

2014  
Oklahoma  
Rivers & Streams  
Report

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Beneficial Use  
Monitoring Program

# EXECUTIVE SUMMARY

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It is the intent of this Oklahoma Water Resources Board (OWRB) report to advance concepts and principles of the Oklahoma Comprehensive Water Plan (OCWP). Consistent with a primary OCWP initiative, this and other OWRB technical studies provide invaluable data crucial to the ongoing management of Oklahoma's water supplies as well as the future use and protection of the state's water resources. Oklahoma's decision-makers rely upon this information to address specific water supply, quality, infrastructure, and related concerns. Maintained by the OWRB and updated every 10 years, the OCWP serves as Oklahoma's official long-term water planning strategy. Recognizing the essential connection between sound science and effective public policy, incorporated in the Water Plan are a broad range of water resource development and protection strategies substantiated by hard data – such as that contained in this report – and supported by Oklahoma citizens.

## Beneficial Use Monitoring Program Goal

The goal of the Beneficial Use Monitoring Program is to document beneficial use impairments, identify impairment sources (if possible), detect water quality trends, provide needed information for the OWQS and facilitate the prioritization of pollution control activities.

The Beneficial Use Monitoring Program exists as a result of the vital economic and social importance of Oklahoma's lakes, streams, wetlands, and aquifers and the associated need for their protection and management. The data contained in this report is scientifically defensible and has been collected and analyzed following procedures outlined in Use Support Assessment Protocols (USAP), developed by Oklahoma's environmental agencies. Specifically, USAPs establish a consistent method to determine if beneficial uses assigned for individual waters through Oklahoma Water Quality Standards (OWQS) are being supported. (Legitimacy of data analyzed following protocols other than those outlined in the USAP must be defended.) If the BUMP report indicates that a designated beneficial use is impaired, threatened, or otherwise compromised, measures must be taken to mitigate or restore the water quality.

Traditionally, the State of Oklahoma has utilized numerous water monitoring programs conducted by individual state and federal agencies. In general, each environmental agency designs and implements its own program with only limited participation from with other state, municipal, or federal entities. These programs collect information for a specific purpose or project (e.g., development of Total Maximum Daily Loads, OWQS process, lake trophic status determination, water quality impact assessments from nonpoint and point source pollution, stream flow measurement, assessment of best management practices, etc.). Therefore, the information is specific to each project's data quality objectives (DQOs) and is often limited to a very small geographic area.

To synchronize Oklahoma's monitoring efforts related to water quality, the State Legislature appropriated funds in 1998 to create the Beneficial Use Monitoring Program under the direction of the Oklahoma Water Resources Board, who maintains Oklahoma's Water Quality Standards. The BUMP brings the OWRB's overall water quality management program full circle. From the promulgation of OWQS, to permitting and enforcement of permits stemming from OWQS-established criteria, to non-point source controls—all agency water quality management

activities are intended to work in concert to restore, protect, and maintain designated beneficial uses.

The specific objectives of the BUMP are to detect and quantify water quality trends, document and quantify impairments of assigned beneficial uses, and identify pollution problems before they become a pollution crisis. This report interprets current Oklahoma lake and stream data collected as part of the comprehensive, long-term program. As the program matures, the BUMP report is sure to become one of the most important documents published annually in Oklahoma.

## Beneficial Use Monitoring Program Components

- **Monitoring Rivers & Streams** - The OWRB is currently monitoring approximately eighty-four (84) stations on a 6-week rotation. Fixed station monitoring is based largely upon the eighty-four (84) planning basins as outlined in the Oklahoma Comprehensive Water Plan (OCWP). In general, at least one (1) sample station was located at the terminal end of each of the planning basins. The OWRB also conducts on-going special studies as well as 25-30 probabilistic monitoring stations annually.
- **Fixed Station Load Monitoring** – The OWRB is currently working with several partners including the USGS, US Army Corp of Engineers, Grand River Dam Authority, and National Weather Service to conduct flow monitoring on all of our fixed station sites that are not part of the Oklahoma/USGS Cooperative Gaging Network. This cooperative effort will allow for loadings to be calculated, trends to be assessed statewide, and provide much needed data for the Use Support Assessment process.
- **Fixed Station Lakes Monitoring** - As part of the Beneficial Use Monitoring Program, the Oklahoma Water Resources Board (OWRB) conducts sampling on lakes and reservoirs across the State of Oklahoma. To accomplish this task, the OWRB has taken a probabilistic survey approach for the lakes monitoring program. This survey design allows the state's objectives to be met as well as ensure various sized waterbodies are represented adequately. The survey population includes all lakes above 50 surface acres, which encompasses approximately 206 different waterbodies. The population is then stratified into two groups – lakes greater than 500 surface acres and those below 500 surface acres. The greater than 500 surface acres group includes 68 lakes, of which approximately one-fifth are monitored annually (quarterly samples) on a randomized draw. They are then monitored again during a subsequent year in the 5-year rotation, so that each lake greater than 50 surface acres is sampled 2 non-consecutive years during each 5 year rotation. The lakes managed by our Federal partners, the USACE and Bureau of Reclamation (BoR) are included in the 68 large lakes. Additionally, ten randomly drawn lakes of less than 500 surface acres are sampled annually (quarterly samples) over the 5 year sample frame. Many of these smaller lakes have not been sampled historically through the BUMP program and include small municipal water supplies.

The OWRB works with other agencies, such as the US Army Corps of Engineers (USACE), for inclusion of additional information on waterbodies managed by the Corps. Data collected consists primarily of water chemistry, nutrients, and chlorophyll-a information. In general, a minimum of three to five stations per reservoir is sampled depending on the size of the reservoir. Stations are located such that they represent the lacustrine, transitional, and riverine zones of the lake. On many reservoirs, additional sites are monitored, including

major arms of the reservoir as appropriate. Water quality parameters have been added to the lakes sampling effort over the years to enhance program ability to make use support determinations.

**Groundwater Monitoring and Assessment Program (GMAP) – This new program was made possible as result of the increase in funding received from the Oklahoma Legislature for water quality/quantity monitoring based on recommendations of the 2012 Update of the Oklahoma Comprehensive Water Plan. These additional monies were utilized to restore funding levels of the Beneficial Use Monitoring Program as well as to implement the new groundwater program. The new groundwater program prioritizes efforts on Oklahoma’s 21 major groundwater aquifers and will continue to be phased in over the next 3 years. This baseline period will focus on 4-6 aquifers per year and will assess concentrations of nutrients, metals and major ion species. Sample size was predicated upon and proportional to the surface area of the aquifer with a general goal of 30 wells per aquifer. Some of the state’s larger aquifers exceeded the goal and some of the smaller aquifers were represented by fewer wells Table 1. Sample Networks Based on Aquifer Areal Extent.**

Areal Extent Category	Sample Site Well Density	Sample Sizes Generated
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When fully implemented, there will be 750 wells in the statewide groundwater quality network statewide. In addition, the OWRB’s annual groundwater level measurement program will be doubled in capacity from around 530 to 1100 wells and will be spatially redistributed. Also over the 5-year baseline period, the OWRB plans to install 30-50 continuous water level recorders to obtain daily or hourly measurements that are more sensitive to detecting seasonal changes (brought on by drought or variable climate conditions) than can be obtained by annual measurements.

> 5000 km <sup>2</sup>	1 well per 150 km <sup>2</sup> (6 aquifers)	37 – 89
3001 – 5000 km <sup>2</sup>	1 well per 100 km <sup>2</sup> (5 aquifers)	33 – 48
1501 – 3000 km <sup>2</sup>	1 well per 75 km <sup>2</sup> (6 aquifers)	25 – 33
751 – 1500 km <sup>2</sup>	1 well per 50 km <sup>2</sup> (2 aquifers)	16 – 19
≤ 750 km <sup>2</sup>	2 aquifers	6 – 10

- Intensive Investigations** - If beneficial use impairment is identified or suspected, then all appropriate state agencies will be alerted and an investigation will be initiated to confirm if beneficial use impairment is occurring. If routine monitoring cannot definitively identify impairments, then an intensive study will be undertaken and if impairment is present, the source of the impairment will be identified if possible. One potential use for the intensive studies envisioned was identified during the data analysis phase of this reporting process. For example, monies could be spent to identify if high turbidity readings in rivers and streams are due to natural processes or do to human activities in the watershed of concern. Some potential causes of beneficial use impairment are; improper beneficial use or criteria (Oklahoma Water Resources Board jurisdiction), point source problems (Oklahoma Department of Environmental Quality or Oklahoma Department of Agriculture), non-point source problems (Oklahoma Conservation Commission, Oklahoma Department of Agriculture, Oklahoma Corporation Commission, or Oklahoma Department of Environmental Quality), oil and gas contamination (Oklahoma Corporation Commission), agricultural activities (Oklahoma Department of Agriculture), or mining activities (Oklahoma Department of Mines). All monitoring activities will be cooperative in nature with the agency with statutory authority assuming the lead role for intensive monitoring. If water bodies are not identified for intensive study as part of this task, then monies will be reallocated for routine monitoring of beneficial use attainment. Other entities (i.e. tribal or governmental units

outside of Oklahoma) will be involved as appropriate. All intensive-monitoring activities will be consistent with the OWQS and the USAP. If no protocols exist, then best professional judgment or State/Environmental Protection Agency guidance is used as appropriate.

## Program History/Overview

Sampling of the numerous lakes, streams, and rivers across this state was initiated in the summer and fall of 1998. Lake sampling in connection with the Beneficial Use Monitoring Program began in July of 1998. Sampling on numerous streams and rivers began in earnest in November of the same year. The two sampling programs, one for lakes and one for streams had separate starting dates for a number of reasons. First, the OWRB has been conducting a lake-sampling program during the warmer summer months since 1990 as part of the Federal Clean Lakes Program. This historical lake sampling program was funded through federal dollars with the express purpose of determining lake trophic status. The trophic status of a reservoir can range from oligotrophic (low biological productivity) to hyper-eutrophic (excessive biological productivity). In general, the more productive a reservoir, the more water quality problems it is likely to experience. Federal dollars to fund this trophic state assessment of our state's lakes were discontinued in 1994. At that time, the OWRB searched for other funding sources, and through working with the Secretary of the Environment and the Oklahoma Conservation Commission, the Water Board was able to obtain a onetime federal 319 nonpoint source grant to continue the lake trophic state assessment program. The OWRB subsequently initiated a quarterly lake sampling program in the spring of 1998 and was able to roll the existing lake program into the BUMP.

For streams, no such comprehensive, statewide sampling effort was ongoing at the time the BUMP was funded. Because of this, the OWRB required a number of months to re-allocate staff and implement a monitoring regime on streams. In addition, OWRB staff greatly desired input from the other environmental agencies on the placement of stream monitoring stations. The existence of a previous statewide stream-monitoring network greatly aided in sample site selection. This historical ambient trend stream-monitoring network existed from 1975 until 1993 and was implemented by the Oklahoma State Health Department. Although this program did not evaluate sample results through comparison with the OWQS criteria or determine use support, it did provide a framework upon which to build. The historical sampling network sampled streams on a monthly basis from 1975-1986 and on a semi-annual basis from 1987-1993. Based upon the historical program and input from other agencies, the OWRB has established an ambient monitoring network of 100 active permanent stations with numerous rotational sites. Both the permanent and rotational networks are evaluated annually to determine if any stations should be dropped and others added. The Water Resources Board relies heavily on the other state and federal agencies for input into this process. In addition, monitoring personnel with the OWRB work closely with the other state environmental agencies to avoid duplication of sampling effort (i.e. the Oklahoma Conservation Commission rotating and data gaps sampling initiatives), except on a very limited basis for quality assurance purposes. A very small number of sites that are duplicative in nature do allow for the comparison of results between sampling programs to ensure that sampling protocols and the Use Support Assessment Protocols (USAP - described below) are working effectively and that decisions on support status are being made in a consistent manner.

The OWRB has developed Use Support Assessment Protocols (USAP) for lakes and streams, which are essential if the state is to be consistent in identifying waters that are not meeting their assigned beneficial uses or are threatened. The Water Resources Board has incorporated the

USAP into Oklahoma Administrative Code (OAC) 785:46 to ensure that consistent determinations for impairments are made by all of the monitoring agencies.

