.30 |
| | OK121610-00-0050M | TKN (mg/L) | 18 | 0 | 0.74 | 0.06 | 0.24 | 0.26 | 0.60 | 0.76 | 0.89 | 1.19 |
| | OK121610-00-0050M | TotDisSolids (mg/L) | 18 | 0 | 286.60 | 38.80 | 164.60 | 133.00 | 186.10 | 203.00 | 377.50 | 714.00 |
| | OK121610-00-0050M | TotHardness (mg/L) | 18 | 0 | 118.10 | 8.29 | 35.19 | 60.70 | 95.97 | 112.60 | 149.13 | 173.20 |
| | OK121610-00-0050M | Tot-N | 18 | 0 | 1.27 | 0.08 | 0.35 | 0.61 | 0.95 | 1.34 | 1.52 | 1.78 |
| | OK121610-00-0050M | TotOrthoPhos (mg/L) | 17 | 1 | 0.03 | 0.01 | 0.02 | 0.01 | 0.02 | 0.03 | 0.05 | 0.08 |
| | OK121610-00-0050M | TotPhosphorus (mg/L) | 17 | 1 | 0.10 | 0.01 | 0.05 | 0.03 | 0.06 | 0.09 | 0.13 | 0.24 |
| OK121610-00-0050M | TotSusSolids (mg/L) | 18 | 0 | 26.00 | 5.37 | 22.80 | 10.00 | 10.00 | 17.50 | 27.75 | 81.00 | |
| OK121610-00-0050M | Turb (NTU) | 18 | 0 | 28.64 | 4.74 | 20.13 | 3.57 | 11.03 | 23.95 | 44.25 | 75.20 | |
| Buggy Creek | OK520610-02-0120C | Alkalinity (CaCO | 20 | 0 | 263.95 | 6.90 | 30.84 | 218.00 | 228.50 | 276.50 | 287.50 | 309.00 |
| | OK520610-02-0120C | Ammonia (mg/L) | 20 | 0 | 0.19 | 0.05 | 0.22 | 0.02 | 0.04 | 0.10 | 0.23 | 0.76 |
| | OK520610-02-0120C | Avail-N | 20 | 0 | 1.13 | 0.10 | 0.46 | 0.47 | 0.80 | 1.03 | 1.45 | 2.24 |
| | OK520610-02-0120C | cBOD5 (mg/l) | 18 | 0 | 3.39 | 0.52 | 2.20 | 2.00 | 2.00 | 2.50 | 4.00 | 9.00 |
| | OK520610-02-0120C | Chloride (mg/L) | 20 | 0 | 39.00 | 2.43 | 10.87 | 26.38 | 31.83 | 36.22 | 43.63 | 71.85 |
| | OK520610-02-0120C | Cond (uS/cm) | 20 | 0 | 1309.10 | 78.90 | 352.70 | 581.00 | 1131.80 | 1264.00 | 1447.80 | 2120.00 |
| | OK520610-02-0120C | Discharge (cfs) | 20 | 0 | 9.31 | 1.56 | 6.96 | 1.82 | 5.14 | 8.40 | 10.56 | 33.38 |
| | OK520610-02-0120C | <i>Enterococcus</i> | 12 | 0 | 302 | 114 | 394 | 30 | 115 | 192 | 314 | 1510 |
| | OK520610-02-0120C | <i>E. coli</i> | 12 | 0 | 458 | 177 | 613 | 20 | 60 | 193 | 618 | 1800 |
| | OK520610-02-0120C | Final DO (mg/l) | 20 | 0 | 9.88 | 0.46 | 2.05 | 6.65 | 8.23 | 9.90 | 11.59 | 12.88 |
| | OK520610-02-0120C | % DO Sat. | 20 | 0 | 109.60 | 5.13 | 22.96 | 81.00 | 96.25 | 104.50 | 115.50 | 171.00 |
| | OK520610-02-0120C | Nitrate (mg/L) | 20 | 0 | 0.93 | 0.07 | 0.29 | 0.42 | 0.70 | 0.94 | 1.08 | 1.65 |
| | OK520610-02-0120C | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK520610-02-0120C | pH (SU) | 20 | 0 | 8.12 | 0.05 | 0.22 | 7.69 | 7.98 | 8.07 | 8.26 | 8.52 |
| | OK520610-02-0120C | Sulfate (mg/L) | 20 | 0 | 431.60 | 33.40 | 149.50 | 208.50 | 340.80 | 378.40 | 503.40 | 842.50 |
| | OK520610-02-0120C | Temp (°C) | 20 | 0 | 19.20 | 2.01 | 8.97 | 7.10 | 10.98 | 17.45 | 27.13 | 34.20 |
| | OK520610-02-0120C | TKN (mg/L) | 20 | 0 | 0.65 | 0.14 | 0.64 | 0.11 | 0.26 | 0.46 | 0.62 | 2.70 |
| | OK520610-02-0120C | TotDisSolids (mg/L) | 20 | 0 | 1004.10 | 52.40 | 234.20 | 656.90 | 872.50 | 936.00 | 1117.00 | 1614.00 |
| | OK520610-02-0120C | TotHardness (mg/L) | 20 | 0 | 548.20 | 20.30 | 90.70 | 363.70 | 514.70 | 538.20 | 607.60 | 735.90 |
| | OK520610-02-0120C | Tot-N | 20 | 0 | 1.58 | 0.18 | 0.81 | 0.70 | 1.09 | 1.28 | 1.79 | 3.75 |
| OK520610-02-0120C | TotOrthoPhos (mg/L) | 17 | 3 | 0.11 | 0.02 | 0.10 | 0.01 | 0.04 | 0.07 | 0.16 | 0.39 | |
| OK520610-02-0120C | TotPhosphorus (mg/L) | 17 | 3 | 0.16 | 0.03 | 0.13 | 0.04 | 0.07 | 0.14 | 0.23 | 0.57 | |
| OK520610-02-0120C | TotSusSolids (mg/L) | 20 | 0 | 40.40 | 10.20 | 45.80 | 10.00 | 16.00 | 25.00 | 54.00 | 214.00 | |
| OK520610-02-0120C | Turb (NTU) | 20 | 0 | 62.50 | 36.80 | 164.40 | 2.10 | 5.70 | 12.10 | 37.10 | 737.00 | |
| Walnut Creek | OK520610-03-0010C | Alkalinity (CaCO | 19 | 1 | 335.60 | 16.30 | 71.00 | 144.00 | 279.00 | 363.00 | 384.00 | 404.00 |
| | OK520610-03-0010C | Ammonia (mg/L) | 20 | 0 | 0.15 | 0.05 | 0.23 | 0.02 | 0.02 | 0.07 | 0.14 | 0.88 |
| | OK520610-03-0010C | Avail-N | 20 | 0 | 0.76 | 0.10 | 0.47 | 0.19 | 0.45 | 0.63 | 0.91 | 1.84 |
| | OK520610-03-0010C | cBOD5 (mg/l) | 19 | 0 | 3.80 | 0.49 | 2.13 | 2.00 | 2.00 | 3.00 | 5.00 | 9.00 |
| | OK520610-03-0010C | Chloride (mg/L) | 20 | 0 | 25.59 | 1.85 | 8.26 | 4.00 | 22.92 | 28.51 | 29.98 | 34.64 |
| | OK520610-03-0010C | Cond (uS/cm) | 20 | 0 | 685.60 | 55.30 | 247.30 | 119.30 | 555.50 | 797.50 | 872.30 | 922.00 |
| | OK520610-03-0010C | Discharge (cfs) | 20 | 0 | 46.40 | 17.30 | 77.60 | 5.00 | 10.70 | 21.40 | 32.30 | 301.40 |
| | OK520610-03-0010C | <i>Enterococcus</i> | 11 | 1 | 495 | 213 | 707 | 20 | 70 | 190 | 510 | 2360 |
| | OK520610-03-0010C | <i>E. coli</i> | 12 | 0 | 495 | 240 | 831 | 20 | 63 | 200 | 659 | 3000 |
| | OK520610-03-0010C | Final DO (mg/l) | 20 | 0 | 9.44 | 0.53 | 2.38 | 4.72 | 7.42 | 9.47 | 10.84 | 13.52 |
| | OK520610-03-0010C | % DO Sat. | 20 | 0 | 95.60 | 3.93 | 17.58 | 62.00 | 86.25 | 94.00 | 106.50 | 146.00 |
| | OK520610-03-0010C | Nitrate (mg/L) | 20 | 0 | 0.56 | 0.06 | 0.27 | 0.13 | 0.42 | 0.57 | 0.71 | 1.28 |
| | OK520610-03-0010C | Nitrite (mg/L) | 20 | 0 | 0.05 | 0.02 | 0.11 | 0.01 | 0.01 | 0.01 | 0.01 | 0.49 |
| | OK520610-03-0010C | pH (SU) | 19 | 1 | 8.13 | 0.05 | 0.24 | 7.76 | 7.89 | 8.17 | 8.36 | 8.48 |
| | OK520610-03-0010C | Sulfate (mg/L) | 20 | 0 | 42.33 | 3.20 | 14.29 | 7.80 | 38.12 | 48.64 | 50.91 | 59.90 |
| | OK520610-03-0010C | Temp (°C) | 20 | 0 | 15.86 | 1.85 | 8.26 | 5.10 | 7.73 | 15.95 | 22.90 | 30.10 |
| | OK520610-03-0010C | TKN (mg/L) | 20 | 0 | 0.64 | 0.23 | 1.03 | 0.11 | 0.15 | 0.32 | 0.51 | 3.94 |
| | OK520610-03-0010C | TotDisSolids (mg/L) | 20 | 0 | 396.50 | 25.50 | 114.00 | 47.00 | 366.60 | 436.00 | 464.00 | 505.50 |
| | OK520610-03-0010C | TotHardness (mg/L) | 20 | 0 | 318.10 | 20.80 | 92.80 | 87.80 | 256.30 | 340.20 | 395.70 | 430.50 |
| | OK520610-03-0010C | Tot-N | 20 | 0 | 1.24 | 0.27 | 1.22 | 0.29 | 0.58 | 0.95 | 1.22 | 4.80 |
| OK520610-03-0010C | TotOrthoPhos (mg/L) | 19 | 1 | 0.13 | 0.05 | 0.21 | 0.01 | 0.02 | 0.04 | 0.16 | 0.88 | |
| OK520610-03-0010C | TotPhosphorus (mg/L) | 19 | 1 | 0.22 | 0.09 | 0.38 | 0.01 | 0.04 | 0.07 | 0.28 | 1.59 | |
| OK520610-03-0010C | TotSusSolids (mg/L) | 20 | 0 | 73.20 | 28.80 | 128.60 | 10.00 | 11.30 | 18.50 | 33.00 | 447.00 | |
| OK520610-03-0010C | Turb (NTU) | 18 | 2 | 56.30 | 30.10 | 127.60 | 3.60 | 5.90 | 9.40 | 22.60 | 506.00 | |
| Trail Creek | OK520620-02-0090G | Alkalinity (CaCO | 20 | 0 | 160.30 | 4.00 | 17.90 | 110.00 | 152.25 | 164.00 | 175.25 | 183.00 |
| | OK520620-02-0090G | Ammonia (mg/L) | 20 | 0 | 0.08 | 0.02 | 0.07 | 0.02 | 0.03 | 0.06 | 0.13 | 0.29 |
| | OK520620-02-0090G | Avail-N | 20 | 0 | 0.51 | 0.07 | 0.31 | 0.04 | 0.19 | 0.57 | 0.78 | 0.90 |
| | OK520620-02-0090G | Chloride (mg/L) | 20 | 0 | 25.18 | 0.48 | 2.16 | 18.39 | 23.95 | 25.28 | 26.79 | 28.40 |
| | OK520620-02-0090G | Cond (uS/cm) | 20 | 0 | 2562.20 | 51.90 | 232.00 | 2081.00 | 2392.30 | 2626.00 | 2747.80 | 2853.00 |
| | OK520620-02-0090G | Discharge (cfs) | 20 | 0 | 4.04 | 0.59 | 2.64 | 0.23 | 1.89 | 3.96 | 4.77 | 10.31 |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum | |
|-------------------|----------------------|----------------------|----|--------|---------|---------|--------|---------|---------|---------|---------|---------|------|
| | OK520620-02-0090G | <i>Enterococcus</i> | 12 | 0 | 229.2 | 49.9 | 173 | 60 | 130 | 140 | 332.5 | 610 | |
| | OK520620-02-0090G | <i>E. coli</i> | 12 | 0 | 315.8 | 83.8 | 290.2 | 20 | 80 | 265 | 440 | 1040 | |
| | OK520620-02-0090G | Final DO (mg/l) | 20 | 0 | 10.03 | 0.42 | 1.89 | 6.97 | 7.90 | 10.61 | 11.43 | 13.12 | |
| | OK520620-02-0090G | % DO Sat. | 20 | 0 | 106.05 | 4.13 | 18.49 | 80.00 | 93.50 | 103.00 | 110.00 | 153.00 | |
| | OK520620-02-0090G | Nitrate (mg/L) | 20 | 0 | 0.41 | 0.06 | 0.27 | 0.01 | 0.14 | 0.51 | 0.60 | 0.78 | |
| | OK520620-02-0090G | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK520620-02-0090G | pH (SU) | 19 | 1 | 8.04 | 0.04 | 0.16 | 7.69 | 7.92 | 8.07 | 8.16 | 8.28 | |
| | OK520620-02-0090G | Sulfate (mg/L) | 20 | 0 | 1530.60 | 84.60 | 378.30 | 1005.90 | 1428.90 | 1493.90 | 1532.80 | 3042.80 | |
| | OK520620-02-0090G | Temp (°C) | 20 | 0 | 16.47 | 2.11 | 9.42 | 1.40 | 7.73 | 15.20 | 26.05 | 32.90 | |
| | OK520620-02-0090G | TKN (mg/L) | 20 | 0 | 0.31 | 0.04 | 0.16 | 0.11 | 0.18 | 0.31 | 0.42 | 0.69 | |
| | OK520620-02-0090G | TotDisSolids (mg/L) | 19 | 1 | 2503.60 | 18.60 | 81.00 | 2334.00 | 2447.00 | 2532.50 | 2554.50 | 2642.00 | |
| | OK520620-02-0090G | TotHardness (mg/L) | 20 | 0 | 1715.70 | 28.30 | 126.60 | 1375.20 | 1652.80 | 1737.10 | 1795.10 | 1901.10 | |
| | OK520620-02-0090G | Tot-N | 20 | 0 | 0.73 | 0.07 | 0.31 | 0.22 | 0.42 | 0.82 | 1.00 | 1.30 | |
| | OK520620-02-0090G | TotOrthoPhos (mg/L) | 19 | 1 | 0.03 | 0.00 | 0.02 | 0.01 | 0.02 | 0.03 | 0.04 | 0.08 | |
| | OK520620-02-0090G | TotPhosphorus (mg/L) | 19 | 1 | 0.05 | 0.01 | 0.04 | 0.01 | 0.02 | 0.04 | 0.06 | 0.17 | |
| OK520620-02-0090G | TotSusSolids (mg/L) | 20 | 0 | 28.85 | 7.50 | 33.52 | 10.00 | 10.00 | 19.50 | 26.00 | 157.00 | | |
| OK520620-02-0090G | Turb (NTU) | 20 | 0 | 12.83 | 4.43 | 19.81 | 2.10 | 3.96 | 5.26 | 13.63 | 87.80 | | |
| Lone Creek | OK520620-03-0020C | Alkalinity (CaCO | 20 | 0 | 166.10 | 7.24 | 32.38 | 75.00 | 153.00 | 173.00 | 188.75 | 206.00 | |
| | OK520620-03-0020C | Ammonia (mg/L) | 20 | 0 | 0.10 | 0.04 | 0.19 | 0.02 | 0.02 | 0.02 | 0.11 | 0.71 | |
| | OK520620-03-0020C | Avail-N | 20 | 0 | 0.83 | 0.09 | 0.40 | 0.27 | 0.58 | 0.81 | 0.95 | 1.92 | |
| | OK520620-03-0020C | cBOD5 (mg/l) | 20 | 0 | 3.50 | 0.38 | 1.72 | 2.00 | 2.00 | 3.00 | 4.75 | 8.00 | |
| | OK520620-03-0020C | Chloride (mg/L) | 20 | 0 | 38.15 | 1.66 | 7.40 | 9.70 | 37.40 | 39.14 | 40.74 | 49.24 | |
| | OK520620-03-0020C | Cond (uS/cm) | 20 | 0 | 2690.00 | 104.00 | 467.00 | 907.00 | 2654.00 | 2832.00 | 2908.00 | 3021.00 | |
| | OK520620-03-0020C | Discharge (cfs) | 20 | 0 | 2.24 | 0.72 | 3.20 | 0.13 | 0.87 | 1.76 | 2.12 | 15.45 | |
| | OK520620-03-0020C | <i>Enterococcus</i> | 12 | 0 | 332 | 111 | 383 | 30 | 98 | 210 | 328 | 1310 | |
| | OK520620-03-0020C | <i>E. coli</i> | 12 | 0 | 6310 | 5937 | 20565 | 80 | 129 | 190 | 888 | 71600 | |
| | OK520620-03-0020C | Final DO (mg/l) | 20 | 0 | 9.55 | 0.37 | 1.64 | 6.79 | 8.02 | 9.61 | 11.03 | 12.10 | |
| | OK520620-03-0020C | % DO Sat. | 20 | 0 | 106.65 | 3.09 | 13.81 | 85.00 | 99.00 | 103.00 | 108.00 | 141.00 | |
| | OK520620-03-0020C | Nitrate (mg/L) | 20 | 0 | 0.71 | 0.06 | 0.28 | 0.24 | 0.52 | 0.74 | 0.85 | 1.35 | |
| | OK520620-03-0020C | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | |
| | OK520620-03-0020C | pH (SU) | 19 | 1 | 8.11 | 0.03 | 0.12 | 7.88 | 8.02 | 8.15 | 8.18 | 8.39 | |
| | OK520620-03-0020C | Sulfate (mg/L) | 20 | 0 | 1619.00 | 107.00 | 480.00 | 394.00 | 1514.00 | 1593.00 | 1664.00 | 3264.00 | |
| | OK520620-03-0020C | Temp (°C) | 20 | 0 | 18.93 | 1.92 | 8.58 | 5.00 | 10.23 | 18.60 | 26.73 | 33.70 | |
| | OK520620-03-0020C | TKN (mg/L) | 20 | 0 | 0.64 | 0.20 | 0.91 | 0.11 | 0.20 | 0.36 | 0.59 | 4.23 | |
| | OK520620-03-0020C | TotDisSolids (mg/L) | 20 | 0 | 2501.00 | 120.00 | 537.00 | 422.00 | 2545.00 | 2628.00 | 2711.00 | 2890.00 | |
| | OK520620-03-0020C | TotHardness (mg/L) | 20 | 0 | 1755.40 | 72.00 | 321.90 | 468.60 | 1728.30 | 1831.60 | 1924.00 | 1993.70 | |
| | OK520620-03-0020C | Tot-N | 20 | 0 | 1.36 | 0.23 | 1.03 | 0.45 | 0.84 | 1.11 | 1.38 | 5.06 | |
| OK520620-03-0020C | TotOrthoPhos (mg/L) | 19 | 1 | 0.05 | 0.04 | 0.18 | 0.01 | 0.01 | 0.01 | 0.02 | 0.78 | | |
| OK520620-03-0020C | TotPhosphorus (mg/L) | 19 | 1 | 0.10 | 0.07 | 0.29 | 0.01 | 0.01 | 0.03 | 0.05 | 1.30 | | |
| OK520620-03-0020C | TotSusSolids (mg/L) | 20 | 0 | 31.30 | 11.80 | 52.80 | 10.00 | 10.00 | 12.00 | 35.00 | 249.00 | | |
| OK520620-03-0020C | Turb (NTU) | 19 | 1 | 7.47 | 1.54 | 6.73 | 1.42 | 2.86 | 5.82 | 9.59 | 28.90 | | |
| Hackberry Creek | OK520620-04-0050D | Alkalinity (CaCO | 18 | 0 | 253.20 | 15.60 | 66.00 | 2.00 | 249.00 | 267.50 | 283.80 | 302.00 | |
| | OK520620-04-0050D | Ammonia (mg/L) | 18 | 0 | 0.07 | 0.02 | 0.07 | 0.02 | 0.02 | 0.04 | 0.11 | 0.28 | |
| | OK520620-04-0050D | Avail-N | 18 | 0 | 0.40 | 0.07 | 0.28 | 0.06 | 0.12 | 0.45 | 0.66 | 0.88 | |
| | OK520620-04-0050D | cBOD5 (mg/l) | 18 | 0 | 3.48 | 0.52 | 2.20 | 2.00 | 2.00 | 2.30 | 4.50 | 9.00 | |
| | OK520620-04-0050D | Chloride (mg/L) | 18 | 0 | 72.55 | 2.18 | 9.26 | 51.50 | 66.84 | 74.33 | 78.41 | 90.50 | |
| | OK520620-04-0050D | Cond (uS/cm) | 17 | 1 | 2519.00 | 106.00 | 436.00 | 1725.00 | 2247.00 | 2530.00 | 2849.00 | 3361.00 | |
| | OK520620-04-0050D | Discharge (cfs) | 18 | 0 | 3.46 | 0.44 | 1.86 | 0.37 | 1.90 | 3.53 | 5.25 | 6.67 | |
| | OK520620-04-0050D | <i>Enterococcus</i> | 10 | 0 | 253.5 | 63.2 | 199.8 | 30 | 87.5 | 195 | 456.3 | 580 | |
| | OK520620-04-0050D | <i>E. coli</i> | 10 | 0 | 383 | 120 | 380 | 30 | 100 | 240 | 613 | 1120 | |
| | OK520620-04-0050D | Final DO (mg/l) | 18 | 0 | 10.44 | 0.42 | 1.77 | 7.31 | 8.82 | 10.72 | 11.68 | 13.05 | |
| | OK520620-04-0050D | % DO Sat. | 18 | 0 | 103.56 | 2.07 | 8.77 | 93.00 | 98.00 | 100.00 | 110.25 | 128.00 | |
| | OK520620-04-0050D | Nitrate (mg/L) | 18 | 0 | 0.32 | 0.06 | 0.24 | 0.01 | 0.08 | 0.38 | 0.54 | 0.67 | |
| | OK520620-04-0050D | Nitrite (mg/L) | 18 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | |
| | OK520620-04-0050D | pH (SU) | 17 | 1 | 8.11 | 0.03 | 0.14 | 7.78 | 8.03 | 8.11 | 8.21 | 8.28 | |
| | OK520620-04-0050D | Sulfate (mg/L) | 18 | 0 | 1247.00 | 82.30 | 349.30 | 634.80 | 1077.20 | 1162.70 | 1454.30 | 1945.50 | |
| | OK520620-04-0050D | Temp (°C) | 18 | 0 | 13.03 | 1.70 | 7.22 | 1.60 | 7.33 | 12.15 | 20.85 | 24.70 | |
| | OK520620-04-0050D | TKN (mg/L) | 18 | 0 | 0.48 | 0.05 | 0.23 | 0.11 | 0.37 | 0.44 | 0.60 | 0.91 | |
| | OK520620-04-0050D | TotDisSolids (mg/L) | 18 | 0 | 2249.00 | 114.00 | 484.00 | 1312.00 | 2017.00 | 2169.00 | 2548.00 | 3148.00 | |
| | OK520620-04-0050D | TotHardness (mg/L) | 18 | 0 | 1457.60 | 79.90 | 339.20 | 867.30 | 1306.80 | 1368.80 | 1709.80 | 2121.70 | |
| | OK520620-04-0050D | Tot-N | 18 | 0 | 0.81 | 0.09 | 0.39 | 0.16 | 0.46 | 0.96 | 1.09 | 1.43 | |
| OK520620-04-0050D | TotOrthoPhos (mg/L) | 17 | 1 | 0.02 | 0.00 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.06 | | |
| OK520620-04-0050D | TotPhosphorus (mg/L) | 17 | 1 | 0.03 | 0.01 | 0.03 | 0.01 | 0.01 | 0.03 | 0.05 | 0.13 | | |
| OK520620-04-0050D | TotSusSolids (mg/L) | 18 | 0 | 17.17 | 3.87 | 16.42 | 1.00 | 10.00 | 11.00 | 18.25 | 78.00 | | |
| OK520620-04-0050D | Turb (NTU) | 18 | 0 | 11.35 | 3.24 | 13.74 | 1.09 | 2.93 | 8.40 | 11.25 | 55.40 | | |
| Commission Creek | OK520620-05-0160C | Alkalinity (CaCO | 20 | 0 | 235.15 | 2.45 | 10.97 | 220.00 | 226.25 | 232.00 | 244.75 | 258.00 | |
| | OK520620-05-0160C | Ammonia (mg/L) | 20 | 0 | 0.04 | 0.01 | 0.04 | 0.02 | 0.02 | 0.02 | 0.05 | 0.13 | |
| | OK520620-05-0160C | Avail-N | 20 | 0 | 0.69 | 0.05 | 0.24 | 0.04 | 0.54 | 0.74 | 0.86 | 1.04 | |
| | OK520620-05-0160C | cBOD5 (mg/l) | 20 | 0 | 3.16 | 0.41 | 1.82 | 2.00 | 2.00 | 2.35 | 3.85 | 8.00 | |
| OK520620-05-0160C | Chloride (mg/L) | 20 | 0 | 102.98 | 4.75 | 21.25 | 85.40 | 90.06 | 98.60 | 105.24 | 185.70 | | |

Appendix A.3. Descriptive statistics by site for water quality parameters.