**The state must follow consistent procedures for listing waters as impaired. Using the OWRB Use Support Assessment Protocols, it was possible for OWRB staff to assess whether threats or impairments are present in our waterways. With continued funding, identification of impaired waters will be accomplished on additional waters.**

## Results of Sampling Efforts

It is essential that Oklahoma quantify impacts in a comprehensive and scientific manner and look for trends in water quality to identify waters that are not meeting their assigned beneficial uses. As a state, we must manage our water resources effectively and direct money to areas in most need of protection or remediation to ensure that we continue to have good quality and sufficient quantity of water to meet our needs well into the 21st century. Comprehensive statewide data sets on rivers, streams and lakes for accurately assessing beneficial use impairments have not existed since 1993. With the implementation of monitoring on a large scale in October of 1998, this is no longer the case. With the availability of data, it is the desire of the Oklahoma Water Resources Board to provide the legislature and professional water managers with a comprehensive and up-to-date document for their review and approval. Administrative and Technical staff at the OWRB look forward to conducting the Beneficial Use Monitoring Program far into the future and providing the state of Oklahoma with the information it needs to make informed decisions that allow us to effectively manage our precious water resources.

Every two years, the OWRB analyzes data collected by BUMP and that data are used to identify if the waters of the state are meeting their assigned beneficial uses. If the stream/river segment is not meeting its beneficial use it is submitted for inclusion on the EPA's 303d list. The latest EPA approved 303d list of impaired waters can be found on the Oklahoma Department of Environmental Quality's website. [Oklahoma's 303d list](#)

# INTRODUCTION

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It is the intent of this Oklahoma Water Resources Board (OWRB) report to advance concepts and principles of the Oklahoma Comprehensive Water Plan (OCWP). Consistent with a primary OCWP initiative, this and other OWRB technical studies provide invaluable data crucial to the ongoing management of Oklahoma's water supplies as well as the future use and protection of the state's water resources. Oklahoma's decision-makers rely upon this information to address specific water supply, quality, infrastructure, and related concerns. Maintained by the OWRB and updated every 10 years, the OCWP serves as Oklahoma's official long-term water planning strategy. Recognizing the essential connection between sound science and effective public policy, incorporated in the Water Plan are a broad range of water resource development and protection strategies substantiated by hard data – such as that contained in this report – and supported by Oklahoma citizens.

Protecting Oklahoma's valuable water resources is essential to maintaining the quality of life for all Oklahomans. Used for a myriad of purposes—such as irrigation, hydropower, public/private water supply, navigation, and a variety of recreational activities—the state's surface and groundwater provides enormous benefits to Oklahoma from both an economic and recreational standpoint.

The National Recreation Lakes Study Commission (NRLSC) estimates that 32,100 people in Oklahoma are employed in support of activities related to our numerous man-made lakes. Also according to the NRLSC, 18,718,000 visitor days are spent on Oklahoma lakes each year and recreation in and around these lakes contributes approximately \$2.2 billion each year to Oklahoma's economy. Of additional value are the recreational benefits associated with our smaller municipal/watershed projects, Oklahoma Department of Wildlife lakes, and rivers and streams throughout the state, which infuse millions into state coffers through fishing, hunting, camping and related activities. (In 1987, the Oklahoma Comprehensive Outdoor Recreation Plan estimated that approximately \$10.7 million was realized through camping and \$15.2 million through hunting/fishing.<sup>1</sup>) According to a 2001 federal study, fishing activities alone contribute \$476,019 dollars to Oklahoma's economy, not including the substantial ancillary costs associated with that extremely popular sport.<sup>2</sup>

In addition to surface waters, abundant groundwater also fuels the state's economy serving as supply for thousands municipalities, rural water districts, industrial facilities, and agricultural operations. According to the 2012 update of the Oklahoma Comprehensive Water Plan (OCWP), groundwater represents the primary water supply for approximately 300 cities and towns and comprises 43 percent of the total water used in the state each year.<sup>3</sup> Groundwater resources also supply approximately 90 percent of the state's irrigation needs, and around 8% of Oklahoma's citizens obtain their drinking water from private wells.

Oklahoma works to protect and manage its water resources through a number of initiatives, with the Oklahoma Water Quality Standards (OWQS) serving as the cornerstone of the state's water quality management programs. The Oklahoma Water Resources Board (OWRB) is designated

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<sup>1</sup> Oklahoma Statewide Comprehensive Outdoor Recreation Plan (SCORP), 1987.

<sup>2</sup> U.S. Department of Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.*

<sup>3</sup> Oklahoma Water Resources Board, *Update of the Oklahoma Comprehensive Water Plan, 1995.*

by state statute as the agency responsible for promulgating water quality standards and developing or assisting the other environmental agencies with implementation framework. State agencies are responsible for implementing the OWQS as outlined by the OWRB through development of Implementation plans. Protecting our waters is a cooperative effort between many state agencies and because the OWQS are utilized by all agencies and represent a melding of both science and policy, they are an ideal mechanism to assess the effectiveness of our diverse water quality management activities.

The OWQS are housed in OAC 785:45 and consist of three main components: beneficial uses, criteria to protect beneficial uses, and anti-degradation policy. An additional component, which is not directly part of the OWQS but necessary to water resource protection, is a monitoring program. A monitoring program is required in order to ensure that beneficial uses are maintained and protected. If uses are not being maintained, the cause of that impairment must be identified and restoration activities should be implemented to improve water quality such that it can meet its assigned beneficial uses.

All state agencies are currently required to implement Oklahoma's Water Quality Standards within the scope of their jurisdiction through the development of an Implementation Plan specific for their agency. This process, called OWQS Implementation, allows the OWQS to be utilized by other state agencies in the performance of their regulatory (statutory) responsibilities to manage water quality or to facilitate best management practice initiatives.

In the late 1990's, the need for a protocol to determine beneficial use impairment was identified, which would facilitate state agencies in directing their time and money to the areas in most need of protection or remediation. The OWRB, working in close concert with other state environmental agencies and other concerned parties developed Use Support Assessment Protocols (USAP) to be used by all parties for assessing if a water body was meeting its assigned beneficial uses. In addition, protocols were developed which could be coupled with a trend monitoring system to detect threatened waters before they become seriously impaired. Data collection efforts connected with protocol development and/or implementation also serves a vital purpose in refining numerical criteria currently included in the OWQS and in developing appropriate numerical and narrative criteria for future OWQS documents. It is essential that our waters meet assigned uses and that OWQS implementation protocols are appropriate. Please see the OWRB website for the applicable Oklahoma Administrative Code OAC 785:46 related to the USAP. Final approval of the USAP occurred in 2000 and the OWRB has constantly worked to refine the existing protocols and pursue the addition or modification of USAP protocols to further enhance its utility and effectiveness.

Work to be performed towards development and implementation of the critical fourth component of the OWQS program, monitoring, is the subject of this report. All sampling activities described and conducted as part of this program were consistent with the Oklahoma USAP. It is also important to note that they are consistent with Environmental Protection Agency (EPA) reporting requirements for the "*Integrated Water Quality Monitoring and Assessment Report*", §319 Nonpoint Source (NPS) Assessment, and the §314 Lake Water Quality Assessment (LWQA).

## Background & Problem Definition

The State of Oklahoma has historically had numerous monitoring programs conducted by several state and federal agencies. In general, each environmental agency conducts their monitoring programs with some degree of integration and coordination with other state,

municipal, or federal programs. Most water quality monitoring programs in Oklahoma are designed and implemented by each agency to collect information for one specific purpose or project (i.e. development of Total Maximum Daily Loads, OWQS process, lake trophic status determination, water quality impacts from point source dischargers, stream flow measurements, document success of best management practices, etc.). Information of this type is very specific to each individual project's data quality objectives (DQOs) and is often limited to a very small geographic area. This document describes sampling activities the OWRB has historically conducted on lakes and efforts that are currently on going on lakes and streams across Oklahoma as part of a comprehensive, long-term, statewide Beneficial Use Monitoring Program (BUMP). The goal of the BUMP is to detect and quantify water quality trends, document and quantify impairments of assigned beneficial uses, and identify pollution problems before they become a pollution crisis.

The state is taking a major step towards coordinating sampling activities with the creation of a "Water Quality Monitoring Council" comprised of representatives from state, local, and federal agencies as well as universities, industries, volunteer groups, Indian tribes, and environmental organizations. This Council as envisioned would serve a useful purpose in providing an avenue for communication between the various groups and will allow the state to coordinate water quality monitoring in a more effective manner. The Council will focus on coordinating agency activities and help the state avoid duplication of effort. Coordination between all concerned parties is obviously essential, but a comprehensive basic monitoring initiative to support the OWQS implementation process must be pursued to identify waters which are not meeting their assigned beneficial uses and thus ensure that Oklahoma's water resources are protected from water quality degradation. The Council will also be pivotal in ensuring consistency between data collection efforts. The Monitoring Council will function in a coordinating capacity, which will maximize monitoring efforts.

## Beneficial Use and Monitoring Program Overview

The overall goal of the Beneficial Use Monitoring Program is to document beneficial use impairments, identify impairment sources (if possible), detect water quality trends, provide needed information for the OWQS, and facilitate the prioritization of pollution control activities.

## Beneficial Use Monitoring Program Components

- **Monitoring Rivers & Streams** - The OWRB is currently monitoring approximately eighty-four (84) stations on a 6-week rotation. Fixed station monitoring is based largely upon the eighty-four (84) planning basins as outlined in the Oklahoma Comprehensive Water Plan (OCWP). In general, at least one (1) sample station was located at the terminal end of each of the planning basins. The OWRB also conducts on-going special studies as well as 25-30 probabilistic monitoring stations annually.
- **Fixed Station Load Monitoring** - The OWRB is currently working with several partners including the the USGS, US Army Corp of Engineers, Grand River Dam Authority, and National Weather Service to conduct flow monitoring on all of our fixed station sites that are not part of the Oklahoma/USGS Cooperative Gaging Network. This cooperative effort will allow for loadings to be calculated, trends to be assessed statewide, and provide much needed data for the Use Support Assessment process. Along with the USGS cost share program, Oklahoma's 319 program, Oklahoma's 314 program and the 303(d)-process will drive sample site locations associated with this task.

- **Fixed Station Lakes Monitoring** - As part of the Beneficial Use Monitoring Program, the Oklahoma Water Resources Board (OWRB) conducts sampling on lakes and reservoirs across the State of Oklahoma. To accomplish this task, the OWRB has taken a probabilistic survey approach for the lakes monitoring program. This survey design allows the state's objectives to be met as well as ensure various sized water bodies are represented adequately. The survey population includes all lakes above 50 surface acres, which encompasses approximately 206 different water bodies. The population is then stratified into two groups – lakes greater than 500 surface acres and those below 500 surface acres. The greater than 500 surface acres group includes 68 lakes, of which approximately one-fifth are monitored annually (quarterly samples) on a randomized draw. They are then monitored again during a subsequent year in the 5-year rotation, so that each lake greater than 50 surface acres is sampled 2 non-consecutive years during each 5 year rotation. The lakes managed by our Federal partners, the USACE and Bureau of Reclamation (BoR) are included in the 68 large lakes. Additionally, ten randomly drawn lakes of less than 500 surface acres are sampled annually (quarterly samples) over the 5 year sample frame. Many of these smaller lakes have not been sampled historically through the BUMP program and include small municipal water supplies.

The OWRB works with other agencies, such as the US Army Corps of Engineers (USACE), for inclusion of additional information on water bodies managed by the Corps. Data collected consists primarily of water chemistry, nutrients, and chlorophyll-a information. In general, a minimum of three to five stations per reservoir is sampled depending on the size of the reservoir. Stations are located such that they represent the lacustrine, transitional, and riverine zones of the lake. On many reservoirs, additional sites are monitored, including major arms of the reservoir as appropriate. Water quality parameters have been added to the lakes sampling effort over the years to enhance program ability to make use support determinations.

- **Groundwater Monitoring and Assessment Program (GMAP)** – This new program was made possible as result of a \$1,500,000 increase in funding received from the Oklahoma Legislature for water quality/quantity monitoring based on recommendations of the 2012 Update of the Oklahoma Comprehensive Water Plan. These additional monies were utilized to restore funding levels of the Beneficial Use Monitoring Program as well as to implement the new groundwater program. The new groundwater program prioritizes efforts on Oklahoma's 21 major groundwater aquifers and will continue to be phased in over the next 3 years. This baseline period will focus on 4-6 aquifers per year and will assess concentrations of nutrients, metals and major ion species. Water quality data will be collected from networks of wells on the basis of an aquifer's areal extent. This design feature generated sample populations of at least 30 wells for each of Oklahoma's 15 largest aquifers. Smaller aquifers are represented by fewer wells but proportionally have more sites per areal extent (Table 1).

**Table 1. Sample Networks Based on Aquifer Areal Extent.**

<b>Areal Extent Category</b>	<b>Sample Site Well Density</b>	<b>Sample Sizes Generated</b>
> 5000 km <sup>2</sup>	1 well per 150 km <sup>2</sup> (6 Aquifers)	37 – 89
3001 – 5000 km <sup>2</sup>	1 well per 100 km <sup>2</sup> (5 aquifers)	33 – 48
1501 – 3000 km <sup>2</sup>	1 well per 75 km <sup>2</sup> (6 aquifers)	25 – 33
751 – 1500 km <sup>2</sup>	1 well per 50 km <sup>2</sup> (2 aquifers)	16 – 19
≤ 750 km <sup>2</sup>	2 aquifers	6 – 10

In the first year of sampling, 203 wells in 6 major aquifers were sampled for water quality and 299 wells for water level. When fully implemented, there will be 750 wells in the statewide groundwater quality network statewide. In addition, the OWRB's annual groundwater level measurement program will be doubled in capacity (from around 530 to 1100 wells) and will be spatially redistributed. Work began on expanding the groundwater level measurement program in January 2014 with the addition of 87 new wells to the program. For one-half of the water level network, manual measurements will become tri-annual events. In January 2014, 110 wells were added to the tri-annual measurement network. Additionally, over the 4-year baseline period, the OWRB plans to install 30-50 continuous water level recorders to obtain daily or hourly measurements that are more sensitive to detecting seasonal changes (brought on by drought or variable climate conditions) than can be obtained by annual measurements. Sixteen continuous water level recorders were installed in 8 aquifers across the state for this purpose in the first year of sampling.

- **Intensive Investigations** - If beneficial use impairment is identified or suspected, then all appropriate state agencies will be alerted and an investigation will be initiated to confirm if beneficial use impairment is occurring. If routine monitoring cannot definitively identify impairments, then an intensive study will be undertaken and if impairment is present, the source of the impairment will be identified, if possible. For example, monies could be spent to identify if high turbidity readings in rivers and streams are due to natural processes or do to human activities in the watershed of concern. Some potential causes of beneficial use impairment are; improper beneficial use or criteria (Oklahoma Water Resources Board jurisdiction), point source problems (Oklahoma Department of Environmental Quality or Oklahoma Department of Agriculture), non-point source problems (Oklahoma Conservation Commission, Oklahoma Department of Agriculture, Oklahoma Corporation Commission, or Oklahoma Department of Environmental Quality), oil and gas contamination (Oklahoma Corporation Commission), agricultural activities (Oklahoma Department of Agriculture), or mining activities (Oklahoma Department of Mines). All monitoring activities will be cooperative in nature with the agency with statutory authority assuming the lead role for intensive monitoring. If water bodies are not identified for intensive study as part of this task, then monies will be reallocated for routine monitoring of beneficial use attainment. Other entities (i.e. tribal or governmental units outside of Oklahoma) will be involved as appropriate. All intensive-monitoring activities will be consistent with the OWQS and the USAP. If no protocols exist, then best professional judgment or State/Environmental Protection Agency guidance is used as appropriate.

# STREAM MONITORING PROGRAM

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The Stream Beneficial Use Monitoring Program was initiated in November of 1998. Implementation of the program was delayed due to the relocation of the ODEQ State Environmental Laboratory to a new building and the fact that the OWRB required a few months to assemble the necessary infrastructure to implement stream sampling (purchase of equipment, database development, assignment of personnel, etc.). BUMP streams staff began collecting monthly data in November of 1998 and throughout the years has changed from monthly sampling to bi-monthly depending on program needs. Beginning in 2013, sampling was again changed to a 6- week cycle. Each stream station is described individually with information outlining the site location and other pertinent information followed by a brief synopsis of data results. All of the sites are listed at his hyperlink, [current permanent monitoring sites](#) .

## River and Stream Monitoring Overview

Historically, data on rivers and streams across the state has been less than uniform. Over the years, various local, tribal, state, and federal agencies have managed a number of sampling programs. These programs have varied in nature ranging from short-term, site-specific sampling to the former Oklahoma State Department of Health (OSDH) statewide sampling program. However, a comprehensive, statewide ambient trend-monitoring program had not existed since 1989, the last year that the OSDH conducted monthly sampling. Furthermore, a program with the specific intent of documenting statewide beneficial use impairments on a long-term basis had never existed until the Beneficial Use Monitoring Program (BUMP). By establishing a monitoring network that evaluates general water quality through the use of an existing framework like the Oklahoma Water Quality Standards, the state of Oklahoma initiated a progressive phase in the long-term assessment of the overall health of our state's streams and rivers.

## Materials & Methods

**The Monitoring Network:** The BUMP rivers and streams network consists of three major station classifications — permanent ambient trend, rotating, and probabilistic sites. Permanent ambient trend monitoring stations are relatively static within the program. In general, they do not change from year to year and have been chosen to allow for long-term assessment of beneficial uses and water quality trends. Since program inception a small number of sites have been dropped from the program and new sites added to more effectively assess the water quality of our major stream basins. Probabilistic stations are selected at random every two years and visited once or twice during biological index periods. Rotating stations are selected for particular purposes and typically have a finite lifespan.

With the creation of the permanent monitoring network, OWRB staff established three overarching objectives for the program.

First, the network must encompass the entire state. To accomplish this, a commitment was made to locate at least one site in each of the 8-digit USGS hydrologic units (HUC) (Table 1) ([Map](#)).

**Table 1.** Eight Digit United States Geological Survey HUC Watersheds.

<b>8 Digit HUC Number</b>	<b>Description</b>	<b>8 Digit HUC Number</b>	<b>Description</b>
11040001	Cimarron Headwaters	11100301	Middle North Canadian
11040002	Upper Cimarron	11100302	Lower North Canadian
11040006	Upper Cimarron – Liberal	11100303	Deep Fork
11040007	Crooked	11110101	Polecat – Snake
11040008	Upper Cimarron – Bluff	11110102	Dirty – Greenleaf
11050001	Lower Cimarron – Eagle Chief	11110103	Illinois
11050002	Lower Cimarron – Skeleton	11110104	Robert S. Kerr Reservoir
11050003	Lower Cimarron	11110105	Poteau
11060001	Kaw Lake	11120105	Lower Prairie Dog Town Fk., Red
11060002	Upper Salt Fork – Arkansas	11120202	Lower Salt Fork – Red
11060003	Medicine Lodge	11120302	Middle North Fork – Red
11060004	Lower Salt Fork – Arkansas	11120303	Lower North Fork – Red
11060005	Chickaskia	11120304	Elm Fork – Red
11060006	Black Bear – Red Rock	11130101	Groesbeck – Sandy
11070103	Middle Verdigris	11130102	Blue – China
11070105	Lower Verdigris	11130201	Farmers – Mud
11070106	Caney	11130202	Cache
11070107	Bird	11130203	West Cache
11070205	Middle Neosho	11130208	Northern Beaver
11070206	Grand Lake	11130210	Lake Texoma
11070207	Spring	11130301	Washita Headwaters
11070208	Elk	11130302	Upper Washita
11070209	Lower Neosho	11130303	Middle Washita
11090103	Rita Blanca	11130304	Lower Washita
11090201	Lower Canadian – Deer	11140101	Bois D’Arc – Island
11090202	Lower Canadian – Walnut	11140102	Blue
11090203	Little	11140103	Muddy Boggy
11090204	Lower Canadian	11140104	Clear Boggy
11100101	Upper Beaver	11140105	Kiamichi
11100102	Middle Beaver	11140106	Pecan – Waterhole
11100103	Coldwater	11140107	Upper Little
11100104	Palo Duro	11140108	Mountain Fork
11100201	Lower Beaver	11140109	Lower Little
11100203	Lower Wolf		

The second objective was that the foundation of the monitoring network should be principally the state's largest rivers, the Arkansas River and the Red River, and their major tributaries, such as the Canadian River and the Washita River. Secondary consideration was given to the major tributaries of rivers such as Canadian River and the Little River. Further consideration was also given to areas of the state (e.g., the Panhandle) that were underrepresented as well as rivers and streams (e.g., The Deep Fork River) that were conspicuously missing from the network.

The third and last objective was to seek the advice and input of other state environmental agencies and professionals before making a final determination of permanent monitoring station locations. In particular, the ODEQ and OCC continue to be very helpful in assisting with locating permanent stations.

Operating within these overarching objectives, the staff of the OWRB had selected and performed monitoring on one hundred and thirty (130) permanent ambient trend-monitoring sites since September of 1998. Beginning in January 2013, the OWRB adjusted the monitoring network to more closely align with the needs of the Oklahoma Comprehensive Water Plan. The goal was to put a permanent station at the outflow of all 82 water planning basins ([Map](#)), while also still maintaining a small network of reference condition sites. Along with the redesigned network the frequency of the sampling was increased from 6 samples per year to 8 samples per year.

The placement of a site location necessitates several considerations. Above all, a site must be accessible by vehicle and be safe for sampling personnel and other motorists. It is also essential that a site be located in an area where representative data can be acquired. The OWQS Use Support Assessment Protocols (USAP) sets spatial limitations on the data that is collected. In summary, a site can only represent twenty-five stream miles for non-wadable streams and ten stream miles for wadable streams (with some exceptions). Furthermore, a site can only be representative of the water body identification number (12 digit HUC number) in which it is located and the site cannot be located within a regulatory mixing zone. This requires that monitoring sites be selected so that they represent as long a stream reach as possible while maintaining the spatial integrity outlined in USAP. Thirdly, it is important that historical data be considered. Many of the BUMP permanent monitoring sites were selected from a set of historical monitoring stations that were a part of the OSDH — the Environmental Division that conducted the Ambient Program later became part of the Oklahoma Department of Environmental Quality (ODEQ) Ambient Trend Monitoring Program. Before initial sampling began in 1998, OWRB staff worked closely with the ODEQ to integrate many of the historical sites into BUMP. Although the historical data from these sites cannot be used to assess beneficial uses (USAP sets a temporal limitation of five years), the historical data set benefits the state in assessing long-term water quality trends. Lastly, it is imperative that rivers and streams which have been designated in the OWQS as Outstanding Resource Waters (ORW), High Quality Waters (HQW), or Sensitive Water Supplies (SWS) be given unique consideration even if they do not meet the objectives as outlined. For example, Sager Creek is not a tributary of a major tributary of a major river. However, it is listed as an ORW and therefore is sampled as part of BUMP. The water quality status of each site is discussed in more detail in the individual [site pages](#).

The goal of the rotating portion of the program is to provide short-term assessments on priority waters as identified by a state agency or other party. Two over-arching objectives were identified to aid in the determination of what would qualify as a rotating site. First, it should be determined that data collection at a particular site should be short-term in nature and not extend past one sampling year, although some stations do remain in the network for up to two years. Data collected within that year should allow water quality managers to make the appropriate decisions regarding the segment being monitored. For instance, if a stream reach is listed as impaired due to pH on the 303(d) list, measuring pH throughout one year should allow the requesting agency or entity to either de-list the segment or determine what other monitoring efforts are necessary. Secondly, the monitoring should fall within the framework of the USAP. Since the inception of the program, the staff of the OWRB has met individually with representatives of other state agencies to identify their priority short-term monitoring needs. Once the OWRB receives a list of waters for monitoring from the interested agencies, staff evaluates the nominations and notifies the nominating agency of which waters would be monitored (all of the waters requested for monitoring have been accommodated since program inception). In all, over two hundred twenty (220) monitoring stations have been or are currently being monitored. In most instances, the segments were listed for one or more variables on the state's 303d list. For a comprehensive list of historic and/or current rotational monitoring stations, please contact the Oklahoma Water Resources Board/Water Quality Programs Division at (405) 530-8800.