| Site Name | WBID | Variable | N | N* | Mean | SE Mean | StDev | Minimum | Q1 | Median | Q3 | Maximum |
|------------|-------------------|----------------------|----|----|---------|---------|--------|---------|---------|---------|---------|---------|
| | OK520620-05-0160C | Cond (uS/cm) | 20 | 0 | 819.40 | 43.60 | 195.00 | 8.90 | 823.80 | 863.00 | 878.30 | 944.00 |
| | OK520620-05-0160C | Discharge (cfs) | 20 | 0 | 6.18 | 0.43 | 1.94 | 2.21 | 5.07 | 6.74 | 7.35 | 10.38 |
| | OK520620-05-0160C | <i>Enterococcus</i> | 12 | 0 | 165.4 | 42.4 | 146.8 | 15 | 82.5 | 140 | 200 | 580 |
| | OK520620-05-0160C | <i>E. coli</i> | 12 | 0 | 158.8 | 49.7 | 172.3 | 10 | 25 | 130 | 247.5 | 620 |
| | OK520620-05-0160C | Final DO (mg/l) | 20 | 0 | 9.99 | 0.31 | 1.37 | 7.90 | 8.86 | 10.03 | 11.28 | 11.98 |
| | OK520620-05-0160C | % DO Sat. | 20 | 0 | 104.25 | 1.29 | 5.76 | 95.00 | 99.00 | 104.50 | 108.00 | 115.00 |
| | OK520620-05-0160C | Nitrite (mg/L) | 20 | 0 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| | OK520620-05-0160C | pH (SU) | 19 | 1 | 8.30 | 0.03 | 0.14 | 7.85 | 8.22 | 8.34 | 8.37 | 8.45 |
| | OK520620-05-0160C | Sulfate (mg/L) | 20 | 0 | 30.26 | 1.29 | 5.76 | 21.31 | 26.92 | 28.42 | 33.51 | 48.20 |
| | OK520620-05-0160C | Temp (°C) | 20 | 0 | 14.83 | 1.52 | 6.78 | 3.80 | 9.30 | 13.80 | 21.28 | 24.60 |
| | OK520620-05-0160C | TKN (mg/L) | 20 | 0 | 0.33 | 0.04 | 0.16 | 0.11 | 0.22 | 0.28 | 0.34 | 0.73 |
| | OK520620-05-0160C | TotDisSolids (mg/L) | 20 | 0 | 482.03 | 5.03 | 22.48 | 435.00 | 473.00 | 483.00 | 492.00 | 536.00 |
| | OK520620-05-0160C | TotHardness (mg/L) | 20 | 0 | 232.60 | 13.20 | 59.10 | 0.30 | 223.90 | 236.90 | 261.30 | 287.60 |
| | OK520620-05-0160C | Tot-N | 20 | 0 | 0.97 | 0.05 | 0.22 | 0.52 | 0.75 | 1.01 | 1.12 | 1.34 |
| | OK520620-05-0160C | TotOrthoPhos (mg/L) | 19 | 1 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.04 |
| | OK520620-05-0160C | TotPhosphorus (mg/L) | 19 | 1 | 0.04 | 0.01 | 0.03 | 0.01 | 0.02 | 0.03 | 0.05 | 0.11 |
| | OK520620-05-0160C | TotSusSolids (mg/L) | 20 | 0 | 27.05 | 4.29 | 19.20 | 10.00 | 11.25 | 21.00 | 34.50 | 73.00 |
| | OK520620-05-0160C | Turb (NTU) | 20 | 0 | 15.28 | 2.28 | 10.21 | 4.79 | 6.71 | 11.00 | 24.38 | 36.20 |
| Deer Creek | OK520620-06-0010F | Alkalinity (CaCO | 20 | 0 | 167.15 | 5.66 | 25.31 | 114.00 | 151.00 | 173.00 | 188.50 | 199.00 |
| | OK520620-06-0010F | Ammonia (mg/L) | 20 | 0 | 0.11 | 0.03 | 0.14 | 0.02 | 0.02 | 0.07 | 0.15 | 0.62 |
| | OK520620-06-0010F | Avail-N | 20 | 0 | 1.82 | 0.14 | 0.64 | 0.84 | 1.21 | 1.97 | 2.19 | 2.86 |
| | OK520620-06-0010F | cBOD5 (mg/l) | 20 | 0 | 3.79 | 0.48 | 2.12 | 2.00 | 2.00 | 3.00 | 5.00 | 9.00 |
| | OK520620-06-0010F | Chloride (mg/L) | 20 | 0 | 117.00 | 97.70 | 436.90 | 11.40 | 17.30 | 20.30 | 22.50 | 1973.00 |
| | OK520620-06-0010F | Cond (uS/cm) | 20 | 0 | 1200.00 | 50.20 | 224.40 | 682.00 | 1049.00 | 1212.50 | 1391.00 | 1560.00 |
| | OK520620-06-0010F | Discharge (cfs) | 20 | 0 | 41.61 | 2.63 | 11.75 | 22.35 | 33.90 | 40.54 | 47.19 | 75.49 |
| | OK520620-06-0010F | <i>Enterococcus</i> | 12 | 0 | 137.1 | 60.5 | 209.5 | 10 | 12.5 | 47.5 | 135 | 610 |
| | OK520620-06-0010F | <i>E. coli</i> | 12 | 0 | 905 | 642 | 2223 | 10 | 13 | 53 | 623 | 7800 |
| | OK520620-06-0010F | Final DO (mg/l) | 20 | 0 | 9.76 | 0.46 | 2.06 | 6.28 | 8.04 | 9.24 | 11.37 | 14.80 |
| | OK520620-06-0010F | % DO Sat. | 20 | 0 | 108.65 | 2.75 | 12.29 | 82.00 | 100.25 | 107.00 | 117.00 | 137.00 |
| | OK520620-06-0010F | Nitrate (mg/L) | 20 | 0 | 1.67 | 0.13 | 0.59 | 0.81 | 1.17 | 1.77 | 2.08 | 2.69 |
| | OK520620-06-0010F | Nitrite (mg/L) | 20 | 0 | 0.04 | 0.02 | 0.11 | 0.01 | 0.01 | 0.01 | 0.01 | 0.46 |
| | OK520620-06-0010F | pH (SU) | 19 | 1 | 8.19 | 0.04 | 0.18 | 7.67 | 8.20 | 8.25 | 8.29 | 8.39 |
| | OK520620-06-0010F | Sulfate (mg/L) | 20 | 0 | 456.90 | 25.70 | 115.00 | 207.70 | 366.40 | 483.80 | 544.50 | 660.00 |
| | OK520620-06-0010F | Temp (°C) | 20 | 0 | 19.66 | 2.11 | 9.45 | 5.70 | 10.65 | 21.65 | 26.40 | 35.40 |
| | OK520620-06-0010F | TKN (mg/L) | 20 | 0 | 0.52 | 0.10 | 0.44 | 0.06 | 0.22 | 0.42 | 0.60 | 1.86 |
| | OK520620-06-0010F | TotDisSolids (mg/L) | 20 | 0 | 893.70 | 43.20 | 193.30 | 468.00 | 731.80 | 941.00 | 1048.00 | 1181.00 |
| | OK520620-06-0010F | TotHardness (mg/L) | 20 | 0 | 615.50 | 29.50 | 131.90 | 335.70 | 514.50 | 634.10 | 711.90 | 842.50 |
| | OK520620-06-0010F | Tot-N | 20 | 0 | 2.23 | 0.16 | 0.71 | 1.27 | 1.55 | 2.17 | 2.81 | 3.84 |
| | OK520620-06-0010F | TotOrthoPhos (mg/L) | 19 | 1 | 0.09 | 0.01 | 0.06 | 0.01 | 0.05 | 0.08 | 0.13 | 0.25 |
| | OK520620-06-0010F | TotPhosphorus (mg/L) | 19 | 1 | 0.15 | 0.02 | 0.11 | 0.04 | 0.09 | 0.11 | 0.21 | 0.51 |
| | OK520620-06-0010F | TotSusSolids (mg/L) | 20 | 0 | 60.00 | 24.80 | 111.10 | 10.00 | 15.50 | 26.50 | 53.00 | 513.00 |
| | OK520620-06-0010F | Turb (NTU) | 20 | 0 | 39.70 | 21.30 | 95.20 | 6.40 | 8.10 | 11.60 | 21.00 | 431.00 |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubStlClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBeckenck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLrgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | RightCondition | RightCondition |
|-------------------|----------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|------------|---------|-----------|-----------|------------|-------------|--------|----------------|---------------|-------------|------------|------------|---------------|---------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|----------------|----------------|
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 20 | 0.1 | 0.1 | 0.1 | 0.75 | 6 | 20 | 0 | 45 | 30 | 0 | 0 | 5 | 0 | X | | | | | 0 | 5 | 10 | 0 | 0 | 0 | 0 | 55 | 30 | 0.15 | X | X | 70 | G | 0 | 5 | 0 | 2 | 75 | 80 | 10 | 10 | 1C | 1C |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 40 | 0.4 | 0.5 | 0.3 | 3 | 5 | 0 | 15 | 0 | 0 | 0 | 10 | 75 | 0 | | | | | | 0 | 10 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 45 | X | X | 45 | G | 0 | 0 | 0 | 65 | 75 | 15 | 10 | 1C | 1C | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 60 | 0.2 | 0.3 | 0.1 | 4 | 7 | 5 | 0 | 20 | 10 | 0 | 0 | 65 | 0 | | | | | | 0 | 5 | 5 | 0 | 0 | 0 | 2 | 0 | 65 | X | M | 60 | M | 0 | 0 | 0 | 75 | 75 | 30 | 10 | 1C | 1C | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 80 | 0.4 | 0.5 | 0.3 | 5 | 8 | 30 | 0 | 20 | 0 | 0 | 10 | 40 | 0 | | | | | | 0 | 25 | 5 | 0 | 0 | 0 | 5 | 5 | 0 | 30 | X | G | 60 | G | 0 | 0 | 0 | 50 | 75 | 40 | 10 | 1B | 1C | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 100 | 0.8 | 1.2 | 1.1 | 8 | 10 | 5 | 0 | 0 | 0 | 0 | 5 | 90 | 0 | | | | | 0.15 | 60 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | X | G | 60 | G | 0 | 0 | 0 | 75 | 85 | 15 | 10 | 1B | 1C | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 120 | 0.4 | 0.6 | 0.5 | 8 | 10 | 20 | 0 | 0 | 0 | 0 | 5 | 75 | 0 | | | | | 10 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 40 | X | M | 40 | M | 0 | 0 | 0 | 60 | 85 | 10 | 10 | 1C | 1B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 140 | 0.3 | 0.4 | 0.3 | 9 | 7 | 25 | 0 | 20 | 30 | 0 | 0 | 25 | 0 | | | | | 0 | 30 | 10 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 35 | 0 | 60 | G | 0 | 0 | 0 | 80 | 80 | 10 | 20 | 2B | 1B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 160 | 0.2 | 0.5 | 0.3 | 5 | 7 | 45 | 0 | 0 | 0 | 0 | 5 | 50 | 0 | | | | | 0 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 5 | X | G | 60 | G | 0 | 0 | 0 | 75 | 75 | 10 | 30 | 2B | 2B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 180 | 0.5 | 0.8 | 0.8 | 5 | 7 | 10 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | | | | | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 15 | X | G | 55 | G | 0 | 0 | 0 | 85 | 75 | 5 | 30 | 2C | 1B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 200 | 0.8 | 1.1 | 0.5 | 5 | 7 | 60 | 0 | 15 | 0 | 0 | 0 | 25 | 0 | | | | | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 5 | 65 | 0 | 0 | X | M | 55 | M | 0 | 0 | 0 | 80 | 75 | 5 | 30 | 2C | 1B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 220 | 0.7 | 0.8 | 0.6 | 6 | 8 | 50 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | | | | | 0.15 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | X | G | 65 | G | 0 | 0 | 0 | 55 | 75 | 5 | 20 | 2C | 1B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 240 | 0.4 | 0.6 | 0.5 | 7 | 9 | 45 | 0 | 10 | 0 | 0 | 0 | 45 | 0 | | | | | 0 | 10 | 20 | 0 | 0 | 0 | 0 | 0.15 | 0 | 0.15 | X | M | 85 | M | 0 | 0 | 0 | 70 | 85 | 10 | 10 | 1B | 1B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 260 | 0.5 | 0.4 | 0.2 | 3 | 6 | 40 | 10 | 60 | 0 | 0 | 0 | 20 | 10 | 0 | | | | | 2 | 30 | 5 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | X | G | 95 | G | 0 | 0 | 0 | 75 | 75 | 20 | 10 | 1B | 1B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 280 | 0.7 | 0.7 | 0.4 | 6 | 8 | 20 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | | | | | 10 | 5 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0.15 | | | 85 | M | 0 | 0 | 0 | 75 | 75 | 20 | 20 | 1B | 1B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 300 | 0.6 | 0.8 | 0.4 | 7 | 8 | 35 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | | | | | 2 | 2 | 5 | 0 | 0 | 0 | 0 | 0.15 | 0 | 0.15 | X | M | 55 | M | 0 | 0 | 0 | 75 | 65 | 30 | 20 | 1A | 2B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 320 | 0.5 | 0.7 | 0.5 | 8 | 9 | 20 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | | | | | 0.15 | 0.15 | 0 | 0 | 0 | 0 | 0 | 0.15 | 0 | 5 | X | M | 60 | M | 0 | 0 | 0 | 80 | 75 | 30 | 10 | 1B | 1C | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 340 | 0.5 | 0.9 | 0.5 | 8 | 9 | 25 | 0 | 25 | 0 | 0 | 5 | 45 | 0 | | | | | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | M | 65 | M | 0 | 0 | 0 | 75 | 80 | 20 | 10 | 1C | 1B | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 360 | 0.5 | 0.7 | 0.7 | 4 | 6 | 15 | 0 | 10 | 0 | 0 | 15 | 60 | 0 | | | | | 0 | 5 | 2 | 0.15 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | X | M | 70 | M | 0 | 0 | 0 | 80 | 80 | 20 | 10 | 1B | 1C | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 380 | 0.3 | 0.3 | 0.3 | 6 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 45 | 45 | 0 | | | | | 0 | 40 | 15 | 0 | 0 | 0 | 0 | 0 | 0.15 | X | M | 65 | M | 0 | 0 | 0 | 85 | 85 | 10 | 30 | 1B | 1B | | |
| OK121300-01-0150H | Delaware Creek | 24040 | 14-Sep-01 | Downstream | 2 | 400 | 0.3 | 0.4 | 0.6 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 50 | 30 | 0 | | | | | 10 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | X | M | 55 | M | 0 | 0 | 0 | 75 | 80 | 30 | 10 | 1B | 1B | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 20 | 0.1 | 0.1 | 0.1 | 26 | 28 | 7 | 1 | 2 | 0 | 0 | 85 | 5 | 0 | | | | X | 0 | 0.5 | 0.5 | 0 | 2 | 0 | 0 | 0.5 | 2 | 0 | 25 | 65 | M | 0 | 0 | 0 | 65 | 75 | 50 | 50 | 1B | 1B | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 40 | 0.1 | 0.1 | 0.1 | 28 | 29 | 5 | 0 | 2 | 0 | 0 | 88 | 5 | 0 | | | | X | 0.5 | 0 | 0.5 | 0.5 | 1 | 0 | 0 | 0.5 | 1 | 0 | 25 | 65 | M | 0 | 0 | 0 | 55 | 75 | 50 | 50 | 1B | 1B | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 60 | 0.1 | 0.1 | 0.1 | 23 | 24 | 4 | 0 | 0 | 0 | 0 | 94 | 2 | 0 | | | | X | 0 | 0 | 0.5 | 0 | 2 | 0 | 0 | 0.5 | 1 | 0 | 20 | 70 | M | 0 | 0 | 0 | 60 | 75 | 50 | 50 | 1B | 1B | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 80 | 0.1 | 0.1 | 0.1 | 24 | 26 | 2 | 0 | 0 | 0 | 0 | 96 | 2 | 0 | X | | | X | 0 | 0 | 0.5 | 0 | 1 | 0 | 0 | 0.5 | 0.5 | 0 | 10 | 75 | G | 0 | 0 | 0 | 70 | 70 | 50 | 50 | 1B | 1B | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 100 | 0.1 | 0.1 | 0.1 | 24 | 27 | 2 | 0 | 2 | 0 | 0 | 94 | 2 | 0 | | | | X | 0 | 0 | 0.5 | 0 | 1 | 0 | 0.5 | 0 | 1 | 0 | 40 | 80 | G | 0 | 5 | 0 | 1 | 50 | 50 | 30 | 20 | 1A | 2B | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 120 | 0.1 | 0.1 | 0.1 | 27 | 34 | 1 | 0 | 4 | 0 | 0 | 93 | 2 | 0 | | | | X | 0 | 0 | 0.5 | 0 | 1 | 0 | 0.5 | 0.5 | 1 | 0 | 5 | 80 | G | 0 | 5 | 0 | 1 | 45 | 50 | 25 | 30 | 1B | 1B | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 140 | 0.1 | 0.2 | 0.1 | 25 | 30 | 2 | 0 | 3 | 1 | 0 | 92 | 2 | 0 | | | | X | 0.5 | 0 | 0.5 | 0 | 1 | 0 | 0.5 | 0.5 | 1 | 0 | 5 | 75 | M | 0 | 0 | 0 | 60 | 50 | 35 | 50 | 1B | 1B | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 160 | 0.1 | 0.1 | 0.1 | 25 | 28 | 2 | 0 | 2 | 1 | 0 | 93 | 2 | 0 | | | | X | 0 | 0 | 0.5 | 0 | 1 | 0 | 0 | 0.5 | 1 | 0 | 10 | 60 | M | 0 | 5 | 0 | 1 | 60 | 50 | 25 | 35 | 1C | 1C | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 180 | 0.1 | 0.2 | 0.1 | 20 | 23 | 1 | 0 | 2 | 2 | 1 | 93 | 1 | 0 | | | | X | 0.5 | 0 | 0.5 | 0 | 1.5 | 0 | 0 | 0.5 | 2 | 0 | 5 | 60 | M | 0 | 10 | 0 | 1 | 50 | 60 | 50 | 25 | 1C | 1C | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 200 | 0.1 | 0.3 | 0.1 | 21 | 24 | 5 | 2 | 5 | 5 | 0 | 80 | 3 | 0 | | | | X | 0.5 | 0 | 0 | 0 | 2 | 0 | 0 | 0.5 | 3 | 0 | 5 | 65 | M | 0 | 0 | 0 | 60 | 65 | 50 | 25 | 1B | 1C | | | |
| OK121300-02-0010C | Bird Creek | 24035 | 10-Sep-01 | Upstream | 1.1 | 220 | 0.2 | 0.1 | 0.2 | 24 | 26 | 2 | 1 | 10 | 7 | 0 | 78 | 2 | 0 | X | | | X | 0.5 | 0 | 0.5 | 0 | 3 | 0.5 | 0.5 | 5 | 0 | 5 | 60 | M | 0 | 0 | 0 | 50 | 70 | 50 | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSilicIay | SubSand | SubGravel | SubCobble | SubBoulder | SubBecken | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition |
|-------------------|--------------------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|-----------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|
| OK121300-04-0010C | Hominy Creek: downstream | 24037 | 11-Sep-01 | Downstream | 1.3 | 380 | 1.5 | 1.7 | 1.1 | 16 | 18 | 40 | 0 | 0 | 0 | 0 | 0 | 20 | 40 | | | X | | 0 | 45 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | | | 75 | M | 0 | 0 | 0 | 0 | 75 | 70 | 50 | 50 | 1B | 1B | |
| OK121300-04-0010C | Hominy Creek: downstream | 24037 | 11-Sep-01 | Downstream | 1.3 | 400 | 1.7 | 2 | 1.5 | 16 | 18 | 60 | 0 | 0 | 0 | 0 | 0 | 40 | | | | X | | 0 | 55 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | | | 65 | M | 0 | 0 | 0 | 0 | 75 | 65 | 50 | 50 | 1C | 2B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 20 | 0.2 | 0.1 | 0.1 | 11 | 13 | 0 | 45 | 25 | 15 | 5 | 0 | 10 | 0 | | | X | | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 0.5 | 8 | 0 | 30 | | | 70 | M | 20 | 0 | 3 | 0 | 80 | 75 | 0 | 2B | 2B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 40 | 0.3 | 0.2 | 0.1 | 7 | 14 | 0 | 0 | 40 | 50 | 5 | 0 | 5 | 0 | | | X | | 0.5 | 0.5 | 1 | 0 | 0 | 0 | 0.5 | 25 | 0 | 0 | | | 65 | G | 50 | 0 | 4 | 0 | 80 | 75 | 15 | 0 | 1B | 2B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 60 | 0.1 | 0.1 | 0.1 | 4 | 14 | 0 | 0 | 65 | 20 | 0 | 0 | 15 | 0 | | | X | X | 0.5 | 0.5 | 1.5 | 0 | 0 | 0 | 0.5 | 20 | 0 | 5 | X | X | 80 | M | 0 | 0 | 0 | 85 | 80 | 25 | 15 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 80 | 0.1 | 0.1 | 0.1 | 7 | 18 | 0 | 0 | 85 | 10 | 0 | 0 | 5 | 0 | | | X | | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0.5 | 15 | 0 | 20 | X | X | 60 | M | 40 | 0 | 3 | 0 | 85 | 80 | 30 | 20 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 100 | 0.1 | 0.1 | 0.1 | 2 | 19 | 0 | 0 | 40 | 55 | 0 | 0 | 5 | 0 | | | X | X | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 20 | 5 | 0 | X | X | 70 | M | 0 | 0 | 0 | 80 | 80 | 35 | 30 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 120 | 0.1 | 0.2 | 0.1 | 6 | 16 | 25 | 0 | 65 | 10 | 0 | 0 | 0 | 0 | | | X | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0.5 | 14 | 0 | 5 | X | X | 60 | M | 70 | 0 | 3 | 0 | 85 | 70 | 40 | 50 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 140 | 0.5 | 0.4 | 0.1 | 7 | 19 | 0 | 75 | 15 | 0 | 0 | 0 | 10 | 0 | | | X | | 0 | 0.5 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | 10 | X | X | 60 | M | 40 | 0 | 3 | 0 | 85 | 65 | 50 | 50 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 160 | 0.7 | 0.6 | 0.3 | 13 | 20 | 0 | 40 | 15 | 30 | 5 | 0 | 10 | 0 | | | X | | 0 | 1 | 1 | 1.5 | 0 | 0 | 0 | 16 | 0 | 5 | | | 65 | M | 70 | 0 | 4 | 0 | 85 | 70 | 50 | 50 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 180 | 0.1 | 0.2 | 0.1 | 12 | 17 | 0 | 80 | 0 | 10 | 0 | 0 | 10 | 0 | | | X | | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 0.5 | 4 | 0 | 0 | | | 70 | M | 30 | 0 | 4 | 0 | 80 | 70 | 50 | 50 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 200 | 0.1 | 0.1 | 0.1 | 3 | 19 | 0 | 60 | 30 | 0 | 0 | 0 | 10 | 0 | | | X | | 0 | 0.5 | 2.5 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | X | X | 75 | M | 0 | 0 | 0 | 85 | 75 | 50 | 50 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 220 | 0.1 | 0.2 | 0.1 | 7 | 14 | 0 | 55 | 20 | 0 | 0 | 0 | 25 | 0 | | | X | | 0 | 0.5 | 1 | 0 | 0 | 0 | 0.5 | 11 | 0 | 0 | X | X | 85 | M | 0 | 0 | 0 | 85 | 70 | 40 | 40 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 240 | 0.1 | 0.2 | 0.1 | 11 | 16 | 0 | 80 | 0 | 0 | 0 | 0 | 20 | 0 | | | X | | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | X | X | 90 | M | 0 | 0 | 0 | 80 | 80 | 50 | 40 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 260 | 0.3 | 0.4 | 0.4 | 10 | 16 | 15 | 75 | 0 | 0 | 0 | 0 | 10 | 0 | | | X | | 0 | 1.5 | 0.5 | 0 | 0 | 0 | 0.5 | 5 | 0 | 0 | | | 80 | M | 0 | 30 | 0 | 2.5 | 80 | 75 | 50 | 50 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 280 | 0.1 | 0.3 | 0.4 | 6 | 16 | 0 | 45 | 40 | 10 | 0 | 0 | 5 | 0 | | | X | | 0.5 | 1 | 1.5 | 0.5 | 0 | 0 | 0 | 30 | 0 | 15 | | | 75 | M | 0 | 20 | 0 | 2 | 75 | 75 | 50 | 30 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 300 | 0.1 | 0.1 | 0.1 | 8 | 17 | 0 | 75 | 10 | 5 | 10 | 0 | 0 | 0 | | | X | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 35 | 0 | 15 | | | 70 | M | 40 | 0 | 1.5 | 0 | 80 | 75 | 50 | 35 | 1B | 1B | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 320 | 0.1 | 0.1 | 0.1 | 6 | 15 | 0 | 20 | 80 | 0 | 0 | 0 | 0 | 0 | | | X | X | 0 | 0 | 0.5 | 0 | 0.5 | 0 | 0.5 | 0 | 0 | 35 | 5 | 5 | X | X | 70 | M | 0 | 0 | 0 | 80 | 70 | 50 | 35 | 1B | 1B |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 340 | 0.1 | 0.1 | 0.1 | 8 | 16 | 0 | 30 | 50 | 10 | 0 | 0 | 10 | 0 | | | X | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | X | X | 80 | M | 0 | 0 | 0 | 80 | 70 | 50 | 30 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 360 | 0.2 | 0.2 | 0.1 | 10 | 15 | 0 | 45 | 45 | 0 | 0 | 0 | 10 | 0 | | | X | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | | | 80 | M | 0 | 0 | 0 | 75 | 70 | 50 | 50 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 380 | 0.1 | 0.1 | 0.1 | 12 | 15 | 10 | 80 | 0 | 0 | 0 | 0 | 10 | 0 | | | X | | 1 | 1.5 | 0 | 0 | 0 | 0 | 0.5 | 4 | 0 | 0 | | | 90 | M | 0 | 0 | 0 | 80 | 80 | 50 | 25 | 1B | 1B | | |
| OK121300-04-0280G | Hominy Creek | 24041 | 04-Oct-01 | Downstream | 1.1 | 400 | 0.1 | 0.1 | 0.1 | 2 | 17 | 0 | 35 | 60 | 5 | 0 | 0 | 0 | 0 | | | X | X | 0 | 0 | 0.5 | 0 | 0 | 0 | 0.5 | 7 | 10 | 5 | X | X | 90 | M | 0 | 0 | 0 | 80 | 70 | 50 | 30 | 1B | 1B | | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 60 | 0 | 10 | 1C | | | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 65 | 40 | 0 | 10 | 1C |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 70 | 0 | 10 | 1C | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 80 | 0.1 | 0.2 | 0.1 | 10 | 22 | 5 | 30 | 15 | 0 | 50 | 0 | 0 | 0 | | | X | | 0 | 0 | 1 | 0 | 0.5 | 0 | 0 | 0 | 10 | 0 | 55 | | | 65 | M | 50 | 0 | 3 | 0 | 80 | 70 | 5 | 10 | 2C | 1C |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 100 | 0.3 | 0.5 | 0.3 | 14 | 20 | 5 | 40 | 55 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 10 | 0 | 35 | | | 60 | M | 80 | 0 | 2 | 0 | 75 | 70 | 5 | 10 | 2C | 1C | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 120 | 0.3 | 0.3 | 0.2 | 7 | 13 | 10 | 0 | 50 | 40 | 0 | 0 | 0 | 0 | | | X | | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 20 | 0 | 15 | | | 60 | M | 10 | 0 | 1 | 0 | 70 | 45 | 5 | 15 | 2C | 1C | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 140 | 0.1 | 0.1 | 0.1 | 1.5 | 20 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | | | 45 | M | 70 | 0 | 1 | 0 | 75 | 40 | 5 | 10 | 2C | 1C | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 160 | 0.2 | 0.5 | 0.2 | 20 | 22 | 25 | 20 | 5 | 50 | 0 | 0 | 0 | 0 | | | X | | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 40 | | | 75 | M | 10 | 0 | 0.5 | 0 | 60 | 75 | 0 | 10 | 1C | | |
| OK121400-01-0270G | Curl Creek | 23909 | 30-Aug-01 | Upstream | 1.33 | 180 | 0.6 | 0.8 | 1 | 20 | 23 | 50 | 10 | 0 | 40 | 0 | 0 | 0 | 0 | | | X | | 0.5 | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSiltClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBerrnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | |
|-------------------|------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 300 | 0.8 | 1.4 | 1.8 | 8 | 16 | 5 | 0 | 65 | 20 | 0 | 0 | 10 | 0 | | X | | | | 5 | 0.15 | 0 | 0 | 0 | 0 | 0 | 15 | 25 | 0.15 | | | 85 | M | 0 | 0 | 0 | 0 | 45 | 65 | 40 | 50 | 1C | 1B | |
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 320 | 0.4 | 0.7 | 0.7 | 6 | 16 | 30 | 0 | 30 | 10 | 0 | 0 | 30 | 0 | | X | | | | 15 | 20 | 0 | 5 | 0 | 0 | 0 | 15 | 0 | 30 | 0.15 | | 80 | M | 0 | 3 | 0 | 0 | 2 | 45 | 80 | 40 | 40 | 1C | 1B |
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 340 | 0.3 | 0.5 | 0.2 | 7 | 18 | 10 | 0 | 15 | 5 | 0 | 65 | 5 | 0 | | X | | | | 5 | 0.15 | 0 | 0 | 0 | 0 | 0.15 | 0.15 | 35 | 5 | | 75 | M | 0 | 10 | 0 | 3 | 45 | 80 | 40 | 50 | 1C | 1C | | |
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 360 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 65 | M | 0 | 50 | 0 | 8 | 45 | 85 | 15 | 15 | 1C | 2A | | | |
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 380 | 0.1 | 0.2 | 0.2 | 2 | 20 | 10 | 0 | 55 | 0 | 0 | 30 | 5 | 0 | | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | | 80 | M | 0 | 40 | 0 | 8 | 55 | 85 | 15 | 20 | 1B | 1B | | |
| OK121400-03-0170C | Buck Creek | 24033 | 04-Sep-01 | Downstream | 1.35 | 400 | 0.3 | 0.2 | 0.3 | 6 | 20 | 5 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 50 | 0.15 | | 80 | M | 0 | 0 | 0 | 0 | 45 | 75 | 35 | 10 | 1C | 1B | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 20 | 0.1 | 0.1 | 0.1 | 7 | 22 | 15 | 0 | 20 | 65 | 0 | 0 | 0 | 0 | | X | X | | | 0 | 1 | 2 | 0 | 0 | 15 | 0 | 30 | 5 | 70 | | 70 | M | 0 | 0 | 0 | 0 | 70 | 75 | 0 | 0 | 2B | 2B | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 40 | 0.1 | 0.1 | 0.1 | 6 | 20 | 5 | 0 | 25 | 65 | 0 | 0 | 5 | 0 | | X | | | | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 0 | 35 | 5 | 10 | X | X | 80 | M | 0 | 0 | 0 | 0 | 80 | 80 | 20 | 20 | 1B | 1B |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 60 | 0.1 | 0.1 | 0.1 | 6 | 21 | 5 | 0 | 40 | 45 | 0 | 0 | 10 | 0 | | X | | | | 0 | 0 | 0.5 | 0 | 0 | 5 | 0 | 35 | 5 | 0 | X | X | 90 | M | 0 | 0 | 0 | 0 | 80 | 80 | 15 | 15 | 1B | 1C | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 80 | 0.1 | 0.1 | 0.1 | 3 | 29 | 10 | 0 | 65 | 15 | 0 | 0 | 10 | 0 | | X | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 30 | 10 | 5 | X | X | 80 | M | 15 | 0 | 0.5 | 0 | 75 | 80 | 15 | 15 | 1B | 1C | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 100 | 0.5 | 0.5 | 0.5 | 10 | 14 | 35 | 40 | 15 | 10 | 0 | 0 | 0 | 0 | | X | | | | 0.5 | 1.5 | 0.5 | 0.5 | 0 | 0 | 0.5 | 15 | 0 | 5 | X | X | 75 | M | 50 | 15 | 0.5 | 1.5 | 70 | 80 | 20 | 15 | 1B | 1C | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 120 | 0.5 | 0.8 | 0.9 | 7 | 12 | 15 | 65 | 0 | 15 | 0 | 0 | 5 | 0 | | X | | | | 0.5 | 0 | 1 | 0.5 | 0 | 0 | 0 | 8 | 0 | 10 | | 90 | M | 0 | 0 | 0 | 0 | 70 | 70 | 20 | 20 | 1B | 1B | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 140 | 0.8 | 0.9 | 1 | 9 | 12 | 15 | 80 | 0 | 0 | 0 | 5 | 0 | | X | | | | | 1 | 0 | 1 | 1 | 0 | 0 | 0.5 | 3.5 | 0 | 0 | 100 | M | 0 | 0 | 0 | 0 | 70 | 75 | 20 | 25 | 1B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 160 | 0.6 | 0.9 | 1.1 | 10 | 12 | 25 | 60 | 0 | 5 | 0 | 10 | 0 | | X | | | | | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 4 | 0 | 10 | | 100 | M | 0 | 0 | 0 | 0 | 70 | 80 | 0 | 15 | 2B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 180 | 0.1 | 0.4 | 0.8 | 11 | 15 | 30 | 65 | 0 | 0 | 0 | 5 | 0 | | X | | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | | 100 | M | 0 | 15 | 0 | 1.5 | 70 | 80 | 0 | 15 | 2B | 1B | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 200 | 0.7 | 0.8 | 0.6 | 12 | 15 | 50 | 40 | 0 | 0 | 0 | 10 | 0 | | X | | | | | 2.5 | 0.5 | 0 | 0 | 0 | 0 | 0.5 | 0 | 5 | | 100 | M | 0 | 0 | 0 | 0 | 75 | 80 | 0 | 15 | 2B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 220 | 0.5 | 0.6 | 0.5 | 9 | 12 | 60 | 35 | 0 | 0 | 0 | 5 | 0 | | X | | | | | 2 | 0.5 | 0 | 0 | 0 | 0 | 0.5 | 0 | 5 | | 90 | M | 0 | 0 | 0 | 0 | 70 | 80 | 0 | 15 | 2B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 240 | 0.6 | 0.4 | 0.6 | 7 | 11 | 55 | 15 | 10 | 0 | 0 | 0 | 20 | | X | | | | 0.5 | 2.5 | 1.5 | 0.5 | 0 | 0 | 0.5 | 3.5 | 0 | 0 | 100 | M | 0 | 0 | 0 | 0 | 60 | 80 | 0 | 12 | 2B | 1B | | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 260 | 0.3 | 0.5 | 0.5 | 7 | 12 | 45 | 0 | 20 | 25 | 0 | 0 | 10 | 0 | | X | | | | 0.5 | 3 | 2 | 1 | 0 | 0 | 1 | 4 | 0 | 10 | | 100 | M | 0 | 0 | 0 | 0 | 70 | 75 | 10 | 12 | 1B | 1B | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 280 | 0.7 | 0.7 | 0.6 | 8 | 11 | 45 | 30 | 10 | 10 | 0 | 0 | 5 | 0 | | X | | | | 0.5 | 3.5 | 3 | 0.5 | 0 | 0 | 0.5 | 7 | 0 | 5 | X | X | 100 | M | 0 | 0 | 0 | 0 | 80 | 75 | 10 | 15 | 2B | 1B | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 300 | 0.5 | 0.9 | 0.9 | 8 | 11 | 55 | 25 | 0 | 0 | 10 | 0 | 10 | 0 | | X | | | | 2.5 | 1 | 0 | 0 | 0 | 0 | 1.5 | 0 | 0 | 0 | 80 | M | 0 | 0 | 0 | 0 | 60 | 75 | 12 | 12 | 1B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 320 | 0.9 | 0.9 | 1 | 0.5 | 15 | 17 | 70 | 0 | 0 | 0 | 30 | 0 | 0 | | X | | | | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | M | 0 | 0 | 0 | 0 | 70 | 75 | 0 | 8 | 2B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 340 | 0.5 | 0.7 | 0.6 | 14 | 17 | 40 | 50 | 0 | 0 | 0 | 10 | 0 | | X | | | | 0.5 | 0 | 0.5 | 0.5 | 0 | 0 | 0.5 | 1 | 0 | 0 | 90 | M | 0 | 0 | 0 | 0 | 80 | 75 | 0 | 10 | 2B | 1B | | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 360 | 0.3 | 0.6 | 0.3 | 15 | 18 | 70 | 0 | 0 | 10 | 0 | 0 | 5 | 15 | | X | | | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0.5 | 5 | 0 | 0 | 100 | M | 0 | 0 | 0 | 0 | 80 | 75 | 0 | 20 | 2B | 1B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 380 | 0.3 | 0.6 | 0.8 | 11 | 15 | 30 | 20 | 0 | 0 | 0 | 10 | 40 | | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | M | 0 | 40 | 0 | 0 | 3 | 75 | 80 | 0 | 15 | 2B | 2B | | | |
| OK121400-04-0010F | Sand Creek | 24036 | 10-Sep-01 | Downstream | 1.1 | 400 | 0.4 | 0.7 | 0.4 | 10 | 18 | 60 | 25 | 0 | 0 | 0 | 15 | 0 | | X | | | | 0.5 | 0.5 | 1 | 0.5 | 0 | 0 | 0 | 1.5 | 0 | 40 | | 100 | M | 0 | 0 | 0 | 0 | 85 | 85 | 0 | 0 | 2B | 2B | | | |
| OK121500-02-0090D | Bull Creek | 23891 | 27-Aug-01 | Downstream | 1.28 | 20 | 1 | 1.3 | 1.4 | 15 | 18 | 0 | 0 | 80 | 10 | 0 | 0 | 0 | | X | | | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 35 | 0 | 0 | 60 | M | 0 | 0 | 0 | 0 | 70 | 75 | 0 | 0 | 2B | 2C | | | | |