Probabilistic monitoring is a unique study design which selects monitoring stations at random. The OWRB has been actively involved in this type of monitoring since 2004. The latest probabilistic data report can be found at the OWRB website under Streams Studies and titled "REMAP", ([www.owrb.ok.gov/reports](http://www.owrb.ok.gov/reports)).

**Stream Monitoring Variables:** The variables that are monitored were chosen to reflect both objectives of the programs — assessment of beneficial uses within the framework of USAP as well as the assessment of general water quality. Even though a variable may not be listed in the OWQS with a specific criterion (e.g., hardness), the variable is an important constituent in analyzing and understanding the general water quality of a particular segment. See 2 for a list of monitoring variables.

Data for general water quality, nutrient, metals, organics, chlorophyll-a, and bacteriological variables are collected in one of two ways. Some variables are monitored in-situ utilizing a Hydrolab® Minisonde or YSI multi-probe instrument. The data are uploaded from the instrument to a data recorder, transferred manually to a field log sheet, and downloaded to the OWRB monitoring database. These variables include dissolved oxygen (D.O.), %D.O. saturation, water temperature, pH, salinity, total dissolved solids, and specific conductance. Data for all other variables are gathered from water quality samples collected at the station. Samples are collected either by suspending a depth-integrating sampler (DH-95 with polyethylene collection bottle) from a bridge, by wading the stream with a DH-81 wadable depth-integrating sampler (polyethylene collection bottle), or in rare cases as a composite or point grab sample. If sampling occurs from a bridge, the sampling is done on the down-stream side of the bridge spanning the stream of interest. Samples are collected using a combination of the depth-integration method and the equal-width increment, grab composite or grab method. All methods used are described in the [Collecting Water Quality Samples](#) SOP. From this water sample, water quality variables are monitored in several ways. For laboratory analysis of general water quality variables and nutrients, water is aliquotted from the churn splitter (this is the first mention of this, needs explanation) to two (2) 1-liter bottles (one for sulfuric acid/ice preservation and one for ice preservation). If a sample is needed for metals analysis, water is

collected at the thalweg of the channel in a 250 ml bottle, either filtered for dissolved components testing or not for a total recovery component, preserved with nitric acid, and placed on ice. Sample water for the determination of nephelometric turbidity, total hardness, and total alkalinity is also aliquotted from the splitter churn. Nephelometric turbidity is determined through use of a HACH Portable turbidimeter. Total hardness and alkalinity are determined using HACH test kits. All instruments and test kits are calibrated and used according to manufacturer's instructions. Sestonic chlorophyll-a samples are also gathered from the churn and are filtered to a glass fiber filter with subsequent chemical/physical extraction. Samples for organics analysis are collected separately using Teflon and glass containers as opposed to polypropylene. Because organics have an increased affinity for polypropylene, allowing a sample to contact polypropylene sample bottles or churn splitters may cause concentrations to be significantly underestimated. Therefore, a composite sample for organics analysis is collected using a 1-liter Teflon collection bottle. At each increment, water is added to a 2-gallon glass bottle. The laboratory sample is aliquoted by inverting the glass bottle 10 times and dispensing to one-quart or one-pint clear or amber glass jars depending on the type of organic analysis. The samples are placed on ice for preservation. Bacteriological samples are collected using a composite grab sample method and are aliquoted to two 100-mL bacteria bottles for laboratory analysis.

Biological data are collected using a variety of methods. In short, fish are typically collected using electrofishing methods, where water conductivity allows. If conductivity does not allow, a seine will be used to collect fish. Benthic macroinvertebrates are collected by targeting the richest habitats in the water body including riffles, streamside vegetation, and woody debris. Collections are then sorted and a subsample taken for taxonomic analysis. Various habitat measures are also included during each biological sampling event. The long-form habitat classification is used during fish collections, and staff gather data various instream and riparian characteristics using both quantitative and qualitative methods. A short-form habitat classification is used during macroinvertebrate collections that focus on target habitat substrate composition. Benthic chlorophyll-a samples are gathered from the characteristic substrates of the stream.

**Table 2.** Variables Monitored by the BUMP Stream Sampling Program.

<b>SAMPLE VARIABLES</b>		
<b>General Water Quality Variables – Sampled 6 times annually</b>		
Dissolved Oxygen (D. O.)	pH	Specific Conductance
Temperature	Oxidation/Reduction Potential	% D. O. Saturation
Salinity	Total Alkalinity	Total Hardness
Chloride	Nephelometric Turbidity	Sulfate
Total Dissolved Solids		
<b>Nutrients – Sampled 6 times annually</b>		
*Kjeldahl Nitrogen	Ortho-Phosphorus	Total Phosphorus
*Nitrate Nitrogen	*Nitrite Nitrogen	Ammonia Nitrogen
<b>Metals – Sampled as needed</b>		
Arsenic	Cadmium	Chromium
Copper	Lead	Mercury
Nickel	Selenium	Silver

SAMPLE VARIABLES		
Zinc	Thallium	
<b>Organics – Site specific sampling as needed</b>		
Analysis of Pesticides, Herbicides, Fungicides, and other organics		
<b>Bacteriological Communities – Sampled 5-10 times annually (during recreational season)</b>		
Enterococci	<i>Escherichia coli</i>	
<b>Biological Communities – Sampled as described below</b>		
Sestonic Chlorophyll-a (8 times annually)	Benthic Chlorophyll-a (as needed during summer)	Fish (once every 4-5 years)
Benthic Macroinvertebrates (2 summer/2 winter every other year)	Habitat (sampled with fish and macroinvertebrate sampling)	

\*Total nitrogen is calculated by OWRB staff, based upon concentrations for these compounds

For a more detailed discussion of water quality sampling procedures, please contact the OWRB for copy of the BUMP Standard Operating Procedures (SOP). The SOP document can be obtained by contacting the Oklahoma Water Resources Board/Water Quality Programs Division at (405) 530-8800 or by accessing and downloading the document via the web at the following link. [Streams SOP's](#)

**Quality Assurance/Quality Control (QA/QC):** QA/QC will not be discussed in detail in this report. However, for a comprehensive description of field QA/QC methods, please contact the Oklahoma Water Resources Board/Water Quality Programs Division at (405) 530-8800. For laboratory QA/QC methods please contact the Oklahoma Department of Environmental Quality/Customer Services Division at (405) 702-6100. Comprehensive QA/QC has been performed on all data collected and utilized for this report.

It is also imperative that the state continues to refine the minerals criteria found in OAC 45: Appendix F. The process was begun in earnest in 2005 with a major revision to Appendix F criteria, and the assessments in this report reflect these new criteria. However, some management segment values are still extrapolated from minimum data and from stations not necessarily representative of the entire management segment. By using the OWRB's methodology for the development of site-specific minerals criteria, BUMP data as well as other water quality monitoring program data may be used to refine inconsistent criteria.

## RESULTS AND DISCUSSION

It is essential that Oklahoma quantify impacts in a comprehensive and scientific manner and look for trends in water quality to identify waters that are not meeting their assigned beneficial uses. As a state, we must manage our water resources effectively and direct money to areas in most need of protection or remediation to ensure that we continue to have good quality and sufficient quantity of water to meet our needs well into the 21<sup>st</sup> century. It is the desire of the Oklahoma Water Resources Board to provide the legislature, the general public and professional water managers with a comprehensive and up-to-date document for their review and approval. Administrative and Technical staff at the OWRB look forward to conducting the Beneficial Use Monitoring Program far into the future and providing the state of Oklahoma with the information it needs to make informed decisions related to the effective management of its precious water resources.

Every two years, the OWRB analyzes data collected by BUMP and that data are used to identify if the waters of the state are meeting their assigned beneficial uses. If the stream/river segment is not meeting its beneficial use it is submitted for inclusion on the EPA's 303d list. The latest EPA approved 303d list of impaired waters can be found on the Oklahoma Department of Environmental Quality's website. [Oklahoma's 303d list](#)

# Arkansas River at Bixby



Sample Record	Times Visited	Station ID
November 1998 - 2012	133	120420010010-001AT

<b>Stream Data</b>	County	Tulsa	<a href="#">View Site Data</a>
	Location	North of the Town of Bixby on State Highway 64	
	Latitude/Longitude	35.95585307, -95.88622562	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11110101)	

	Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
<b>In-Situ</b>	Water Temperature (°C)	115	17.0	18.3	1.9/34.1	9/24.3	
	Turbidity (NTU)	118	45	20	4/638	12/45	22% of values > OWQS
	pH (units)	114	8.02	8.01	7.19/9.15	7.75/8.27	
	Dissolved Oxygen (mg/L)	115	9.84	9.35	3.9/23.03	7.32/11.48	
	Hardness (mg/L)	116	238	237	85/442	194/281	
<b>Minerals</b>	Total Dissolved Solids (mg/L)	54	761	735	296/1372	523/967	
	Specific Conductivity (uS/cm)	115	1499	1442	92/3275	1016/1885	
	Chloride (mg/L)	117	322	272	66/863	219/392	
	Sulfate (mg/L)	117	125	114	29/1580	86/132	
<b>Nutrients</b>	Total Phosphorus (mg/L)	118	0.220	0.198	0.089/0.835	0.16/0.239	
	Total Nitrogen (mg/L)	116	1.46	1.40	0.25/3.56	1.14/1.69	
	Nitrate/Nitrite (mg/L)	118	0.71	0.68	0.05/2.35	0.43/0.96	
	Chlorophyll A (mg/m <sup>3</sup> )	33	17.2	8.7	0.9/167	5.3/15.7	TSI=58.5
<b>Bacteria</b>	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	357.5	109.0	10/4000	33.5/310.5	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	127.2	46.0	10/836	12.5/164.8	

	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
<a href="#">Click to learn more about Beneficial Uses</a>												
Fish & Wildlife Propagation	NS	S	S	S						S	S	S
Aesthetics												S
Agriculture					S		S	S				
Secondary Body Contact Recreation									S			
Public & Private Water Supply				S		S			S			
Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Arkansas River at Haskell



Sample Record	Times Visited	Station ID
November 1998 - Current	152	120410010080-001AT

Stream Data	County	Muskogee	<a href="#">View Site Data</a>
	Location	East of the Town of Haskell on State Highway 104	
	Latitude/Longitude	35.82095549, -95.63995264	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11110101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	129	17.2	17.8	1.9/32.6	9.3/25.5
Turbidity (NTU)	130		46	21	2/944	11/48		
pH (units)	129		8.12	8.10	7.15/9.16	7.85/8.37		
Dissolved Oxygen (mg/L)	128		9.82	9.70	4.51/16.94	8.34/11.06		
Hardness (mg/L)	129		240	236	140/490	202/282		
Minerals	Total Dissolved Solids (mg/L)	72	794	782	209/1430	629/938		
	Specific Conductivity (uS/cm)	127	1518	1412	411/3436	1145/1818		
	Chloride (mg/L)	134	326	274	26/815	222/424		
	Sulfate (mg/L)	134	108	107	27/205	83/124		
Nutrients	Total Phosphorus (mg/L)	139	0.208	0.189	0.073/0.81	0.153/0.235		
	Total Nitrogen (mg/L)	134	1.36	1.30	0.4/3.18	1.06/1.6		
	Nitrate/Nitrite (mg/L)	135	0.56	0.60	<0.05/1.6	0.21/0.8		
	Chlorophyll A (mg/m <sup>3</sup> )	47	20.8	13.8	1.3/140	5/25.6	TSI= 60.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	205.6	25.0	<10/2419.6	<10/168.5		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	133.6	10.0	<10/1515	<10/63		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Arkansas River at Moffett



Sample Record	Times Visited	Station ID
November 1998 - Current	76	220200010010-001AT

Stream Data	County	Sequoyah	<a href="#">View Site Data</a>
	Location	East of the Town of Moffett on State Highway 64	
	Latitude/Longitude	35.39242903, -94.43267795	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110104)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	63	19.4	20.1	1.7/30.9	12.9/27
Turbidity (NTU)	66		36	22	7/194	16/45		
pH (units)	63		7.85	7.84	6.87/8.79	7.66/8.09		
Dissolved Oxygen (mg/L)	63		9.15	8.75	5.35/16.48	7.36/10.41		
Hardness (mg/L)	63		166	141	39/658	125/185		
Minerals	Total Dissolved Solids (mg/L)	22	327	311	185/536	246/396		
	Specific Conductivity (uS/cm)	62	617	575	195/1333	482/737		
	Chloride (mg/L)	66	106	97	13/293	59/141		
	Sulfate (mg/L)	66	55	51	22/116	37/67		
Nutrients	Total Phosphorus (mg/L)	66	0.121	0.113	<0.051/0.33	0.09/0.136		
	Total Nitrogen (mg/L)	65	0.96	0.89	0.45/2.82	0.67/1.13		
	Nitrate/Nitrite (mg/L)	66	0.32	0.25	<0.05/1.17	0.11/0.49		
	Chlorophyll A (mg/m <sup>3</sup> )	25	14.3	11.7	<0.1/71.8	6/15.7	TSI= 56.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	21	1092.3	10.0	<10/12000	<10/38.5	Mean > OWQS	
	E. Coll (cfu/100ml)(* -Geo. Mn.)	21	160.1	10.0	<10/2035	<10/25		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Arkansas River at Muskogee



Sample Record	Times Visited	Station ID
November 1998 - Current	114	121400010260-001AT

Stream Data	County	Muskogee	<a href="#">View Site Data</a>
	Location	East of the Town of Muskogee on State Highway 62	
	Latitude/Longitude	35.77016066, -95.30031102	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11110102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	112	17.8	17.6	1.9/32.4	10.8/25.3
Turbidity (NTU)	113		44	24	5/387	16/44		
pH (units)	110		8.04	8.02	7.09/9.48	7.73/8.32		
Dissolved Oxygen (mg/L)	112		8.84	8.55	4.2/14.88	7.07/10.58		
Hardness (mg/L)	110		189	175	92/418	144/220		
Minerals	Total Dissolved Solids (mg/L)	54	472	425	155/1040	308/617	35.7% of values > OWQS	
	Specific Conductivity (uS/cm)	112	952	798	215/2746	472/1256		
	Chloride (mg/L)	101	175	140	11/713	80/219	40.0% of values > OWQS	
	Sulfate (mg/L)	102	76	69	28/202	45/98		
Nutrients	Total Phosphorus (mg/L)	115	0.163	0.144	0.053/0.705	0.113/0.177		
	Total Nitrogen (mg/L)	114	1.19	1.11	0.4/3.9	0.93/1.39		
	Nitrate/Nitrite (mg/L)	115	0.46	0.43	<0.05/1.21	0.22/0.65		
	Chlorophyll A (mg/m <sup>3</sup> )	41	19.6	14.5	<0.1/90	8.8/26.7	TSI = 59.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	4110.3	51.0	<10/75000	<10/200	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	438.7	24.6	<10/5492	<10/71		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Arkansas River at Ralston



Sample Record	Times Visited	Station ID
December 1998 - Current	153	621200010200-001AT

Stream Data	County	Pawnee	<a href="#">View Site Data</a>
	Location	East of the Town of Ralston on State Highway 18	
	Latitude/Longitude	36.50481274, -96.72547095	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11060006)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	136	17.8	18.6	-0.4/38	10/24.9
Turbidity (NTU)	137		129	34	2/1119	13/115	32% of values > OWQS	
pH (units)	136		8.19	8.22	6.96/8.88	8/8.4		
Dissolved Oxygen (mg/L)	136		10.14	9.89	1.73/26.76	8.15/11.76		
Hardness (mg/L)	136		260	250	82/635	198/321		
Minerals	Total Dissolved Solids (mg/L)	70	708	668	280/1510	535/840		
	Specific Conductivity (uS/cm)	136	1189	1082	186/4882	746/1478		
	Chloride (mg/L)	138	249	217	18/1380	146/291		
	Sulfate (mg/L)	138	110	106	36/268	86/134		
Nutrients	Total Phosphorus (mg/L)	138	0.238	0.168	<0.005/1.39	0.126/0.263		
	Total Nitrogen (mg/L)	137	1.41	1.30	0.35/5.78	0.92/1.67		
	Nitrate/Nitrite (mg/L)	138	0.51	0.46	<0.05/1.72	<0.05/0.76		
	Chlorophyll A (mg/m <sup>3</sup> )	41	25.0	18.5	2/113	8/35.6	TSI = 62.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	2916.9	99.0	<10/65000	17.5/501	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	557.2	20.0	<10/9804	<10/218.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S	
	Aesthetics													NEI
	Agriculture					S		S	S					
	Primary Body Contact Recreation									NS				
	Public & Private Water Supply					NEI		NEI			NEI			
	Fish Consumption				S									

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Notes

# Arkansas River at Sand Springs



Sample Record	Times Visited	Station ID
September 1999 - 2012	118	120420010130-001AT

Stream Data	County	Tulsa	<a href="#">View Site Data</a>
	Location	South of the Town of Sand Springs on State Highway 97	
	Latitude/Longitude	36.12393866, -96.11578343	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11110101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	102	17.3	19.1	0.5/33	9.3/24.6
Turbidity (NTU)	104		34	15	3/735	8/32	19% of values > OWQS	
pH (units)	102		7.87	7.87	7.16/8.63	7.69/8.02		
Dissolved Oxygen (mg/L)	102		8.92	9.00	2.84/15.85	6.98/10.51		
Hardness (mg/L)	104		243	238	59/412	196/288		
Minerals	Total Dissolved Solids (mg/L)	44	846	807	347/1650	601/1059		
	Specific Conductivity (uS/cm)	102	1646	1564	179/4080	1128/1995		
	Chloride (mg/L)	104	367	309	91/1100	238/468		
	Sulfate (mg/L)	105	115	112	29/228	85/137		
Nutrients	Total Phosphorus (mg/L)	105	0.138	0.140	0.016/0.281	0.109/0.164		
	Total Nitrogen (mg/L)	104	1.15	1.18	0.48/2.2	0.78/1.45		
	Nitrate/Nitrite (mg/L)	106	0.54	0.55	<0.05/1.36	0.24/0.78		
	Chlorophyll A (mg/m <sup>3</sup> )	32	6.1	5.4	0.7/18.7	3.1/7.9	TSI = 48.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	67.4	20.0	<10/400	<10/87		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	28.2	20.0	<10/119	<10/36		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Secondary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
NS = Not Supporting  
NEI = Not Enough Information

Notes

# Barren Fork at Eldon



Sample Record	Times Visited	Station ID
November 1998 - Current	186	121700050010-001AT

Stream Data	County	Cherokee	<a href="#">View Site Data</a>
	Location	South of the Town of Eldon on State Highway 51	
	Latitude/Longitude	35.92173377, -94.83726494	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments	
		In-Situ	Water Temperature (°C)	121	17.0	17.3	3.1/28.6	11.2/22.1	
			Turbidity (NTU)	120	4	3	1/45	2/3	
			pH (units)	120	7.60	7.55	6.37/8.82	7.34/7.88	
			Dissolved Oxygen (mg/L)	121	9.50	9.64	4.4/14.53	7.88/11.1	
			Hardness (mg/L)	122	99	97	46/159	89/106	
		Minerals	Total Dissolved Solids (mg/L)	21	140	117	92/545	108/126	
			Specific Conductivity (uS/cm)	121	198	199	20/713	174/215	
			Chloride (mg/L)	99	8	10	<5/44	<5/10	
			Sulfate (mg/L)	99	10	10	<5/40	7/10	
		Nutrients	Total Phosphorus (mg/L)	126	0.033	0.028	<0.005/0.217	0.021/0.035	See Notes
			Total Nitrogen (mg/L)	125	1.52	1.40	0.2/4.2	0.87/1.98	
			Nitrate/Nitrite (mg/L)	126	1.35	1.32	0.14/3.83	0.73/1.72	
			Chlorophyll A (mg/m <sup>3</sup> )	66	1.5	1.1	<0.1/11.7	0.6/1.7	TSI= 34.5
		Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	73	223.2	20.0	<10/3900	<10/82	Geo. Mean > OWQS
			E. Coli (cfu/100ml)(* -Geo. Mn.)	73	79.0	10.0	<10/2419.6	<10/52	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	S						S	S	S	
	Aesthetics												S	NS
	Agriculture					S		S	S					
	Primary Body Contact Recreation									NS				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				S									
	<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> 41%(31 of 75) of 3-month rolling Geo. Mean exceed OWQS criterion of 0.037 ppm											

# Beaver River at Beaver



Sample Record	Times Visited	Station ID
November 1998 - Current	110	720500020290-001AT

Stream Data	County	Beaver	<a href="#">View Site Data</a>
	Location	North of the Town of Beaver on State Highway 23	
	Latitude/Longitude	36.82280124, -100.5193698	
	Planning Watershed	Panhandle (8-digit HUC - 11100102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	93	16.4	15.4	1/32	10.3/23.7
Turbidity (NTU)	96		20	7	1/808	4/15		
pH (units)	92		7.71	7.69	6.93/9.1	7.41/7.99		
Dissolved Oxygen (mg/L)	94		9.05	8.99	0.16/20.28	7.11/11.18		
Hardness (mg/L)	94		1571	1374	201/3510	1095/2060		
Minerals	Total Dissolved Solids (mg/L)	52	5935	5135	1360/10400	4193/7760	100% of values > OWQS	
	Specific Conductivity (uS/cm)	95	8629	8103	451/17157	6881/10500		
	Chloride (mg/L)	96	2490	2240	177/6510	1881/2968	100% of values > OWQS	
	Sulfate (mg/L)	96	904	828	103/2620	612/1095	59% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	96	0.081	0.036	0.008/2.119	0.023/0.069		
	Total Nitrogen (mg/L)	96	1.02	0.81	0.18/12.11	0.58/1.11		
	Nitrate/Nitrite (mg/L)	96	0.10	0.05	<0.05/3.96	<0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	2	10.3	10.3	10.2/10.4	n/a	No data	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	23	1319.8	199.0	20/9208	100/1100	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	23	1285.0	221.0	<10/5794	63/2987	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	NS	NS
	Aesthetics												S
	Agriculture					NS		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish & Wildlife Propagation not supporting for Selenium

# Beaver River at Gate



Sample Record	Times Visited	Station ID
October 2000 – September 2007	45	720500020140-001AT

Stream Data	County	Beaver	<a href="#">View Site Data</a>
	Location	South of the Town of Gate on County Road N 1650	
	Latitude/Longitude	36.78998597, -100.0574831	
	Planning Watershed	Panhandle (8-digit HUC -11100201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	37	20.0	21.2	2/34.3	13/27.6
Turbidity (NTU)	37		11	6	1/103	4/11		
pH (units)	35		8.03	8.08	7.38/8.6	7.83/8.25		
Dissolved Oxygen (mg/L)	37		9.99	9.96	5.61/18.98	7.91/11.36		
Hardness (mg/L)	37		650	625	320/1050	508/778		
Minerals	Total Dissolved Solids (mg/L)	3	2140	1950	1830/2640	1830/2640		
	Specific Conductivity (uS/cm)	37	3680	3477	1897/10893	2525/4217		
	Chloride (mg/L)	37	964	878	368/2860	631/1195	50.0% of values > OWQS	
	Sulfate (mg/L)	37	365	330	175/1230	268/430		
Nutrients	Total Phosphorus (mg/L)	37	0.050	0.034	0.009/0.272	0.019/0.061		
	Total Nitrogen (mg/L)	37	0.73	0.67	0.24/1.79	0.44/1.03		
	Nitrate/Nitrite (mg/L)	37	0.06	0.05	<0.05/0.2	<0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	0	0.0	0.0	0/0	0/0	No Data	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	12	621.8	150.5	<10/2900	43.3/775	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	12	138.3	75.5	<10/496	<10/251.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						NS	NS	NS
	Aesthetics												NEI
	Agriculture					S		NS	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Beaver River at Guymon