| OK121500-02-0090D | Bull Creek | 23891 | 27-Aug-01 | Downstream | 1.28 | 40 | 0.2 | 0.8 | 1.3 | 13 | 15 | 0 | 0 | 80 | 10 | 10 | 0 | 0 | | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | X | X | 50 | M | 0 | 0 | 0 | 0 | 75 | 70 | 0 | 0 | 2B | 2C | | |
| OK121500-02-0090D | Bull Creek | 23891 | 27-Aug-01 | Downstream | 1.28 | 60 | 0.5 | 0.8 | 0.7 | 8 | 20 | 0 | 0 | 80 | 10 | 10 | 0 | 0 | | X | | | | | 0 | 1 | 0.5 | 0.5 | 0 | 0 | 0 | 25 | 0 | 0 | X | X | 60 | M | 0 | 0 | 0 | 70 | 75 | 10 | 0 | 2B | 2C | | |
| OK121500-02-0090D | Bull Creek | 23891 | 27-Aug-01 | Downstream | 1.28 | 80 | 0.5 | 0.4 | 0.3 | 10 | 18 | 55 | 0 | 35 | 0 | 0 | 10 | 0 | | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | X | X | 45 | M | 0 | 0 | 0 | 65 | 75 | 0 | 0 | 2A | 2B | | | |
| OK121500-02-0090D | Bull Creek | 23891 | 27-Aug-01 | Downstream | 1.28 | 100 | 0.4 | 0.6 | 0.3 | 13 | 18 | 0 | 0 | 70 | 20 | 10 | 0 | 0 | | X | | | | | 0 | 0</ | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSiltClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBerrnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | |
|-------------------|------------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 260 | 0.3 | 0.2 | 0.1 | 8 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | | X | | 1.5 | 1.5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | X | 55 | M | 0 | 100 | 0 | 1 | 35 | 45 | 30 | 50 | 1A | 1A |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 280 | 0.3 | 0.3 | 0.1 | 10 | 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | | X | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | X | 55 | M | 0 | 100 | 0 | 1 | 40 | 45 | 40 | 50 | 1A | 1A |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 300 | 1 | 1 | 0.6 | 8 | 10 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | X | X | | 1 | 0 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | X | 65 | M | 0 | 70 | 0 | 1 | 60 | 65 | 20 | 50 | 1A | 1A |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 320 | 0.8 | 0.8 | 0.8 | 10 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | X | X | | 3 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | X | 80 | M | 0 | 0 | 0 | 45 | 40 | 10 | 50 | 2B | 1A | | |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 340 | 0.4 | 0.4 | 0.6 | 11 | 13 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | X | X | | 1 | 1.5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | X | 60 | T | 40 | 0 | 1 | 0 | 45 | 30 | 10 | 50 | 2B | 1A | |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 360 | 0.5 | 0.7 | 0.7 | 8 | 14 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | X | | | 1.5 | 2 | 1.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | X | 65 | G | 20 | 0 | 1 | 0 | 45 | 55 | 10 | 50 | 2B | 1A | |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 380 | 0.4 | 0.7 | 0.7 | 10 | 14 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | X | X | | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 60 | 10 | 50 | 2B | 1A | | |
| OK121500-02-0360D | Dog Creek | 25560 | 31-Jul-02 | Downstream | 1.69 | 400 | 0.6 | 0.8 | 0.8 | 11 | 14 | 20 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | X | | | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | X | 85 | M | 0 | 0 | 0 | 0 | 45 | 75 | 10 | 50 | 2B | 1A | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 20 | 0.2 | 0.2 | 0.2 | 4 | 10 | 10 | 0 | 10 | 20 | 50 | 20 | 0 | 0 | 0 | X | | | | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 75 | 0 | 35 | X | 95 | M | 0 | 0 | 0 | 65 | 65 | 20 | 40 | 1A | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 40 | 0.3 | 0.4 | 0.3 | 8 | 15 | 5 | 5 | 30 | 40 | 10 | 0 | 5 | 5 | X | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 15 | X | 75 | S | 10 | 20 | 1 | 1 | 70 | 65 | 15 | 45 | 1A | 1A | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 60 | 0.1 | 0.2 | 0.1 | 3 | 12 | 5 | 15 | 40 | 40 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 30 | X | 60 | S | 0 | 0 | 0 | 0 | 70 | 60 | 15 | 45 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 80 | 0.1 | 0.2 | 0.2 | 4 | 14 | 10 | 10 | 50 | 30 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 25 | X | 75 | S | 0 | 20 | 0 | 2 | 60 | 70 | 20 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 100 | 0.1 | 0.2 | 0.2 | 4 | 15 | 10 | 10 | 70 | 10 | 0 | 0 | 0 | 10 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 35 | X | 70 | M | 0 | 30 | 0 | 3 | 65 | 75 | 20 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 120 | 0.2 | 0.2 | 0.1 | 8 | 12 | 10 | 10 | 70 | 20 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 1 | 0 | 0.5 | 0 | 65 | 0 | 60 | X | 85 | M | 0 | 0 | 0 | 60 | 70 | 20 | 50 | 1B | 1A | | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 140 | 0.3 | 0.4 | 0.4 | 6 | 10 | 10 | 20 | 45 | 25 | 5 | 0 | 0 | 5 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 60 | 0 | 65 | X | 85 | M | 0 | 0 | 0 | 0 | 55 | 70 | 20 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 160 | 0.3 | 0.5 | 0.3 | 10 | 12 | 10 | 40 | 45 | 10 | 0 | 0 | 0 | 5 | X | | | | 0 | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 30 | 0 | 50 | X | 80 | M | 20 | 0 | 2 | 0 | 65 | 70 | 30 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 180 | 0.2 | 0.3 | 0.3 | 10 | 12 | 10 | 30 | 45 | 10 | 0 | 0 | 0 | 5 | X | | | | 1 | 0 | 1 | 0.5 | 0 | 0 | 0.5 | 0 | 10 | 0 | 10 | X | 85 | M | 0 | 0 | 0 | 0 | 60 | 75 | 40 | 50 | 1A | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 200 | 0.4 | 0.1 | 0.5 | 8 | 14 | 10 | 30 | 40 | 10 | 0 | 0 | 0 | 10 | X | | | | 0 | 0.5 | 0.5 | 0 | 0 | 0.5 | 0 | 10 | 0 | 10 | X | 85 | M | 0 | 10 | 0 | 3 | 45 | 75 | 40 | 40 | 1A | 2B | | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 220 | 0.5 | 0.8 | 0.4 | 6 | 16 | 10 | 35 | 45 | 10 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 15 | X | 60 | G | 0 | 30 | 0 | 3 | 55 | 65 | 20 | 20 | 2B | 2B | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 240 | 0.3 | 0.4 | 0.3 | 8 | 12 | 10 | 40 | 45 | 5 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | X | 50 | T | 20 | 40 | 1 | 2 | 50 | 60 | 10 | 20 | 2C | 2C | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 260 | 0.2 | 0.1 | 0.1 | 10 | 12 | 30 | 60 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | X | 30 | S | 30 | 30 | 1 | 2 | 60 | 65 | 10 | 30 | 2C | 2C |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 280 | 0.1 | 0.1 | 0.1 | 4 | 10 | 40 | 50 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 45 | X | 30 | T | 40 | 50 | 1 | 3 | 65 | 55 | 10 | 40 | 2C | 1B | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 300 | 0.8 | 1 | 0.5 | 12 | 14 | 20 | 45 | 25 | 0 | 0 | 0 | 0 | 10 | X | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | X | 45 | T | 20 | 30 | 1 | 2 | 65 | 45 | 20 | 50 | 2B | 1B | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 320 | 0.8 | 1 | 0.6 | 12 | 15 | 15 | 50 | 25 | 0 | 0 | 0 | 0 | 10 | X | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | X | 60 | M | 0 | 0 | 0 | 60 | 40 | 30 | 50 | 2B | 1B | | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 340 | 0.4 | 0.5 | 0.3 | 8 | 14 | 15 | 40 | 25 | 10 | 0 | 0 | 0 | 10 | X | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | X | 65 | M | 0 | 0 | 0 | 0 | 60 | 40 | 30 | 50 | 1B | 1B | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 360 | 0.4 | 0.6 | 0.2 | 9 | 14 | 10 | 40 | 30 | 10 | 0 | 0 | 0 | 10 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 0 | X | 80 | M | 0 | 0 | 0 | 65 | 35 | 30 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 380 | 0.5 | 0.7 | 0.3 | 10 | 12 | 10 | 40 | 30 | 10 | 0 | 0 | 0 | 10 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 5 | 0 | 10 | X | 45 | G | 40 | 0 | 1 | 0 | 70 | 50 | 30 | 50 | 1B | 1A | | |
| OK121500-02-0050C | California Creek | 23881 | 03-Aug-01 | Downstream | 1.7 | 400 | 0.2 | 0.2 | 0.1 | 6 | 10 | 5 | 35 | 40 | 20 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 15 | X | 50 | M | 30 | 0 | 2 | 0 | 70 | 55 | 20 | 50 | 2B | 1A | |
| OK121500-03-0010D | Big Creek | 24038 | 13-Sep-01 | Upstream | 1.01 | 20 | 0.2 | 0.1 | 0.1 | 6 | 18 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | X | | | | 0 | 1 | 0.5 | 0 | 1 | 0 | 0 | 0 | 2.5 | 0 | 0 | 0 | 5 | G | 0 | 0 | 0 | 0 | 75 | 70 | 0 | 0 | 2B | 2B | | |
| OK121500-03-0010D | Big Creek | 24038 | 13-Sep-01 | Upstream | 1.01 | 40 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 70 | 0 | 0 | 2B | 2B | | |
| OK1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubStrIClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBeechrock | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | | | |
|-------------------|--------------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|--------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|----|----|
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 220 | 0.1 | 0.2 | 0.2 | 2 | 26 | 0 | 2 | 35 | 43 | 20 | 0 | 0 | 0 | X | | | | | | | | | | | 85 | 0 | 50 | | | 95 | M | 0 | 0 | 0 | 0 | 40 | 35 | 45 | 50 | 1B | 1B | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 240 | 0 | 0 | 0 | 0 | 36 | 0 | 1 | 40 | 40 | 19 | 0 | 0 | 0 | | | X | | | | | | | | | 0 | 0 | 75 | | | 95 | M | 0 | 0 | 0 | 0 | 40 | 35 | 40 | 50 | 1B | 1B | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 260 | 0.1 | 0.1 | 0.1 | 2 | 36 | 0 | 0 | 10 | 65 | 25 | 0 | 0 | 0 | X | | | | | | | | | | 20 | 0 | 60 | | | 90 | M | 0 | 0 | 0 | 0 | 40 | 30 | 30 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 280 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 10 | 60 | 30 | 0 | 0 | 0 | | | X | | | | | | | | 0 | 0 | 40 | | | 60 | M | 75 | 0 | 1.3 | 0 | 80 | 20 | 30 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 300 | 0.2 | 0.3 | 0.2 | 4 | 36 | 0 | 0 | 40 | 50 | 10 | 0 | 0 | 0 | X | | | | | | | | | | 50 | 0 | 75 | | | 60 | S | 0 | 0 | 0 | 0 | 50 | 30 | 30 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 320 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 60 | 15 | 0 | 0 | 25 | | | | | X | | | | | | | 30 | 0 | 80 | | | 60 | T | 50 | 0 | 1.5 | 0 | 65 | 20 | 15 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 340 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 80 | 10 | 10 | 0 | 0 | 0 | | | X | | | | | | | | 20 | 0 | 80 | | | 60 | T | 20 | 0 | 1.5 | 0 | 75 | 20 | 10 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 360 | 0.5 | 0.7 | 0.3 | 16 | 22 | 0 | 2 | 80 | 18 | 0 | 0 | 0 | 0 | X | | | | | | | | | | 40 | 0 | 30 | | | 85 | M | 0 | 0 | 0 | 0 | 45 | 40 | 20 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 380 | 0.4 | 0.5 | 0.3 | 5 | 20 | 0 | 3 | 65 | 15 | 17 | 0 | 0 | 0 | X | | | | 1 | 0 | 0 | 1 | 0 | 0 | 80 | 0 | 20 | | | 60 | T | 40 | 0 | 1 | 0 | 70 | 20 | 40 | 50 | 1B | 1B | | | | | |
| OK121600-01-0060D | Ranger Creek | 23878 | 01-Aug-01 | Upstream | 1.1 | 400 | 0.1 | 0.2 | 0.1 | 4 | 20 | 0 | 0 | 5 | 5 | 0 | 90 | 0 | 0 | X | | | | | | | | | | 75 | 0 | 20 | | | 70 | T | 100 | 0 | 0.7 | 0 | 80 | 25 | 40 | 50 | 1B | 1B | | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 20 | 0.2 | 0.2 | 0.3 | 18 | 20 | 0 | 10 | 50 | 40 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0.5 | 0 | 0 | 1 | 0 | 80 | 0 | 10 | | | 80 | M | 0 | 20 | 0 | 1 | 45 | 50 | 30 | 50 | 1B | 1B | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 40 | 0.2 | 0.3 | 0.2 | 10 | 30 | 0 | 5 | 55 | 40 | 0 | 0 | 0 | 0 | | | | | | | 0 | 0 | 0.5 | 0 | 0 | 0 | 85 | 5 | 0 | | | 85 | G | 0 | 0 | 0 | 35 | 45 | 50 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 60 | 0.2 | 0.3 | 0.2 | 6 | 20 | 0 | 0 | 65 | 35 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 85 | 5 | 0 | | | 85 | G | 0 | 0 | 0 | 30 | 55 | 50 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 80 | 0.2 | 0.6 | 0.3 | 14 | 18 | 0 | 5 | 15 | 10 | 0 | 70 | 0 | 0 | X | | | | | 0 | 3 | 1 | 0 | 3 | 1 | 0 | 50 | 0 | 5 | X | X | 80 | M | 0 | 0 | 0 | 20 | 65 | 50 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 100 | 0.2 | 0.6 | 0.8 | 14 | 18 | 0 | 10 | 40 | 10 | 0 | 40 | 0 | 0 | X | | | | | 0.5 | 0 | 0 | 0 | 1 | 0 | 40 | 0 | 5 | X | X | 60 | G | 0 | 40 | 0 | 2 | 25 | 70 | 50 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 120 | 0.2 | 0.2 | 0.2 | 20 | 22 | 0 | 15 | 40 | 20 | 25 | 0 | 0 | 0 | X | X | | | | | 0 | 0 | 0.5 | 0 | 1 | 0 | 2 | 0 | 55 | 5 | 10 | X | X | 75 | M | 0 | 30 | 0 | 1 | 30 | 60 | 50 | 50 | 1A | 1A | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 140 | 0.3 | 0.4 | 0.3 | 10 | 20 | 0 | 10 | 60 | 20 | 10 | 0 | 0 | 0 | X | X | | | | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 70 | 5 | 15 | X | X | 75 | M | 0 | 0 | 0 | 20 | 45 | 50 | 50 | 1A | 1A | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 160 | 0.2 | 0.3 | 0.2 | 4 | 20 | 0 | 5 | 60 | 35 | 0 | 0 | 0 | 0 | X | | | | | | | | | | 85 | 5 | 10 | | | 80 | G | 0 | 0 | 0 | 0 | 45 | 40 | 50 | 50 | 1A | 1A | | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 180 | 0.4 | 0.3 | 0.2 | 12 | 18 | 0 | 15 | 55 | 25 | 5 | 0 | 0 | 0 | X | | | | | 1 | 0.5 | 0.5 | 1 | 0 | 0 | 0 | 85 | 0 | 5 | X | X | 60 | G | 0 | 0 | 0 | 50 | 50 | 20 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 200 | 0.3 | 0.3 | 0.2 | 18 | 20 | 0 | 10 | 40 | 10 | 0 | 40 | 0 | 0 | X | | | | | | 0 | 0 | 0.5 | 1 | 0 | 0 | 70 | 0 | 10 | X | X | 75 | G | 0 | 0 | 0 | 0 | 65 | 20 | 40 | 50 | 1A | 1B | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 220 | 0.3 | 0.5 | 0.2 | 20 | 21 | 0 | 10 | 30 | 5 | 0 | 60 | 0 | 0 | X | | | | | | 0 | 0 | 0.5 | 2 | 0 | 0 | 30 | 0 | 15 | X | X | 65 | G | 20 | 0 | 1 | 0 | 70 | 30 | 50 | 50 | 1A | 1A | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 240 | 0.2 | 0.2 | 0.2 | 21 | 23 | 0 | 5 | 10 | 0 | 5 | 80 | 0 | 0 | X | X | | | | | 0 | 0 | 0.5 | 0 | 2 | 0 | 0 | 35 | 5 | 10 | X | X | 60 | G | 0 | 30 | 0 | 1 | 60 | 50 | 50 | 50 | 1A | 1A | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 260 | 0.2 | 0.2 | 0.2 | 18 | 24 | 0 | 10 | 15 | 5 | 0 | 70 | 0 | 0 | X | | | X | | | | | | | 0 | 0 | 1 | 0 | 1.5 | 0 | 5 | 0 | 10 | 5 | 0 | 2 | 40 | 65 | 50 | 50 | 1A | 1A | | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 280 | 0.2 | 0.4 | 0.4 | 24 | 30 | 0 | 5 | 10 | 5 | 0 | 80 | 0 | 0 | X | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 10 | X | X | 40 | G | 0 | 70 | 0 | 2 | 25 | 70 | 50 | 50 | 1A | 1A | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 300 | 0.1 | 0.2 | 0.1 | 10 | 25 | 0 | 20 | 50 | 30 | 0 | 0 | 0 | 0 | X | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 65 | 5 | 0 | X | X | 60 | G | 0 | 70 | 0 | 2 | 20 | 70 | 50 | 50 | 1A | 1A |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 320 | 0.2 | 0.3 | 0.2 | 10 | 30 | 0 | 10 | 60 | 30 | 0 | 0 | 0 | 0 | | | X | | | | | | | | 0 | 0 | 0 | 0.5 | 0 | 80 | 5 | 0 | X | X | 60 | G | 0 | 50 | 0 | 2 | 20 | 65 | 50 | 50 | 1A | 1A |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 340 | 0.6 | 1 | 0.4 | 20 | 24 | 0 | 20 | 50 | 30 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0.5 | 0.5 | 0 | 3 | 0 | 0 | 85 | 0 | 10 | X | X | 60 | M | 0 | 40 | 0 | 2 | 75 | 40 | 50 | 50 | 1A | 1A | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 360 | 0.4 | 0.6 | 0.3 | 15 | 20 | 0 | 10 | 20 | 10 | 0 | 60 | 0 | 0 | X | | | | | 0 | 1.5 | 0.5 | 0 | 4 | 0 | 0 | 60 | 0 | 10 | X | X | 75 | M | 0 | 10 | 0 | 1 | 75 | 45 | 50 | 50 | 1A | 1A | | | |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 380 | 0.3 | 0.5 | 0.2 | 12 | 20 | 0 | 10 | 30 | 20 | 0 | 40 | 0 | 0 | X | | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 60 | 0 | 5 | X | X | 80 | M | 0 | 0 | 0 | 75 | 30 | 50 | 50 | 1A | 1A |
| OK121600-01-0100G | Fourteenmile Creek | 23879 | 01-Aug-01 | Downstream | 0 | 400 | 0.1 | 0.8 | 0.8 | 21 | 22 | 0 | 10 | 30 | 10 | 0 | 50 | 0 | 0 | X | | | | | 1 | 3 | 2 | 1 | 1 | 0 | 0 | 65 | 0 | 5 | X | X | 80 | M | 0 | 0 | 0 | 0 | 75 | 45 | 50 | 50 | 1A | 1A | | | |
| OK121600-01-0430M | Chouteau Creek | 23890 | 17-Aug-01 | Upstream | 1 | 20 | 0.8 | 1.2 | 0.6 | 12 | 14 | 15 | 60 | 15 | 10 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 25 | 0 | 20 | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSilClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBeesrock | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | |
|-------------------|----------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|------------|---------|-----------|-----------|------------|-------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 180 | 0.6 | 0.9 | 0.4 | 15 | 30 | 0 | 15 | 65 | 20 | 0 | 0 | 0 | 0 | X | | | | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 65 | 0 | 5 | X | X | 50 | T | 80 | 20 | 3 | 1 | 80 | 45 | 50 | 50 | 1A | 1A | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 200 | 0.4 | 0.7 | 0.3 | 20 | 30 | 0 | 20 | 70 | 10 | 0 | 0 | 0 | 0 | X | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 60 | 0 | 15 | X | X | 30 | T | 90 | 40 | 3 | 1 | 80 | 5 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 220 | 0.3 | 0.2 | 0.2 | 25 | 30 | 0 | 20 | 70 | 10 | 0 | 0 | 0 | 0 | X | | | | | 1.5 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 10 | X | X | 30 | T | 90 | 45 | 4 | 1 | 85 | 60 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 240 | 0.2 | 0.2 | 0.2 | 30 | 35 | 0 | 10 | 60 | 30 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 15 | X | X | 45 | T | 80 | 40 | 4 | 1 | 85 | 60 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 260 | 0.2 | 0.2 | 0.2 | 20 | 35 | 0 | 15 | 60 | 25 | 0 | 0 | 0 | 0 | X | | | | | 2 | 1 | 1 | 0 | 0 | 0 | 50 | 5 | 20 | X | X | 40 | S | 60 | 30 | 3 | 1 | 80 | 40 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 280 | 0.2 | 0.2 | 0.2 | 15 | 35 | 0 | 10 | 60 | 30 | 0 | 0 | 0 | 0 | X | | | | | 3 | 1 | 1 | 0 | 0 | 0 | 55 | 5 | 0 | X | X | 45 | T | 75 | 25 | 3 | 1 | 70 | 30 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 300 | 0.2 | 0.2 | 0.2 | 10 | 30 | 0 | 10 | 70 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 65 | 5 | 10 | X | X | 50 | M | 85 | 20 | 3 | 1 | 65 | 25 | 50 | 50 | 1A | 1B | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 320 | 0.3 | 0.3 | 0.2 | 12 | 40 | 0 | 10 | 55 | 35 | 0 | 0 | 0 | 0 | X | | | | | 4 | 2 | 1 | 0 | 0 | 0 | 70 | 5 | 0 | X | X | 40 | G | 70 | 0 | 3 | 0 | 65 | 20 | 50 | 50 | 1A | 1B | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 340 | 0.2 | 0.2 | 0.2 | 14 | 40 | 0 | 5 | 60 | 35 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 70 | 5 | 0 | X | X | 45 | G | 60 | 0 | 3 | 0 | 70 | 20 | 50 | 50 | 1A | 1B | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 360 | 0.2 | 0.2 | 0.2 | 4 | 40 | 0 | 5 | 55 | 40 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 5 | 5 | X | X | 50 | G | 60 | 0 | 3 | 0 | 60 | 20 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 380 | 0.2 | 0.2 | 0.2 | 4 | 45 | 0 | 10 | 60 | 30 | 0 | 0 | 0 | 0 | X | | | | | 1 | 3 | 1 | 0 | 0 | 0 | 60 | 5 | 10 | X | X | 60 | G | 55 | 0 | 2 | 0 | 65 | 20 | 50 | 50 | 1A | 1A | | |
| OK121600-02-0030D | Saline Creek | 23880 | 02-Aug-01 | Downstream | 1 | 400 | 0.2 | 0.3 | 0.2 | 5 | 50 | 0 | 20 | 70 | 10 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 5 | 20 | X | X | 40 | G | 80 | 0 | 3 | 0 | 75 | 15 | 50 | 50 | 1A | 1A | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 80 | G | 0 | 0 | 0 | 0 | 40 | 45 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 85 | G | 0 | 0 | 0 | 0 | 40 | 50 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 80 | G | 0 | 0 | 0 | 0 | 45 | 45 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 80 | 0.1 | 0.1 | 0.1 | 3 | 40 | 0 | 20 | 60 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | | | 80 | G | 0 | 0 | 0 | 0 | 45 | 50 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 70 | G | 0 | 0 | 0 | 0 | 35 | 35 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 120 | 0.3 | 0.3 | 0.2 | 4 | 40 | 0 | 10 | 30 | 60 | 0 | 0 | 0 | 0 | X | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 20 | 0 | 50 | X | G | 60 | T | 0 | 0 | 0 | 0 | 50 | 40 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 140 | 0.2 | 0.2 | 0.1 | 5 | 40 | 10 | 10 | 60 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 45 | 0 | 30 | X | G | 45 | 0 | 1 | 0 | 60 | 45 | 50 | 50 | 2B | 2B | | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 160 | 0.4 | 0.6 | 0.2 | 6 | 40 | 15 | 5 | 50 | 30 | 0 | 0 | 0 | 0 | X | | | | | 1 | 3 | 4 | 1 | 0 | 1 | 0 | 55 | 0 | 15 | X | G | 65 | 30 | 0 | 1 | 0 | 60 | 50 | 50 | 50 | 2B | 2B | | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 180 | 0.2 | 0.3 | 0.2 | 6 | 50 | 10 | 5 | 35 | 50 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 60 | 0 | 1 | 60 | 0 | 20 | X | G | 70 | G | 0 | 0 | 0 | 45 | 35 | 50 | 50 | 2B | 2B |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 200 | 0.1 | 0.2 | 0.1 | 4 | 50 | 0 | 10 | 30 | 60 | 0 | 0 | 0 | 0 | X | X | | | | 0 | 0 | 1.5 | 1 | 0 | 0 | 50 | 1 | 65 | 15 | 25 | X | G | 80 | G | 0 | 0 | 0 | 45 | 20 | 50 | 50 | 2B | 2B | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 220 | 0.2 | 0.4 | 0.2 | 6 | 50 | 0 | 30 | 50 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1 | 1 | 0 | 0 | 80 | 4 | 0 | 40 | 0 | 0 | X | 85 | G | 0 | 0 | 0 | 0 | 65 | 20 | 50 | 50 | 2B | 2B | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 240 | 0.2 | 0.3 | 0.4 | 10 | 50 | 0 | 20 | 60 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 6 | 10 | 0 | 0 | 60 | 6 | 0 | 35 | 0 | 0 | X | 60 | G | 35 | 0 | 1.5 | 0 | 60 | 20 | 50 | 50 | 2B | 2B | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 260 | 0.4 | 0.8 | 0.4 | 20 | 50 | 0 | 10 | 50 | 30 | 0 | 10 | 0 | 0 | X | | | | | 0 | 3 | 4 | 0 | 3 | 70 | 4 | 0 | 45 | 0 | 0 | X | 60 | G | 30 | 0 | 1 | 0 | 60 | 50 | 50 | 50 | 2B | 2C | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 280 | 0.6 | 1.1 | 1.1 | 10 | 14 | 0 | 5 | 45 | 40 | 0 | 10 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 6 | 40 | 3 | 0 | 55 | 0 | 10 | X | 75 | M | 0 | 0 | 0 | 0 | 20 | 65 | 50 | 50 | 2B | 2C |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 300 | 0.3 | 1 | 0.4 | 12 | 20 | 0 | 5 | 20 | 25 | 0 | 50 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 0 | 45 | 0 | 5 | X | 70 | G | 0 | 0 | 0 | 0 | 25 | 45 | 50 | 50 | 2B | 2B | |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 320 | 0.1 | 0.2 | 0.1 | 10 | 30 | 0 | 5 | 15 | 20 | 0 | 60 | 0 | 0 | X | X | | | | 0 | 1 | 0 | 0 | 0 | 3 | 6 | 1 | 0 | 40 | 0 | 0 | X | 80 | G | 0 | 0 | 0 | 0 | 20 | 25 | 50 | 50 | 2B | 2B |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 340 | 0.2 | 0.7 | 0.4 | 11 | 30 | 0 | 0 | 10 | 10 | 0 | 80 | 0 | 0 | X | | | | | 0 | 0 | 0 | 0 | 0 | 5 | 4.5 | 1 | 0 | 20 | 0 | 15 | X | 75 | M | 0 | 0 | 0 | 0 | 30 | 25 | 50 | 50 | 2B | 2B |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 360 | 0.2 | 0.4 | 0.2 | 12 | 35 | 0 | 0 | 10 | 0 | 0 | 90 | 0 | 0 | X | X | | | | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 0 | 5 | X | 85 | G | 0 | 0 | 0 | 0 | 25 | 20 | 50 | 50 | 2B | 2B |
| OK121600-03-0090G | Drowning Creek | 23887 | 08-Aug-01 | Downstream | 1.1 | 380 | 0.2 | 0.3 | 0.1 | 14 | 30 | 0 | 0 | 10 | 10 | 10 | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSiltClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBeechnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition |
|-------------------|----------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|-------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 140 | 0.3 | 0.8 | 0.2 | 20 | 25 | 0 | 15 | 70 | 15 | 0 | 0 | 0 | 0 | X | | | | 1 | 5 | 1.5 | 1 | 0 | 0 | 0 | 1 | 65 | 0 | 5 | X | X | 70 | G | 0 | 0 | 0 | 0 | 30 | 40 | 50 | 40 | 1B | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 160 | 0.4 | 0.7 | 0.3 | 12 | 20 | 0 | 10 | 75 | 10 | 0 | 0 | 5 | 0 | X | X | | | | 0 | 6 | 2 | 0 | 0 | 0 | 1 | 70 | 10 | 20 | X | X | 80 | G | 0 | 0 | 0 | 0 | 60 | 30 | 50 | 40 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 180 | 0.5 | 0.8 | 0.3 | 10 | 25 | 0 | 10 | 70 | 15 | 0 | 0 | 5 | 0 | X | X | | | | 0 | 3 | 3 | 1.5 | 0 | 0 | 0 | 70 | 0 | 25 | X | X | 60 | M | 45 | 0 | 1.5 | 0 | 65 | 20 | 50 | 50 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 200 | 0.3 | 1 | 0.3 | 12 | 25 | 0 | 20 | 70 | 10 | 0 | 0 | 0 | 0 | X | X | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 60 | 0 | 30 | X | X | 60 | M | 30 | 0 | 1.5 | 0 | 55 | 20 | 50 | 50 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 220 | 0.3 | 0.4 | 0.5 | 15 | 25 | 0 | 10 | 80 | 10 | 0 | 0 | 0 | 0 | X | X | | | | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 45 | 0 | 10 | X | X | 65 | M | 20 | 0 | 1 | 0 | 65 | 20 | 50 | 40 | 1A | 1A |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 240 | 0.2 | 0.3 | 0.3 | 10 | 20 | 0 | 5 | 75 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 1.5 | 3 | 1 | 0 | 0 | 0 | 65 | 10 | 5 | X | X | 60 | M | 20 | 0 | 1 | 0 | 60 | 40 | 50 | 40 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 260 | 0.2 | 0.2 | 0.2 | 6 | 14 | 0 | 5 | 75 | 20 | 0 | 0 | 0 | 0 | X | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 65 | 10 | 10 | X | X | 40 | M | 50 | 0 | 1.5 | 0 | 70 | 30 | 50 | 40 | 1A | 1B | |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 280 | 0.5 | 0.8 | 0.3 | 10 | 12 | 0 | 10 | 50 | 10 | 0 | 0 | 30 | 0 | X | | | | | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 60 | 0 | 15 | X | X | 40 | G | 50 | 0 | 2 | 0 | 65 | 30 | 50 | 50 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 300 | 1.1 | 1 | 0.4 | 10 | 15 | 0 | 15 | 35 | 10 | 0 | 0 | 40 | 0 | X | | | | | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 60 | 0 | 5 | X | X | 40 | G | 60 | 0 | 2 | 0 | 70 | 25 | 50 | 50 | 1A | 1A |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 320 | 0.1 | 1.2 | 0.4 | 14 | 20 | 0 | 10 | 50 | 10 | 0 | 0 | 30 | 0 | X | | | | | 3 | 1.5 | 1 | 1 | 0 | 0 | 0 | 65 | 0 | 10 | X | X | 70 | M | 0 | 0 | 0 | 0 | 45 | 20 | 40 | 40 | 1A | 1A |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 340 | 0.8 | 1 | 0.6 | 15 | 20 | 0 | 15 | 60 | 15 | 0 | 0 | 10 | 0 | X | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 60 | 0 | 5 | X | X | 80 | M | 0 | 0 | 0 | 0 | 50 | 20 | 30 | 30 | 1B | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 360 | 0.2 | 0.4 | 0.4 | 10 | 30 | 0 | 10 | 70 | 15 | 0 | 0 | 5 | 0 | X | X | | | | 1.5 | 3 | 3 | 1 | 0 | 0 | 0 | 65 | 0 | 25 | X | X | 80 | M | 0 | 0 | 0 | 0 | 55 | 60 | 30 | 30 | 1B | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 380 | 0.2 | 0.5 | 0.4 | 12 | 30 | 0 | 10 | 60 | 20 | 0 | 0 | 10 | 0 | X | X | | | | 0 | 1.5 | 2 | 1 | 0 | 0 | 0 | 60 | 0 | 20 | X | X | 70 | M | 0 | 0 | 0 | 0 | 40 | 45 | 50 | 40 | 1A | 1B |