Sample Record	Times Visited	Station ID
April 1999 - 2012	123	720510000190-001AT

Stream Data	County	Texas	<a href="#">View Site Data</a>
	Location	West of the Town of Guymon off State Highway 64	
	Latitude/Longitude	36.70576142, -101.6365036	
	Planning Watershed	Panhandle (8-digit HUC - 11100101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	111	15.4	16.0	-0.2/32	8/22.9
Turbidity (NTU)	115		20	14	2/146	8/25		
pH (units)	109		8.00	8.00	7.21/8.9	7.76/8.18		
Dissolved Oxygen (mg/L)	113		8.11	8.01	0.06/30.97	5.99/9.82		
Hardness (mg/L)	113		265	228	70/1263	205/268		
Minerals	Total Dissolved Solids (mg/L)	37	298	295	270/331	290/309		
	Specific Conductivity (uS/cm)	112	482	478	170/668	452/524		
	Chloride (mg/L)	99	11	11	<5/25	10/13		
	Sulfate (mg/L)	99	30	30	17/81	27/33		
Nutrients	Total Phosphorus (mg/L)	113	0.053	0.035	<0.005/0.504	0.018/0.056		
	Total Nitrogen (mg/L)	113	0.62	0.51	0.16/5.27	0.4/0.68		
	Nitrate/Nitrite (mg/L)	113	0.14	0.05	<0.05/0.76	<0.05/0.17		
	Chlorophyll A (mg/m <sup>3</sup> )	20	4.0	2.4	0.2/24.9	1.6/4.4	TSI= 44.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	1841.6	233.0	31/21000	132.3/1325	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	1375.8	233.0	74/24192	152/448.3	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	NEI	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Beaver River at Ft. Supply



Sample Record	Times Visited	Station ID
November 1998 - Current	107	720500020010-002AT

Stream Data	County	Harper	<a href="#">View Site Data</a>
	Location	Northwest of the Town of Ft. Supply on State Highway 183	
	Latitude/Longitude	36.5908354, -99.59121563	
	Planning Watershed	Panhandle (8-digit HUC - 11100201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	96	18.2	18.9	-0.1/36	10.2/26.1
Turbidity (NTU)	99		14	8	1/65	5/16		
pH (units)	93		8.03	8.04	7.26/8.58	7.9/8.23		
Dissolved Oxygen (mg/L)	95		10.14	10.39	1.46/16.5	8.19/11.99		
Hardness (mg/L)	97		566	508	238/1260	441/620		
Minerals	Total Dissolved Solids (mg/L)	35	1118	997	401/1920	873/1230		
	Specific Conductivity (uS/cm)	97	1691	1577	650/3419	1394/1846		
	Chloride (mg/L)	97	249	221	69/786	199/244		
	Sulfate (mg/L)	96	325	272	47/1170	227/341		
Nutrients	Total Phosphorus (mg/L)	97	0.043	0.028	<0.005/0.169	0.02/0.054		
	Total Nitrogen (mg/L)	98	0.60	0.56	0.2/1.6	0.39/0.73		
	Nitrate/Nitrite (mg/L)	98	0.10	0.05	<0.05/1.17	0.05/0.08		
	Chlorophyll A (mg/m <sup>3</sup> )	21	6.5	4.5	0.6/28.4	1.9/9.1	TSI=48.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	524.1	210.0	20/3000	86/611	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	131.0	85.0	<10/437	20/174	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** Fish consumption not supporting for Lead

# Beaver River at Turpin



Sample Record	Times Visited	Station ID
November 2000 – May 2008	69	720500020450-001AT

Stream Data	County	Beaver	<a href="#">View Site Data</a>
	Location	South of the Town of Turpin on State Highway 83	
	Latitude/Longitude	36.75941268, -100.8439297	
	Planning Watershed	Panhandle (8-digit HUC - 11100102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	58	15.2	15.8	-0.2/28.9	9/21.5
Turbidity (NTU)	59		6	3	1/32	2/7		
pH (units)	58		7.87	7.87	7.27/8.65	7.66/8.11		
Dissolved Oxygen (mg/L)	58		10.89	11.05	4.53/20.14	8.65/12.71		
Hardness (mg/L)	59		1177	1169	207/1850	1039/1335		
Minerals	Total Dissolved Solids (mg/L)	8	6020	5930	5660/6580	5785/6360	97.7% of values > OWQS	
	Specific Conductivity (uS/cm)	59	9288	9337	4295/12796	8582/10421		
	Chloride (mg/L)	58	2561	2585	729/3970	2312/2800	100% of values > OWQS	
	Sulfate (mg/L)	59	706	681	229/1600	616/777	17.0% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	59	0.039	0.024	0.011/0.263	0.018/0.034		
	Total Nitrogen (mg/L)	59	0.85	0.68	0.33/3.86	0.58/0.93		
	Nitrate/Nitrite (mg/L)	59	0.06	0.05	<0.05/0.2	<0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	15	17.7	7.5	0.1/78	2.7/19	TSI=58.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	19	2249.9	500.0	<10/24000	30/1300	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	19	1108.0	259.0	<10/6867	41/911	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						NS	S	NS
	Aesthetics												NEI
	Agriculture					NS		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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 NEI = Not Enough Information

Notes

# Big Cabin Creek at Big Cabin



Sample Record	Times Visited	Station ID
September 1999 - 2012	131	121600060060-001AT

Stream Data	County	Craig	<a href="#">View Site Data</a>
	Location	Northeast of the Town of Big Cabin on road 310	
	Latitude/Longitude	36.56838771, -95.15177919	
	Planning Watershed	Grand (8-digit HUC - 11070209)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	109	16.9	17.2	0.3/32.4	10/24.4
Turbidity (NTU)	108		41	28	7/755	18/41		
pH (units)	109		7.60	7.56	6.78/8.79	7.4/7.81		
Dissolved Oxygen (mg/L)	109		7.86	7.38	3.08/18.5	5.85/9.59		
Hardness (mg/L)	107		244	218	13/671	175/292		
Minerals	Total Dissolved Solids (mg/L)	31	369	356	164/964	265/422		
	Specific Conductivity (uS/cm)	108	568	557	165/1385	446/674		
	Chloride (mg/L)	109	21	10	<5/85	10/26		
	Sulfate (mg/L)	110	161	140	34/538	96/200	14.8% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	110	0.195	0.142	0.026/1.09	0.094/0.217		
	Total Nitrogen (mg/L)	109	1.79	1.36	0.49/11.16	0.93/1.98		
	Nitrate/Nitrite (mg/L)	110	0.80	0.39	<0.05/10.1	0.21/0.82		
	Chlorophyll A (mg/m <sup>3</sup> )	55	17.9	9.5	1.2/102	3.5/24	TSI=58.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	15901.1	52.0	<10/437000	20/616		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	31	1558.0	110.0	<10/24196	31/847		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					NS		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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 NEI = Not Enough Information

Notes

# Bird Creek at Port of Catoosa



Sample Record	Times Visited	Station ID
November 1998 - Current	151	121300010010-001AT

Stream Data	County	Tulsa	<a href="#">View Site Data</a>
	Location	Northwest of the Town of Catoosa on State Highway 266	
	Latitude/Longitude	36.22311412, -95.81921244	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11070107)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	130	17.6	17.4	2.8/31	10.6/24.5
Turbidity (NTU)	130		81	32	6/1000	21/74		
pH (units)	130		7.58	7.59	6.88/9.12	7.38/7.75		
Dissolved Oxygen (mg/L)	129		8.21	7.62	3.17/19.26	6.4/9.68		
Hardness (mg/L)	130		133	128	58/294	108/158		
Minerals	Total Dissolved Solids (mg/L)	55	232	235	64/358	184/275		
	Specific Conductivity (uS/cm)	129	404	400	26/1570	316/477		
	Chloride (mg/L)	120	41	38	<5/219	28/49		
	Sulfate (mg/L)	120	44	38	19/293	29/46		
Nutrients	Total Phosphorus (mg/L)	133	0.393	0.370	<0.05/0.953	0.25/0.495		
	Total Nitrogen (mg/L)	134	2.97	2.79	0.82/8.16	1.99/3.91		
	Nitrate/Nitrite (mg/L)	135	1.97	1.83	0.16/6.9	0.81/2.93		
	Chlorophyll A (mg/m <sup>3</sup> )	68	7.7	5.6	1.7/86.4	3.7/8.1	TSI=50.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	4285.8	127.8	<10/73000	30/757	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	903.7	76.0	<10/17329	41.4/420.8	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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 NEI = Not Enough Information

Notes

# Black Bear Creek at Pawnee



Sample Record	Times Visited	Station ID
December 1998 - Current	157	621200030010-001AT

Stream Data	County	Pawnee	<a href="#">View Site Data</a>
	Location	North of the Town of Pawnee on State Highway 18	
	Latitude/Longitude	36.34341161, -96.79985204	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11060006)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	137	17.1	17.5	-0.3/33.3	9.3/24.6
Turbidity (NTU)	138		147	54	5/1000	21/173	38% of values > OWQS	
pH (units)	137		7.93	7.97	6.26/8.7	7.69/8.17		
Dissolved Oxygen (mg/L)	137		8.95	8.31	1.7/30.01	6.62/10.23		
Hardness (mg/L)	136		225	218	42/465	151/296		
Minerals	Total Dissolved Solids (mg/L)	69	462	427	145/1170	277/613		
	Specific Conductivity (uS/cm)	136	810	739	158/2174	419/1099		
	Chloride (mg/L)	139	140	120	10/564	58/197		
	Sulfate (mg/L)	139	47	42	10/145	32/57		
Nutrients	Total Phosphorus (mg/L)	147	0.238	0.190	0.009/1.33	0.122/0.322		
	Total Nitrogen (mg/L)	138	1.56	1.41	0.47/4.36	0.95/1.95		
	Nitrate/Nitrite (mg/L)	139	0.38	0.31	<0.05/2.61	0.05/0.57		
	Chlorophyll A (mg/m <sup>3</sup> )	20	14.5	10.4	2.3/45.7	7.1/19.2	TSI=56.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	1368.5	259.0	<10/19000	40/1310	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	555.9	63.0	<10/10462	15/263.7		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Blue River at Durant



Sample Record	Times Visited	Station ID
November 1998 - Current	157	410600010010-001AT

Stream Data	County	Bryan	<a href="#">View Site Data</a>
	Location	East of the Town of Durant off State Highway 70	
	Latitude/Longitude	33.99732546, -96.24093554	
	Planning Watershed	Blue-Boggy (8-digit HUC - 11140102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	132	18.8	18.6	2.7/33	12/26.6
Turbidity (NTU)	135		65	26	3/707	14/52		
pH (units)	130		8.01	8.05	7.06/8.8	7.84/8.19		
Dissolved Oxygen (mg/L)	132		8.51	8.26	4.14/20.41	6.88/9.88		
Hardness (mg/L)	133		219	230	68/346	188/253		
Minerals	Total Dissolved Solids (mg/L)	38	227	238	68/288	208/253		
	Specific Conductivity (uS/cm)	132	394	411	139/596	339/458		
	Chloride (mg/L)	103	9	10	<5/63	<5/10		
	Sulfate (mg/L)	102	19	16	<5/82	11/21		
Nutrients	Total Phosphorus (mg/L)	139	0.087	0.054	<0.005/0.497	0.035/0.096		
	Total Nitrogen (mg/L)	134	0.64	0.47	<0.05/3.12	0.31/0.82		
	Nitrate/Nitrite (mg/L)	134	0.16	0.05	<0.05/1.4	<0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	31	4.0	3.1	0.2/29	0.6/5.4	TSI = 44.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	512.7	97.0	<10/5000	<10/400		
	E. Coll (cfu/100ml)(* -Geo. Mn.)	31	202.7	98.0	<10/933	52/275.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Brushy Creek at Haileyville



Sample Record	Times Visited	Station ID
November 1998 - 2012	136	220600030010-001AT

Stream Data	County	Pittsburg	<a href="#">View Site Data</a>
	Location	Southwest of the Town of Haileyville on State Highway 63	
	Latitude/Longitude	34.843370, -95.614373	
	Planning Watershed	Eufaula (8-digit HUC - 11090204)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	117	17.9	18.6	1.9/33	10.9/24.9
Turbidity (NTU)	119		72	42	4/1000	25/80	14% of values > OWQS	
pH (units)	117		7.37	7.33	6.31/8.57	7.08/7.68		
Dissolved Oxygen (mg/L)	117		7.19	6.60	1.41/26.38	5.1/8.41	11.5% of values < OWQS	
Hardness (mg/L)	117		97	74	<10/693	52/99		
Minerals	Total Dissolved Solids (mg/L)	37	128	113	62/254	98/145		
	Specific Conductivity (uS/cm)	117	276	179	18/1291	123/252		
	Chloride (mg/L)	104	26	10	<5/178	8/18		
	Sulfate (mg/L)	105	63	34	12/369	26/50		
Nutrients	Total Phosphorus (mg/L)	120	0.116	0.077	0.007/1.06	0.053/0.122		
	Total Nitrogen (mg/L)	119	0.91	0.81	0.23/3.39	0.61/1.08		
	Nitrate/Nitrite (mg/L)	120	0.17	0.11	<0.05/1.17	<0.05/0.25		
	Chlorophyll A (mg/m <sup>3</sup> )	23	5.9	3.7	0.5/33	1.3/4.9	TSI=47.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	943.7	36.0	<10/14136	<10/197.5	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	1000.5	68.0	<10/19863	<10/273		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	NEI	S						S	S	S
	Aesthetics												NS
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Canadian River at Bridgeport