| OK121600-03-0510D | Sycamore Creek | 24043 | 25-Oct-01 | Downstream | 1.2 | 400 | 0.2 | 0.2 | 0.2 | 10 | 30 | 0 | 5 | 65 | 25 | 0 | 0 | 5 | 0 | X | | | | 0 | 1 | 1 | 0.5 | 0 | 0 | 0 | 70 | 10 | 10 | X | X | 80 | M | 0 | 0 | 0 | 0 | 45 | 45 | 50 | 50 | 1A | 1A | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 20 | 0.1 | 0.3 | 0.2 | 8 | 25 | 0 | 5 | 5 | 10 | 0 | 80 | 0 | 0 | X | | | | 0 | 2 | 1 | 1 | 3 | 0 | 0 | 10 | 10 | 40 | X | X | 85 | G | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 40 | 10 | 2B | 1A |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 40 | 0.2 | 0.3 | 0.3 | 18 | 20 | 0 | 5 | 5 | 5 | 0 | 80 | 5 | 0 | X | | | | 2.5 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 55 | 0 | 90 | T | 0 | 0 | 0 | 0 | 0 | 25 | 35 | 40 | 15 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 60 | 0.2 | 0.2 | 0.2 | 8 | 25 | 0 | 0 | 0 | 0 | 0 | 95 | 5 | 0 | X | | | | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 5 | 0 | 75 | X | 80 | T | 0 | 0 | 0 | 0 | 25 | 40 | 40 | 15 | 1A | 1B |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 80 | 0.2 | 0.3 | 0.2 | 7 | 25 | 0 | 15 | 5 | 5 | 0 | 70 | 5 | 0 | X | X | | | | 0 | 1.5 | 1 | 3 | 1 | 0 | 0 | 5 | 0 | 70 | X | 85 | T | 0 | 0 | 0 | 0 | 30 | 35 | 35 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 100 | 0.1 | 0.2 | 0.3 | 8 | 30 | 0 | 5 | 10 | 0 | 0 | 80 | 5 | 0 | X | | | | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 5 | 0 | 80 | X | 85 | T | 0 | 0 | 0 | 0 | 25 | 55 | 35 | 10 | 1A | 1B | | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 120 | 0.3 | 0.5 | 0.3 | 7 | 30 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | X | X | | | | 0 | 1 | 1.5 | 4 | 3 | 0 | 0 | 10 | 0 | 90 | X | 70 | T | 0 | 0 | 0 | 0 | 0 | 25 | 45 | 35 | 15 | 1A | 1B |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 140 | 0.1 | 0.2 | 0.2 | 10 | 30 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | X | X | | | | 4 | 2 | 0 | 3 | 4 | 0 | 0 | 30 | 0 | 95 | X | 75 | T | 0 | 0 | 0 | 0 | 20 | 50 | 40 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 160 | 0.4 | 0.6 | 0.2 | 12 | 30 | 0 | 0 | 10 | 10 | 0 | 70 | 10 | 0 | X | | | | 2 | 0 | 0 | 1.5 | 3 | 0 | 0 | 0 | 35 | 0 | 70 | X | 85 | T | 0 | 0 | 0 | 0 | 35 | 40 | 30 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 180 | 0.3 | 0.5 | 0.3 | 18 | 20 | 0 | 0 | 0 | 0 | 0 | 95 | 5 | 0 | X | | | | 5 | 1 | 2 | 3.5 | 1 | 0 | 0 | 0 | 0 | 60 | X | 85 | T | 0 | 0 | 0 | 0 | 55 | 40 | 50 | 15 | 1A | 1B | | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 200 | 0.4 | 0.4 | 0.2 | 20 | 24 | 0 | 5 | 0 | 0 | 0 | 90 | 5 | 0 | X | | | | 6 | 2 | 1.5 | 4 | 2 | 0 | 0 | 5 | 0 | 45 | X | 75 | T | 0 | 0 | 0 | 0 | 40 | 35 | 30 | 10 | 1A | 1B | | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 220 | 0.1 | 0.1 | 0.1 | 4 | 20 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | X | | | | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 30 | 0 | 25 | X | 85 | M | 0 | 0 | 0 | 0 | 40 | 45 | 40 | 10 | 1A | 2B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 240 | 0.2 | 0.2 | 0.1 | 6 | 18 | 0 | 0 | 0 | 0 | 0 | 95 | 5 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 20 | X | 80 | M | 0 | 0 | 0 | 0 | 55 | 35 | 40 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 260 | 0.1 | 0.1 | 0.1 | 6 | 20 | 0 | 0 | 0 | 0 | 0 | 95 | 5 | 0 | X | X | | | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 10 | 0 | 85 | X | 85 | M | 0 | 0 | 0 | 0 | 30 | 65 | 50 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 280 | 0.2 | 0.3 | 0.1 | 8 | 15 | 0 | 10 | 0 | 0 | 0 | 80 | 10 | 0 | X | | | | 1.5 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 15 | 0 | 85 | X | 75 | M | 0 | 0 | 0 | 0 | 35 | 70 | 50 | 10 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 300 | 0.2 | 0.2 | 0.2 | 10 | 20 | 0 | 0 | 0 | 0 | 0 | 80 | 20 | 0 | X | X | | | 3.5 | 0 | 0 | 1.5 | 3 | 0 | 0 | 0 | 10 | 0 | 90 | X | 85 | M | 0 | 10 | 0 | 1 | 40 | 45 | 50 | 10 | 1A | 2B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 320 | 0.2 | 0.3 | 0.3 | 7 | 20 | 0 | 0 | 0 | 0 | 0 | 90 | 10 | 0 | X | | | | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 25 | 0 | 85 | X | 75 | T | 0 | 0 | 0 | 0 | 30 | 45 | 50 | 15 | 1A | 1B | |
| OK121600-04-0060D | Tar Creek | 23886 | 07-Aug-01 | Upstream | 1 | 340 | 0.1 | 0.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSiltClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBerrnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLrgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | | |
|-------------------|-----------------|----------|-----------|-----------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|------------|--------|----------------|---------------|-------------|------------|------------|---------------|---------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|----|
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 100 | 0.2 | 0 | 0.5 | 7 | 13 | 35 | 5 | 50 | 5 | 0 | 0 | 0 | 5 | X | | | | 1 | 1 | 2 | 3 | 0 | 0 | 0 | 15 | 0 | 70 | X | X | 65 | M | 0 | 0 | 0 | 0 | 80 | 70 | 50 | 50 | 1B | 1B | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 120 | 0.4 | 0.8 | 0.5 | 12 | 14 | 40 | 5 | 40 | 5 | 0 | 0 | 10 | 5 | X | | | | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 15 | 0 | 50 | | | 60 | M | 0 | 0 | 0 | 0 | 70 | 45 | 50 | 50 | 1C | 1C | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 140 | 0.5 | 0.8 | 0.6 | 6 | 14 | 35 | 10 | 45 | 5 | 0 | 0 | 0 | 5 | X | | | | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0.5 | 10 | 0 | 50 | | | 55 | M | 0 | 0 | 0 | 0 | 75 | 45 | 50 | 50 | 1C | 1B | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 160 | 0.05 | 0.05 | 0.05 | 1 | 14 | 5 | 35 | 30 | 25 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 30 | 0 | 70 | | | 60 | M | 0 | 5 | 0 | 2 | 75 | 50 | 50 | 50 | 1C | 1C | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 180 | 0.05 | 0.1 | 0.1 | 1 | 20 | 20 | 40 | 25 | 5 | 0 | 5 | 5 | 5 | X | | | | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 25 | 0 | 80 | | | 60 | M | 5 | 5 | 1 | 1 | 80 | 50 | 50 | 50 | 1B | 1B | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 200 | 0.05 | 0.05 | 0.05 | 1 | 25 | 30 | 10 | 15 | 25 | 20 | 0 | 0 | 0 | X | | | | 2 | 2 | 3 | 0.5 | 0 | 0 | 0.5 | 20 | 0 | 80 | | | 65 | M | 0 | 0 | 0 | 0 | 80 | 45 | 50 | 50 | 1B | 1B | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 220 | 0.05 | 0.05 | 0.05 | 2 | 22 | 25 | 5 | 25 | 35 | 5 | 0 | 5 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 75 | | | 65 | M | 0 | 0 | 0 | 0 | 50 | 50 | 50 | 50 | 1B | 1B | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 240 | 0.05 | 0.05 | 0.05 | 2.5 | 18 | 15 | 0 | 0 | 0 | 0 | 50 | 35 | 0 | X | | | | 0 | 0 | 0 | 0 | 0.5 | 5 | 5 | 0 | 5 | 0 | 10 | | | 65 | M | 0 | 0 | 0 | 0 | 45 | 50 | 50 | 50 | 1B | 1C | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 260 | 0.05 | 0.05 | 0.05 | 1 | 20 | 20 | 5 | 20 | 10 | 35 | 10 | 0 | 0 | X | | | | 0 | 0 | 0.5 | 0 | 3 | 1 | 0 | 0 | 25 | 0 | 0 | X | X | 70 | M | 0 | 0 | 0 | 0 | 50 | 55 | 50 | 50 | 1B | 1B | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 280 | 0.1 | 0.2 | 0.1 | 6 | 16 | 10 | 0 | 5 | 3 | 80 | 0 | 2 | 0 | X | | | | 0 | 0.5 | 1 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 50 | | | 60 | M | 0 | 0 | 0 | 0 | 60 | 75 | 50 | 50 | 1B | 1C | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 300 | 0.3 | 0.3 | 0.4 | 18 | 18 | 5 | 35 | 5 | 0 | 50 | 0 | 0 | 0 | X | | | | 1 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 10 | 0 | 80 | | | 55 | M | 0 | 15 | 0 | 1 | 70 | 85 | 50 | 50 | 1B | 1B | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 320 | 0.4 | 0.6 | 0.4 | 10 | 15 | 35 | 5 | 30 | 0 | 0 | 30 | 0 | 0 | X | | | | 0.5 | 0.5 | 1 | 1 | 0.5 | 0.5 | 0 | 10 | 0 | 65 | | | 60 | M | 0 | 0 | 0 | 0 | 80 | 45 | 50 | 50 | 1B | 1C | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 340 | 0.4 | 0.7 | 0.8 | 7 | 20 | 25 | 5 | 50 | 15 | 0 | 5 | 0 | 0 | X | | | | 0.5 | 2 | 1 | 2 | 0 | 0 | 0 | 15 | 0 | 85 | | | 70 | M | 0 | 0 | 0 | 0 | 80 | 40 | 50 | 50 | 1C | 1C | | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 360 | 0.1 | 0.2 | 0.1 | 2 | 24 | 25 | 15 | 15 | 30 | 0 | 15 | 0 | 0 | X | | | | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 20 | 0 | 60 | | | 75 | M | 0 | 0 | 0 | 0 | 60 | 30 | 50 | 50 | 1C | 1C | | |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 380 | 0.5 | 0.6 | 0.5 | 14 | 18 | 25 | 15 | 20 | 3 | 35 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0.5 | 0 | 0.5 | 15 | 0 | 0 | 0 | X | X | 60 | M | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 45 | 50 | 50 | 2B | 2B |
| OK121600-06-0220I | Big Cabin Creek | 24039 | 13-Sep-01 | Upstream | 1.14 | 400 | 0.5 | 1 | 0.7 | 18 | 19 | 25 | 10 | 20 | 5 | 35 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | | | 75 | G | 0 | 0 | 0 | 0 | 60 | 60 | 50 | 50 | 2B | 2B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 20 | 0.4 | 0.5 | 0.2 | 10 | 35 | 0 | 25 | 45 | 30 | 0 | 0 | 0 | 0 | X | | | | 0 | 7 | 10 | 0 | 3 | 0 | 1 | 65 | 0 | 15 | | | 85 | G | 0 | 0 | 0 | 0 | 25 | 20 | 30 | 30 | 1A | 2A | | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 40 | 0.2 | 0.3 | 0.2 | 4 | 40 | 10 | 65 | 25 | 0 | 0 | 0 | 0 | 0 | X | | | | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 70 | 5 | 0 | X | X | 55 | G | 0 | 0 | 0 | 0 | 45 | 20 | 10 | 30 | 2B | 2B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 60 | 0.1 | 0.2 | 0.2 | 6 | 40 | 0 | 25 | 45 | 30 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 75 | 5 | 0 | X | X | 60 | G | 0 | 0 | 0 | 0 | 45 | 20 | 10 | 30 | 2B | 2B | | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 80 | 0.2 | 0.2 | 0.1 | 8 | 30 | 0 | 10 | 35 | 55 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 75 | 5 | 0 | X | X | 60 | G | 40 | 0 | 1 | 0 | 50 | 25 | 30 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 100 | 0.1 | 0.2 | 0.2 | 6 | 30 | 0 | 15 | 55 | 30 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 75 | 5 | 0 | X | X | 70 | G | 30 | 0 | 1 | 0 | 30 | 25 | 50 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 120 | 0.2 | 0.2 | 0.2 | 8 | 40 | 0 | 20 | 60 | 20 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 70 | 5 | 0 | X | X | 70 | G | 0 | 0 | 0 | 0 | 25 | 25 | 50 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 140 | 0.2 | 0.3 | 0.2 | 6 | 35 | 0 | 10 | 50 | 40 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 75 | 5 | 0 | X | X | 65 | G | 0 | 0 | 0 | 0 | 30 | 20 | 50 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 160 | 0.2 | 0.2 | 0.1 | 4 | 40 | 0 | 15 | 55 | 30 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 60 | 5 | 0 | X | X | 80 | G | 0 | 0 | 0 | 0 | 30 | 15 | 50 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 180 | 0.1 | 0.2 | 0.1 | 3 | 30 | 0 | 10 | 40 | 50 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 70 | 15 | 0 | X | X | 90 | G | 0 | 0 | 0 | 0 | 30 | 10 | 50 | 50 | 2C | 1B | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 200 | 0.1 | 0.1 | 0.1 | 6 | 30 | 0 | 20 | 60 | 20 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 65 | 15 | 0 | X | X | 70 | G | 0 | 0 | 0 | 0 | 40 | 10 | 50 | 50 | 2C | 1A | | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 220 | 0.1 | 0.2 | 0.1 | 6 | 30 | 0 | 15 | 75 | 10 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 40 | 15 | 0 | X | X | 80 | G | 0 | 0 | 0 | 0 | 25 | 20 | 50 | 50 | 2B | 1A | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 240 | 0.1 | 0.1 | 0.1 | 14 | 30 | 0 | 25 | 70 | 5 | 0 | 0 | 0 | 0 | X | | | | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 35 | 0 | 0 | X | X | 70 | G | 0 | 0 | 0 | 0 | 30 | 20 | 50 | 50 | 2C | 1A | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 260 | 0.3 | 0.2 | 0.2 | 12 | 30 | 0 | 20 | 70 | 10 | 0 | 0 | 0 | 0 | X | | | | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 40 | 0 | 5 | X | X | 80 | G | 0 | 0 | 0 | 0 | 30 | 45 | 50 | 50 | 2C | 1A | | |
| OK121600-07-0110G | Fivemile Creek | 23885 | 07-Aug-01 | Upstream | 1 | 280 | 0.4 | 0.3 | 0.2 | 8 | 30 | 0 | 25 | 70 | 5 | 0 | 0 | 0 | 0 | X | | | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 30 | 0 | 0 | X | X | 85 | M | 0 | 0 | 0 | 0 | 35 | 60 | 50 | 50 | 2C | 1A</ | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubSiltClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBerrnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | |
|-------------------|---------------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|------------|--------|----------------|---------------|-------------|------------|------------|---------------|--------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 60 | 1 | 1.5 | 1.1 | 18 | 20 | 10 | 25 | 45 | 0 | 0 | 0 | 0 | 20 | X | | | | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 10 | 0 | 0 | X | X | 60 | G | 0 | 20 | 0 | 3 | 65 | 75 | 20 | 5 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 80 | 0.1 | 0.1 | 0.1 | 1 | 24 | 2 | 3 | 90 | 5 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 40 | G | 0 | 100 | 0 | 4 | 55 | 75 | 25 | 0 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 100 | 0.5 | 0.7 | 0.4 | 6 | 24 | 50 | 5 | 45 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | X | X | 40 | G | 0 | 100 | 0 | 4 | 35 | 70 | 25 | 5 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 120 | 0.05 | 0.05 | 0.05 | 0.5 | 20 | 0 | 5 | 95 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 25 | 0 | X | X | 40 | G | 0 | 100 | 0 | 4 | 25 | 70 | 20 | 5 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 140 | 0.1 | 0.2 | 0.3 | 5 | 23 | 20 | 10 | 70 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 20 | X | X | 40 | G | 0 | 80 | 0 | 4 | 35 | 65 | 15 | 5 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 160 | 0.5 | 0.3 | 0.2 | 6 | 26 | 30 | 30 | 30 | 0 | 0 | 0 | 0 | 10 | 0 | | X | | | 0.5 | 0.5 | 1 | 1 | 0 | 0 | 0 | 5 | 0 | 70 | X | X | 40 | T | 0 | 80 | 0 | 3.5 | 60 | 70 | 20 | 10 | 2B | 2B | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 180 | 0.3 | 0.5 | 0.3 | 7 | 18 | 20 | 40 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 60 | X | X | 70 | T | 0 | 0 | 0 | 0 | 0 | 70 | 70 | 20 | 20 | 2B | 2B |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 200 | 0.1 | 0.1 | 0.1 | 6 | 18 | 10 | 5 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 10 | 0 | 30 | X | X | 70 | T | 0 | 0 | 0 | 0 | 80 | 70 | 20 | 30 | 2B | 2B | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 220 | 0.1 | 0.3 | 0.1 | 9 | 18 | 20 | 15 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 10 | X | X | 50 | T | 0 | 0 | 0 | 75 | 65 | 25 | 40 | 2B | 2B | | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 240 | 0.3 | 0.3 | 0.5 | 11 | 15 | 50 | 30 | 5 | 0 | 0 | 0 | 5 | 10 | X | | | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | X | X | 60 | M | 0 | 0 | 0 | 0 | 55 | 60 | 25 | 40 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 260 | 0.2 | 0.3 | 0.3 | 10 | 16 | 40 | 35 | 5 | 0 | 0 | 0 | 10 | 10 | X | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 75 | M | 0 | 20 | 0 | 2 | 55 | 45 | 20 | 40 | 2B | 2B | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 280 | 0.6 | 1.1 | 0.9 | 15 | 16 | 50 | 30 | 5 | 0 | 0 | 0 | 5 | 15 | X | | | | 0 | 1 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | X | X | 60 | T | 0 | 20 | 0 | 3 | 70 | 65 | 20 | 50 | 2B | 2B | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 300 | 0.5 | 1.4 | 0.8 | 15 | 16 | 50 | 30 | 5 | 0 | 0 | 0 | 5 | 15 | X | | | | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 50 | X | X | 50 | T | 0 | 0 | 0 | 80 | 85 | 20 | 50 | 2B | 2B | | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 320 | 0.7 | 0.9 | 1 | 14 | 16 | 50 | 25 | 10 | 0 | 0 | 0 | 5 | 10 | X | | | | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 90 | X | X | 50 | T | 75 | 0 | 2.5 | 0 | 85 | 65 | 20 | 50 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 340 | 0.7 | 0.9 | 0.8 | 15 | 16 | 65 | 25 | 5 | 0 | 0 | 0 | 5 | 10 | X | | | | 0.5 | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | X | X | 50 | T | 0 | 0 | 0 | 50 | 60 | 25 | 40 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 360 | 0.5 | 0.5 | 0.3 | 12 | 16 | 40 | 20 | 35 | 0 | 0 | 0 | 5 | 0 | X | | | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | X | X | 60 | T | 0 | 0 | 0 | 50 | 60 | 25 | 50 | 2B | 2B | | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 380 | 0.4 | 1 | 0.5 | 8 | 19 | 25 | 25 | 25 | 0 | 0 | 0 | 5 | 20 | X | | | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | X | X | 50 | T | 50 | 0 | 2 | 75 | 60 | 25 | 50 | 2B | 2B | | |
| OK121610-00-0050M | Pryor Creek: HWY 69 | 23882 | 06-Aug-01 | Downstream | 1.1 | 400 | 0.5 | 0.5 | 0.3 | 9 | 17 | 10 | 35 | 25 | 25 | 5 | 0 | 0 | 0 | 0 | | X | | | 0 | 2 | 0.5 | 0 | 0 | 0 | 0 | 0 | 20 | X | X | 50 | T | 0 | 0 | 0 | 70 | 45 | 25 | 50 | 2B | 2B | | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 20 | 0.2 | 0.1 | 2 | 6 | 9 | 15 | 80 | 5 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 1 | 0 | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 60 | S | 15 | 0 | 1 | 0 | 75 | 85 | 20 | 5 | 1B | 2A | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 40 | 0.1 | 0.1 | 0.2 | 7 | 8 | 15 | 80 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 10 | X | X | 60 | M | 5 | 0 | 1 | 0 | 80 | 75 | 30 | 5 | 1B | 2B | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 60 | 0.2 | 0.2 | 0.2 | 9 | 12 | 10 | 85 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0.5 | 0 | 1 | 0 | 0 | 0.5 | 0 | 0 | 10 | X | X | 80 | M | 0 | 0 | 0 | 70 | 85 | 40 | 5 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 80 | 0.1 | 0.1 | 0.2 | 10 | 14 | 5 | 93 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 30 | X | X | 80 | M | 5 | 0 | 0.5 | 0 | 70 | 65 | 40 | 50 | 1B | 2C | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 100 | 0.3 | 0 | 0.2 | 10 | 16 | 5 | 94 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0.5 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 45 | X | X | 70 | M | 0 | 0 | 0 | 65 | 70 | 40 | 5 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 120 | 0.2 | 0.1 | 0.2 | 12 | 14 | 5 | 90 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0 | 2 | 2 | 0 | 0 | 0.1 | 0 | 0 | 20 | X | X | 80 | M | 0 | 0 | 0 | 70 | 75 | 25 | 5 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 140 | 0.1 | 0.1 | 0.2 | 9 | 14 | 0 | 95 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 0.5 | 0 | 1 | 0 | 0 | 0.5 | 0 | 0 | 20 | X | X | 85 | M | 0 | 0 | 0 | 85 | 88 | 50 | 0 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 160 | 0.2 | 0.1 | 0.2 | 8 | 10 | 60 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 5 | X | X | 70 | M | 0 | 0 | 0 | 85 | 80 | 50 | 5 | 1C | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 180 | 0.2 | 0.2 | 0.2 | 8 | 9 | 0 | 95 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0.5 | 0 | 1 | 0 | 0 | 0.5 | 0 | 0 | 10 | X | X | 75 | M | 0 | 0 | 0 | 70 | 75 | 50 | 5 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 200 | 0.1 | 0.1 | 0 | 9 | 10 | 5 | 94 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0 | 0.5 | 1 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 75 | M | 0 | 0 | 0 | 85 | 80 | 50 | 5 | 1B | 2B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 220 | 0.2 | 0.1 | 0.2 | 12 | 13 | 5 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 70 | M | 0 | 0 | 0 | 70 | 80 | 50 | 10 | 1B | 1B | | |
| OK520610-02-0120C | Buggy Creek | 23901 | 07-Aug-01 | Downstream | 1.05 | 240 | 0.6 | 0.4 | 0.2 | 4 | 12 | 50 | 35 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | | X | | | 0 | 1 | 0.5 | 1 | 0 | 0 | 0 | 0 | 10 | X | X | 65 | M | 0 | 0 | 0 | 65 | 80 | 5 | 20 | 2B | 1B | | | |
| OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubStricClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBerrnck | SubPOM | SubHardPanClay | RiffleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLrgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embeddedness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | | |
|-------------------|-------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|--------------|---------|-----------|-----------|------------|------------|--------|----------------|---------------|-------------|------------|------------|---------------|---------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|--------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|----|
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 20 | 0.4 | 0.2 | 0.2 | 3 | 5 | 50 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0.5 | 0.5 | 0.5 | 0 | 0 | 2 | 0 | 0 | 0 | X | X | 70 | G | 0 | 5 | 0 | 1 | 85 | 80 | 25 | 50 | 2B | 1B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 40 | 0.2 | 0.2 | 0.2 | 4 | 6 | 25 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0.5 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | X | X | 75 | G | 0 | 0 | 0 | 0 | 75 | 70 | 50 | 50 | 2B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 60 | 0.3 | 0.3 | 0.2 | 3 | 4 | 30 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 40 | X | X | 75 | G | 0 | 5 | 0 | 1 | 45 | 80 | 50 | 50 | 1B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 80 | 0.5 | 0.2 | 0.2 | 3 | 5 | 10 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 10 | X | X | 60 | G | 0 | 0 | 0 | 0 | 65 | 65 | 50 | 50 | 1B | 1B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 100 | 0.6 | 0.4 | 0.2 | 2 | 6 | 60 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0.5 | 0.5 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | X | X | 80 | M | 5 | 5 | 2 | 1 | 55 | 75 | 50 | 50 | 1B | 1B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 120 | 0.2 | 0.2 | 0.1 | 4 | 5 | 25 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 0.5 | 0 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | X | X | 70 | G | 0 | 0 | 0 | 0 | 80 | 70 | 50 | 50 | 1B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 140 | 0.2 | 0.5 | 0.3 | 3 | 7 | 50 | 25 | 0 | 0 | 25 | 0 | 0 | 0 | | X | | | 0 | 0.5 | 1 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 1 | X | X | 25 | M | 0 | 1 | 0 | 2 | 45 | 75 | 50 | 50 | 1B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 160 | 0.4 | 0.3 | 0.2 | 2 | 5 | 50 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0 | 2 | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 1 | X | X | 80 | G | 0 | 5 | 0 | 2 | 45 | 80 | 50 | 50 | 1B | 1B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 180 | 0.2 | 0.2 | 0.2 | 3 | 4 | 30 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 0.5 | 2 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | X | X | 70 | G | 0 | 0 | 0 | 0 | 80 | 80 | 50 | 50 | 1B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 200 | 0.1 | 0.2 | 0.2 | 4 | 6 | 60 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0.5 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 40 | X | X | 60 | G | 0 | 0 | 0 | 0 | 85 | 60 | 30 | 50 | 2B | 1B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 220 | 0.2 | 0.2 | 0.3 | 3 | 6 | 30 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | | X | X | | 0 | 2 | 1 | 0.5 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | X | X | 50 | G | 0 | 20 | 0 | 5 | 60 | 75 | 25 | 25 | 2B | 2B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 240 | 0.7 | 0.6 | 0.3 | 3 | 5 | 30 | 65 | 0 | 0 | 0 | 0 | 5 | 0 | | X | X | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 50 | G | 0 | 30 | 0 | 3 | 45 | 85 | 15 | 15 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 260 | 0.5 | 0.3 | 0.2 | 3 | 5 | 10 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 40 | X | X | 70 | G | 0 | 0 | 0 | 0 | 85 | 60 | 10 | 15 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 280 | 0.3 | 0.3 | 0.4 | 2 | 3 | 5 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 1 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 20 | X | X | 70 | G | 0 | 0 | 0 | 0 | 80 | 65 | 10 | 10 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 300 | 0.3 | 0.5 | 0.2 | 5 | 6 | 65 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | | X | X | | 1 | 1 | 2 | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 70 | G | 5 | 0 | 1 | 0 | 85 | 70 | 25 | 10 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 320 | 0.3 | 0.2 | 0.3 | 4 | 6 | 25 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 0.5 | 0.5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | X | X | 85 | G | 0 | 0 | 0 | 0 | 60 | 75 | 40 | 15 | 2B | 2B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 340 | 0.2 | 0.2 | 0.2 | 3 | 5 | 30 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 2 | 0 | 0.5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | X | X | 75 | G | 0 | 5 | 0 | 1 | 65 | 75 | 25 | 25 | 2B | 2B | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 360 | 0.5 | 0.4 | 0.1 | 3 | 6 | 40 | 55 | 0 | 0 | 0 | 0 | 1 | 4 | | X | X | | 1 | 0 | 1 | 1 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 50 | G | 5 | 0 | 1 | 0 | 85 | 50 | 0 | 25 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 380 | 0.3 | 0.2 | 0.2 | 4 | 6 | 20 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | | X | X | | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0.5 | 0 | 0 | 5 | X | X | 75 | G | 0 | 0 | 0 | 0 | 85 | 75 | 5 | 40 | 2B | 2B | | | |
| OK520620-02-0090G | Trail Creek | 23008 | 07-Jun-01 | Upstream | 1.13 | 400 | 0.3 | 0.1 | 0.1 | 4 | 7 | 2 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 3 | 2 | 2 | 0.5 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | X | X | 85 | G | 0 | 0 | 0 | 0 | 75 | 60 | 10 | 30 | 2B | 2B | | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 20 | -0.1 | -0.1 | -0.1 | 2 | 7 | 0 | 90 | 10 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0.5 | 0 | 0 | 5 | X | X | 85 | M | 0 | 0 | 0 | 0 | 75 | 80 | 20 | 30 | 1A | 2A | | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 40 | -0.1 | -0.1 | -0.1 | 1 | 7 | 0 | 95 | 5 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | X | X | 95 | G | 0 | 0 | 0 | 0 | 45 | 55 | 20 | 30 | 2A | 2A | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 60 | -0.1 | -0.1 | -0.1 | 1.5 | 6 | 0 | 95 | 5 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | X | X | 95 | M | 0 | 0 | 0 | 0 | 45 | 45 | 20 | 40 | 2A | 1A |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 80 | -0.1 | -0.1 | -0.1 | 2 | 6 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 7 | X | X | 95 | M | 0 | 0 | 0 | 0 | 80 | 70 | 15 | 30 | 2A | 2A |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 100 | -0.1 | -0.1 | -0.1 | 2 | 6 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0.5 | X | X | 95 | M | 0 | 0 | 0 | 0 | 50 | 60 | 10 | 30 | 2A | 2A | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 120 | -0.1 | -0.1 | -0.1 | 1.5 | 6 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 2 | X | X | 95 | G | 0 | 0 | 0 | 0 | 25 | 45 | 15 | 40 | 2A | 2A | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 140 | -0.1 | -0.1 | -0.1 | 1 | 9 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | X | X | 95 | G | 0 | 0 | 0 | 0 | 50 | 75 | 25 | 50 | 1A | 1A | | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 160 | -0.1 | -0.1 | -0.1 | 1 | 9 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 2 | X | X | 95 | M | 0 | 0 | 0 | 0 | 50 | 90 | 15 | 50 | 1A | 1A | | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 180 | -0.1 | -0.1 | -0.1 | 1.5 | 9 | 0 | 95 | 5 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0.5 | X | X | 95 | M | 0 | 0 | 0 | 0 | 75 | 85 | 50 | 50 | 1A | 1A | | |
| OK520620-03-0020C | Lone Creek | 23903 | 08-Aug-01 | Downstream | 1.08 | 200 | -0.1 | -0.1 | -0.1 | 1 | 9 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | | X | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 95 | G | 0 | 0 | 0 | 0 | 35 | 40 | 50 | 50 | 1A | 1A | | |
| OK520620-0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix B. Raw habitat data.