Sample Record		Times Visited	Station ID
February 1999 - Current		148	520610020150-001AT
Stream Data	County	Blaine	<a href="#">View Site Data</a>
	Location	East of the Town of Bridgeport on US Highway 281	
	Latitude/Longitude	35.54292908, -98.31831715	
	Planning Watershed	West Central (8-digit HUC - 11090202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	126	17.0	17.0	-0.6/36.3	10/24
Turbidity (NTU)	123		69	29	4/1000	11/67	12% of values > OWQS	
pH (units)	122		8.12	8.13	7.6/8.6	7.97/8.27		
Dissolved Oxygen (mg/L)	125		9.62	9.48	0.38/19.77	8.11/10.56		
Hardness (mg/L)	126		572	558	126/2100	458/634		
Minerals	Total Dissolved Solids (mg/L)	64	989	1017	265/1518	740/1235		
	Specific Conductivity (uS/cm)	126	1471	1514	334/2552	1066/1900		
	Chloride (mg/L)	125	153	178	12/472	32/235		
	Sulfate (mg/L)	127	413	412	106/752	355/472		
Nutrients	Total Phosphorus (mg/L)	127	0.146	0.094	0.01/2.14	0.061/0.143		
	Total Nitrogen (mg/L)	126	1.27	1.13	0.38/7.47	0.84/1.47		
	Nitrate/Nitrite (mg/L)	127	0.46	0.39	<0.05/2.5	0.06/0.62		
	Chlorophyll A (mg/m <sup>3</sup> )	43	15.0	8.5	2.3/84.4	5.3/22.2	TSI=57.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	772.3	100.0	<10/12033	36/425	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	999.3	41.0	<10/24192	<10/95		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			NEI			
Fish Consumption					NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Canadian River at Calvin



Sample Record	Times Visited	Station ID
December 1998 - Current	159	220600010119-001AT

Stream Data	County	Hughes	<a href="#">View Site Data</a>
	Location	North of the Town of Calvin on State Highway 270	
	Latitude/Longitude	34.97589666, -96.24231022	
	Planning Watershed	Central (8-digit HUC - 11090202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	130	18.9	19.3	2/36.3	11.5/26.4
Turbidity (NTU)	129		145	41	4/1001	23/146	14% of values > OWQS	
pH (units)	130		8.26	8.27	7.19/9.04	8.06/8.41		
Dissolved Oxygen (mg/L)	130		9.90	9.66	3.79/23.59	8.08/11.61		
Hardness (mg/L)	132		328	320	99/727	251/409		
Minerals	Total Dissolved Solids (mg/L)	67	625	622	312/1064	496/743		
	Specific Conductivity (uS/cm)	130	1003	994	318/1749	727/1269		
	Chloride (mg/L)	128	134	135	25/253	102/171		
	Sulfate (mg/L)	129	168	155	32/473	104/214		
Nutrients	Total Phosphorus (mg/L)	133	0.239	0.179	0.023/1.16	0.131/0.284		
	Total Nitrogen (mg/L)	132	1.54	1.39	0.35/6.36	1/1.93		
	Nitrate/Nitrite (mg/L)	133	0.30	<0.05	<0.05/1.83	<0.05/0.49		
	Chlorophyll A (mg/m <sup>3</sup> )	68	37.0	25.6	3.4/176	16.6/45	TSI = 66.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	38	1023.4	60.0	<10/24192	25.6/457.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	38	137.0	15.3	<10/2419.6	<10/95.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						NS	S	NS
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

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 NEI = Not Enough Information

Notes

Fish consumption not supporting for Lead

# Canadian River at Konawa



Sample Record	Times Visited	Station ID
November 1998 - 2012	135	520600010010-001AT

Stream Data	County	Seminole	<a href="#">View Site Data</a>
	Location	East of the Town of Konawa on State Highway 377	
	Latitude/Longitude	34.93343848, -96.6830356	
	Planning Watershed	Central (8-digit HUC - 11090202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	115	18.0	18.5	0.7/34.8	11/26.6
Turbidity (NTU)	114		173	41	1/1001	22/199		
pH (units)	116		8.27	8.26	7.43/9.15	8.02/8.46		
Dissolved Oxygen (mg/L)	114		9.77	9.30	4.49/32.28	7.89/11.15		
Hardness (mg/L)	115		364	355	89/674	267/462		
Minerals	Total Dissolved Solids (mg/L)	52	706	713	294/1160	551/863	54% of values > OWQS	
	Specific Conductivity (uS/cm)	115	1076	1103	206/1722	793/1369		
	Chloride (mg/L)	114	122	120	18/282	81/160		
	Sulfate (mg/L)	114	246	227	41/3090	147/276		
Nutrients	Total Phosphorus (mg/L)	123	0.327	0.264	<0.005/1.26	0.175/0.375		
	Total Nitrogen (mg/L)	115	1.83	1.64	0.6/6.55	1.19/2.19		
	Nitrate/Nitrite (mg/L)	116	0.43	0.18	<0.05/3.18	<0.05/0.7		
	Chlorophyll A (mg/m <sup>3</sup> )	49	39.2	31.8	5.3/135	17.8/54.6	TSI = 67.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	914.9	120.0	<10/9100	25.5/500	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	433.2	20.0	<10/5794	<10/73		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# Canadian River at Purcell



Sample Record	Times Visited	Station ID
February 1999 - Current	155	520610010010-001AT

Stream Data	County	McClain	<a href="#">View Site Data</a>
	Location	East of the Town of Purcell on State Highway 77	
	Latitude/Longitude	35.01433266, -97.35035449	
	Planning Watershed	Central (8-digit HUC - 11090202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	127	17.1	18.5	-2.3/34.1	10.4/25
Turbidity (NTU)	126		135	36	4/1000	17/138		
pH (units)	127		8.35	8.25	7.36/9.85	8.06/8.58		
Dissolved Oxygen (mg/L)	127		10.42	10.15	4.21/26.87	8.17/12.33		
Hardness (mg/L)	129		420	420	74/990	285/540		
Minerals	Total Dissolved Solids (mg/L)	67	796	756	285/1804	598/1000		
	Specific Conductivity (uS/cm)	128	1226	1199	303/2215	882/1602		
	Chloride (mg/L)	131	135	122	20/419	81/181		
	Sulfate (mg/L)	131	276	271	41/972	179/347		
Nutrients	Total Phosphorus (mg/L)	139	0.533	0.414	0.011/2.765	0.258/0.63		
	Total Nitrogen (mg/L)	132	2.97	2.65	0.56/11.87	1.86/3.53		
	Nitrate/Nitrite (mg/L)	133	1.22	0.91	<0.05/9.69	0.22/1.51		
	Chlorophyll A (mg/m <sup>3</sup> )	71	55.3	38.1	0.5/211	9.3/92.4	TSI = 70.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	23	2933.9	200.0	<10/31700	51/920.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	23	1070.6	30.0	<10/19863	<10/295		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Canadian River at Taloga



Sample Record	Times Visited	Station ID
November 1998 - 2012	106	520620020010-001AT

Stream Data	County	Dewey	<a href="#">View Site Data</a>
	Location	North of the Town of Taloga on State Highway 183	
	Latitude/Longitude	36.05419703, -98.96894778	
	Planning Watershed	West-Central (8-digit HUC - 11090201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	93	15.2	15.9	-0.5/32.6	7.5/22.9
Turbidity (NTU)	99		46	17	2/1000	10/36		
pH (units)	93		8.08	8.08	7.36/8.7	7.94/8.25		
Dissolved Oxygen (mg/L)	93		10.24	9.50	1.13/21.02	8.22/11.95		
Hardness (mg/L)	94		709	678	58/1425	560/793		
Minerals	Total Dissolved Solids (mg/L)	45	1608	1540	615/3410	1420/1748		
	Specific Conductivity (uS/cm)	96	2337	2400	711/4187	2102/2595		
	Chloride (mg/L)	94	371	388	66/749	294/445	19% of values > OWQS	
	Sulfate (mg/L)	95	550	462	141/1681	382/590		
Nutrients	Total Phosphorus (mg/L)	99	0.071	0.032	<0.005/1.89	0.019/0.056		
	Total Nitrogen (mg/L)	94	0.87	0.70	0.2/5.29	0.48/0.9		
	Nitrate/Nitrite (mg/L)	95	0.29	0.13	<0.05/2.82	<0.05/0.3		
	Chlorophyll A (mg/m <sup>3</sup> )	0	0.0	0.0	0/0	0/0	No data	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	17	307.6	50.0	<10/3000	<10/350		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	17	42.1	20.0	<10/253	<10/36		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		NS	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								
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# Canadian River at Whitefield



Sample Record	Times Visited	Station ID
September 1999 - Current	143	220300000010-001AT

Stream Data	County	Haskell	<a href="#">View Site Data</a>
	Location	North of the Town of Whitefield on State Highway 2	
	Latitude/Longitude	35.26306098, -95.23915454	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11090204)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	121	18.1	20.0	1.3/33	11.3/24.2
Turbidity (NTU)	123		19	6	1/812	4/13		
pH (units)	120		7.92	7.94	6.39/8.64	7.72/8.18		
Dissolved Oxygen (mg/L)	120		8.92	8.76	2.25/18.95	6.96/10.62		
Hardness (mg/L)	121		150	146	43/317	130/164		
Minerals	Total Dissolved Solids (mg/L)	56	234	226	169/480	204/251		
	Specific Conductivity (uS/cm)	120	432	426	197/720	375/496		
	Chloride (mg/L)	123	43	39	17/74	32/52		
	Sulfate (mg/L)	123	47	48	23/100	37/57		
Nutrients	Total Phosphorus (mg/L)	125	0.060	0.044	<0.005/0.95	0.027/0.071		
	Total Nitrogen (mg/L)	124	0.64	0.60	0.21/1.4	0.46/0.79		
	Nitrate/Nitrite (mg/L)	125	0.18	0.16	<0.05/0.56	0.05/0.27		
	Chlorophyll A (mg/m <sup>3</sup> )	49	4.6	4.0	<0.1/21.3	2.2/5.9	TSI = 45.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	278.0	10.0	<10/6867	<10/27.8		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	103.5	21.6	<10/1860	<10/65		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										S			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
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# Caney Creek at Barber



Sample Record		Times Visited	Station ID
September 1999 - 2012		145	121700040010-001AT
Stream Data	County	Cherokee	<a href="#">View Site Data</a>
	Location	North of the Town of Barber off State Highway 100	
	Latitude/Longitude	35.72381643, -94.85787184	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	99	18.1	17.6	4.1/29.3	13/23.3
Turbidity (NTU)	100		4	2	1/103	1/3		
pH (units)	97		7.77	7.76	6.46/9.06	7.56/8.02		
Dissolved Oxygen (mg/L)	99		9.66	9.42	3.94/15.6	8.29/11.12		
Hardness (mg/L)	99		109	109	64/174	98/120		
Minerals	Total Dissolved Solids (mg/L)	12	149	143	116/237	133/157		
	Specific Conductivity (uS/cm)	99	219	218	123/391	200/243		
	Chloride (mg/L)	90	9	10	<5/37	<5/10		
	Sulfate (mg/L)	90	9	10	<5/33	7/10		
Nutrients	Total Phosphorus (mg/L)	105	0.060	0.037	<0.005/1.532	0.03/0.047		
	Total Nitrogen (mg/L)	104	1.14	1.05	0.18/7.06	0.71/1.41		
	Nitrate/Nitrite (mg/L)	105	0.99	0.91	0.06/6.68	0.55/1.26		
	Chlorophyll A (mg/m <sup>3</sup> )	53	1.3	0.8	<0.1/12.1	0.5/1.2	TSI = 32.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	46	94.3	20.0	<10/1408	<10/52	Mean > OWOS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	46	123.9	15.0	<10/2382	<10/41		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chloride	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					S								
<b>S = Fully Supporting</b> <b>NS = Not Supporting</b> <b>NEI = Not Enough Information</b>		Notes											