| WBID | SiteName | SAMPLEID | Date | Direction | ChanSin | Distance | DepthLqt | DepthCnt | DepthRqt | WidthWater | WidthBank | SubStrIClay | SubSand | SubGravel | SubCobble | SubBoulder | SubBedrock | SubPOM | SubHardPanClay | RifleHabitat | PoolHabitat | RumHabitat | DryHabitat | CoverUnderCut | CoverLrgWdDeb | CoverSmWdDeb | CoverRoots | CoverBarkLedge | CoverSubAqVeg | CoverEmergAqVeg | CoverTerVeg | CoverCobbold | Embededness | CanopyCover | PointBar | ScouringDeposit | BankVegCover | DomVegType | PercErodeLeft | PercErodeRight | ErodeHLeft | ErodeHRight | LeftSlope | RightSlope | LeftWidth | RightWidth | LeftCondition | RightCondition | | | |
|-------------------|------------------|----------|-----------|------------|---------|----------|----------|----------|----------|------------|-----------|-------------|---------|-----------|-----------|------------|------------|--------|----------------|--------------|-------------|------------|------------|---------------|---------------|--------------|------------|----------------|---------------|-----------------|-------------|--------------|-------------|-------------|----------|-----------------|--------------|------------|---------------|----------------|------------|-------------|-----------|------------|-----------|------------|---------------|----------------|----|----|----|
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 20 | 0.1 | 0.3 | 0.1 | 2 | 3 | 10 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | | X | 65 | G | 0 | 0 | 0 | 0 | 80 | 75 | 20 | 10 | 2C | 2C | | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 40 | 0.1 | 0.2 | 0.2 | 1.5 | 2 | 0 | 65 | 30 | 0 | 0 | 0 | 5 | 0 | | | X | | 5 | 0 | 1 | 0 | 0 | 0 | 3 | 2 | 10 | 5 | | X | 80 | G | 0 | 0 | 0 | 0 | 75 | 85 | 20 | 30 | 2C | 2C | | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 60 | 0.1 | 0.2 | 0.2 | 5 | 8 | 10 | 85 | 5 | 0 | 0 | 0 | 0 | 0 | | | X | | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | | X | 85 | G | 0 | 0 | 0 | 0 | 85 | 80 | 10 | 50 | 2C | 2C | | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 80 | 0.2 | 0.1 | 0.1 | 1.5 | 11 | 0 | 70 | 30 | 0 | 0 | 0 | 0 | 0 | | | X | | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 15 | 3 | | X | 60 | G | 0 | 5 | 0 | 0.5 | 75 | 60 | 10 | 50 | 2C | 2C | | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 100 | 0.2 | 0.2 | 0.2 | 1 | 2 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 15 | 0 | 1 | 1 | 0 | 0 | 4 | 0 | 0 | 15 | | X | 90 | G | 0 | 0 | 0 | 0 | 85 | 70 | 15 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 120 | 0.2 | 0.2 | 0.3 | 1 | 2 | 80 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 10 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 12 | | X | 95 | G | 0 | 0 | 0 | 0 | 90 | 90 | 15 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 140 | 0.1 | 0.1 | 0.1 | 1 | 1 | 20 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 5 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 8 | | X | 95 | G | 0 | 0 | 0 | 0 | 90 | 90 | 15 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 160 | 0.1 | 0.2 | 0.2 | 1 | 3 | 5 | 85 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | | | X | | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | | X | 65 | G | 35 | 5 | 1 | 1 | 80 | 80 | 15 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 180 | 0.2 | 0.3 | 0.4 | 1 | 2 | 5 | 65 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | | | X | | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | | X | 75 | G | 0 | 10 | 0 | 1 | 75 | 80 | 10 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 200 | 0.2 | 0.2 | 0.2 | 1.5 | 2 | 5 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 3 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 10 | | X | 85 | G | 0 | 0 | 0 | 0 | 90 | 90 | 20 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 220 | 0.2 | 0.1 | 0.2 | 1.5 | 2 | 5 | 90 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | | | X | | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | | X | 90 | G | 0 | 10 | 0 | 0.5 | 85 | 85 | 20 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 240 | 0.1 | 0.1 | 0.2 | 1 | 3 | 5 | 40 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 40 | | X | 85 | G | 0 | 5 | 0 | 0.5 | 90 | 80 | 15 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 260 | 0.1 | 0.1 | 0.1 | 1 | 6 | 0 | 80 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 1 | 0 | 0 | 0.5 | 0 | 0 | 1 | 1 | 0 | 5 | | X | 75 | G | 25 | 20 | 1 | 1 | 80 | 75 | 25 | 50 | 2C | 2C | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 280 | 0.1 | 0.2 | 0.2 | 1 | 1 | 0 | 90 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 1 | 4 | 0 | 8 | | X | 80 | G | 5 | 0 | 1 | 0 | 80 | 80 | 30 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 300 | 0.2 | 0.1 | 0.1 | 3 | 4 | 10 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 1 | 0 | 0 | 10 | | X | 90 | G | 0 | 0 | 0 | 0 | 75 | 90 | 35 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 320 | 0.2 | 0.1 | 0.1 | 1 | 1 | 5 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 1 | 0.5 | 0 | 0 | 0 | 1 | 0 | 0 | 15 | | X | 80 | G | 50 | 0 | 1 | 0 | 88 | 70 | 50 | 50 | 2B | 2B | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 340 | 0.1 | 0.1 | 0.1 | 2 | 2 | 0 | 80 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0.5 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 10 | | X | 80 | G | 25 | 0 | 1 | 0 | 75 | 80 | 20 | 50 | 2C | 2C | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 360 | 0.1 | 0.1 | 0.2 | 2 | 3 | 0 | 30 | 50 | 0 | 0 | 0 | 20 | 0 | 0 | | | X | | 0.5 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | | X | 70 | G | 40 | 30 | 1 | 1 | 80 | 75 | 10 | 50 | 2C | 2C | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 380 | 0.3 | 0.5 | 0.4 | 1 | 1.5 | 0 | 50 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0.5 | 0 | 1 | 0 | 0 | 0 | 2 | 5 | 0 | 3 | | X | 90 | G | 0 | 0 | 0 | 0 | 90 | 90 | 20 | 50 | 2C | 2C | | | |
| OK520620-05-0160C | Commission Creek | 23905 | 08-Aug-01 | Downstream | 1.02 | 400 | 0.1 | 0.3 | 0.2 | 2 | 5 | 0 | 80 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0.5 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | | X | 80 | G | 50 | 0 | 1 | 0 | 80 | 70 | 10 | 50 | 2C | 2C | | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 20 | 0 | 0.1 | 0.3 | 30 | 50 | 20 | 60 | 0 | 0 | 0 | 0 | 20 | 0 | | | X | X | 0 | 4.5 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | X | X | 0 | 100 | 0 | 4 | 0 | 45 | 90 | 0 | 0 | | | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 40 | 0.1 | 0 | 0.1 | 13 | 40 | 5 | 85 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | | | X | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | X | X | 0 | 100 | 0 | 4 | 0 | 45 | 90 | 0 | 0 | | | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 60 | 0.1 | 0.1 | 0.2 | 16 | 45 | 5 | 90 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | | | X | | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 10 | 100 | 0 | 4 | 0 | 45 | 90 | 0 | 5 | 1C | | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 80 | 0.1 | 0 | 0.3 | 13 | 40 | 5 | 60 | 25 | 10 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 2.5 | 2.5 | 0 | 0 | 0 | 0 | 8 | 10 | 5 | X | X | 30 | M | 100 | 0 | 4 | 0 | 60 | 80 | 0 | 5 | 1C | | | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 100 | 0.2 | 0.1 | 0.1 | 10 | 30 | 15 | 80 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | | | X | | 0 | 1.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | X | X | 20 | M | 0 | 50 | 0 | 4 | 65 | 80 | 10 | 20 | 1C | 1C | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 120 | 0.1 | 0.1 | 0.1 | 17 | 23 | 10 | 85 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | | | X | | 0 | 0.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | X | 30 | M | 0 | 20 | 0 | 2 | 50 | 80 | 50 | 20 | 1C | 1C | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 140 | 0.1 | 0.1 | 0.1 | 17 | 35 | 15 | 65 | 10 | 5 | 0 | 0 | 5 | 0 | 0 | | | X | | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 15 | 5 | X | X | 60 | M | 0 | 75 | 0 | 2 | 50 | 80 | 50 | 20 | 1C | 1C |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 160 | 0.1 | 0 | 0.1 | 13 | 32 | 10 | 55 | 25 | 0 | 0 | 0 | 0 | 10 | 0 | | | X | | 0 | 1.5 | 1.5 | 0 | 0 | 0 | 0.5 | 0 | 5 | 10 | 10 | X | X | 55 | M | 0 | 0 | 0 | 0 | 60 | 80 | 50 | 20 | 1C | 1C | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 180 | 0.1 | 0 | 0.1 | 10 | 25 | 5 | 80 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 0.5 | 1 | 0.5 | 0 | 0 | 0 | 0 | 2 | 30 | 0 | X | X | 70 | M | 0 | 0 | 0 | 0 | 60 | 70 | 50 | 20 | 1C | 1C | | |
| OK520620-06-0010F | Deer Creek | 23902 | 07-Aug-01 | Downstream | 1.28 | 200 | 0.1 | 0.1 | 0.1 | 8 | 22 | 20 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | X | | 0 | 0.5 | 1.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | X | 60 | M | 0 | 0 | 0 | | | | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|----------------|-------------------|--------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 3 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 2 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Lepisosteidae | Lepisosteus oculatus | Spotted gar | 3.5 | 2.7 | | | | X | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 10 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 19 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 7 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 6 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 2 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 10 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 3 | Catostomidae | Moxostoma erythrum | Golden redbreast | 2.3 | 2 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 9 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 11 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 91 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 13 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 15 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 35 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 4 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 4 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 3 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Delaware Creek | OK121300-01-0150H | Tulsa | 14-Sep-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 391 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 58 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 1 | Lepisosteidae | Lepisosteus osseus | Longnose gar | 4 | 3.7 | | | | X | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 188 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 1113 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 16 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 5 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 40 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 2 | Catostomidae | Carpodacus carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 28 | Catostomidae | Moxostoma erythrum | Golden redbreast | 2.3 | 2 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 23 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 32 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 8 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 34 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 8 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 3 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 113 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 28 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 4 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 3 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 5 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 15 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------------|-------------------|------------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Bird Creek | OK121300-02-0010C | Osage | 10-Sep-01 | 16 | Percidae | Percina phoxocephala | Slenderhead darter | 2.2 | 1.8 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 3 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 2 | Centrarchidae | Lepomis cyanelus | Green sunfish | 4 | 4 | X | | | | | X |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 2 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 84 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 1 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 29 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 4 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 3 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 3 | Fundulidae | Fundulus olivaceus | Blackspotted topminnow | 2.7 | 2.3 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 3 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 13 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 1 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 5 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Hominy Creek: downstream | OK121300-04-0010C | Tulsa | 11-Sep-01 | 4 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | X | | | X |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 1 | Centrarchidae | Lepomis cyanelus | Green sunfish | 4 | 4 | X | | | | | X |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 182 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 313 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 5 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 21 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 82 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 1 | Sciaenidae | Aplodinotus grunniens | Freshwater drum | 3.2 | 3.2 | X | | | | | X |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 15 | Fundulidae | Fundulus olivaceus | Blackspotted topminnow | 2.7 | 2.3 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 19 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 2 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 5 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 8 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 127 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 11 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 1 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 6 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Hominy Creek: upstream | OK121300-04-0280G | Osage | 04-Sep-01 | 2 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 4 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 34 | Centrarchidae | Lepomis cyanelus | Green sunfish | 4 | 4 | X | | | | | X |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 14 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 39 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 9 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 5 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 5 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 2 | Catostomidae | Carpodacus carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 2 | Sciaenidae | Aplodinotus grunniens | Freshwater drum | 3.2 | 3.2 | X | | | | | X |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 1 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 3 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 5 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 30 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 4 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|------------|-----------|--------------------|----------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 15 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 6 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 17 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 2 | Centrarchidae | Lepomis microlophus | Redear sunfish | 3 | 2.87 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 4 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 6 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 1 | Centrarchidae | Pomoxis nigromaculatus | Black crappie | 3.2 | 2.8 | | | | X | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 4 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 1 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Curl Creek | OK121400-01-0270G | Washington | 30-Aug-01 | 2 | Percidae | Percina phoxocephala | Slenderhead darter | 2.2 | 1.8 | X | | | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 2 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 7 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 59 | Cyprinidae | Camptostoma oligolepis | Largescale stoneroller | 1.5 | 1.5 | | | | | X | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 98 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 4 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 10 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 1 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 5 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 2 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 10 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 9 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Hogshooter Creek | OK121400-01-0300D | Washington | 30-Aug-01 | 3 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 23 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 1 | Sciaenidae | Aplodinotus grunniens | Freshwater drum | 3.2 | 3.2 | X | | | | | X |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 2 | Lepisosteidae | Lepisosteus platostomus | Shortnose gar | 3.8 | 3.3 | | | | X | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 2 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 59 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 1 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 39 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 21 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 1 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 6 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 3 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 4 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 2 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 2 | Percichthyidae | Morone chrysops | White bass | 3.3 | 3 | | | | X | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 2 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 5 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Little Caney River | OK121400-02-0140H | Osage | 31-Aug-01 | 1 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 60 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Lepisosteidae | Lepisosteus oculatus | Spotted gar | 3.5 | 2.7 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 5 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 4 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 286 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|---------------|-------------------|--------|-----------|--------------------|----------------|-------------------------|-----------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 23 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 96 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Catostomidae | Carpiodes carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 4 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Catostomidae | Ictiobus cyprinellus | Largemouth buffalo | 3.2 | 3 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Catostomidae | Moxostoma erythrurum | Golden redhorse | 2.3 | 2 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 3 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 27 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 135 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 2 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 13 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 18 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 59 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 13 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 7 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 2 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Mission Creek | OK121400-02-0190B | Osage | 05-Sep-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 9 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 84 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 46 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 20 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 35 | Cyprinidae | Notropis boops | Bigeye shiner | 2 | 1.5 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 11 | Cyprinidae | Notropis rubellus | Rosyface shiner | 1.6 | 1.6 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 74 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 11 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 2 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Catostomidae | Moxostoma duquesnei | Black redhorse | 1.8 | 2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 9 | Catostomidae | Moxostoma erythrurum | Golden redhorse | 2.3 | 2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 5 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 2 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 6 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 226 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 6 | Percichthyidae | Morone chrysops | White bass | 3.3 | 3 | | | | X | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 34 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 2 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 42 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 18 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 9 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 7 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 2 | Percidae | Percina copelandi | Channel darter | 1.8 | 1.7 | X | | | | | |
| Buck Creek | OK121400-03-0170C | Osage | 04-Sep-01 | 1 | Percidae | Percina phoxocephala | Slenderhead darter | 2.2 | 1.8 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 2 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|------------|-------------------|---------|-----------|--------------------|----------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 11 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 1 | Lepisosteidae | Lepisosteus osseus | Longnose gar | 4 | 3.7 | | | | X | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 1 | Lepisosteidae | Lepisosteus platostomus | Shortnose gar | 3.8 | 3.3 | | | | X | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 94 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 74 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 9 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 48 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 21 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 2 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 14 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 1 | Fundulidae | Fundulus olivaceus | Blackspotted topminnow | 2.7 | 2.3 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 47 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 5 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 5 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 29 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 7 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 2 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 1 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 3 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Sand Creek | OK121400-04-0010F | Osage | 10-Sep-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 159 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 41 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 643 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 50 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 304 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 3 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 4 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 1 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 1 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 281 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 20 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 98 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 2 | Percichthyidae | Morone chrysops | White bass | 3.3 | 3 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 20 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 10 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 42 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 79 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 36 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 5 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 12 | Centrarchidae | Pomoxis nigromaculatus | Black crappie | 3.2 | 2.8 | | | | X | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 6 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Bull Creek | OK121500-02-0090D | Wagoner | 27-Aug-01 | 5 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 3 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 16 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 112 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|------------------|-------------------|--------|-----------|--------------------|----------------|-------------------------|---------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 16 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | | X |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 53 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 10 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 1 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 1 | Catostomidae | Myntrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 9 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 35 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 1 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 15 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 47 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 54 | Percichthyidae | Morone chrysops | White bass | 3.3 | 3 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 20 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 27 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 44 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 57 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 4 | Centrarchidae | Pomoxis nigromaculatus | Black crappie | 3.2 | 2.8 | | | | X | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 1 | Percidae | Etheostoma gracile | Slough darter | 2.6 | 1.6 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Dog Creek | OK121500-02-0360D | Rogers | 31-Jul-02 | 2 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 1 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 78 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 34 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 413 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | | X |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 161 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 3 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 7 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 6 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 12 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 24 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 4 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 3 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 3 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 13 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 10 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 65 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 1 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 12 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 5 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 71 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 3 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 34 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 4 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| California Creek | OK121510-02-0050C | Nowata | 03-Aug-01 | 3 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|----------|-----------|--------------------|---------------|-----------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 4 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 166 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 34 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 19 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 12 | Cyprinidae | Cyprinella whipplei | Steelcolor shiner | 2 | 1.8 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 7 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 18 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 2 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 105 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 2 | Catostomidae | Carpiodes carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 15 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 18 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 21 | Catostomidae | Moxostoma erythrum | Golden redhorse | 2.3 | 2 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 93 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 2 | Sciaenidae | Aplodinotus grunniens | Freshwater drum | 3.2 | 3.2 | X | | | | | X |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 5 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 12 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 1 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 255 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 34 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 12 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 16 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 1 | Centrarchidae | Lepomis microlophus | Redear sunfish | 3 | 2.87 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 10 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 10 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 2 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Big Creek | OK121510-03-0010D | Nowata | 13-Sep-01 | 21 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 69 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 188 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 12 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 74 | Cyprinidae | Notropis boops | Bigeye shiner | 2 | 1.5 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 7 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 11 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 1 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 3 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 31 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 38 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 23 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 54 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 40 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 26 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 17 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Ranger Creek | OK121600-01-0060D | Cherokee | 01-Aug-01 | 52 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 2 | Cyprinidae | Semotilus atromaculatus | Creek chub | 2 | 2 | | | | | | X |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|----------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 17 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 933 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 831 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 4 | Cyprinidae | Nocomis asper | Redspot chub | 1.5 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 112 | Cyprinidae | Notropis boops | Bigeye shiner | 2 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 191 | Cyprinidae | Notropis nubilus | Ozark minnow | 1.6 | 1.2 | | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 17 | Cyprinidae | Notropis rubellus | Rosyface shiner | 1.6 | 1.6 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 15 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 2 | Centrarchidae | Ambloplites ariommus | Shadow bass | 2 | 1.5 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 3 | Catostomidae | Erimyzon oblongus | Creek chubsucker | 2 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 52 | Catostomidae | Hypentelium nigricans | Northern hog sucker | 1.3 | 1 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 4 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 44 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 6 | Catostomidae | Moxostoma duquesnei | Black redhorse | 1.8 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 1 | Catostomidae | Moxostoma erythrum | Golden redhorse | 2.3 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 106 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 3 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 30 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 2 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 1 | Cyprinidae | Semotilus atromaculatus | Creek chub | 2 | 2 | | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 4 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 3 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 5 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 169 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 7 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 4 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 4 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 1 | Percidae | Etheostoma blennioides | Greenside darter | 1.6 | 1.4 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 8 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 7 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 1 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 11 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 01-Aug-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 666 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 425 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 1 | Cyprinidae | Notropis amnis | Pallid shiner | 1.7 | 1.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 71 | Cyprinidae | Notropis boops | Bigeye shiner | 2 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 55 | Cyprinidae | Notropis nubilus | Ozark minnow | 1.6 | 1.2 | | | | | X | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 12 | Cyprinidae | Notropis rubellus | Rosyface shiner | 1.6 | 1.6 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 3 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 1 | Centrarchidae | Ambloplites ariommus | Shadow bass | 2 | 1.5 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 5 | Catostomidae | Hypentelium nigricans | Northern hog sucker | 1.3 | 1 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 5 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 5 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 2 | Catostomidae | Moxostoma duquesnei | Black redhorse | 1.8 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 41 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 56 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|----------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 7 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 3 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 3 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 3 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 43 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 1 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 2 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 3 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 2 | Percidae | Etheostoma blennioides | Greenside darter | 1.6 | 1.4 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 1 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 5 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 52 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 6 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Fourteenmile Creek | OK121600-01-0100G | Cherokee | 08-Nov-01 | 5 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 11 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 1 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 8 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 9 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 3 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 9 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 8 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 3 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 12 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 1 | Ictaluridae | Pyloodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 26 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 24 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 156 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 9 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 6 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 7 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 31 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 2 | Centrarchidae | Lepomis microlophus | Redear sunfish | 3 | 2.87 | X | | | | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 16 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Chouteau Creek | OK121600-01-0430M | Mayes | 17-Aug-01 | 16 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 17 | Cyprinidae | Semotilus atromaculatus | Creek chub | 2 | 2 | | | | | | X |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 30 | Catostomidae | Catostomus commersoni | White sucker | 1.8 | 1.6 | X | | | | | X |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 528 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 294 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 24 | Cyprinidae | Nocomis asper | Redspot chub | 1.5 | 1.5 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 6 | Cyprinidae | Notropis nubilis | Ozark minnow | 1.6 | 1.2 | | | | | X | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 8 | Centrarchidae | Ambloplites ariommus | Shadow bass | 2 | 1.5 | X | | | | | X |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 1 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 9 | Catostomidae | Hypentelium nigricans | Northern hog sucker | 1.3 | 1 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 2 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|----------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 1 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 12 | Cottidae | Cottus carolinae | Banded sculpin | 1 | 1 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 4 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 1 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 4 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 1 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 1 | Percidae | Etheostoma blennioides | Greenside darter | 1.6 | 1.4 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 84 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 18 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 48 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Saline Creek | OK121600-02-0030D | Mayes | 02-Aug-01 | 2 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 1 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 36 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 60 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 8 | Cyprinidae | Phoxinus erythrogaster | Southern redbelly dace | 1.2 | 1.2 | | | | | X | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 33 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 166 | Cottidae | Cottus carolinae | Banded sculpin | 1 | 1 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 8 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 11 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 2 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 3 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 21 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 20 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 68 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Drowning Creek | OK121600-03-0090G | Delaware | 08-Aug-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 2 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 55 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 6 | Cyprinidae | Cyprinella whipplei | Steelcolor shiner | 2 | 1.8 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 122 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Cyprinidae | Notropis nubilis | Ozark minnow | 1.6 | 1.2 | | | | | X | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 74 | Cyprinidae | Notropis rubellus | Rosyface shiner | 1.6 | 1.6 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Catostomidae | Cariodes carpio | River carsucker | 3.5 | 3.5 | | | X | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 24 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 16 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Fundulidae | Fundulus catenatus | Northern studfish | 1.8 | 1.6 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 1 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 7 | Cottidae | Cottus carolinae | Banded sculpin | 1 | 1 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 4 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 3 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 10 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 4 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 52 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 3 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 29 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Little Horse Creek | OK121600-03-0190A | Ottawa | 07-Aug-01 | 11 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|--------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 2 | Cyprinidae | Semotilus atromaculatus | Creek chub | 2 | 2 | | | | | | X |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 6 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 360 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 549 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 16 | Cyprinidae | Nocomis asper | Redspot chub | 1.5 | 1.5 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 1 | Cyprinidae | Notropis nubilus | Ozark minnow | 1.6 | 1.2 | | | | | X | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 86 | Cyprinidae | Notropis rubellus | Rosyface shiner | 1.6 | 1.6 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 4 | Centrarchidae | Ambloplites ariommus | Shadow bass | 2 | 1.5 | X | | | | | X |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 8 | Catostomidae | Hypentelium nigricans | Northern hog sucker | 1.3 | 1 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 3 | Catostomidae | Moxostoma duquesnei | Black rehorse | 1.8 | 2 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 22 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 30 | Ictaluridae | Noturus exilis | Slender madtom | 2 | 1 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 3 | Fundulidae | Fundulus catenatus | Northern studfish | 1.8 | 1.6 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 1 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 24 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 4 | Cottidae | Cottus caroliniae | Banded sculpin | 1 | 1 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 15 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 13 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 12 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 41 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 1 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 2 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 10 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 6 | Percidae | Etheostoma punctulatum | Stippled darter | 1.7 | 1.3 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 38 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Sycamore Creek | OK121600-03-0510D | Ottawa | 25-Oct-01 | 4 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 4 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 2 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 5 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 19 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 14 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 2 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 1 | Catostomidae | Ictiobus bubalus | Smallmouth buffalo | 3.2 | 3.3 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 40 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 13 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 25 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 10 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 1 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 2 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 11 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Tar Creek | OK121600-04-0060D | Ottawa | 07-Aug-01 | 10 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 3 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 125 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 1 | Lepisosteidae | Lepisosteus osseus | Longnose gar | 4 | 3.7 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 2 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 235 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|--------------------|-------------------|--------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 14 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 20 | Cyprinidae | Notropis buchanani | Ghost shiner | 2.6 | 2.6 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 25 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 20 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 21 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 2 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 13 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 1 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 48 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 2 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 12 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 219 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 17 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 23 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 128 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 129 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 6 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 14 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Little Cabin Creek | OK121600-06-0080C | Craig | 29-Aug-01 | 2 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 3 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 85 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 64 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 44 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 10 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 42 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 11 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 1 | Catostomidae | Moxostoma | Redhorse sucker | 2.1 | 2 | | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 6 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 6 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 8 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 44 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 3 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 15 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 1 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 33 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 9 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 3 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 6 | Percidae | Etheostoma flabellare | Fantail darter | 2 | 1.3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 10 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 9 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 4 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Big Cabin Creek | OK121600-06-0220I | Craig | 13-Sep-01 | 1 | Percidae | Percina phoxocephala | Slenderhead darter | 2.2 | 1.8 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 32 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 418 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|---------------------|-------------------|--------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 571 | Cyprinidae | Luxilus cardinalis | Cardinal shiner | 1 | 1 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 34 | Cyprinidae | Nocomis asper | Redspot chub | 1.5 | 1.5 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 2 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 12 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 21 | Catostomidae | Hypentelium nigricans | Northern hog sucker | 1.3 | 1 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 6 | Catostomidae | Moxostoma duquesnei | Black redbhorse | 1.8 | 2 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 14 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 48 | Centrarchidae | Ambloplites ariommus | Shadow bass | 2 | 1.5 | X | | | | | X |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 78 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 64 | Fundulidae | Fundulus catenatus | Northern studfish | 1.8 | 1.6 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 3 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 9 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 27 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 72 | Cottidae | Cottus carolinae | Banded sculpin | 1 | 1 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 6 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 34 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 77 | Centrarchidae | Micropterus dolomieu | Smallmouth bass | 1.5 | 1.5 | | | | X | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 21 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 1 | Percidae | Etheostoma blennioides | Greenside darter | 1.6 | 1.4 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 3 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Fivemile Creek | OK121600-07-0110G | Ottawa | 07-Aug-01 | 3 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 4 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 3 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Lepisosteidae | Lepisosteus oculatus | Spotted gar | 3.5 | 2.7 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 139 | Cyprinidae | Camptostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 165 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Cyprinidae | Notemigonus crysoleucas | Golden shiner | 3.8 | 3.8 | | | X | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 30 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 6 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 7 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Sciaenidae | Aplodinotus grunniens | Freshwater drum | 3.2 | 3.2 | X | | | | | X |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 6 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 17 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 11 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 10 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 5 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 70 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 3 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 7 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|---------------------|-------------------|---------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Pryor Creek: Hwy 20 | OK121610-00-0050D | Mayes | 06-Aug-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 3 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 14 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 18 | Cyprinidae | Campostoma anomalum | Central stoneroller | 2.2 | 2 | | | | | X | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 168 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 4 | Cyprinidae | Lythrurus umbratilis | Redfin shiner | 2 | 2 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 19 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 18 | Cyprinidae | Pimephales notatus | Bluntnose minnow | 3 | 2.7 | | | X | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 26 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 16 | Catostomidae | Minytrema melanops | Spotted sucker | 2 | 1.5 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 1 | Ictaluridae | Noturus nocturnus | Freckled madtom | 2.5 | 1.8 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 2 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 5 | Fundulidae | Fundulus notatus | Blackstripe topminnow | 2.7 | 2.3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 18 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 50 | Atherinidae | Labidesthes sicculus | Brook silverside | 2.7 | 2 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 2 | Centrarchidae | Lepomis gulosus | Warmouth sunfish | 3.2 | 3 | | | | X | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 3 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 6 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 143 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 10 | Centrarchidae | Micropterus punctulatus | Spotted bass | 2.3 | 2.5 | | | | X | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 16 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 1 | Percidae | Etheostoma spectabile | Orangethroat darter | 2.4 | 2 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 7 | Percidae | Etheostoma whipplei | Redfin darter | 2 | 1.8 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 1 | Percidae | Percina caprodes | Logperch | 2.3 | 2.3 | X | | | | | |
| Pryor Creek: Hwy 69 | OK121610-00-0050M | Mayes | 06-Aug-01 | 8 | Percidae | Percina phoxocephala | Slenderhead darter | 2.2 | 1.8 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 1 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 8 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 661 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 137 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 6 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 37 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 5 | Catostomidae | Carpionodes carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 6 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 18 | Fundulidae | Fundulus zebrinus | Plains killifish | 3.3 | 3.2 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 6 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 36 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Buggy Creek | OK520610-02-0120C | Grady | 07-Aug-01 | 26 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 3 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 15 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 1 | Lepisosteidae | Lepisosteus oculatus | Spotted gar | 3.5 | 2.7 | | | | X | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 1 | Lepisosteidae | Lepisosteus osseus | Longnose gar | 4 | 3.7 | | | | X | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 3 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 1681 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 18 | Cyprinidae | Hybognathus placitus | Plains minnow | 3.6 | 3 | | | | | X | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 59 | Cyprinidae | Notropis atherinoides | Emerald shiner | 3.2 | 3.2 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|------------------|-------------------|---------|-----------|--------------------|-----------------|-----------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 212 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 5 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 157 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 2 | Catostomidae | Carpoides carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 18 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 11 | Ictaluridae | Pylodictis olivaris | Flathead catfish | 3.3 | 3 | | | | X | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 13 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 12 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 12 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 20 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 1 | Centrarchidae | Lepomis microlophus | Redear sunfish | 3 | 2.87 | X | | | | | |
| Walnut Creek | OK520610-03-0010C | McClain | 16-Aug-01 | 24 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 757 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Cyprinidae | Cyprinus carpio | Common carp | 4 | 3.8 | | | X | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 17 | Cyprinidae | Hybognathus placitus | Plains minnow | 3.6 | 3 | | | | | X | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 55 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 7 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Fundulidae | Fundulus zebrinus | Plains killifish | 3.3 | 3.2 | X | | | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 1 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Trail Creek | OK520620-02-0090G | Dewey | 07-Jun-01 | 2 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 325 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 37 | Cyprinidae | Hybognathus placitus | Plains minnow | 3.6 | 3 | | | | | X | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 3 | Cyprinidae | Notropis atherinoides | Emerald shiner | 3.2 | 3.2 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 33 | Cyprinidae | Notropis girardi | Arkansas River shiner | 1.8 | 1.4 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 167 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 6 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 6 | Cyprinidae | Pimephales promelas | Fathead minnow | 3.7 | 3.5 | | | X | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 3 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 4 | Cyprinodontidae | Cyprinodon rubrofluviatilis | Red River pupfish | 2.6 | 2 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 160 | Fundulidae | Fundulus zebrinus | Plains killifish | 3.3 | 3.2 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 96 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 16 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 2 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Lone Creek | OK520620-03-0020C | Dewey | 08-Aug-01 | 3 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 84 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 63 | Cyprinidae | Notropis atherinoides | Emerald shiner | 3.2 | 3.2 | X | | | | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 57 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 7 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 49 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Hackberry Creek | OK520620-04-0050D | Ellis | 08-Aug-01 | 5 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 23 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 10 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 40 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |

Appendix C. Fish collection data.

| SiteName | WBID | County | Date | TotalSpecimenCount | Family | Species | VernName | WQMean | HabMean | Insectivor | Planktivor | Omnivore | Piscivore | Herbivore | Generalist |
|------------------|-------------------|--------|-----------|--------------------|---------------|-------------------------|-------------------------|--------|---------|------------|------------|----------|-----------|-----------|------------|
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 3 | Ictaluridae | Ameiurus natalis | Yellow bullhead catfish | 3.6 | 3.2 | X | | | | | X |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 2 | Fundulidae | Fundulus zebrinus | Plains killifish | 3.3 | 3.2 | X | | | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 8 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 2 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 6 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 1 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Commission Creek | OK520620-05-0160C | Ellis | 08-Aug-01 | 22 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 1 | Lepisosteidae | Lepisosteus osseus | Longnose gar | 4 | 3.7 | | | | X | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 18 | Clupeidae | Dorosoma cepedianum | Gizzard shad | 3.3 | 3.5 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 2472 | Cyprinidae | Cyprinella lutrensis | Red shiner | 4 | 3.7 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 34 | Cyprinidae | Hybognathus placitus | Plains minnow | 3.6 | 3 | | | | | X | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 322 | Cyprinidae | Notropis atherinoides | Emerald shiner | 3.2 | 3.2 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 59 | Cyprinidae | Notropis girardi | Arkansas River shiner | 1.8 | 1.4 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 274 | Cyprinidae | Notropis stramineus | Sand shiner | 2.7 | 2.5 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 18 | Cyprinidae | Phenacobius mirabilis | Suckermouth minnow | 2.3 | 1.3 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 70 | Cyprinidae | Pimephales promelas | Fathead minnow | 3.7 | 3.5 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 83 | Cyprinidae | Pimephales vigilax | Bullhead minnow | 3.6 | 3.4 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 2 | Catostomidae | Carpiodes carpio | River carpsucker | 3.5 | 3.5 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 2 | Catostomidae | Carpiodes carpio | River carpsucker | 3.5 | 3.4 | | | X | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 28 | Ictaluridae | Ameiurus melas | Black bullhead catfish | 4 | 4 | X | | | | | X |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 25 | Ictaluridae | Ictalurus punctatus | Channel catfish | 3.2 | 3.3 | | | | X | | X |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 19 | Fundulidae | Fundulus zebrinus | Plains killifish | 3.3 | 3.2 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 7 | Poeciliidae | Gambusia affinis | Mosquitofish | 4 | 4 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 1 | Centrarchidae | Lepomis cyanellus | Green sunfish | 4 | 4 | X | | | | | X |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 8 | Centrarchidae | Lepomis humilis | Orangespotted sunfish | 3.5 | 3.3 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 1 | Centrarchidae | Lepomis macrochirus | Bluegill sunfish | 3.2 | 3.2 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 6 | Centrarchidae | Lepomis megalotis | Longear sunfish | 3.3 | 3 | X | | | | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 1 | Centrarchidae | Micropterus salmoides | Largemouth bass | 3.2 | 3.2 | | | | X | | |
| Deer Creek | OK520620-06-0010F | Caddo | 07-Aug-01 | 2 | Centrarchidae | Pomoxis annularis | White crappie | 3.4 | 3.2 | | | | X | | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|-----------------|-----------------|
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Limnodrilus |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 24 | 8 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 2 | | | 62.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Dineutus |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | | 1 | | 73.00 | ARTHROPODA | Insecta | Coleoptera | Hydrochidae | Hydrochus |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | | 1 | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 21 | 31 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 5 | 2 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 19 | 9 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 15 | 7 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 5 | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 2 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 2 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 2 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 1 | | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | | 1 | | 166.50 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Chauliodes |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | | 1 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 1 | 1 | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 22 | 24 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 1 | 1 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-01-0150H | Delaware Creek | 16-Jul-02 | 25502 | 100 | 100 | | 50 | 100 | | 4 | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-01-0150H | Delaware Creek | 27-Jan-03 | 26650 | | | | | | | | | | | NO FLOW | | | | |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 1 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Naididae | Nais |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 7 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 3 | 7 | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 5 | | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 12 | | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microclyloepus |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 14 | 2 | 3 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 33 | 30 | 4 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 2 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 1 | 25 | 12 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 3 | | 2 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 5 | 2 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 2 | 4 | 8 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 3 | 159.00 | ARTHROPODA | Insecta | Hemiptera | Veliidae | Rhagovelia |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 5 | 5 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | 1 | 10 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 8 | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | 1 | 2 | 195.00 | ARTHROPODA | Insecta | Odonata | Macromiinae | Macromia |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | 1 | 1 | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 10 | 5 | 7 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 11 | 5 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | 1 | | 239.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Oecetis |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|------------------|-----------------|
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 2 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 1 | 262.00 | MOLLUSCA | Gastropoda | Basommatophora | Ancylidae | Ferrissia |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 6 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 2 | 4 | 55 | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 3 | | 3 | 277.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Eupera |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | 13 | | 2 | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121300-02-0010C | Bird Creek | 03-Aug-01 | 23898 | 50 | 100 | 100 | 3.13 | 50 | 50 | | | 1 | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 3 | | 1 | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | 1 | 8 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | 2 | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | 3 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 4 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 4 | 3 | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 17 | 55 | 87 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 3 | 2 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 3 | 1 | 2 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 13 | 28 | 13 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | | 1 | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | 1 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 9 | 1 | 3 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | 2 | 2 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | 1 | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | | 1 | 192.80 | ARTHROPODA | Insecta | Odonata | Libellulidae | Libellula |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 60 | 7 | 5 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 6 | 10 | 2 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 230.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Potamyia |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | | | 2 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 2 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 281.00 | NEMATODA | | | | |
| OK121300-02-0010C | Bird Creek | 05-Feb-02 | 25454 | 100 | 100 | 100 | 50 | 100 | 25 | 1 | | | 281.50 | NEMERTEA | Enopla | Hoplonemertea | Tetrastemmatidae | Prostoma |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | 1 | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 2 | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 3 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 3 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 9 | | 8 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | 4 | | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|-------------------|-------------------|
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 29 | 11 | 17 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | | 2 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | | 30 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | 3 | 3 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 1 | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 8 | 1 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | | 124.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Camelobaetidius |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 12 | 3 | 1 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | 1 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 5 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | 1 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | | 155.90 | ARTHROPODA | Insecta | Hemiptera | Mesoveliidae | Mesovelia |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | 1 | | 164.00 | ARTHROPODA | Insecta | Lepidoptera | Pyrilidae | Petrophila |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 2 | 13 | 2 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 2 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | 1 | 1 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 1 | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 26 | 21 | 35 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 6 | 69 | 1 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 12 | | 2 | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | 8 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121300-02-0010C | Bird Creek | 17-Jul-02 | 25488 | 80 | 100 | 98 | 25 | 50 | 25 | | | 1 | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 9.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Lumbricidae | |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 2 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 10 | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 29 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 13 | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 8 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 5 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 127.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Labiobaetis |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclleon |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 4 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 19 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 2 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 195.70 | ARTHROPODA | Insecta | Orthoptera | Tridactylidae | Ellipes |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 3 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 18 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | | 1 | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|---------------|-------------------|-------------------|
| OK121300-04-0010C | Hominy Crk: downstr. | 02-Aug-01 | 23895 | | 100 | | | 100 | | | 1 | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 3 | 11 | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | | 1 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 9 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | 16 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 61 | 95 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | | 2 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 2 | 10 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 4 | 27 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | 1 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | | | 138.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Heptagenia |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 8 | 1 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 4 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 3 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 10 | 6 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 3 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | | 3 | | 239.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Oecetis |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | | | 250.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Cymellus |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | | 2 | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 2 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121300-04-0010C | Hominy Crk: downstr. | 04-Feb-02 | 25451 | 60 | 100 | | 12.5 | 50 | | 1 | | | 281.50 | NEMERTEA | Enopla | Hoplonemertea | Tetrastemmatidae | Prostoma |
| OK121300-04-0010C | Hominy Crk: downstr. | 16-Jul-02 | 25487 | | | | | | | | | | | NO FLOW | | | | |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | | 1 | | 29.10 | ARTHROPODA | Crustacea | Cladocera | | |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 33 | 3 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 16 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 26 | 71 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 11 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 6 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 1 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 1 | | | 230.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Potamyia |
| OK121300-04-0010C | Hominy Crk: downstr. | 27-Jan-03 | 26664 | 100 | 100 | | 25 | 100 | | 2 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 16 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 23.00 | ARTHROPODA | Acari | Arcarina | | |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 4 | | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 5 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|------------------|-----------------|
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 25 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 6 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 11 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 21 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 2 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 164.00 | ARTHROPODA | Insecta | Lepidoptera | Pyrilidae | Petrophila |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 9 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 5 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 3 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 1 | | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 13 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 11 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 2 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121300-04-0280G | Hominy Crk: upstream | 03-Aug-01 | 23900 | 100 | | | 25 | | | 14 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 5 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | 3 | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 2 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 7 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | | | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 4 | 8 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 43 | 85 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | 4 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | | 2 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 25 | 10 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 3 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 3 | 1 | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 5 | 1 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 3 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 11 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 5 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 2 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 4 | 1 | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 2 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 2 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 7 | 9 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 3 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0280G | Hominy Crk: upstream | 05-Feb-02 | 25458 | 90 | 100 | | 25 | 25 | | 1 | | | 281.00 | NEMATODA | | | | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|---------------|-----------------|-----------------|
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 18 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Branchiura |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Limnodrilus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 3 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 3 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | | 1 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcyloepus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 9 | | 2 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 13 | 8 | 27 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | 2 | 2 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 6 | 6 | 4 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | 2 | 8 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 2 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | | | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 12 | 2 | 4 | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 2 | | 1 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclleon |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 5 | | 1 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 8 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | 2 | 9 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 155.90 | ARTHROPODA | Insecta | Hemiptera | Mesoveliidae | Mesovelia |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 7 | 1 | 2 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 173.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Basiaeschna |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 6 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 2 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 1 | 3 | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 21 | 1 | 20 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | 1 | 1 | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | | | 1 | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121300-04-0280G | Hominy Crk: upstream | 17-Jul-02 | 25492 | 100 | 100 | 100 | 25 | 100 | 100 | 7 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Naididae | Nais |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 2 | 18.20 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Branchiura |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 4 | 19.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Limnodrilus |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 1 | 91.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Diamesinae |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 12 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 13 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | | | 1 | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|------------------|----------------|
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 1 | | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 3 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 6 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 1 | | | 143.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 5 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 2 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 2 | | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 1 | | | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 4 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121300-04-0280G | Hominy Crk: upstream | 28-Jan-03 | 26668 | 85 | | | 25 | | | 26 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 31.10 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Cambarus |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 34 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 63.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Gyretes |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 21 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 10 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 10 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 10 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 168.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Nigronia |
| OK121400-01-0270G | Curl Creek | 02-Aug-01 | 23896 | 100 | | | 25 | | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 17.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Slavina |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 6 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 22 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 59 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 160.70 | ARTHROPODA | Insecta | Lepidoptera | Nepticulidae | |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 4 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121400-01-0270G | Curl Creek | 04-Feb-02 | 25452 | 50 | | | 25 | | | 1 | | | 281.00 | NEMATODA | | | | |
| OK121400-01-0270G | Curl Creek | 16-Jul-02 | 25484 | | | | | | | | | | | NO FLOW | | | | |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 8 | 1 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | | 2 | | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophiliidae | Enochrus |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 49 | 53 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 5 | 20 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|----------------|----------------|
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 3 | 9 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | | 2 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | | | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 4 | 1 | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 6 | 1 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 5 | 8 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | | 1 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 7 | 12 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | | 1 | | 235.30 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Neotrichia |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | 2 | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 1 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-01-0300D | Hogshooter Creek | 02-Aug-01 | 23897 | 85 | 100 | | 12.5 | 100 | | 9 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 2 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 70 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 1 | | | 67.50 | ARTHROPODA | Insecta | Coleoptera | Hydraenidae | Hydraena |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 11 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 2 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 1 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121400-01-0300D | Hogshooter Creek | 11-Feb-02 | 24799 | 90 | | | 12 | | | 4 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 2 | 1 | | 49.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Uvarus |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 55 | 3 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | | 1 | | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | | 1 | | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | | | 84.50 | ARTHROPODA | Insecta | Diptera | Anthomyiidae | Limnophora |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 16 | 37 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | 1 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 5 | 14 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 4 | 4 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | | 1 | | 96.00 | ARTHROPODA | Insecta | Diptera | Dolichopodidae | |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 2 | 1 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | | 1 | | 161.00 | ARTHROPODA | Insecta | Lepidoptera | Pyalidae | |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 1 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 4 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | 22 | 9 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-01-0300D | Hogshooter Creek | 16-Jul-02 | 25485 | 70 | 100 | | 25 | 100 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121400-01-0300D | Hogshooter Creek | 27-Jan-03 | 26666 | | | | | | | | | | | NO FLOW | | | | |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 1 | | 43.00 | ARTHROPODA | Insecta | Coleoptera | Chrysomelidae | |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 8 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|-----------------|-------------------|
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 13 | 4 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 1 | | 83.60 | ARTHROPODA | Insecta | Collembola | Isotomidae | Isotomurus |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 1 | | 88.06 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Probezzia |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 4 | 21 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 5 | 8 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | 7 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 2 | 4 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 5 | 22 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 6 | 6 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 4 | 1 | | 127.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Labiobaetis |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | | 1 | | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloeodes |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 6 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 7 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 33 | 4 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 4 | 5 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 2 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 4 | | | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 4 | 3 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | 2 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | 3 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121400-02-0140H | Little Caney River | 02-Aug-01 | 23894 | 100 | 100 | | 25 | 50 | | 1 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 5 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | | 1 | | 23.00 | ARTHROPODA | Acari | Arcarina | | |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 4 | | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 24 | 2 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 2 | 12 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 7 | 55 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | 6 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 7 | 17 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 6 | 12 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 3 | 2 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 11 | 5 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 149.70 | ARTHROPODA | Insecta | Ephemeroptera | Potamanthidae | Anthopotamus |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 12 | 2 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | | 1 | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 2 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 13 | 3 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|-------------------|-------------------|
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 3 | 6 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 1 | | | 230.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Potamyia |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | | 1 | | 243.50 | ARTHROPODA | Insecta | Trichoptera | Limnephilidae | Pycnopsyche |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | | 1 | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121400-02-0140H | Little Caney River | 04-Feb-02 | 25453 | 100 | 100 | | 25 | 50 | | 5 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 8 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 17 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | | 49.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Uvarus |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 4 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 5 | 1 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 7 | 2 | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 5 | 69 | 6 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | 1 | 2 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | 1 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 1 | 5 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 1 | 2 | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 2 | 1 | 2 | 127.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Labiobaetis |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 1 | | | 136.10 | ARTHROPODA | Insecta | Ephemeroptera | Ephemeridae | Hexagenia |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 2 | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 10 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 7 | 3 | 65 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | 2 | 1 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 2 | | | 168.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Nigronia |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 1 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 4 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 1 | | 1 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 23 | 1 | 1 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | 1 | 30 | 1 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-02-0140H | Little Caney River | 16-Jul-02 | 25486 | 20 | 100 | 100 | 25 | 50 | 50 | | | 2 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 1 | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 2 | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 1 | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 13 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 15 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 3 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 4 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 2 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 10 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 1 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | | | 3 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|----------------|-------------------|
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | 3 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | 5 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-02-0140H | Little Caney River | 28-Jan-03 | 26671 | 100 | | | 50 | | | 9 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 3 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 8 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 7 | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 1 | | 29.50 | ARTHROPODA | Crustacea | Copepoda | | |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 22 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 8 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 1 | | 83.60 | ARTHROPODA | Insecta | Collembola | Isotomidae | Isotomurus |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 56 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 4 | 23 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 2 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 29 | 2 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 3 | 15 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 2 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 1 | 3 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 2 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 19 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 5 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 1 | | 161.00 | ARTHROPODA | Insecta | Lepidoptera | Pyralidae | |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 2 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | | 1 | | 174.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Nasiaeschna |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 15 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 3 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 5 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 1 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-02-0190B | Mission Creek | 05-Feb-02 | 25456 | 75 | 100 | | 25 | 100 | | 3 | | | 281.00 | NEMATODA | | | | |
| OK121400-02-0190B | Mission Creek | 17-Jul-02 | 25490 | | | | | | | | | | | NO FLOW | | | | |
| OK121400-02-0190B | Mission Creek | 28-Jan-03 | 26670 | | | | | | | | | | | NO FLOW | | | | |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 12 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 8 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 25 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 3 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 4 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 115.70 | ARTHROPODA | Insecta | Diptera | Tipulidae | Geranomyia |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|------------------|-----------------|
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 4 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocaepnia |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 26 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 7 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-03-0170C | Buck Creek | 05-Feb-02 | 25457 | 75 | | | 12.5 | | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaenidia | Tubificidae | Branchiura |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 31 | 3 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | 2 | | 88.06 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Probezzia |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 12 | 41 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 11 | 6 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | | 4 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | | 6 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | 1 | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 2 | 4 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 2 | 1 | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 25 | 3 | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | 1 | | 143.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 7 | 6 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 25 | 25 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | | 18 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 4 | 2 | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121400-03-0170C | Buck Creek | 17-Jul-02 | 25491 | 100 | 100 | | 25 | 75 | | 1 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 3 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaenidia | Tubificidae | Branchiura |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaenidia | Tubificidae | Limnodrilus |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 2 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 7 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 12 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 7 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 6 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 3 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 26 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 149.70 | ARTHROPODA | Insecta | Ephemeroptera | Potamanthidae | Anthopotamus |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 3 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 6 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocaepnia |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 1 | | | 243.50 | ARTHROPODA | Insecta | Trichoptera | Limnephilidae | Pycnopsyche |
| OK121400-03-0170C | Buck Creek | 28-Jan-03 | 26669 | 100 | | | 75 | | | 2 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 18 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaenidia | Tubificidae | Branchiura |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|-------------------|
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 4 | 1 | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 8 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 33 | 4 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 10 | 60 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 11 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 6 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 11 | 17 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 2 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 1 | | | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclleon |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 2 | 1 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 2 | 1 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 2 | 1 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 9 | 6 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 1 | 1 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptilia |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | | 1 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 14 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-04-0010F | Sand Creek | 03-Aug-01 | 23899 | 100 | 100 | | 25 | 25 | | 13 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 2 | | 11.50 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Bratislavia |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 1 | | 13.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Dero |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 3 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 2 | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 24 | 3 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 3 | 63 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 3 | 16 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 3 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 10 | 3 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 1 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 6 | 12 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 6 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 1 | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 3 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 5 | 2 | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-------------------|-----------------|
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 1 | | | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 32 | 1 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 1 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 1 | | 250.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Cymellus |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | | 5 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 23 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-04-0010F | Sand Creek | 05-Feb-02 | 25455 | 65 | 100 | | 25 | 50 | | 2 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | | 2 | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 10 | 1 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | | 1 | | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 15 | 55 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | | 1 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | 6 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | | 1 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 8 | 1 | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | | 1 | | 138.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Heptagenia |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 7 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocota |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 10 | 1 | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 63 | 35 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | 34 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 9 | 1 | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-04-0010F | Sand Creek | 17-Jul-02 | 25489 | 80 | 100 | | 12.5 | 50 | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 3 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 3 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 22 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 3 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 3 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 8 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 2 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 72 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121400-04-0010F | Sand Creek | 27-Jan-03 | 26667 | 100 | | | 25 | | | 1 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121500-02-0090D | Bull Creek | 28-Jan-03 | 26651 | | | | | | | | | | | NO FLOW | | | | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-----------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|----------------|-----------------|
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 3 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 5 | | | 13.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Dero |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 8 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 11 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 3 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 16 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 26 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 8 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 25 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 1 | | | 107.80 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Nemotelus |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121500-02-0360D | Dog Creek | 29-Jan-02 | 25669 | 100 | | | 50 | | | 3 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121510-02-0050C | Dog Creek | 07-Jan-02 | 24672 | | | | | | | | | | | NO FLOW | | | | |
| OK121510-02-0050C | Dog Creek | 27-Jan-03 | 26649 | | | | | | | | | | | NO FLOW | | | | |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 4 | 12.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Chaetogaster |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 1 | 17.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Slavina |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 3 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 46 | 44 | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 7 | 8 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 34 | 35 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 4 | 1 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 5 | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | 10 | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 218.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Isoperla |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 1 | | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 2 | 258.00 | ARTHROPODA | Insecta | Trichoptera | Rhyacophilidae | Rhyacophila |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | | 4 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121510-03-0010D | Big Creek | 28-Jan-02 | 25668 | | 100 | 100 | | 50 | 50 | | 2 | 3 | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 1 | 31.10 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Cambarus |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 20 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 30 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 4 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 12 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 1 | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 1 | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 2 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 2 | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 20 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | 1 | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|------------------|-----------------|
| OK121510-03-0010D | Big Creek | 16-Jul-02 | 25503 | | | 100 | | | 50 | | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121510-03-0010D | Big Creek | 27-Jan-03 | 26648 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 11 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 15 | | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 15 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 2 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 7 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 6 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 30 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclleon |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 137.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 2 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 8 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 8 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 6 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-01-0060D | Ranger Creek | 23-Jul-01 | 23324 | 100 | | | 12.5 | | | 1 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaenidae | Limnodrilus | |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 50 | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 1 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 1 | 83.60 | ARTHROPODA | Insecta | Collembola | Isotomidae | Isotomurus |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 70 | | 12 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 2 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | | 98.00 | ARTHROPODA | Insecta | Diptera | Empididae | Clinocera |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 3 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 3 | | 3 | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 2 | | 1 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 5 | | 2 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | | | 1 | 145.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Leptophlebia |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 14 | | 4 | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocaepnia |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 2 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | 1 | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | | 216.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Clioperla |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 2 | | | 218.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Isoperla |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 1 | | | 219.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Oemopteryx |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | 100 | 12.5 | 12.5 | | 12.5 | 2 | | | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|----------------|
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | | 100 | 12.5 | | 12.5 | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | | 100 | 12.5 | | 12.5 | | | 1 | 235.60 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Oxyethira |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | | 100 | 12.5 | | 12.5 | | | 1 | 262.00 | MOLLUSCA | Gastropoda | Basommatophora | Ancylidae | Ferrissia |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | | 100 | 12.5 | | 12.5 | | | 1 | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK121600-01-0060D | Ranger Creek | 12-Feb-02 | 24825 | 75 | | 100 | 12.5 | | 12.5 | 1 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 5 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 23.00 | ARTHROPODA | Acari | Arcarina | | |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 15 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 42 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 5 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 9 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 2 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 2 | | | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 2 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 8 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 129.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Pseudocleon |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 4 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 7 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 3 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 2 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Petridae | Neoperla |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 35 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 1 | | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121600-01-0060D | Ranger Creek | 16-Jul-02 | 25363 | 100 | | | 12.5 | | | 17 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 4 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 3 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 17 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 3 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 6 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 4 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 71 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|-----------------|------------------|-------------------|
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 5 | | | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnatina=Phasgan |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 2 | | | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 3 | | | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121600-01-0060D | Ranger Creek | 28-Jan-03 | 26661 | 75 | | | 12.5 | | | 3 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 4 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 7 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 7 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 9 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 4 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 1 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 2 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 22 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 13 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 13 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 10 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 11 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 1 | | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 6 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 8 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-01-0100G | Fourteenmile Creek | 23-Jul-01 | 23325 | 100 | | | 25 | | | 4 | | | 272.00 | MOLLUSCA | Gastropoda | Neotaenioglossa | Pleuroceridae | Goniobasis=Elimia |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 29 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 8 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 1 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 1 | | | 133.00 | ARTHROPODA | Insecta | Ephemeroptera | Ephemerellidae | Ephemerella |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 8 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 5 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 2 | | | 201.00 | ARTHROPODA | Insecta | Plecoptera | Chloroperlidae | Alloperla |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 2 | | | 207.00 | ARTHROPODA | Insecta | Plecoptera | Nemouridae | Amphinemura |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 3 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 1 | | | 218.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Isoperla |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 12 | | | 219.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Oemopteryx |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 3 | | | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |
| OK121600-01-0100G | Fourteenmile Creek | 12-Feb-02 | 24826 | 100 | | | 12.5 | | | 4 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaenidia | Lumbricidae | |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 1 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 4 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 4 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 5 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 38 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 7 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|-----------------|------------------|-------------------|
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 3 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 26 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 34 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 3 | | | 143.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 1 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 1 | | | 155.80 | ARTHROPODA | Insecta | Hemiptera | Hebridae | Merragata |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 11 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 15 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 3 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 3 | | | 272.00 | MOLLUSCA | Gastropoda | Neotaenioglossa | Pleuroceridae | Goniobasis=Elimia |
| OK121600-01-0100G | Fourteenmile Creek | 16-Jul-02 | 25362 | 100 | | | 25 | | | 7 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 6 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 23.27 | ARTHROPODA | Acan | Arcarina | Protziidae | Wandesia |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 6 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 37 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 6 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 136.00 | ARTHROPODA | Insecta | Ephemeroptera | Ephemeridae | Ephemera |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 9 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 21 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 9 | | | 145.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Leptophlebia |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 201.00 | ARTHROPODA | Insecta | Plecoptera | Chloroperlidae | Alloperla |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 3 | | | 210.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 1 | | | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-01-0100G | Fourteenmile Creek | 28-Jan-03 | 26662 | 100 | | | 12.5 | | | 13 | | | 219.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Oemopteryx |
| OK121600-01-0430M | Chouteau Creek | 28-Jan-03 | 26655 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-01-0430M | Chouteau Creek | 31-Jul-03 | 23351 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 1 | | | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 6 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 5 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 5 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 5 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 2 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 2 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 13 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 2 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|-------------------|------------------|
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 2 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 7 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 40 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 18 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-02-0030D | Saline Creek | 23-Jul-01 | 23326 | 100 | | | 6.25 | | | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 1 | | | 23.28 | ARTHROPODA | Acari | Arcarina | Sperchonidae | Sperchon |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 2 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 3 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 30 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 5 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 23 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 4 | | | 133.00 | ARTHROPODA | Insecta | Ephemeroptera | Ephemerellidae | Ephemerella |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 5 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 11 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 3 | | | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 1 | | | 223.00 | ARTHROPODA | Insecta | Trichoptera | Glossosomatidae | Agapetus |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 2 | | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 6 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 1 | | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121600-02-0030D | Saline Creek | 29-Jan-02 | 24784 | 100 | | | 6.25 | | | 2 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 11.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 23.00 | ARTHROPODA | Acari | Arcarina | | |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 31.10 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Cambarus |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 4 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 5 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 8 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 9 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 9 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 2 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 2 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 23 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 16 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 3 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 1 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 3 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 6 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|-----------------|-------------------|-------------------|
| OK121600-02-0030D | Saline Creek | 16-Jul-02 | 25361 | 100 | | | 25 | | | 4 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 23.25 | ARTHROPODA | Acari | Arcarina | Lebertiidae | Lebertia |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 32.00 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Orconectes |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 36.00 | ARTHROPODA | Crustacea | Amphipoda | Gammaridae | |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 17 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 2 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 11 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 3 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 12 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 6 | | | 133.00 | ARTHROPODA | Insecta | Ephemeroptera | Ephemerellidae | Ephemerella |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 16 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 17 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 211.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Acroneuria |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 223.00 | ARTHROPODA | Insecta | Trichoptera | Glossosomatidae | Agapetus |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 4 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-02-0030D | Saline Creek | 28-Jan-03 | 26663 | 100 | | | 25 | | | 1 | | | 272.00 | MOLLUSCA | Gastropoda | Neotaenioglossa | Pleuroceridae | Goniobasis=Elimia |
| OK121600-03-0090G | Drowning Creek | 23-Jul-01 | 23327 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 6 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 2 | | | 30.00 | ARTHROPODA | Crustacea | Decapoda | Astacidae | |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 89 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 1 | | | 35.50 | ARTHROPODA | Crustacea | Ostracoda | | |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 5 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 3 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 7 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 10 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 1 | | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121600-03-0090G | Drowning Creek | 29-Jan-02 | 24783 | 100 | | | 6.25 | | | 6 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 18 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 2 | | | 30.00 | ARTHROPODA | Crustacea | Decapoda | Astacidae | |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 54 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 1 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 1 | | | 94.00 | ARTHROPODA | Insecta | Chironomidae | Chironomidae | Tanytopodinae |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 10 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 11 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 2 | | | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclaeon |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 1 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 1 | | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK121600-03-0090G | Drowning Creek | 15-Jul-02 | 25360 | 100 | | | 6.25 | | | 1 | | | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 1 | | | 8.50 | ANNELIDA | Oligochaeta | Haplotaxida | Glossoscolecidae | Sparganophilus |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|---------------|----------------|----------------|
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 3 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Limnodrilus |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 28 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 90 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 1 | | | 35.50 | ARTHROPODA | Crustacea | Ostracoda | | |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 1 | | | 36.00 | ARTHROPODA | Crustacea | Amphipoda | Gammaridae | |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 4 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 2 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 5 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 2 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 3 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 2 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 1 | | | 210.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | |
| OK121600-03-0090G | Drowning Creek | 27-Jan-03 | 26660 | 80 | | | 12.5 | | | 4 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-03-0190A | Little Horse Creek | 24-Jul-01 | 23330 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-03-0190A | Little Horse Creek | 29-Jan-02 | 24782 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 10 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 4 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 37 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 7 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 3 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 4 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 4 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 3 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 6 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Procloeon |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 9 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 2 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucocuta |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 10 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 2 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 5 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 6 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 188.50 | ARTHROPODA | Insecta | Odonata | Gomphidae | Lanthus |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121600-03-0510D | Sycamore Creek | 31-Jul-01 | 23354 | 100 | | | 25 | | | 1 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 23.40 | ARTHROPODA | Acari | Arcarina | Torrenicolidae | Torrenicola |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 20 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 2 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 2 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 25 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 9 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 40 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|------------|------------|---------------|---------------|---------------|-------------------|------------------|
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 6 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 11 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 3 | | | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 4 | | | 218.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Isoperla |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 2 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-03-0510D | Sycamore Creek | 29-Jan-02 | 24781 | 100 | | | 6.25 | | | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 30.00 | ARTHROPODA | Crustacea | Decapoda | Astacidae | |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 3 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 14 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 5 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 2 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 23 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 2 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 14 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 29 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 143.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 4 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 4 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 2 | | | 188.50 | ARTHROPODA | Insecta | Odonata | Gomphidae | Lanthus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocaupnia |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 225.00 | ARTHROPODA | Insecta | Trichoptera | Helicopsychidae | Helicopsyche |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 5 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 2 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 1 | | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121600-03-0510D | Sycamore Creek | 15-Jul-02 | 25359 | 100 | | | 12.5 | | | 5 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | | | 1 | 17.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Slavina | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 25 | | 1 | 23.28 | ARTHROPODA | Acari | Arcarina | Sperchonidae | Sperchon | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 29 | 38 | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 3 | | | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 2 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 1 | 10 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 3 | 1 | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella | | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 16 | 3 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema | | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | 100 | 100 | 12.5 | 25 | 47 | 4 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia | | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|-----------------|-------------------|------------------|
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 1 | 143.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | 2 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | 1 | | | 188.50 | ARTHROPODA | Insecta | Odonata | Gomphidae | Lanthus |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 2 | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 1 | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 1 | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 1 | 223.00 | ARTHROPODA | Insecta | Trichoptera | Glossosomatidae | Agapetus |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | 3 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-03-0510D | Sycamore Creek | 13-Jan-03 | 26720 | 100 | | 100 | 12.5 | | 25 | | | 38 | 272.00 | MOLLUSCA | Gastropoda | Neotaenioglossa | Goniobasis=Elimia | |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 1 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 10 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 9 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 5 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 4 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 2 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 5 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 82 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-04-0060D | Tar Creek | 24-Jul-01 | 23329 | 100 | | | 25 | | | 1 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 1 | | | 12.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Chaetogaster |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 2 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 108 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 3 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 2 | | | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-04-0060D | Tar Creek | 28-Jan-02 | 25664 | 100 | | | 50 | | | 11 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 2 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 20 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 8 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 67 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 19 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 2 | | | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 6 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 27 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-04-0060D | Tar Creek | 15-Jul-02 | 25357 | 75 | | | 50 | | | 1 | | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 3 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|------------------|-----------------|
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 7 | | 1 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | | | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 8 | | 12 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 3 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 2 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 79 | | 20 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | 7 | | 3 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-04-0060D | Tar Creek | 13-Jan-03 | 26718 | 100 | | 100 | 25 | | 100 | | | 2 | 281.50 | NEMERTEA | Enopla | Hoplonemertea | Tetrastemmatidae | Prostoma |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 87 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 2 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 3 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 4 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 161.00 | ARTHROPODA | Insecta | Lepidoptera | Pyrilidae | |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121600-06-0080C | Little Cabin Creek | 31-Jul-01 | 25131 | 100 | | | 50 | | | 6 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 1 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 1 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 2 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 90 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 2 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 19 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 1 | | | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 1 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 11 | | | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK121600-06-0080C | Little Cabin Creek | 28-Jan-02 | 25667 | 100 | | | 50 | | | 3 | | | 258.00 | ARTHROPODA | Insecta | Trichoptera | Rhyacophilidae | Rhyacophila |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 9 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 25 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 6 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 1 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 67 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-06-0080C | Little Cabin Creek | 16-Jul-02 | 25501 | 100 | | | 50 | | | 6 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-06-0080C | Little Cabin Creek | 27-Jan-03 | 26647 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 41 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 4 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 4 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-----------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|----------------|----------------|-----------------|
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 6 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 6 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 1 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 4 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 2 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 22 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 1 | | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 7 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121600-06-0220I | Big Cabin Creek | 31-Jul-01 | 25130 | 100 | | | 25 | | | 4 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 2 | | | 13.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Naididae | Dero |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 3 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Naididae | Nais |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | | 41 | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 1 | | | 29.10 | ARTHROPODA | Crustacea | Cladocera | | |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | | | | | 31.10 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Cambarus |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | | 9 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 2 | | 5 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 80 | 39 | | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 2 | 1 | | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 2 | 1 | | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 18 | 20 | | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 4 | | | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | | | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | 1 | | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 2 | | | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 1 | | | 174.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Nasiaeschna |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | | | 3 | | | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 9 | 2 | | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocaupnia |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | 1 | | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 1 | 2 | | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 5 | | | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121600-06-0220I | Big Cabin Creek | 28-Jan-02 | 25666 | 100 | 100 | 50 | 50 | 5 | 1 | | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 46 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 8 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 3 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 2 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 9 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 1 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 7 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 2 | | | 122.70 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acerpenna |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 2 | | | 139.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Leucrocuta |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 5 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|------------|---------------|-------------------|------------------|
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 55 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 5 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 1 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121600-06-0220I | Big Cabin Creek | 16-Jul-02 | 25504 | 100 | | | 50 | | | 2 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121600-06-0220I | Big Cabin Creek | 27-Jan-03 | 26646 | | | | | | | | | | | NO FLOW | | | | |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 6 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 1 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 3 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 2 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 2 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 6 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 41 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 3 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 28 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 10 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 2 | | | 210.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 5 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 9 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 6 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-07-0110G | Fivemile Creek | 24-Jul-01 | 23328 | 100 | | | 12.5 | | | 1 | | | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 23.28 | ARTHROPODA | Acari | Arcarina | Sperchonidae | Sperchon |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 34.50 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Asellus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 55 | 78 | | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 35.50 | ARTHROPODA | Crustacea | Ostracoda | | |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 3 | | | | 80.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Ectopria |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 6 | 1 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 2 | | | | 86.00 | ARTHROPODA | Insecta | Diptera | Athericidae | Atherix |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 11 | 8 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 19 | 7 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 2 | | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 2 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 2 | | | | 211.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Acroneuria |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 1 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 1 | | | 214.50 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlinella |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 1 | | | | 218.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Isoperla |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | 2 | 2 | | | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | 70 | 50 | 50 | 50 | | 1 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-------------------|------------------|
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | | 70 | 50 | | 50 | 2 | | | 223.00 | ARTHROPODA | Insecta | Trichoptera | Glossosomatidae | Agapetus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | | 70 | 50 | | 50 | 12 | | 1 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | | 70 | 50 | | 50 | 5 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | | 70 | 50 | | 50 | | | 1 | 252.00 | ARTHROPODA | Insecta | Trichoptera | Polycentropodidae | Polycentropus |
| OK121600-07-0110G | Fivemile Creek | 28-Jan-02 | 25665 | 100 | | 70 | 50 | | 50 | | | 2 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 6 | | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 33 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 22 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 7 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 4 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 2 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 25 | | | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 4 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 9 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 3 | | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 204.00 | ARTHROPODA | Insecta | Plecoptera | Leuctridae | Leuctra |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 1 | | | 213.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Neoperla |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 7 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 2 | | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 4 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121600-07-0110G | Fivemile Creek | 15-Jul-02 | 25358 | 100 | | | 12.5 | | | 6 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | | 6.50 | ANNELIDA | Polychaeta | Scolecida | Aeolosomatidae | Aeolosoma |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 18 | | 15 | 35.00 | ARTHROPODA | Crustacea | Isopoda | Asellidae | Lirceus |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | | | 1 | 59.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Optioservus |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | | | 1 | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 4 | | 1 | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 5 | | 21 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 8 | | 4 | 122.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Acentrella |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | | | 1 | 123.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Baetis |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 4 | | 12 | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 25 | | 21 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | 11 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | | | 1 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 1 | | 4 | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 3 | | 3 | 212.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Agnetina=Phasgan |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 3 | | 1 | 220.00 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Strophopteryx |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | 100 | 25 | | 100 | 100 | 8 | | 2 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|---------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|------------------|----------------|-------------------|
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | | 100 | 25 | | 100 | 35 | | 7 | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | | 100 | 25 | | 100 | | | 2 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121600-07-0110G | Fivemile Creek | 13-Jan-03 | 26719 | 100 | | 100 | 25 | | 100 | 1 | | | 272.00 | MOLLUSCA | Gastropoda | Neotaenioglossa | Pleuroceridae | Goniobasis=Elimia |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 31-Jul-01 | 23353 | | | | | | | | | | | NO FLOW | | | | |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 2 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 3 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 3 | | | 37.00 | ARTHROPODA | Crustacea | Amphipoda | Gammaridae | Gammarus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 1 | | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 90 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 14 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 1 | | | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 29-Jan-02 | 25670 | 100 | | | 50 | | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 1 | 1 | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 36 | 33 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 15 | 5 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 1 | | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 27 | 15 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 9 | 12 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 43 | 64 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 7 | 6 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 15-Jul-02 | 25500 | 100 | 100 | | 12.5 | 25 | | 1 | | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 1 | | | 3.70 | ANNELIDA | Hirudinea | Pharyngobdellida | Erpobdellidae | Mooreobdella |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 12 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 7 | | | 37.00 | ARTHROPODA | Crustacea | Amphipoda | Gammaridae | Gammarus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 1 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 4 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 3 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 44 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 17 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 1 | | | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 8 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 1 | | | 269.00 | MOLLUSCA | Gastropoda | Basommatophora | Planorbidae | Gyraulus |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 2 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK121610-00-0050D | Pryor Creek: Hwy 20 | 28-Jan-03 | 26653 | 100 | | | 25 | | | 14 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Sphaerium |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 31-Jul-01 | 23352 | | | | | | | | | | | NO FLOW | | | | |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 2 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 5 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|---------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|----------------|----------------|
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 2 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 8 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 72 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 10 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 24 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 3 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 2 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 2 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 258.00 | ARTHROPODA | Insecta | Trichoptera | Rhyacophilidae | Rhyacophila |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 3 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 29-Jan-02 | 25671 | 100 | | | 50 | | | 1 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 2 | 2 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 1 | | | 62.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Dineutus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 1 | | | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 18 | 26 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 1 | 2 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 3 | 3 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 6 | 15 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 1 | 2 | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 1 | | | 141.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenacron |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 77 | 73 | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 3 | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 15-Jul-02 | 25499 | 100 | 100 | | 25 | 25 | | 2 | 1 | | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 13.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Dero |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 1 | | | 18.20 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Branchiura |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 21 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 37.00 | ARTHROPODA | Crustacea | Amphipoda | Gammaridae | Gammarus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 8 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 30 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 47 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 4 | | | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 1 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 142.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Stenonema |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 1 | | | 198.00 | ARTHROPODA | Insecta | Plecoptera | Capniidae | Allocapnia |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 1 | | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|---------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|-----------------|
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 10 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 279.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Sphaerium |
| OK121610-00-0050M | Pryor Creek: Hwy 69 | 28-Jan-03 | 26654 | 100 | | | 25 | | | 2 | | | 285.50 | HES | Turbellaria | Tricladida | Planariidae | Dugesia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | | 1 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | | 1 | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | 8 | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | | 1 | 88.06 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Probezzia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 110 | 66 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | 1 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 3 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | | | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | 1 | 1 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 4 | 2 | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | | | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloeodes |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 6 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 6 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 8 | 16 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | 1 | | 159.00 | ARTHROPODA | Insecta | Hemiptera | Veliidae | Rhagovelia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 2 | 1 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | | | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 5 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | | | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 2 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 2 | 28 | | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | | 1 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520610-02-0120C | Buggy Creek | 18-Jul-01 | 23258 | | 50 | 100 | | 50 | 25 | 1 | 1 | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 2 | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 3 | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 29.10 | ARTHROPODA | Crustacea | Cladocera | | |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | 4 | | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 1 | | 62.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Dineutus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 1 | | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | 3 | | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 4 | 8 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 54 | 46 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopodinae |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | 3 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 6 | | | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 11 | 6 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|----------------|
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 1 | 1 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | | 1 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 1 | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | 8 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK520610-02-0120C | Buggy Creek | 04-Feb-02 | 25151 | | 100 | 40 | | 100 | 50 | | | 1 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 8 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 33.50 | ARTHROPODA | Crustacea | Isopoda | | |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 58 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 124.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Callibaetis |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloeodes |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 6 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 12 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 6 | 152.55 | ARTHROPODA | Insecta | Hemiptera | Belostomatidae | Belostoma |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 2 | 155.90 | ARTHROPODA | Insecta | Hemiptera | Mesoveliidae | Mesovelia |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 3 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 11 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520610-02-0120C | Buggy Creek | 06-Aug-02 | 25631 | | | 100 | | | 50 | | | 1 | 275.00 | MOLLUSCA | Pelecypoda | Veneroida | Corbiculidae | Corbicula |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 1 | | 14.00 | ANNELIDA | Oligochaeta | Haplotaenidae | Naididae | Nais |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 1 | 12 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 50.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Hydroporus |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 62.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Dineutus |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 81.00 | ARTHROPODA | Insecta | Coleoptera | Psephenidae | Psephenus |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 106 | 83 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 28 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|--------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|------------|------------|-------------|----------------|-----------------|---------------|
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 1 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis | Corydalis |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | | 1 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520610-02-0120C | Buggy Creek | 28-Jan-03 | 26645 | | 100 | 50 | | 50 | 50 | | 2 | 2 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 50.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Hydroporus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 63.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Gyretes |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 1 | 6 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus | |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 73.00 | ARTHROPODA | Insecta | Coleoptera | Hydrochidae | Hydrochus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 2 | 83.00 | ARTHROPODA | Insecta | Coleoptera | Scirtidae | Scirtes |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | 2 | | 88.05 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Palpomyia |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 38 | 28 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 2 | 10 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopinae |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 45 | 23 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 107.80 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Nemotelus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 2 | 124.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Callibaetis |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 2 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 1 | 1 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 1 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | 9 | 27 | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | 1 | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | 2 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK520610-03-0010C | Walnut Creek | 31-Jul-01 | 23349 | | 50 | 100 | | 100 | 9999 | | | 14 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 83.60 | ARTHROPODA | Insecta | Collembola | Isotomidae | Isotomurus |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 2 | 84.50 | ARTHROPODA | Insecta | Diptera | Anthomyiidae | Limnophora |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 2 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 10 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 88.20 | ARTHROPODA | Insecta | Diptera | Chaoboridae | Chaoborus |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 7 | 5 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 91 | 65 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladinae |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 1 | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopinae |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 4 | 18 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 96.00 | ARTHROPODA | Insecta | Diptera | Dolichopodidae | |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 6 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 2 | | 115.70 | ARTHROPODA | Insecta | Diptera | Tipulidae | Geranomyia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus | |
|-------------------|--------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|-------------------|----------------|
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 1 | 12 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila | |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | | 2 | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | 1 | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon | |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis | |
| OK520610-03-0010C | Walnut Creek | 01-Feb-02 | 25145 | | 50 | 50 | | 100 | 50 | | | 1 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 1 | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 65 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 8 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 2 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 23 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 14 | | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloeodes | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 1 | | 128.80 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Proclaeon | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 2 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 2 | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 1 | | 155.00 | ARTHROPODA | Insecta | Hemiptera | Gerridae | Rheumatobates | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 1 | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia | |
| OK520610-03-0010C | Walnut Creek | 06-Aug-02 | 25630 | | 100 | | | 12.5 | | | 2 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila | |
| OK520610-03-0010C | Walnut Creek | 28-Jan-03 | 26644 | | 100 | | | 50 | | | 2 | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais | |
| OK520610-03-0010C | Walnut Creek | 28-Jan-03 | 26644 | | 100 | | | 50 | | | 3 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini | |
| OK520610-03-0010C | Walnut Creek | 28-Jan-03 | 26644 | | 100 | | | 50 | | | 101 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae | |
| OK520610-03-0010C | Walnut Creek | 28-Jan-03 | 26644 | | 100 | | | 50 | | | 2 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae | |
| OK520610-03-0010C | Walnut Creek | 28-Jan-03 | 26644 | | 100 | | | 50 | | | 7 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 3 | 20 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 1 | 42.70 | ARTHROPODA | Insecta | Coleoptera | Carabidae | | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 3 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 6 | 49.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Uvarus | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 1 | 51.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Laccophilus | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 2 | | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcyloepus | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 2 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 1 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Peltydites | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 2 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | | 83.00 | ARTHROPODA | Insecta | Coleoptera | Scirtidae | Scirtes | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 2 | | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | | 88.06 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Probezzia | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 1 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 55 | 22 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 7 | 3 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 12 | 12 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 9 | 9 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 1 | 124.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Callibaetis | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 2 | 1 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 8 | 9 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | | 1 | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis | |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 2 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-----------|---------------|-----------------|----------------|
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 18 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | 6 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 1 | | 235.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Ilthytrichia |
| OK520620-02-0090G | Trail Creek | 25-Jul-02 | 25523 | | 100 | 100 | | 25 | 25 | | 2 | | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 2 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | 63 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 25 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 2 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 31 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 176.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Calopteryx |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 3 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-02-0090G | Trail Creek | 27-Jan-03 | 26642 | | | 75 | | | 50 | | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 33 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 2 | 65.10 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Halipius |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 2 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Peltodytes |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 3 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 17 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 2 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 21 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytopinae |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 5 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 2 | 107.80 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Nemotelus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 14 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 152.55 | ARTHROPODA | Insecta | Hemiptera | Belostomatidae | Belostoma |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 1 | 173.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Basiaeschna |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 3 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|-------------|-----------------|----------------|
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 6 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 2 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 3 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 5 | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-03-0020C | Lone Creek | 17-Jul-01 | 23246 | | | 50 | | | 50 | | | 10 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.05 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Celina |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.05 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Celina |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 48.05 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Celina |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 3 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 3 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 3 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|------------|----------------|-----------------|----------------|
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 9 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 80 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 14 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 5 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 110.50 | ARTHROPODA | Insecta | Diptera | Tabanidae | Chrysops |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 1 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-03-0020C | Lone Creek | 04-Feb-02 | 24794 | | | 100 | | | 50 | | | 2 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 7 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 19 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 33.50 | ARTHROPODA | Crustacea | Isopoda | | |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 6 | 50.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Hydroporus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 7 | 50.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Hydroporus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 8 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Peltodytes |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Peltodytes |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 4 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 2 | 70.50 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Cymbiodyta |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 6 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 5 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 87.00 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 11 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 8 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 10 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 8 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 10 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-----------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|------------|------------|------------|----------------|-----------------|-----------------|
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 4 | 107.80 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Nemotelus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 117.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Hexatoma |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloesodes |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 7 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 3 | 152.55 | ARTHROPODA | Insecta | Hemiptera | Belostomatidae | Belostoma |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 152.80 | ARTHROPODA | Insecta | Hemiptera | Cicadellidae | |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 155.60 | ARTHROPODA | Insecta | Hemiptera | Hebridae | |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 159.00 | ARTHROPODA | Insecta | Hemiptera | Veliidae | Rhagovelia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 2 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 2 | 173.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Basiaeschna |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 4 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 9 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 5 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 11 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 184.10 | ARTHROPODA | Insecta | Odonata | Gomphidae | Argomphus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 235.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Ithytrichia |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 8 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-03-0020C | Lone Creek | 25-Jul-02 | 25524 | | | 90 | | | 50 | | | 1 | 281.00 | NEMATODA | | | | |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 2 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 110 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 3 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 152.55 | ARTHROPODA | Insecta | Hemiptera | Belostomatidae | Belostoma |
| OK520620-03-0020C | Lone Creek | 27-Jan-03 | 26641 | | | 70 | | | 50 | | | 1 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 2 | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | 80 | 63 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini | |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | 3 | 1 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae | |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | 5 | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae | |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | 1 | 3 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini | |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 99.00 | ARTHROPODA | Insecta | Diptera | Empididae | Hemerodromia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|-----------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|------------|----------------|-----------------|----------------|
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 2 | 4 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 2 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 5 | 9 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 1 | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 4 | 6 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | | 1 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 1 | 3 | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 3 | 2 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-04-0050D | Hackberry Creek | 17-Jul-01 | 23248 | | 85 | 75 | | 100 | 50 | | 7 | 4 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 1 | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 31.10 | ARTHROPODA | Crustacea | Decapoda | Cambaridae | Cambarus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 1 | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 62.00 | ARTHROPODA | Insecta | Coleoptera | Gyrinidae | Dineutus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 3 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Halipidae | Peltodytes |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 4 | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 2 | 70.50 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Cymbiodyta |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 2 | 76.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Tropisternus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 83.00 | ARTHROPODA | Insecta | Coleoptera | Scirtidae | Scirtes |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 3 | 3 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 84 | 78 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 4 | 2 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 18 | 6 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 3 | 5 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 3 | 124.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Callibaetis |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 4 | 6 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 2 | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 2 | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 2 | 155.60 | ARTHROPODA | Insecta | Hemiptera | Hebridae | |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 2 | | 180.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Enallagma |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 1 | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 11 | 1 | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | | 1 | 243.00 | ARTHROPODA | Insecta | Trichoptera | Limnephilidae | Limnephilius |
| OK520620-04-0050D | Hackberry Creek | 04-Feb-02 | 24792 | | 75 | 60 | | 50 | 50 | | 2 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 3 | 33.50 | ARTHROPODA | Crustacea | Isopoda | | |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 5 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 50.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Hydroporus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 54.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Dubiraphia |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 11 | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 5 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|----------------|----------------|
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 14 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 6 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 96.00 | ARTHROPODA | Insecta | Diptera | Dolichopodidae | |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 2 | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 2 | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 3 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 152.80 | ARTHROPODA | Insecta | Hemiptera | Cicadellidae | |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 3 | 161.00 | ARTHROPODA | Insecta | Lepidoptera | Pyralidae | |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 170.00 | ARTHROPODA | Insecta | Megaloptera | Sialidae | Scirtes |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 1 | 173.00 | ARTHROPODA | Insecta | Odonata | Aeshnidae | Basiaeschna |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 2 | 184.10 | ARTHROPODA | Insecta | Odonata | Gomphidae | Arigomphus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 19 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 6 | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 2 | 192.97 | ARTHROPODA | Insecta | Odonata | Libellulidae | Plathemis |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 3 | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK520620-04-0050D | Hackberry Creek | 25-Jul-02 | 25526 | | | 75 | | | 50 | | | 3 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 1 | | | 18.30 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Ilyodrilus |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 1 | | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 3 | | | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 77 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 4 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 19 | | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 10 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 9 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-04-0050D | Hackberry Creek | 27-Jan-03 | 26639 | 75 | | | 50 | | | 4 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 1 | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 2 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 3 | 16 | 6 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 1 | 73.00 | ARTHROPODA | Insecta | Coleoptera | Hydrochidae | Hydrochus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 1 | 75.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Paracymus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 11 | 13 | 16 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 11 | 6 | 4 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | 1 | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 6 | | 2 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 1 | | | 109.50 | ARTHROPODA | Insecta | Diptera | Stratiomyidae | Stratiomys |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 1 | 111.00 | ARTHROPODA | Insecta | Diptera | Tabanidae | Tabanus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 1 | | | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 1 | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 10 | 8 | 5 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 4 | 127.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Labiobaetis |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 1 | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 2 | 137.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|----------------|------------------|-----------------|
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | | 5 | 138.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Heptagenia |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 9 | 2 | 5 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 12 | 10 | 10 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | 1 | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 1 | 1 | 6 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 21 | 1 | 8 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 1 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 4 | 33 | 23 | 231.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Smicridea |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | 10 | 4 | 40 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520620-05-0160C | Commission Creek | 19-Jul-01 | 23266 | 75 | 50 | 90 | 50 | 25 | 50 | | 1 | | 278.00 | MOLLUSCA | Pelecypoda | Veneroida | Sphaeriidae | Pisidium |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 35.50 | ARTHROPODA | Crustacea | Ostracoda | | |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 2 | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 1 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 87.75 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Dasyhelea |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 126 | | 56 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 2 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 4 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 6 | 138.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Heptagenia |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 17 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 2 | 145.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Leptophlebia |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 1 | | 1 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 9 | | 1 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 3 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 3 | | 13 | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 7 | | 1 | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Hydroperla |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 4 | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | 2 | | | 230.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Potamyia |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 4 | 231.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Smicridea |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 243.50 | ARTHROPODA | Insecta | Trichoptera | Limnephilidae | Pycnopsyche |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 247.00 | ARTHROPODA | Insecta | Trichoptera | Philopotamidae | Chimarra |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 3 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-05-0160C | Commission Creek | 04-Feb-02 | 24793 | 60 | | 70 | 25 | | 25 | | | 1 | 281.00 | NEMATODA | | | | |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 19.00 | ANNELIDA | Oligochaeta | Haplotaaxida | Tubificidae | Limnodrilus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 33.50 | ARTHROPODA | Crustacea | Isopoda | | |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 2 | 58.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Microcylloepus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 66.00 | ARTHROPODA | Insecta | Coleoptera | Haliplidae | Peltodytes |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 87.60 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Bezzia |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 2 | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 4 | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 3 | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|------------------|----------------|
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 2 | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 127.50 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Labiobaetis |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 128.00 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Paracloeodes |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 3 | 138.00 | ARTHROPODA | Insecta | Ephemeroptera | Heptageniidae | Heptagenia |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 19 | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 3 | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 2 | | | 159.00 | ARTHROPODA | Insecta | Hemiptera | Veliidae | Rhagovelia |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 7 | 177.00 | ARTHROPODA | Insecta | Odonata | Calopterygidae | Hetaerina |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 2 | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 92 | | 9 | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 2 | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 3 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 1 | | | 192.50 | ARTHROPODA | Insecta | Odonata | Libellulidae | Brechmorhoga |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 29 | 231.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Smicridea |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 2 | | 5 | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 263.50 | MOLLUSCA | Gastropoda | Basommatophora | Lymnaeidae | Fossaria |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | | | 1 | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-05-0160C | Commission Creek | 25-Jul-02 | 25525 | 100 | | 75 | 25 | | 50 | 29 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 9.00 | ANNELIDA | Oligochaeta | Haplotaxida | Lumbricidae | |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 91 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 120.00 | ARTHROPODA | Insecta | Diptera | Tipulidae | Tipula |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 7 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 4 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 4 | | | 214.00 | ARTHROPODA | Insecta | Plecoptera | Perlidae | Perlesta |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 11 | | | 217.00 | ARTHROPODA | Insecta | Plecoptera | Perlodidae | Hydroperla |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 2 | | | 220.50 | ARTHROPODA | Insecta | Plecoptera | Taeniopterygidae | Taeniopteryx |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 243.50 | ARTHROPODA | Insecta | Trichoptera | Limnephilidae | Pycnopsyche |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 3 | | | 275.00 | MOLLUSCA | Pelecypoda | Veneroidea | Corbiculidae | Corbicula |
| OK520620-05-0160C | Commission Creek | 27-Jan-03 | 26640 | 66 | | | 25 | | | 1 | | | 278.00 | MOLLUSCA | Pelecypoda | Veneroidea | Sphaeriidae | Pisidium |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 6 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 2 | | | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | | 1 | | 83.20 | ARTHROPODA | Insecta | Coleoptera | Staphylinidae | |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | | 1 | | 87.50 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Atrichopogon |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 29 | 45 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | | 6 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 33 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 17 | 13 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 13 | 12 | | 126.60 | ARTHROPODA | Insecta | Ephemeroptera | Baetidae | Fallceon |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 4 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 146.00 | ARTHROPODA | Insecta | Ephemeroptera | Leptophlebiidae | Neochoroterpes |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 8 | 1 | | 151.00 | ARTHROPODA | Insecta | Ephemeroptera | Tricorythidae | Tricorythodes |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Rifle %SampColl | Woody %SampCol | Vegetation %SampCol | Rifle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRifle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|--------------------|-------------------|------------------------|--------------------|--------------------|-------------------------|----------|----------|--------|---------|------------|-------------|----------------|-----------------|-------------------|
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 4 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 2 | | | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 3 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 3 | 32 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 230.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Potamyia |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | | 3 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK520620-06-0010F | Deer Creek | 16-Jul-01 | 23244 | 100 | 100 | | 25 | 12.5 | | 1 | | | 238.00 | ARTHROPODA | Insecta | Trichoptera | Leptoceridae | Nectopsyche |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | 11 | | 14.00 | ANNELIDA | Oligochaeta | Haplotaxida | Naididae | Nais |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplotaxida | Tubificidae | Limnodrilus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 28.00 | ARTHROPODA | Crustacea | Amphipoda | Talitridae | Hyalella |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | | | 48.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Agabus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | | | 52.00 | ARTHROPODA | Insecta | Coleoptera | Dytiscidae | Oreodytes |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | | | 57.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Macronychus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 2 | 2 | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 73.00 | ARTHROPODA | Insecta | Coleoptera | Hydrochidae | Hydrochus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 88.07 | ARTHROPODA | Insecta | Diptera | Ceratopogonidae | Stilobezzia |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 9 | 11 | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 80 | 91 | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 6 | 1 | | 93.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Pseudochironomini |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | 4 | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 3 | 6 | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 26 | 18 | | 104.00 | ARTHROPODA | Insecta | Diptera | Simuliidae | Simulium |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 3 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 153.00 | ARTHROPODA | Insecta | Hemiptera | Corixidae | |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 3 | | | 186.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Erpetogomphus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | 9 | 23 | | 229.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Hydropsyche |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 234.00 | ARTHROPODA | Insecta | Trichoptera | Hydroptilidae | Hydroptila |
| OK520620-06-0010F | Deer Creek | 01-Feb-02 | 24796 | 75 | 100 | | 25 | 25 | | | 1 | | 267.00 | MOLLUSCA | Gastropoda | Basommatophora | Physidae | Physella |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 6 | | | 45.00 | ARTHROPODA | Insecta | Coleoptera | Dryopidae | Helichus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 2 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 70.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Berosus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 71.00 | ARTHROPODA | Insecta | Coleoptera | Hydrophilidae | Enochrus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 72.00 | ARTHROPODA | Insecta | Coleoptera | Helophoridae | Helophorus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 45 | | | 90.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Chironomini |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthocladiinae |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 7 | | | 94.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanypodinae |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 33 | | | 95.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Tanytarsini |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 6 | | | 131.00 | ARTHROPODA | Insecta | Ephemeroptera | Caenidae | Caenis |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 2 | | | 142.40 | ARTHROPODA | Insecta | Ephemeroptera | Isonychiidae | Isonychia |

Appendix D. Macroinvertebrate collection data.

| WBID | SiteName | Date | SAMPLEID | Riffle %SampColl | Woody %SampCol | Vegetation %SampCol | Riffle %SampPick | Woody %SampPick | Vegetation %Samppick | NumRiffle | NumWoody | NumVeg | BugRef# | Phylum | Class | Order | Family | Genus |
|-------------------|------------|-----------|----------|---------------------|-------------------|------------------------|---------------------|--------------------|-------------------------|-----------|----------|--------|---------|------------|-------------|-------------|----------------|-----------------|
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 167.00 | ARTHROPODA | Insecta | Megaloptera | Corydalidae | Corydalis |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 179.00 | ARTHROPODA | Insecta | Odonata | Coenagrionidae | Argia |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 2 | | | 187.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Gomphus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 13 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |
| OK520620-06-0010F | Deer Creek | 02-Aug-02 | 25338 | 75 | | | 50 | | | 1 | | | 228.00 | ARTHROPODA | Insecta | Trichoptera | Hydropsychidae | Cheumatopsyche |
| OK520620-06-0010F | Deer Creek | 27-Jan-03 | 26643 | 75 | | | 100 | | | 2 | | | 19.00 | ANNELIDA | Oligochaeta | Haplaxida | Tubificidae | Limnodrilus |
| OK520620-06-0010F | Deer Creek | 27-Jan-03 | 26643 | 75 | | | 100 | | | 4 | | | 60.00 | ARTHROPODA | Insecta | Coleoptera | Elmidae | Stenelmis |
| OK520620-06-0010F | Deer Creek | 27-Jan-03 | 26643 | 75 | | | 100 | | | 12 | | | 92.00 | ARTHROPODA | Insecta | Diptera | Chironomidae | Orthoclaadiinae |
| OK520620-06-0010F | Deer Creek | 27-Jan-03 | 26643 | 75 | | | 100 | | | 1 | | | 117.50 | ARTHROPODA | Insecta | Diptera | Tipulidae | Limnophila |
| OK520620-06-0010F | Deer Creek | 27-Jan-03 | 26643 | 75 | | | 100 | | | 12 | | | 191.00 | ARTHROPODA | Insecta | Odonata | Gomphidae | Progomphus |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|----------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121300010150 | Delaware Creek | attaining | | XXX | | | | | | | | 230 | | 09/14/01 |
| OK121300010150 | Delaware Creek | not enough information | | | | | | XXX | | | | 398 | 140 | 09/17/01 |
| OK121300010150 | Delaware Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/17/01 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 217 | 68 | 09/25/01 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/25/01 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/25/01 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 215 | 68 | 09/16/02 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/16/02 |
| OK121300010150 | Delaware Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/16/02 |
| OK121300010150 | Delaware Creek | attaining | | XXX | | | | | | | | 413 | | 12/16/02 |
| OK121300010150 | Delaware Creek | not attaining | | | | | | | | XXX | | 138 | 103 | 01/27/03 |
| OK121300010150 | Delaware Creek | not attaining | | | | | | | | XXX | | 399 | 103 | 01/27/03 |
| OK121300010150 | Delaware Creek | not attaining | | | | | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121300010150 | Delaware Creek | not attaining | | | | | | | | XXX | | 399 | 140 | 01/27/03 |
| OK121300010150 | Delaware Creek | attaining | | XXX | | | | | | | | 91 | | 01/27/03 |
| OK121300010150 | Delaware Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK121300010150 | Delaware Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121300010150 | Delaware Creek | attaining | | | | | | | | | | 302, 462 | | 01/27/03 |
| OK121300010150 | Delaware Creek | not attaining | | XXX | | | | | | | | 322 | 68 | 03/03/03 |
| OK121300010150 | Delaware Creek | not attaining | | XXX | | | | | | | | 322 | 92 | 03/03/03 |
| OK121300010150 | Delaware Creek | not attaining | | XXX | | | | | | | | 322 | 140 | 03/03/03 |
| OK121300010150 | Delaware Creek | not attaining | | XXX | | | | | | | | 441 | 140 | 03/03/03 |
| OK121300010150 | Delaware Creek | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK121300010150 | Delaware Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121300010150 | Delaware Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121300010150 | Delaware Creek | attaining | | XXX | | | | | | | | 153 | | |
| OK121300020010 | Bird Creek | not enough information | | | | | | XXX | | | | 398 | 140 | 09/18/01 |
| OK121300020010 | Bird Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK121300020010 | Bird Creek | attaining | | XXX | | | | | | | | 91 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | | | | | | | XXX | | 138 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | | | | | XXX | | | | 302 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | | | | | | | XXX | | 385 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | | | | | | | XXX | | 399 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | XXX | | | | | | | | 413 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | | | | | | XXX | | | 302, 462 | | 12/17/02 |
| OK121300020010 | Bird Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |
| OK121300020010 | Bird Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK121300020010 | Bird Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121300020010 | Bird Creek | attaining | | XXX | | | | | | | | 322 | | 03/04/03 |
| OK121300020010 | Bird Creek | attaining | | XXX | | | | | | | | 441 | | 03/04/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 215 | 85 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 217 | 85 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/13/03 |
| OK121300020010 | Bird Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 05/13/03 |
| OK121300040010 | Hominy Creek | not enough information | | XXX | | | | | | | | 230 | 140 | 09/11/01 |
| OK121300040010 | Hominy Creek | not enough information | | | | | | XXX | | | | 398 | 140 | 09/17/01 |
| OK121300040010 | Hominy Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/17/01 |
| OK121300040010 | Hominy Creek | attaining | | XXX | | | | | | | | 91 | | 01/27/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | | | XXX | | 138 | | 01/27/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK121300040010 | Hominy Creek | not attaining | | XXX | | | | | | | | 441 | 140 | 03/03/03 |
| OK121300040010 | Hominy Creek | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121300040010 | Hominy Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121300040010 | Hominy Creek | attaining | | XXX | | | | | | | | 322 | | 03/03/03 |
| OK121300040010 | Hominy Creek | not enough information | | XXX | | | | | | | | 413 | 140 | 03/03/03 |
| OK121300040010 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 85 | 05/12/03 |
| OK121300040010 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 68 | 05/12/03 |
| OK121300040010 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/12/03 |
| OK121300040010 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/12/03 |
| OK121300040010 | Hominy Creek | not enough information | | | | XXX | | | | | | 217 | 140 | 05/12/03 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 06/05/00 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 400 | 92 | 06/05/00 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 06/05/00 |
| OK121300040280 | Hominy Creek | attaining | | | | | | XXX | | | | 302 | | 06/05/00 |
| OK121300040280 | Hominy Creek | attaining | | | | XXX | | | | | | 217 | | 09/18/00 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | XXX | | XXX | | 398 | 156 | 03/19/01 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | | XXX | | | 138 | 103 | 03/19/01 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | XXX | | XXX | | 398 | 92 | 03/19/01 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | | XXX | | | 138 | 140 | 03/19/01 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121300040280 | Hominy Creek | not attaining | | | | | | XXX | | | XXX | 398 | 140 | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | XXX | | | | | | | | 91 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | XXX | | | | | | | | 317 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | | | | | XXX | | | | 317 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | | | | | | XXX | | | 317 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | XXX | | | | | | | | 322 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | | | | | | | XXX | | 385 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | XXX | | | | | | | | 413 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | XXX | | | | | | | | 441 | | 03/19/01 |
| OK121300040280 | Hominy Creek | attaining | | | | | | | XXX | | | 302, 462 | | 03/19/01 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | | | XXX | | 399 | 103 | 01/28/03 |
| OK121300040280 | Hominy Creek | not attaining | | | | | | | | XXX | | 399 | 140 | 01/28/03 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/13/03 |
| OK121300040280 | Hominy Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/13/03 |
| OK121400010270 | Curly Creek | attaining | | XXX | | | | | | | | 230 | | 08/30/01 |
| OK121400010270 | Curly Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/17/01 |
| OK121400010270 | Curly Creek | not attaining | | XXX | | | | | | | | 413 | 156 | 01/27/03 |
| OK121400010270 | Curly Creek | not attaining | | XXX | | | | | | | | 413 | 140 | 01/27/03 |
| OK121400010270 | Curly Creek | attaining | | XXX | | | | | | | | 91 | | 01/27/03 |
| OK121400010270 | Curly Creek | attaining | | | | | | | | XXX | | 138 | | 01/27/03 |
| OK121400010270 | Curly Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121400010270 | Curly Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK121400010270 | Curly Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK121400010270 | Curly Creek | not attaining | | XXX | | | | | | | | 322 | 156 | 03/03/03 |
| OK121400010270 | Curly Creek | not attaining | | XXX | | | | | | | | 322 | 92 | 03/03/03 |
| OK121400010270 | Curly Creek | not attaining | | XXX | | | | | | | | 322 | 140 | 03/03/03 |
| OK121400010270 | Curly Creek | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK121400010270 | Curly Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121400010270 | Curly Creek | attaining | | XXX | | | | | | | | 441 | | 03/03/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/12/03 |
| OK121400010270 | Curly Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 05/12/03 |
| OK121400010300 | Hogshooter Creek | attaining | | XXX | | | | | | | | 230 | | 09/04/98 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/19/00 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 09/19/00 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/19/00 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 400 | 92 | 09/19/00 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/19/00 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 09/19/00 |
| OK121400010300 | Hogshooter Creek | not attaining | | XXX | | | | | | | | 322 | 156 | 03/20/01 |
| OK121400010300 | Hogshooter Creek | not attaining | | XXX | | | | | | | | 322 | 92 | 03/20/01 |
| OK121400010300 | Hogshooter Creek | not attaining | | XXX | | | | | | | | 322 | 140 | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | XXX | | | | | | | | 91 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | | | | | | XXX | | | 138 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | XXX | | | | | | | | 317 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | | | | | | XXX | | | 317 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | | | | | | | XXX | | 385 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | XXX | | | | | | | | 413 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | XXX | | | | | | | | 441 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | | | | | | XXX | | | 302, 462 | | 03/20/01 |
| OK121400010300 | Hogshooter Creek | attaining | | | | | | | | XXX | | 399 | | 12/16/02 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/12/03 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/12/03 |
| OK121400010300 | Hogshooter Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/12/03 |
| OK121400020140 | Little Caney River | not enough information | | XXX | | | | | | | | 230 | 140 | 08/31/01 |
| OK121400020140 | Little Caney River | not enough information | | | | | | XXX | | | XXX | 398 | 140 | 09/17/01 |
| OK121400020140 | Little Caney River | not enough information | | | | XXX | | | | | | 400 | 140 | 09/17/01 |
| OK121400020140 | Little Caney River | attaining | | XXX | | | | | | | | 91 | | 01/28/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | | | XXX | | 138 | | 01/28/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | XXX | | | | 302 | | 01/28/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121400020140 | Little Caney River | not attaining | | XXX | | | | | | | | 413 | 156 | 03/03/03 |
| OK121400020140 | Little Caney River | not attaining | | XXX | | | | | | | | 413 | 140 | 03/03/03 |
| OK121400020140 | Little Caney River | not attaining | | XXX | | | | | | | | 441 | 140 | 03/03/03 |
| OK121400020140 | Little Caney River | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121400020140 | Little Caney River | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121400020140 | Little Caney River | attaining | | XXX | | | | | | | | 322 | | 03/03/03 |
| OK121400020140 | Little Caney River | not attaining | | | | XXX | | | | | | 215 | 85 | 05/12/03 |
| OK121400020140 | Little Caney River | not attaining | | | | XXX | | | | | | 215 | 156 | 05/12/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121400020140 | Little Caney River | not attaining | | | | XXX | | | | | | 215 | 68 | 05/12/03 |
| OK121400020140 | Little Caney River | not attaining | | | | XXX | | | | | | 215 | 92 | 05/12/03 |
| OK121400020140 | Little Caney River | not attaining | | | | XXX | | | | | | 215 | 140 | 05/12/03 |
| OK121400020140 | Little Caney River | not enough information | | | | XXX | | | | | | 217 | 140 | 05/12/03 |
| OK121400020190 | Mission Creek | attaining | | | | | | XXX | | | | 398 | | 09/18/01 |
| OK121400020190 | Mission Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK121400020190 | Mission Creek | attaining | | XXX | | | | | | | | 413 | | 12/17/02 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/28/03 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 01/28/03 |
| OK121400020190 | Mission Creek | not attaining | | XXX | | | | XXX | | | | 302 | 140 | 01/28/03 |
| OK121400020190 | Mission Creek | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121400020190 | Mission Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121400020190 | Mission Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121400020190 | Mission Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |
| OK121400020190 | Mission Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK121400020190 | Mission Creek | attaining | | XXX | | | | | XXX | | | 317 | | 03/04/03 |
| OK121400020190 | Mission Creek | attaining | | XXX | | | | | | | | 322 | | 03/04/03 |
| OK121400020190 | Mission Creek | attaining | | XXX | | | | | | | | 441 | | 03/04/03 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 05/13/03 |
| OK121400020190 | Mission Creek | not attaining | | XXX | | | | | | | | 215 | 92 | 05/13/03 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 05/13/03 |
| OK121400020190 | Mission Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/13/03 |
| OK121400020190 | Mission Creek | not attaining | | XXX | | | | | | | | 217 | 140 | 05/13/03 |
| OK121400030170 | Buck Creek | not enough information | | | | | | XXX | | | | 302 | 140 | 06/06/00 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/19/00 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 09/19/00 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/19/00 |
| OK121400030170 | Buck Creek | attaining | | | | | | | | | | 400 | | 09/19/00 |
| OK121400030170 | Buck Creek | attaining | | XXX | | | | | | | | 217 | | 09/19/00 |
| OK121400030170 | Buck Creek | attaining | | | | | | | | | | 400 | | 09/19/00 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | XXX | | | | 398 | 156 | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | XXX | | | | XXX | | | | 398 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | | | | | XXX | | | | 398 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | XXX | | | | | | | | 91 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | | | | | | XXX | | | 138 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | | | | | | | | | 317 | | 03/20/01 |
| OK121400030170 | Buck Creek | not enough information | | | | XXX | | XXX | | | | 317 | 140 | 03/20/01 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------|---------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121400030170 | Buck Creek | attaining | | XXX | | | | | XXX | | | 317 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | XXX | | | | | | | | 322 | | 03/20/01 |
| OK121400030170 | Buck Creek | attaining | | | | | | | | XXX | | 385 | | 03/20/01 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK121400030170 | Buck Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/13/03 |
| OK121400030170 | Buck Creek | attaining | | | | | | | | | | 215 | | 05/13/03 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 03/20/01 |
| OK121400040010 | Sand Creek | not attaining | | | | | | | | | | 441 | 140 | 03/20/01 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 03/20/01 |
| OK121400040010 | Sand Creek | attaining | | XXX | | | | | | | | 230 | | 08/27/01 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 09/18/01 |
| OK121400040010 | Sand Creek | attaining | | XXX | | | | | | | | 400 | | 09/18/01 |
| OK121400040010 | Sand Creek | attaining | | XXX | | | | | | | | 400 | | 09/18/01 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/17/02 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/17/02 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/17/02 |
| OK121400040010 | Sand Creek | not attaining | | | | | | | | | | 217 | 92 | 09/17/02 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | | | 215 | | 09/17/02 |
| OK121400040010 | Sand Creek | attaining | | XXX | | | | | | | | 217 | | 09/17/02 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 413 | 156 | 12/17/02 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | | | 413 | | 12/17/02 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | XXX | | 399 | 140 | 01/27/03 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | | | 91 | | 01/28/03 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | XXX | | 138 | | 01/28/03 |
| OK121400040010 | Sand Creek | not attaining | | | | | | | | | | 322 | 156 | 03/04/03 |
| OK121400040010 | Sand Creek | not attaining | | | | XXX | | | | | | 322 | 92 | 03/04/03 |
| OK121400040010 | Sand Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121400040010 | Sand Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |
| OK121400040010 | Sand Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 91 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | | | | 215 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 217 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 322 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | | | | 400 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 91 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | | | | 215 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 217 | 85 | 07/17/01 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 322 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | | | | 400 | 85 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | | | | | | | 215 | 156 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | | | | 322 | 156 | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | | | | | | | | | 400 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | XXX | | | | | | | | 91 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | XXX | | | | | | | | 215 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | | | | | | | | | 217 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | | | | | | | | | 322 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | XXX | | | | | | | | 400 | | 07/17/01 |
| OK121500020090 | Bull Creek | attaining | | | | | | | | | | 91 | | 07/17/01 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | XXX | | 399 | 140 | 01/28/03 |
| OK121500020090 | Bull Creek | not attaining | | XXX | | | | | XXX | | | 302, 462 | 140 | 01/28/03 |
| OK121500020090 | Bull Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/04/03 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 230 | 140 | 08/11/99 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 215 | 92 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 322 | 92 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 400 | 92 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 215 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 322 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 400 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | XXX | | | | 302 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 317 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | XXX | | | | 317 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | XXX | | | 317 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | XXX | | | | 398 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 441 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 07/17/01 |
| OK121500020360 | Dog Creek | attaining | | XXX | | | | | | | | 230 | | 08/03/01 |
| OK121500020360 | Dog Creek | attaining | | XXX | | | | XXX | | | | 398 | | 09/17/01 |
| OK121500020360 | Dog Creek | not enough information | | | | | | | | | | 400 | 140 | 09/17/01 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/16/02 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 215 | 92 | 09/16/02 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/16/02 |
| OK121500020360 | Dog Creek | attaining | | | | | | | | | | 217 | | 09/16/02 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 413 | 156 | 12/16/02 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 12/16/02 |
| OK121500020360 | Dog Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK121500020360 | Dog Creek | not enough information | | XXX | | | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121500020360 | Dog Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK121500020360 | Dog Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121500020360 | Dog Creek | attaining | | XXX | | | | | | XXX | | 399 | | 01/27/03 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | XXX | | 399 | 140 | 01/28/03 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 322 | 156 | 03/03/03 |
| OK121500020360 | Dog Creek | not attaining | | | | XXX | | | | | | 322 | 92 | 03/03/03 |
| OK121500020360 | Dog Creek | not attaining | | XXX | | | | | | | | 322 | 140 | 03/03/03 |
| OK121500020360 | Dog Creek | attaining | | | | | | | | | | 317 | | 03/03/03 |
| OK121500020360 | Dog Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121500020360 | Dog Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121510020050 | California Creek | attaining | | XXX | | | | | | | | 230 | | 08/10/99 |
| OK121510020050 | California Creek | attaining | | | | | | XXX | | | | 302 | | 06/13/00 |
| OK121510020050 | California Creek | attaining | | | | | | | | | | 400 | | 07/18/00 |
| OK121510020050 | California Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 08/22/00 |
| OK121510020050 | California Creek | not attaining | | XXX | | | | | | | | 217 | 92 | 08/22/00 |
| OK121510020050 | California Creek | attaining | | | | | | | | | | 217 | | 08/22/00 |
| OK121510020050 | California Creek | not attaining | | XXX | | | | XXX | | | | 398 | 156 | 03/26/01 |
| OK121510020050 | California Creek | not attaining | | XXX | | | | XXX | | | | 398 | 92 | 03/26/01 |
| OK121510020050 | California Creek | not enough information | | | | XXX | | XXX | | | | 398 | 140 | 03/26/01 |
| OK121510020050 | California Creek | attaining | | XXX | | | | | | | | 91 | | 03/26/01 |
| OK121510020050 | California Creek | attaining | | | | | | | | XXX | | 138 | | 03/26/01 |
| OK121510020050 | California Creek | attaining | | | | | | | | | | 317 | | 03/26/01 |
| OK121510020050 | California Creek | attaining | | | | | | XXX | | | | 317 | | 03/26/01 |
| OK121510020050 | California Creek | attaining | | | | | | | XXX | | | 317 | | 03/26/01 |
| OK121510020050 | California Creek | attaining | | | | | | | | | | 322 | | 03/26/01 |
| OK121510020050 | California Creek | not enough information | | | | XXX | | | | XXX | | 385 | 140 | 03/26/01 |
| OK121510020050 | California Creek | not attaining | | XXX | | | | | | | | 215 | 156 | 09/16/02 |
| OK121510020050 | California Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/16/02 |
| OK121510020050 | California Creek | attaining | | XXX | | | | | | | | 215 | | 09/16/02 |
| OK121510020050 | California Creek | not attaining | | XXX | | | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK121510020050 | California Creek | attaining | | XXX | | | | | | XXX | | 399 | | 01/27/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121510020050 | California Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/03/03 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 03/26/01 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/26/01 |
| OK121510030010 | Big Creek | not attaining | | | | | | | XXX | | | 302, 462 | 140 | 03/26/01 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | | | | 230 | | 08/01/01 |
| OK121510030010 | Big Creek | attaining | | | | | | | | | | 400 | | 09/18/01 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/10/02 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/10/02 |
| OK121510030010 | Big Creek | not attaining | | | | | | | | | | 215 | 92 | 09/10/02 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/10/02 |
| OK121510030010 | Big Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/10/02 |
| OK121510030010 | Big Creek | not attaining | | | | | | | | | | 217 | 140 | 09/10/02 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | | | | 215 | | 09/10/02 |
| OK121510030010 | Big Creek | attaining | | | | | | | | | | 217 | | 09/10/02 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | | | | 91 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | | | | | | XXX | | | 138 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | | | | | | XXX | | | 385 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | XXX | | | 399 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | | | | | | | | | 413 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121510030010 | Big Creek | attaining | | | | | | | | | | 317 | | 03/04/03 |
| OK121510030010 | Big Creek | attaining | | XXX | | | | | XXX | | | 317 | | 03/04/03 |
| OK121510030010 | Big Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121510030010 | Big Creek | not enough information | | | | XXX | | | | | | 441 | 140 | 03/04/03 |
| OK121600010060 | Ranger Creek | attaining | | | | | | XXX | | | | 398 | | 09/18/01 |
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | | | | | 400 | | 09/18/01 |
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | | | | | 230 | | 11/08/01 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/10/02 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/10/02 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/10/02 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/10/02 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/28/03 |
| OK121600010060 | Ranger Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 01/28/03 |
| OK121600010060 | Ranger Creek | attaining | | | | | | XXX | | | | 302 | | 01/28/03 |
| OK121600010060 | Ranger Creek | attaining | | | | | | | XXX | | | 385 | | 01/28/03 |
| OK121600010060 | Ranger Creek | not enough information | | | | XXX | | | XXX | | | 399 | 140 | 01/28/03 |
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | | | | | 413 | | 01/28/03 |
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | XXX | | | | 317 | | 03/04/03 |
| OK121600010060 | Ranger Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |
| OK121600010060 | Ranger Creek | attaining | | XXX | | | | | | | | 322 | | 03/04/03 |
| OK121600010060 | Ranger Creek | attaining | | | | | | | | | | 441 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | XXX | | | | 398 | 156 | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | XXX | | | | 398 | | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | | | 400 | | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | XXX | | | | 398 | | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | not enough information | | | | XXX | | | | | | 400 | | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | XXX | | | | 400 | | 09/18/01 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 230 | | 11/08/01 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/10/02 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/10/02 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | | | 215 | | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 217 | | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | | | 215 | | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 217 | | 09/17/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 413 | | 11/19/02 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 413 | | 11/19/02 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 91 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | XXX | | 138 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 91 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | XXX | | | | 302 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | XXX | | 138 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 413 | | 01/28/03 |
| OK121600010100 | Fourteenmile Creek | not attaining | | | | XXX | | | | | | 322 | 156 | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 441 | | 03/04/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 322 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | XXX | | | | | | | 317 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK121600010100 | Fourteenmile Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | | | | | | | 230 | 140 | 08/02/01 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | | | | 230 | 140 | 08/17/01 |
| OK121600010430 | Chouteau Creek | attaining | | XXX | | | | XXX | | | | 398 | | 09/18/01 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | | | | 400 | | 09/18/01 |
| OK121600010430 | Chouteau Creek | not attaining | | XXX | | | | | | | | 215 | 85 | 09/09/02 |
| OK121600010430 | Chouteau Creek | not attaining | | | | | | | | | | 215 | 156 | 09/09/02 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | | | | 215 | 100 | 09/09/02 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600010430 | Chouteau Creek | not attaining | | | | | | | | | | 217 | 140 | 09/09/02 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | XXX | | | | 302 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | XXX | | | | | | XXX | | 385 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | XXX | | | | | | XXX | | 138 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | XXX | | | | 302 | 140 | 01/28/03 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | | | | 413 | | 01/28/03 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121600010430 | Chouteau Creek | not attaining | | XXX | | | | | | | | 317 | 140 | 03/03/03 |
| OK121600010430 | Chouteau Creek | attaining | | XXX | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600010430 | Chouteau Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600010430 | Chouteau Creek | attaining | | XXX | | | | | | | | 322 | | 03/03/03 |
| OK121600010430 | Chouteau Creek | attaining | | XXX | | | | | | | | 441 | | 03/03/03 |
| OK121600010430 | Chouteau Creek | not attaining | | XXX | | | | | | | | 317 | 140 | 03/04/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | | | XXX | | | | 317 | 140 | 03/04/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | XXX | | | 317 | 140 | 03/04/03 |
| OK121600010430 | Chouteau Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/04/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 230 | | 08/02/01 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 230 | | 08/08/01 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | XXX | | | | 398 | | 09/17/01 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 400 | | 09/17/01 |
| OK121600020030 | Saline Creek | not enough information | | | | XXX | | | | | | 400 | | 09/18/01 |
| OK121600020030 | Saline Creek | attaining | | | | | | XXX | | | | 400 | | 09/18/01 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|----------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600020030 | Saline Creek | not attaining | | | | XXX | | | | | | 215 | 85 | 09/09/02 |
| OK121600020030 | Saline Creek | not attaining | | | | XXX | | | | | | 217 | 85 | 09/09/02 |
| OK121600020030 | Saline Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/09/02 |
| OK121600020030 | Saline Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/09/02 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 215 | | 09/09/02 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 215 | | 09/09/02 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK121600020030 | Saline Creek | not enough information | | | | XXX | | | | | | 217 | | 09/09/02 |
| OK121600020030 | Saline Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600020030 | Saline Creek | not enough information | | | | XXX | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | XXX | | 399 | | 01/27/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | XXX | | | | 302 | | 01/27/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | XXX | | 385 | | 01/27/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 91 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | XXX | | 385 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | XXX | | | | 302 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | XXX | | 138 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 413 | | 01/28/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | | | | 317 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600020030 | Saline Creek | not enough information | | | | XXX | | | | | | 322 | 140 | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 441 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 322 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | XXX | | | | | | | 317 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600020030 | Saline Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | | | 230 | | 08/07/01 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 230 | | 08/08/01 |
| OK121600030090 | Drowning Creek | not attaining | | | | | | | | | | 400 | 156 | 09/17/01 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 400 | | 09/17/01 |
| OK121600030090 | Drowning Creek | not enough information | | | | XXX | | | | | | 400 | | 09/17/01 |
| OK121600030090 | Drowning Creek | attaining | | | | | | XXX | | | | 400 | | 09/17/01 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/09/02 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 09/09/02 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/09/02 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 215 | | 09/09/02 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/09/02 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 01/27/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | XXX | | 399 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | XXX | | 138 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | | | 413 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 91 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | | | | | XXX | | 399 | 140 | 01/27/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 413 | | 01/27/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/03/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | XXX | | | | | | 322 | 156 | 03/03/03 |
| OK121600030090 | Drowning Creek | not attaining | | | | | | | | | | 322 | 140 | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | | | | 317 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | XXX | | | 317 | | 03/03/03 |
| OK121600030090 | Drowning Creek | not enough information | | | | XXX | | | | | | 441 | 140 | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 441 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 322 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | XXX | | | | | | | 317 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600030090 | Drowning Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600030190 | Little Horse Creek | attaining | | | | | | XXX | | | | 398 | | 09/17/01 |
| OK121600030190 | Little Horse Creek | attaining | | XXX | | | | | | | | 400 | | 09/17/01 |
| OK121600030190 | Little Horse Creek | not attaining | | XXX | | | | | | | | 230 | 140 | 10/25/01 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 09/09/02 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 09/09/02 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600030190 | Little Horse Creek | not attaining | | XXX | | | | | | | | 215 | 140 | 09/09/02 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/09/02 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/27/03 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121600030190 | Little Horse Creek | not attaining | | | | | | XXX | | | | 302 | 140 | 01/27/03 |
| OK121600030190 | Little Horse Creek | attaining | | XXX | | | | | | XXX | | 385 | | 01/27/03 |
| OK121600030190 | Little Horse Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK121600030190 | Little Horse Creek | attaining | | XXX | | | | | | | | 413 | | 01/27/03 |
| OK121600030190 | Little Horse Creek | not attaining | | | | XXX | | | | | | 317 | 140 | 03/03/03 |
| OK121600030190 | Little Horse Creek | attaining | | XXX | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600030190 | Little Horse Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600030190 | Little Horse Creek | attaining | | XXX | | | | | | | | 322 | | 03/03/03 |
| OK121600030190 | Little Horse Creek | not enough information | | | | | | | | | | 441 | 140 | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 230 | | 08/07/01 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 400 | | 09/17/01 |
| OK121600030510 | Sycamore Creek | not enough information | | | | XXX | | | | | | 400 | | 09/17/01 |
| OK121600030510 | Sycamore Creek | not enough information | | | | | | XXX | | | | 400 | | 09/17/01 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 230 | | 10/25/01 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 215 | 85 | 09/09/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/09/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 215 | 84 | 09/09/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 217 | | 09/09/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/09/02 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 215 | | 09/16/02 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 217 | | 09/16/02 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 215 | | 09/16/02 |
| OK121600030510 | Sycamore Creek | not enough information | | | | XXX | | | | | | 217 | 156 | 09/16/02 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 215 | | 09/16/02 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 217 | | 09/16/02 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK121600030510 | Sycamore Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 413 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 91 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|-------|--------|------------------------|
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | XXX | | 138 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 413 | | 01/27/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 317 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 322 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | | | | 441 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | not enough information | | | | | | | | | | 322 | 85 | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 322 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 441 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 322 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | XXX | | | | | | | 317 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK121600030510 | Sycamore Creek | attaining | | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 230 | | 08/07/01 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 230 | | 08/29/01 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 400 | | 09/17/01 |
| OK121600040060 | Tar Creek | not enough information | | | | | XXX | | | | | 400 | | 09/17/01 |
| OK121600040060 | Tar Creek | not enough information | | | | | XXX | | | | | 217 | | 09/09/02 |
| OK121600040060 | Tar Creek | not attaining | | | | | XXX | | | | | 215 | 140 | 09/09/02 |
| OK121600040060 | Tar Creek | not attaining | | | | | XXX | | | | | 215 | 140 | 09/16/02 |
| OK121600040060 | Tar Creek | not attaining | | | | | XXX | | | | | 217 | 140 | 09/16/02 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | XXX | | 385 | | 01/27/03 |
| OK121600040060 | Tar Creek | not enough information | | | | | XXX | | | XXX | | 399 | 140 | 01/27/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 91 | | 01/27/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | XXX | | 138 | | 01/27/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 91 | | 01/27/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 413 | | 01/27/03 |
| OK121600040060 | Tar Creek | not attaining | | | | | XXX | | | | | 322 | 92 | 03/03/03 |
| OK121600040060 | Tar Creek | not attaining | | | | | XXX | | | | | 322 | 140 | 03/03/03 |
| OK121600040060 | Tar Creek | not enough information | | | | | XXX | | | | | 317 | 140 | 03/03/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | XXX | | | 317 | | 03/03/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 441 | | 03/03/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 322 | | 03/03/03 |
| OK121600040060 | Tar Creek | attaining | XXX | | | | | | | | | 317 | | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 230 | 140 | 09/13/01 |
| OK121600060080 | Little Cabin Creek | attaining | | XXX | | | | | | | | 400 | | 09/17/01 |
| OK121600060080 | Little Cabin Creek | not attaining | | XXX | | | | | | | | 215 | 140 | 09/16/02 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 09/16/02 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600060080 | Little Cabin Creek | attaining | | XXX | | | | | | | | 215 | | 09/17/02 |
| OK121600060080 | Little Cabin Creek | attaining | | | | | | | | | | 217 | | 09/17/02 |
| OK121600060080 | Little Cabin Creek | attaining | | XXX | | | | | | | | 215 | | 09/17/02 |
| OK121600060080 | Little Cabin Creek | attaining | | XXX | | | | | | | | 217 | | 09/17/02 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 12/16/02 |
| OK121600060080 | Little Cabin Creek | attaining | | | | | | | | | | 413 | | 12/16/02 |
| OK121600060080 | Little Cabin Creek | not attaining | | XXX | | | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 01/27/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | XXX | | 385 | 140 | 01/27/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | XXX | | | | | | XXX | | 399 | 140 | 01/27/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/27/03 |
| OK121600060080 | Little Cabin Creek | attaining | | XXX | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | XXX | | | | | | | | 317 | 140 | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | | | | XXX | | | 317 | 140 | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not attaining | | | | | | | | | | 322 | 140 | 03/03/03 |
| OK121600060080 | Little Cabin Creek | not enough information | | | | XXX | | | | | | 322 | 85 | 03/04/03 |
| OK121600060080 | Little Cabin Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121600060220 | Big Cabin Creek | attaining | | XXX | | | | | | | | 230 | | 08/06/01 |
| OK121600060220 | Big Cabin Creek | not attaining | | | | | | | | | | 215 | 84 | 09/17/02 |
| OK121600060220 | Big Cabin Creek | not attaining | | | | | | | | | | 217 | 84 | 09/17/02 |
| OK121600060220 | Big Cabin Creek | not attaining | | XXX | | | | | | | | 215 | 92 | 09/17/02 |
| OK121600060220 | Big Cabin Creek | attaining | | XXX | | | | | | | | 217 | | 09/17/02 |
| OK121600060220 | Big Cabin Creek | attaining | | XXX | | | | | | | | 215 | | 09/17/02 |
| OK121600060220 | Big Cabin Creek | attaining | | XXX | | | | | | | | 217 | | 09/17/02 |
| OK121600060220 | Big Cabin Creek | not enough information | | | | | XXX | | | XXX | | 138 | 140 | 01/28/03 |
| OK121600060220 | Big Cabin Creek | not enough information | | | | | XXX | | | | | 91 | 140 | 01/28/03 |
| OK121600060220 | Big Cabin Creek | not enough information | | | | | | XXX | | | | 302 | 140 | 01/28/03 |
| OK121600060220 | Big Cabin Creek | not attaining | | | | | | | | | | 322 | 84 | 03/04/03 |
| OK121600060220 | Big Cabin Creek | not enough information | | | | | XXX | | | | | 322 | 92 | 03/04/03 |
| OK121600060220 | Big Cabin Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK121600060220 | Big Cabin Creek | attaining | | XXX | | | | | | | | 441 | | 03/04/03 |
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | | | | | 215 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | | | 217 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | | | 400 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | | | 215 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | not enough information | | | | XXX | | | | | | 217 | 156 | 08/27/01 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|----------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | | | | | 400 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | | | | | 215 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | | | 217 | | 08/27/01 |
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | XXX | | | | 398 | | 09/18/01 |
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | | | | | 400 | | 09/18/01 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | | | 413 | | 12/17/02 |
| OK121600070110 | Fivemile Creek | not enough information | | | | XXX | | | | XXX | | 385 | 140 | 01/28/03 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | | XXX | | 399 | | 01/28/03 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/28/03 |
| OK121600070110 | Fivemile Creek | attaining | | | XXX | | | | | | | 317 | | 03/04/03 |
| OK121600070110 | Fivemile Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK121600070110 | Fivemile Creek | not enough information | | | | XXX | | | XXX | | | 317 | 140 | 03/04/03 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 400 | 100 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | XXX | | | | | | | | 217 | 92 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 400 | 92 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | XXX | | | | | | | | 217 | 140 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 08/27/01 |
| OK121610000050 | Pryor Creek | attaining | | XXX | | | | | | | | 215 | | 08/27/01 |
| OK121610000050 | Pryor Creek | attaining | | XXX | | | | | | | | 215 | | 08/27/01 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | | | 215 | | 08/27/01 |
| OK121610000050 | Pryor Creek | attaining | | XXX | | | | | | | | 215 | | 08/27/01 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | | | 215 | | 08/27/01 |
| OK121610000050 | Pryor Creek | not enough information | | | | | | | | | | 217 | 140 | 08/27/01 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | XXX | | | | | | XXX | | 138 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 317 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 317 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | | | | | XXX | | 322 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | | | | | XXX | | 385 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | XXX | | | | | | | | 441 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | XXX | | | | | | XXX | | 302, 462 | 140 | 04/01/02 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | | | 91 | | 04/01/02 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | XXX | | 138 | | 04/01/02 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | | | 317 | | 04/01/02 |
| OK121610000050 | Pryor Creek | not enough information | | | | XXX | | | | XXX | | 317 | 140 | 04/01/02 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK121610000050 | Pryor Creek | attaining | | XXX | | | | | | | | 322 | | 04/01/02 |
| OK121610000050 | Pryor Creek | attaining | | | | | | | | XXX | | 385 | | 04/01/02 |
| OK121610000050 | Pryor Creek | not attaining | | | | XXX | | | | XXX | | 399 | 140 | 01/28/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 08/27/01 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 400 | 156 | 08/27/01 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 400 | 92 | 08/27/01 |
| OK520610020120 | Buggy Creek | attaining | | XXX | | | | | | | | 400 | | 08/27/01 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 04/01/02 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 04/01/02 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 04/01/02 |
| OK520610020120 | Buggy Creek | attaining | | XXX | | | | | | | | 413 | | 12/17/02 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | XXX | | 385 | 155 | 01/27/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | XXX | | 399 | 155 | 01/27/03 |
| OK520610020120 | Buggy Creek | attaining | | XXX | | | | | | XXX | | 385 | | 01/27/03 |
| OK520610020120 | Buggy Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK520610020120 | Buggy Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK520610020120 | Buggy Creek | attaining | | XXX | | | | | | XXX | | 138 | | 01/27/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | XXX | | 399 | 140 | 01/28/03 |
| OK520610020120 | Buggy Creek | attaining | | | | | | | | | | 317 | | 03/04/03 |
| OK520610020120 | Buggy Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |
| OK520610020120 | Buggy Creek | attaining | | XXX | | | | | | | | 322 | | 03/04/03 |
| OK520610020120 | Buggy Creek | attaining | | | | | | | | | | 441 | | 03/04/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 05/13/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/13/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 05/13/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 05/13/03 |
| OK520610020120 | Buggy Creek | not attaining | | | | XXX | | | | | | 217 | 140 | 05/13/03 |
| OK520610030010 | Walnut Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | XXX | | | | | | XXX | | 385 | | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | | | | | | | XXX | | 399 | | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | | | | | | | XXX | | 385 | | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | XXX | | | | | | XXX | | 399 | | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | | | | | | | XXX | | 138 | | 01/27/03 |
| OK520610030010 | Walnut Creek | not enough information | | | | XXX | | XXX | | | | 302 | 140 | 01/27/03 |
| OK520610030010 | Walnut Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |
| OK520610030010 | Walnut Creek | attaining | | XXX | | | | XXX | | | | 317 | | 03/04/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|--------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK520610030010 | Walnut Creek | attaining | | | | | | | XXX | | | 317 | | 03/04/03 |
| OK520610030010 | Walnut Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK520610030010 | Walnut Creek | not attaining | | | | XXX | | | | | | 217 | 156 | 05/13/03 |
| OK520610030010 | Walnut Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 05/13/03 |
| OK520610030010 | Walnut Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 05/13/03 |
| OK520610030010 | Walnut Creek | attaining | | | | XXX | | | | | | 215 | | 05/13/03 |
| OK520610030010 | Walnut Creek | attaining | | XXX | | | | | | | | 217 | | 05/13/03 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | XXX | | | | 398 | 140 | 09/18/01 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK520620020090 | Trail Creek | not attaining | | | | | | | | | | 215 | 156 | 07/09/02 |
| OK520620020090 | Trail Creek | not attaining | | | | | | | | | | 217 | 156 | 07/09/02 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 215 | 92 | 07/09/02 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 217 | 92 | 07/09/02 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 07/09/02 |
| OK520620020090 | Trail Creek | attaining | | XXX | | | | | | | | 217 | | 07/09/02 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 01/27/03 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | XXX | | | | 302, 462 | 140 | 01/27/03 |
| OK520620020090 | Trail Creek | not attaining | | | | | | | XXX | | | 385 | 155 | 01/27/03 |
| OK520620020090 | Trail Creek | not attaining | | | | | | | XXX | | | 399 | 155 | 01/27/03 |
| OK520620020090 | Trail Creek | attaining | | | | | | | XXX | | | 385 | | 01/27/03 |
| OK520620020090 | Trail Creek | attaining | | XXX | | | | | XXX | | | 399 | | 01/27/03 |
| OK520620020090 | Trail Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK520620020090 | Trail Creek | attaining | | XXX | | | | | XXX | | | 138 | | 01/27/03 |
| OK520620020090 | Trail Creek | attaining | | XXX | | | | XXX | | | | 302 | | 01/27/03 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 322 | 140 | 03/04/03 |
| OK520620020090 | Trail Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/04/03 |
| OK520620020090 | Trail Creek | attaining | | XXX | | | | | | | | 317 | | 03/04/03 |
| OK520620020090 | Trail Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | XXX | | | | 398 | 140 | 09/18/01 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK520620030020 | Lone Creek | attaining | | XXX | | | | XXX | | | | 398 | | 09/18/01 |
| OK520620030020 | Lone Creek | attaining | | | | | | | | | | 400 | | 09/18/01 |
| OK520620030020 | Lone Creek | not attaining | | | | | | | | | | 413 | 140 | 01/27/03 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | XXX | | | | 302, 462 | 140 | 01/27/03 |
| OK520620030020 | Lone Creek | attaining | | | | | | | | | | 91 | | 01/27/03 |
| OK520620030020 | Lone Creek | attaining | | | | | | | XXX | | | 138 | | 01/27/03 |
| OK520620030020 | Lone Creek | attaining | | XXX | | | | XXX | | | | 302 | | 01/27/03 |
| OK520620030020 | Lone Creek | not enough information | | | | XXX | | | XXX | | | 385 | 140 | 01/27/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK520620030020 | Lone Creek | attaining | | XXX | | | | | | XXX | | 399 | | 01/27/03 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | | XXX | | | 317 | 140 | 03/04/03 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | | | | | 322 | 140 | 03/04/03 |
| OK520620030020 | Lone Creek | not attaining | | | | | | | | | | 441 | 140 | 03/04/03 |
| OK520620030020 | Lone Creek | attaining | | | | | | | | | | 317 | | 03/04/03 |
| OK520620030020 | Lone Creek | attaining | | | | | | XXX | | | | 317 | | 03/04/03 |
| OK520620030020 | Lone Creek | attaining | | XXX | | | | | XXX | | | 317 | | 03/04/03 |
| OK520620030020 | Lone Creek | not enough information | | | | | | | | | | 322 | 140 | 03/04/03 |
| OK520620030020 | Lone Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 05/13/03 |
| OK520620030020 | Lone Creek | not attaining | | | | | | | | | | 217 | 156 | 05/13/03 |
| OK520620030020 | Lone Creek | not attaining | | | | | | | | | | 215 | 140 | 05/13/03 |
| OK520620030020 | Lone Creek | attaining | | XXX | | | | | | | | 217 | | 05/13/03 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | | | | 215 | 85 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | | | | | | | 217 | 85 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | | | | | | | 215 | 85 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | | | | 217 | 85 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | | | | 215 | 156 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | | | | | | | 217 | 156 | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | | | | | | | 215 | 84 | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | XXX | | | | | | | | 217 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | | | | | 215 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | XXX | | | | | | | | 215 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | | | | | 215 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | | | | | 217 | | 09/09/02 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 01/27/03 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/27/03 |
| OK520620040050 | Hackberry Creek | not enough information | | | | | | | | XXX | | 91 | 140 | 01/27/03 |
| OK520620040050 | Hackberry Creek | not enough information | | | | XXX | | | | | | 138 | 140 | 01/27/03 |
| OK520620040050 | Hackberry Creek | not enough information | | XXX | | | | XXX | | | | 302 | 140 | 01/27/03 |
| OK520620040050 | Hackberry Creek | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK520620040050 | Hackberry Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK520620040050 | Hackberry Creek | not attaining | | | | XXX | | | | | | 441 | 140 | 03/04/03 |
| OK520620050160 | Commission Creek | not attaining | | | | XXX | | XXX | | | | 398 | 140 | 09/18/01 |
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 400 | | 09/18/01 |
| OK520620050160 | Commission Creek | not attaining | | | | XXX | | | | XXX | | 385 | 140 | 01/27/03 |
| OK520620050160 | Commission Creek | attaining | | XXX | | | | | | XXX | | 399 | | 01/27/03 |

Appendix E.1. OCC assessment results for beneficial use support.

| OKWBID | SITE NAME | ATTAINMENT | HABITAT LIMITED AQ. COMM. | WARM WATER AQ. COMM. | COOL WATER AQ. COMM. | PRIMARY CONTACT (RECR) | SECONDARY CONTACT (RECR) | PUBLIC/PRIVATE WATER SUP. | AESTHETICS | AGRICULTURE | SWS-SENSITIVE WATER SUP. | CAUSE | SOURCE | DATE LAST MONITORED |
|----------------|------------------|------------------------|------------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|------------------------------|------------|-------------|-----------------------------|----------|--------|------------------------|
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 413 | | 01/27/03 |
| OK520620050160 | Commission Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK520620050160 | Commission Creek | not attaining | | | | XXX | | | XXX | | | 317 | 140 | 03/03/03 |
| OK520620050160 | Commission Creek | not attaining | | | | XXX | | | | | | 322 | 140 | 03/03/03 |
| OK520620050160 | Commission Creek | attaining | | XXX | | | | | | | | 441 | | 03/03/03 |
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK520620050160 | Commission Creek | not enough information | | | | XXX | | | | | | 322 | 92 | 03/04/03 |
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 322 | | 03/04/03 |
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 215 | | 05/13/03 |
| OK520620050160 | Commission Creek | attaining | | XXX | | | | | | | | 217 | | 05/13/03 |
| OK520620050160 | Commission Creek | not enough information | | | | | | | | | | 215 | 92 | 05/13/03 |
| OK520620050160 | Commission Creek | attaining | | | | | | | | | | 217 | | 05/13/03 |
| OK520620050160 | Commission Creek | attaining | | XXX | | | | | | | | 215 | | 05/13/03 |
| OK520620050160 | Commission Creek | attaining | | XXX | | | | | | | | 217 | | 05/13/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | | | | | 230 | | 08/07/01 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 230 | 140 | 09/05/01 |
| OK520620060010 | Deer Creek | not enough information | | | | | | XXX | | | XXX | 398 | 140 | 09/17/01 |
| OK520620060010 | Deer Creek | not enough information | | | | XXX | | | | | | 400 | 140 | 09/17/01 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 400 | 140 | 09/18/01 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 215 | 140 | 09/09/02 |
| OK520620060010 | Deer Creek | attaining | | XXX | | | | | | | | 217 | | 09/09/02 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/27/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | XXX | | 138 | 140 | 01/27/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | XXX | | | | 302 | | 01/27/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | | XXX | | | 385 | | 01/27/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | | XXX | | | 399 | | 01/27/03 |
| OK520620060010 | Deer Creek | attaining | | XXX | | | | | | | | 413 | | 01/27/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | | XXX | | | 302, 462 | | 01/27/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 91 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | XXX | | | 138 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | XXX | | | 385 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | XXX | | | 399 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | | | | 413 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | not attaining | | | | XXX | | | XXX | | | 302, 462 | 140 | 01/28/03 |
| OK520620060010 | Deer Creek | attaining | | XXX | | | | | | | | 317 | | 03/03/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |
| OK520620060010 | Deer Creek | attaining | | | | | | XXX | | | | 317 | | 03/03/03 |

Appendix E.2. Key for beneficial use support assessment codes and impairment cause and source codes.

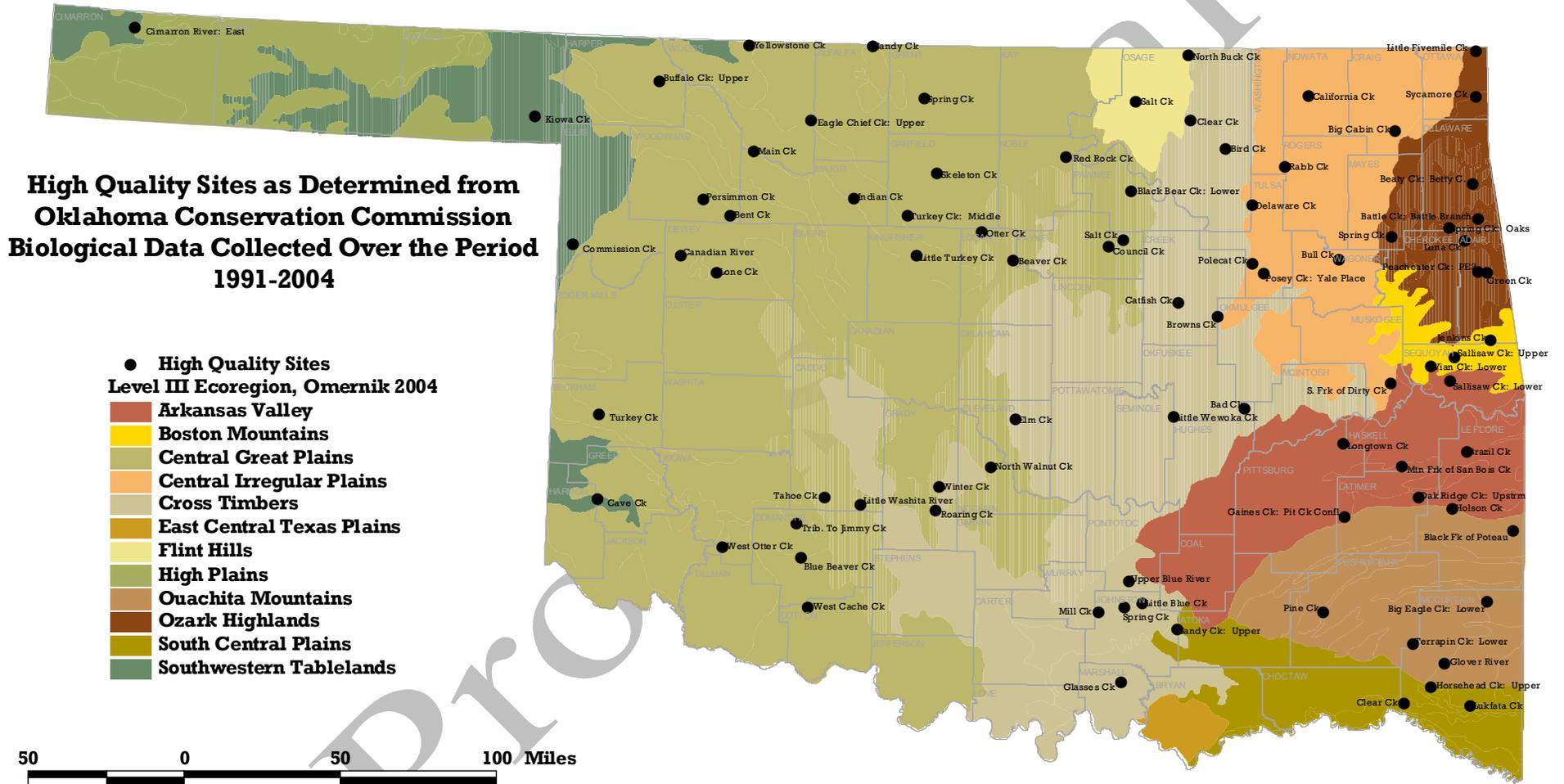
| USE ID | DESCRIPTION |
|---------------|--|
| 124 | Aesthetic |
| 125 | Agriculture |
| 130 | Cool Water Aquatic Community |
| 131 | Habitat Limited Aquatic Community |
| 133 | Warm Water Aquatic Community |
| 137 | Primary Body Contact Recreation |
| 138 | Public and Private Water Supply |
| 139 | Secondary Body Contact Recreation |
| 1005 | Sensitive Water Supply |
| IMPAIRMENT ID | |
| 91 | Ammonia (unionized)--toxin |
| 138 | Chloride |
| 153 | Chlorpyrifos |
| 215 | Enterococcus |
| 217 | Escherichia coli |
| 230 | Fishes bioassessments (streams) |
| 302 | Nitrates |
| 317 | Oil and grease |
| 322 | Oxygen, dissolved |
| 385 | Sulfates |
| 398 | Total coliform |
| 399 | Total dissolved solids |
| 400 | Total fecal coliform |
| 413 | Turbidity |
| 441 | pH |
| 462 | Total phosphorous |
| SOURCE ID | |
| 68 | Land application of wastewater biosolids (non-ag) |
| 84 | Municipal (urbanized high density area) |
| 85 | Municipal point source discharges |
| 92 | On-site treatment systems (septic systems and similar decentralized systems) |
| 100 | Permitted runoff from confined animal feeding operations (CAFOs) |
| 102 | Petroleum / natural gas activities (Legacy) |
| 140 | Source unknown |
| 155 | Natural sources |
| 156 | Agriculture |

High Quality Sites as Determined from Oklahoma Conservation Commission Biological Data

Biological data collection has been and continues to be a hallmark of the Oklahoma Conservation Commission Water Quality Division's (OCC) monitoring program. Since the development of rapid biological assessment methods in the late eighties, the OCC has been collecting fish, benthic macroinvertebrate, and instream habitat data on Oklahoma's wadeable streams to better characterize the extent and nature of nonpoint source pollution impacts and provide the necessary baseline and perpetual data for trend monitoring. Biological collections are also used to determine the effects of implementation projects on a local and watershed scale.

Using multimetric indices like the Index of Biotic Integrity (IBI), the aquatic community of a stream of unknown quality may be compared to regional streams of similar habitat but known quality to determine the impact(s), if any, of human activity. As Oklahoma state and tribal authorities continue to develop biological monitoring programs, the need for a list of sites of known biological integrity is becoming increasingly imperative for meaningful and efficient data interpretation. As a first step toward such a "reference" list, the OCC has developed a list of "high quality sites" derived empirically from analysis of its own biological data. While this list is a reporting of those sites which scored the highest with respect to a composited scoring regime (explained below), it is not intended to be construed as a compilation of "state reference streams", and OCC is not posing recommendations (implied or otherwise) with respect to its use. The list is simply a compilation of streams with high quality biological communities (defined below) as sampled by the OCC over the past fifteen years. The list is by no means exhaustive of high quality streams in the state, and characterizations resulting from older collections (there are some collections from 1991) do not necessarily represent present day conditions.

To derive a list of sites exhibiting high biological quality, staff queried fish, benthic macroinvertebrate, and habitat data for all OCC sites collected through May 2005. Approximately 510 sites possessing concurrent (by year) fish and macroinvertebrate collections were then summarized by the following metrics for each data type: 1. Fish – total species, number of intolerant species, proportion tolerant individuals, number of sensitive benthic species (darters, madtoms, round bodied suckers), proportion omnivorous individuals, and proportion insectivorous individuals, 2. Benthic macroinvertebrates (summer riffle collections) – total taxa, EPT taxa, proportion EPT individuals, 3. Habitat – total score per 99-3 document. Sites were stratified by Omernik's 2004 Level III ecoregions and the appropriate quartile (75th or 25th) was derived and implemented as a screening criterion to determine the top sites for each metric (e.g., all sites for a given ecoregion exceeding the 75th percentile for total fish species). For each site, metrics meeting the imposed criteria were weighted to produce the following scores: 1. fish metrics equal one point, 2. macroinvertebrate metrics equal two points, and 3. total habitat equals one point. Sites were then "scored" by summing the weighted total of metrics meeting the imposed criteria. For each Level III ecoregion, sites exhibiting the highest total scores were chosen in such a manner to represent both stream size and, in cases of obvious difference, major subregions (Level IV). The Arbuckle Uplift and Wichita Mountains are two examples of subregions exhibiting aquatic communities markedly different from the other subregions of their respective Level III ecoregions.



| Sitename | Wbid | Lat | Long | Legal Desc | County | Level III Ecoregion | Level 4 name | Comments |
|---|-------------------|-------------|--------------|---------------------------------------|------------|--------------------------|---|---|
| Cave Creek | OK311600-02-0140G | 34.8681 | -99.7162 | NW¼ Section 34 5N 24W | Greer | Southwestern Tablelands | Caprock Canyons, Badlands, and Breaks | |
| Kiowa Creek: Beaver Co. | OK720500-02-0130K | 36.616 | -100.1647222 | SE¼ SE¼ SE¼ Section 20 2N 27E | Beaver | Southwestern Tablelands | Cimarron/Canadian Breaks | |
| Cimarron River: East | OK720900-00-0010G | 36.9185 | -102.5197 | SW¼ NE¼ NE¼ Section 9 5N 5E | Cimarron | Southwestern Tablelands | Mesa de Maya / Black Mesa | |
| Commission Creek | OK520620-05-0160C | 36.03356 | -99.917 | N.B. NW¼ NE¼ NW¼ Section 18 18N 25W | Ellis | Southwestern Tablelands | Cimarron/Canadian Breaks | |
| Salt Creek | OK620900-02-0020D | 36.11594444 | -96.739 | Sections 14/23 19N 5E | Payne | Central Great Plains | Cross Timbers Transition | |
| Winter Creek | OK310810-02-0220G | 34.9713 | -97.7742 | Sections 19/30 6N 5W | Grady | Central Great Plains | Cross Timbers Transition | |
| Canadian River | OK520620-03-0010G | 36.00096639 | -99.29 | SW¼ SW¼ SW¼ Section 25 18N 20W | Dewey | Central Great Plains | Rolling Red Hills | |
| Lone Creek | OK520620-03-0020G | 35.92722222 | -99.081 | N¼ Section 26 17N 18W | Dewey | Central Great Plains | Rolling Red Hills | |
| Council Creek | OK620900-02-0050H | 36.0829 | -96.8196 | W.B. Section 31 19N 5E | Payne | Central Great Plains | Cross Timbers Transition | |
| Otter Creek | OK620910-03-0040G | 36.1449 | -97.553 | Sections 6/7 19N 3W | Logan | Central Great Plains | Cross Timbers Transition | |
| Main Creek | OK620920-01-0180F | 36.49202778 | -98.88975 | NE¼ NE¼ NE¼ Section 10 23N 16W | Major | Central Great Plains | Gypsum Hills | |
| Roaring Creek | OK310810-02-0170G | 34.8619 | -97.794 | Sections 35/36 5N 6W | Grady | Central Great Plains | Cross Timbers Transition | |
| Little Washita River | OK310820-02-0010F | 34.8839 | -98.2196 | Section 23/26 5N 10W | Caddo | Central Great Plains | Cross Timbers Transition | |
| Tahoe Creek | OK311300-03-0070G | 34.9082 | -98.4269 | NW¼ NW¼ Section 13 5N 12W | Caddo | Central Great Plains | Cross Timbers Transition | most of influence is Wichitas |
| West Cache Creek | OK311310-02-0020G | 34.4075 | -98.505 | W¼ Section 6 2S 12W | Colton | Central Great Plains | Broken Red Plains | |
| North Walnut Creek | OK520610-03-0010G | 35.0634 | -97.4854 | SE¼ Section 23 7N 3W | McClain | Central Great Plains | Cross Timbers Transition | |
| Beaver Creek | OK620900-03-0230C | 36.01925 | -97.3715 | SW¼ NW¼ SW¼ Section 24 18N 2W | Logan | Central Great Plains | Cross Timbers Transition | |
| Skeleton Creek | OK620910-03-0240G | 36.4093 | -97.8193 | W¼ Section 2 22N 6W | Garfield | Central Great Plains | Prairie Tableland | |
| Turkey Creek: Middle | OK620910-06-0010M | 36.21777778 | -97.98530556 | N.B. Section 18 20N 7W | Garfield | Central Great Plains | Prairie Tableland | |
| Little Turkey Creek: Downstream of Bridge | OK620910-06-0020B | 36.02983333 | -97.92986111 | NE¼ Section 22 18N 7W | Kingfisher | Central Great Plains | Pleistocene Sand Dunes and Sandsage Grassland | |
| Eagle Chief Creek: Upper | OK620920-04-0010G | 36.63633333 | -98.55819444 | NW¼ NW¼ NW¼ Section 24 25N 13W | Woods | Central Great Plains | Prairie Tableland | |
| Black Bear Creek: Lower | OK621200-03-0010D | 36.33986111 | -96.69211111 | Sections 31/32 22N 6E | Pawnee | Central Great Plains | Cross Timbers Transition | |
| Bent Creek | OK720500-01-0070D | 36.19202778 | -99.00908333 | SE¼ NE¼ SE¼ Section 21 20N 17W | Woodward | Central Great Plains | Rolling Red Hills | |
| Turkey Creek | OK311510-02-0060G | 35.2592 | -99.7234 | NE¼ Section 15 9N 24W | Beckham | Central Great Plains | Pleistocene Sand Dunes and Sandsage Grassland | |
| Indian Creek | OK620910-02-0310C | 36.28972222 | -98.29986111 | SW¼ SW¼ SW¼ Section 17 21N 10W | Major | Central Great Plains | Pleistocene Sand Dunes and Sandsage Grassland | |
| Buffalo Creek: Upper | OK620920-05-0010P | 36.79955556 | -99.44991667 | SE¼ SE¼ SW¼ Section 22 27N 21W | Harper | Central Great Plains | Rolling Red Hills | |
| Spring Creek | OK621000-02-0130G | 36.7529 | -97.902 | Section 12 26N 7W | Grant | Central Great Plains | Prairie Tableland | |
| Yellowstone Creek | OK621010-01-0270G | 36.976316 | -98.929 | SE¼ NW¼ SE¼ Section 21 29N 16W | Woods | Central Great Plains | Rolling Red Hills | |
| Sandy Creek | OK621010-02-0010G | 36.986 | -98.211 | Section 18 29N 9W | Alfalfa | Central Great Plains | Pleistocene Sand Dunes and Sandsage Grassland | |
| Red Rock Creek | OK621200-05-0010K | 36.49416667 | -97.0724722 | SW¼ SE¼ Section 3 23N 2E | Noble | Central Great Plains | Prairie Tableland | |
| Persimmon Creek | OK720500-01-0150G | 36.26186111 | -99.17372222 | NW¼ NW¼ NW¼ Section 31 21N 18W | Woodward | Central Great Plains | Rolling Red Hills | |
| Blue Beaver Creek | OK311310-02-0060G | 34.6307 | -98.5523 | N.C. Section 22 2N 13W | Comanche | Central Great Plains | Broken Red Plains | most of influence is Wichitas |
| West Otter Creek | OK311500-02-0040G | 34.6669 | -98.995 | Sections 4/9 2N 17W | Kiowa | Central Great Plains | Red Prairie | |
| Unnamed Trib. To Jimmy Creek | OK311300-01-0400G | 34.7849 | -98.5802 | NE¼ N¼ Section 29 4N 13W | Comanche | Central Great Plains | Wichita Mountains | included to represent small streams |
| Upper Blue River | OK410600-02-0010T | 34.54936111 | -96.69244444 | S.B. Section 17 1N 6E | Pontotoc | Cross Timbers | Arbuckle Uplift | |
| Clear Creek | OK121300-03-0200C | 36.66628 | -96.34927 | NE¼ Section 8 25N 9E | Osage | Cross Timbers | Northern Cross Timbers | heavy flint hills influence |
| Spring Creek | OK310800-01-0160G | 34.42947222 | -96.71863889 | S.B. Section 30 1S 6E | Johnston | Cross Timbers | Arbuckle Uplift | |
| Mill Creek | OK310800-01-0190T | 34.40508333 | -96.863 | SE¼ Section 3 2S 4E | Johnston | Cross Timbers | Arbuckle Uplift | |
| Sandy Creek: Upper | OK410400-03-0160T | 34.32925 | -96.419 | NW¼ Section 1 3S 8E | Johnston | Cross Timbers | Arbuckle Uplift | only stream to not have spring influence; granite bedrock watershed |
| Little Blue Creek | OK410600-02-0090G | 34.44861111 | -96.613 | S.B. Section 19 1S 7E | Johnston | Cross Timbers | Arbuckle Uplift | |
| Bad Creek | OK520500-01-0170G | 35.3418056 | -96.039 | E¼ Section 16 10N 12E | Okfuskee | Cross Timbers | Northern Cross Timbers | |
| Bird Creek | OK121300-03-0010A | 36.5354 | -96.1496 | Sections 20/29 24N 11E | Osage | Cross Timbers | Northern Cross Timbers | |
| Catfish Creek | OK520700-06-0140G | 35.82819444 | -96.419 | Section 36 16N 8E | Creek | Cross Timbers | Northern Cross Timbers | |
| Elm Creek | OK520810-00-0100C | 35.29078 | -97.34878 | Section 31 10N 1W and Section 6 9N 1W | Cleveland | Cross Timbers | Northern Cross Timbers | Dan's BPJ |
| Glasses Creek | OK310800-01-0020M | 34.085863 | -96.732869 | Sections 25/36 5S 5E | Marshall | Cross Timbers | Eastern Cross Timbers | chosen to represent this level four ER |
| Browns Creek | OK520700-06-0050L | 35.7692 | -96.1923 | Sections 24/19 15N 10E | Creek | Cross Timbers | Northern Cross Timbers | chosen to represent small streams; also no summer bugs, so score could have been better |
| Little Wewoka Creek: Site # 1 | OK520500-02-0090T | 35.3045 | -96.44288889 | SE¼ SE¼ SE¼ Section 27 10N 8E | Hughes | Cross Timbers | Northern Cross Timbers | chosen to represent small streams; also no summer bugs, so score could have been better |
| Salt Creek | OK621200-04-0010J | 36.7519 | -96.6724 | NE¼ Section 8 26N 6E | Osage | Flint Hills | Flint Hills | |
| North Buck Creek | OK121400-03-0210R | 36.96605 | -96.36583 | NE¼ Section 30 29N 9E | Osage | Flint Hills | Flint Hills | |
| California Creek | OK121510-02-0050C | 36.7802 | -95.6657 | Sections 36/35 27N 15E | Nowata | Central Irregular Plains | Osage Cuestas | |
| Delaware Creek: West Turley | OK121300-01-0150H | 36.27714 | -95.99239 | E.B. Section 25 21N 12E | Tulsa | Central Irregular Plains | Osage Cuestas | |
| Big Cabin Creek | OK121600-06-0220I | 36.61417 | -95.16172 | NW¼ Section 34 25N 20E | Craig | Central Irregular Plains | Osage Cuestas | |

| Sitename | Wbid | Lat | Long | Legal Desc | County | Level III Ecoregion | Level 4 name | Comments |
|---|-------------------|-------------|--------------|--|------------|--------------------------|---|---|
| Polecat Creek | OK120420-02-0050D | 36.0103 | -95.99403333 | SW¼ SW¼ NW¼ Section 25 18N 12E | Tulsa | Central Irregular Plains | Osage Cuestas | included to represent low gradient, large streams; very little rock for substrate; most of watershed in cross timbers ecoregion |
| Rabb Creek | OK121400-01-0090D | 36.45252 | -95.8032 | Sections 22/27 23N 14E | Rogers | Central Irregular Plains | Osage Cuestas | included to represent small streams |
| South Fork of Dirty Creek | OK120400-02-0030F | 35.45941667 | -95.20033333 | NE¼ SW¼ NW¼ Section 4 11N 20E | Muskogee | Central Irregular Plains | Osage Cuestas | nice stream that would have possibly graded near the top with summer bugs |
| Posey Creek: Yale Place | OK120420-01-0030G | 35.9636 | -95.9283 | NW¼ SW¼ SE¼ Section 9 17N 13E | Tulsa | Central Irregular Plains | Osage Cuestas | included to represent small streams without rocky substrate |
| Bull Creek | OK121500-02-0090D | 36.02981 | -95.494 | NW¼ Section 22 18N 17E | Wagoner | Central Irregular Plains | Osage Cuestas | medium sized, low gradient, little rock in substrate; also no bugs or would have possibly scored higher |
| Spring Creek: Oaks | OK121600-01-0290T | 36.16925 | -94.856 | NE¼ NW¼ SE¼ Section 33 20N 23E | Delaware | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | |
| Sycamore Creek | OK121600-03-0510D | 36.76853 | -94.692 | NE¼ NW¼ Section 2 26N 24E | Ottawa | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | |
| Peacheater Creek: PE2 | OK121700-05-0120F | 35.9648 | -94.6898 | SW¼ SW¼ NW¼ Section 7 17N 25E | Adair | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | |
| Beaty Creek: Betty C. | OK121600-05-0160F | 36.3704 | -94.7191 | SW¼ NE¼ SW¼ Section 23 22N 24E | Delaware | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | chosen to represent small streams |
| Spring Creek | OK121600-01-0290H | 36.13095 | -95.1885 | NW¼ Section 16 19N 20E | Mayes | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | chosen to represent this area of the ER, didn't have a summer bug collection but suspect it would have been good |
| Green Creek | OK121700-05-0150G | 35.95861111 | -94.63777778 | SE¼ Section 9 17N 25E | Adair | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | chosen to represent small streams |
| Little Fivemile Creek | OK121600-07-0120D | 36.98077 | -94.68578 | Sections 22/23 29N 24E | Ottawa | Ozark Highlands | Springfield Plateau | chosen to represent small streams |
| Luna Creek | OK121700-03-0260G | 36.10583333 | -94.765 | SE¼ Section 20 19N 24E | Adair | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | chosen to represent small streams |
| Battle Creek: Battle Branch | OK121700-06-0040G | 36.2104167 | -94.68436111 | SW¼ NE¼ SW¼ Section 18 20N 25E | Delaware | Ozark Highlands | Dissected Springfield Plateau-Elk River Hills | chosen to represent small streams |
| Sallisaw Creek: Upper | OK220200-03-0010G | 35.5775 | -94.829167 | NE¼ NE¼ NE¼ Section 26 13N 23E | Sequoyah | Boston Mountains | Lower Boston Mountains | heavy ozark influence |
| Jenkins Creek | OK220200-05-0050G | 35.65194444 | -94.62222222 | S.B. Section 26 14N 25E | Adair | Boston Mountains | Lower Boston Mountains | |
| Vian Creek: Lower | OK220200-02-0130G | 35.53747222 | -94.971 | SW¼ Section 3 12N 22E | Sequoyah | Boston Mountains | Lower Boston Mountains | |
| Mountain Fork of San Bois Creek | OK220200-04-0050J | 35.07615 | -95.13848 | SE¼ Section 13 7N 20E | Haskell | Arkansas Valley | Scattered High Ridges and Mountains | |
| Sallisaw Creek: Lower | OK220200-03-0010C | 35.46461111 | -94.86175 | SW¼ SE¼ SW¼ Section 34 12N 23E | Sequoyah | Arkansas Valley | Arkansas Valley Plains | transitional stream between ozarks, bostons, and ark valley |
| Brazil Creek | OK220100-03-0010G | 35.13880556 | -94.76902778 | SE¼ NW¼ NW¼ Section 27 8N 24E | LeFlore | Arkansas Valley | Arkansas Valley Plains | |
| Gaines Creek: Pit Creek Confluence | OKTEMP-09204 | 34.8465 | -95.4711 | NE¼ SW¼ Section 1 4N 17E | Latimer | Arkansas Valley | Lower Canadian Hills | included to represent this level four ER |
| Oak Ridge Creek: Upstream of confluence with Red Oak Ck | OK220100-04-0050H | 34.9318 | -95.0472 | SW¼ NE¼ SW¼ Section 1 5N 21E | Latimer | Arkansas Valley | Arkansas Valley Plains | very small, so included to represent small streams |
| Longtown Creek | OK220600-01-0070G | 35.1801 | -95.47275 | SE¼ Section 11 8N 17E | Pittsburg | Arkansas Valley | Lower Canadian Hills | achieved score with only fish; summer bugs might possibly improve score |
| Glover River: Lower (Above Lebow Hollow) | OK410210-08-0010G | 34.16888889 | -94.913 | NE¼ Section 32 4S 23E | McCurtain | Ouachita Mountains | Western Ouachitas | |
| Big Eagle Creek: Lower | OK410210-06-0160G | 34.45083333 | -94.663 | SE¼ Section 22 1S 25E | McCurtain | Ouachita Mountains | Athens Plateau | |
| Holson Creek | OK220100-04-0030G | 34.87944444 | -94.853 | NW¼ Section 26 5N 23E | LeFlore | Ouachita Mountains | Fourche Mountains | some influence from the Ark Valley (Poteau River) |
| Black Fork of Poteau River | OK220100-02-0040T | 34.7738 | -94.5124 | SW¼ Section 31 4N 27E | LeFlore | Ouachita Mountains | Fourche Mountains | |
| Terrapin Creek: Lower | OK410210-02-0150G | 34.25705 | -95.08668 | SW¼ NW¼ NW¼ Section 34 3S 21E | Pushmataha | Ouachita Mountains | Western Ouachitas | good for small streams |
| Pine Creek | OK410300-03-0580C | 34.40553 | -95.5936 | SW¼ Section 2 2S 16E | Pushmataha | Ouachita Mountains | Western Ouachita Valleys | |
| Horsehead Creek: Upper | OK410210-01-0060G | 34.06277778 | -94.988 | NE¼ NE¼ Section 3 6S 22E | McCurtain | South Central Plains | Cretaceous Dissected Uplands | |
| Lufketa Creek | OK410210-07-0010G | 33.96817 | -94.76617 | NW¼ NW¼ NE¼ Section 11 7S 24E | McCurtain | South Central Plains | Pleistocene Fluvial Terraces | |
| Clear Creek | OK410100-01-0490P | 33.98244444 | -95.14197222 | S¼ Section 31 6S 21E and N¼ Section 6 7S 21E | McCurtain | South Central Plains | Blackland Prairie | only stream in this level 4; didn't have summer bugs so all of score is based upon fish and habitat |