# Caney River at Ramona



Sample Record		Times Visited	Station ID
December 1998 - Current		153	121400010010-001AT
Stream Data	County	Washington	<a href="#">View Site Data</a>
	Location	Southeast of the Town of Ramona on County Road E0350	
	Latitude/Longitude	36.50889974, -95.84265966	
	Planning Watershed	Middle Arkansas (8-digit HUC - 11070106)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)		129	17.3	18.1	0.8/35.1
Turbidity (NTU)			132	111	60	6/1100	28/120	33% of values > OWQS
pH (units)			129	7.82	7.82	6.65/9.09	7.63/8.02	
Dissolved Oxygen (mg/L)			129	8.98	8.55	3.46/15.33	7.11/11.06	
Hardness (mg/L)			130	149	154	<10/358	119/174	
Minerals	Total Dissolved Solids (mg/L)		37	216	220	20/350	155/289	
	Specific Conductivity (uS/cm)		128	371	348	38/989	270/476	
	Chloride (mg/L)		102	39	25	<5/377	14/52	
	Sulfate (mg/L)		102	31	27	<5/112	19/38	
Nutrients	Total Phosphorus (mg/L)		135	0.154	0.124	<0.005/0.726	0.08/0.187	
	Total Nitrogen (mg/L)		134	1.22	1.01	0.26/4.36	0.78/1.34	
	Nitrate/Nitrite (mg/L)		135	0.40	0.28	<0.05/2.9	0.08/0.45	
	Chlorophyll A (mg/m <sup>3</sup> )		67	23.8	11.5	0.5/268	6.1/25.7	TSI=61.7
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)		34	2725.2	41.0	<10/87000	17.5/180.9	Mean > OWQS
	E. Coli (cfu/100ml)(* -Geo. Mn.)		34	231.5	52.0	<10/5475	<10/106.8	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish Consumption not supported by Lead</i>											

# Chikaskia River at Blackwell



Sample Record	Times Visited	Station ID
December 1998 - Current	152	621100000010-001AT

Stream Data	County	Kay	<a href="#">View Site Data</a>
	Location	East of the Town of Blackwell on State Highway 177	
	Latitude/Longitude	36.81155311, -97.27808293	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11060005)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	130	16.8	17.0	-0.9/34	9.3/26
Turbidity (NTU)	131		126	44	6/1000	23/107	24% of values > OWQS	
pH (units)	128		8.03	8.05	6.24/9.29	7.85/8.25		
Dissolved Oxygen (mg/L)	130		10.75	9.76	2.53/48.86	8.05/12.44		
Hardness (mg/L)	129		365	318	80/3720	235/389		
Minerals	Total Dissolved Solids (mg/L)	66	697	557	195/3840	486/676		
	Specific Conductivity (uS/cm)	130	990	891	33/6238	667/1102		
	Chloride (mg/L)	131	155	116	12/1970	66/158		
	Sulfate (mg/L)	131	118	104	30/765	81/128		
Nutrients	Total Phosphorus (mg/L)	139	0.204	0.154	0.02/1.24	0.093/0.256		
	Total Nitrogen (mg/L)	130	1.84	1.77	0.48/6.63	1.27/2.28		
	Nitrate/Nitrite (mg/L)	131	0.98	0.86	<0.05/3.09	0.33/1.38		
	Chlorophyll A (mg/m <sup>3</sup> )	71	19.9	11.8	0.1/138	3.9/29.3	TSI = 59.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	5870.0	156.1	20/147000	59.5/1225	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	360.1	25.0	<10/3968	<10/248.6		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish consumption not supporting for Lead</i>											

# Chikaskia River at Tonkawa



Sample Record	Times Visited	Station ID
March 2013 - Current	26	621100000010-002RS

Stream Data	County	Kay	View Site Data
	Location	Northeast of the Town of Tonkawa off State Highway 60	
	Latitude/Longitude	36.637358, -97.23295	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11060005)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	20	17.8	20.2	0/28.5	10.2/26
Turbidity (NTU)	21		92	53	6/576	14/122	24% of values > OWQS	
pH (units)	20		8.04	8.07	6.79/8.62	7.91/8.3		
Dissolved Oxygen (mg/L)	20		9.59	9.09	3.7/14.7	7.23/12.15		
Hardness (mg/L)	18		335	332	89/536	261/439		
Minerals	Total Dissolved Solids (mg/L)	14	580	563	237/886	460/684		
	Specific Conductivity (uS/cm)	19	1100	999	250/4588	713/1158		
	Chloride (mg/L)	14	128	129	15/238	91/154		
	Sulfate (mg/L)	14	137	127	63/257	95/169		
Nutrients	Total Phosphorus (mg/L)	14	0.181	0.126	0.031/0.664	0.059/0.282		
	Total Nitrogen (mg/L)	14	1.52	1.32	0.73/3.71	1.12/1.79		
	Nitrate/Nitrite (mg/L)	14	0.43	0.34	<0.05/1.08	<0.05/0.85		
	Chlorophyll A (mg/m <sup>3</sup> )	14	25.7	29.2	3.2/45.8	12.5/36.6	TSI = 62.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	2	278.7	278.7	146.7/410.6	n/a		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	2	95.6	95.6	41.1/150	n/a		

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NEI			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> Fish consumption not supporting for Lead											

# Cimarron River at Ames



Sample Record	Times Visited	Station ID
March 2003 - Current	108	620910020010-004RS

Stream Data	County	Major	<a href="#">View Site Data</a>
	Location	West of the Town of Ames off State Highway 8	
	Latitude/Longitude	36.27979304, -98.31895336	
	Planning Watershed	Central (8-digit HUC - 11050002)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	87	17.8	18.9	-0.9/39.2	9.6/26.5
Turbidity (NTU)	90		32	8	1/513	4/18		
pH (units)	87		8.07	8.08	7.4/8.57	7.95/8.19		
Dissolved Oxygen (mg/L)	87		10.53	10.54	5.07/21.06	8.86/11.89		
Hardness (mg/L)	88		1019	1060	422/1815	776/1219		
Minerals	Total Dissolved Solids (mg/L)	45	9744	9010	2050/20200	6460/12600		
	Specific Conductivity (uS/cm)	87	16151	15000	3765/36987	10469/22359		
	Chloride (mg/L)	87	5238	4460	181/13500	3000/7620		
	Sulfate (mg/L)	87	822	808	300/3210	661/914		
Nutrients	Total Phosphorus (mg/L)	87	0.049	0.029	<0.005/0.364	0.018/0.045		
	Total Nitrogen (mg/L)	87	0.99	0.95	0.45/2.3	0.75/1.19		
	Nitrate/Nitrite (mg/L)	87	0.34	0.24	<0.05/1.13	<0.05/0.44		
	Chlorophyll A (mg/m <sup>3</sup> )	51	15.1	11.1	1.2/64.9	5.7/20	TSI= 57.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	167.9	50.0	<10/1203.3	<10/200	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	763.3	481.0	20/3255	167.3/949.8	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	NS						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish &amp; Wildlife Propagation not supporting for Selenium</i>											

# Cimarron River at Buffalo



Sample Record	Times Visited	Station ID
November 1998 - 2012	123	620920030010-001AT

Stream Data	County	Woods	<a href="#">View Site Data</a>
	Location	East of the Town of Buffalo on State Highway 34	
	Latitude/Longitude	36.85209062, -99.31622871	
	Planning Watershed	Panhandle (8-digit HUC - 11050001)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	110	18.1	17.9	-1/36.2	9.8/26.5
Turbidity (NTU)	112		23	8	2/715	4/18		
pH (units)	109		8.06	8.10	7.17/8.7	7.89/8.26		
Dissolved Oxygen (mg/L)	107		9.76	9.30	0.67/23.17	8.01/11.43		
Hardness (mg/L)	109		1002	800	119/7000	640/1236		
Minerals	Total Dissolved Solids (mg/L)	49	10596	6060	1746/40000	4129/12750	16% of values > OWQS	
	Specific Conductivity (uS/cm)	110	15831	12466	2030/61252	7713/19014		
	Chloride (mg/L)	110	5073	3890	630/24100	2220/5956	20% of values > OWQS	
	Sulfate (mg/L)	110	613	498	196/1620	366/790		
Nutrients	Total Phosphorus (mg/L)	110	0.080	0.054	<0.005/0.392	0.035/0.096		
	Total Nitrogen (mg/L)	109	0.77	0.63	0.23/2.59	0.46/0.97		
	Nitrate/Nitrite (mg/L)	110	0.20	0.05	<0.05/1.85	0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	0	0.0	0.0	0/0	0/0	No Data	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	1160.5	154.5	<10/11000	37.5/1500	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	5817.5	4242.0	<10/24199	413.5/7816.8	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						NS	NS	NS
	Aesthetics												S
	Agriculture					S		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b>											

# Cimarron River at Dover



Sample Record	Times Visited	Station ID
December 1998 - 2012	138	620910020010-001AT

Stream Data	County	Kingfisher	<a href="#">View Site Data</a>
	Location	South of the Town of Dover on US 81	
	Latitude/Longitude	35.95153084, -97.91407037	
	Planning Watershed	Central (8-digit HUC -11050002)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	117	17.7	17.5	-0.3/37.7	9.7/25.3
Turbidity (NTU)	121		135	20	3/1000	11/84		
pH (units)	117		8.04	8.08	7/8.56	7.91/8.2		
Dissolved Oxygen (mg/L)	116		10.09	9.78	4.73/20.53	8.27/11.89		
Hardness (mg/L)	119		833	836	100/2160	632/997		
Minerals	Total Dissolved Solids (mg/L)	52	6130	6244	305/12300	3699/8555		
	Specific Conductivity (uS/cm)	117	11376	11352	134/28860	7765/14832		
	Chloride (mg/L)	118	3462	2949	47/10300	2165/4785		
	Sulfate (mg/L)	119	612	639	96/1025	489/741		
Nutrients	Total Phosphorus (mg/L)	119	0.195	0.084	<0.005/2.35	0.051/0.197		
	Total Nitrogen (mg/L)	118	1.27	1.09	0.53/5.72	0.81/1.47		
	Nitrate/Nitrite (mg/L)	119	0.43	0.29	<0.05/1.73	0.09/0.71		
	Chlorophyll A (mg/m <sup>3</sup> )	37	19.2	18.7	1.3/46.5	5.6/31.3	TSI = 59.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	27	4634.3	60.0	<10/87000	<10/600	Mean > OWOS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	27	1390.2	487.0	<10/9208	183/1483	Mean > OWOS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish & Wildlife Propagation not supporting for Selenium

# Cimarron River at Guthrie



Sample Record	Times Visited	Station ID
December 1998 - Current	157	620910010010-001AT

Stream Data	County	Logan	<a href="#">View Site Data</a>
	Location	North of the Town of Guthrie on US 77	
	Latitude/Longitude	35.91981845, -97.4257038	
	Planning Watershed	Central (8-digit HUC -11050002)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	135	17.4	17.3	-1.1/37.3	9/25
Turbidity (NTU)	137		150	33	6/1000	16/100	16% of values > OWQS	
pH (units)	135		8.12	8.11	7.06/9.72	7.9/8.29		
Dissolved Oxygen (mg/L)	134		9.90	9.75	4.55/18.09	7.97/11.66		
Hardness (mg/L)	134		650	620	196/1890	489/792		
Minerals	Total Dissolved Solids (mg/L)	68	4069	3951	1108/9510	2496/5143		
	Specific Conductivity (uS/cm)	133	7873	7451	863/19499	5287/9905		
	Chloride (mg/L)	136	2176	2104	91/6500	1405/2608		
	Sulfate (mg/L)	135	445	455	115/851	330/557		
Nutrients	Total Phosphorus (mg/L)	136	0.388	0.309	0.029/1.58	0.219/0.491		
	Total Nitrogen (mg/L)	135	2.10	1.82	0.58/6.4	1.47/2.37		
	Nitrate/Nitrite (mg/L)	136	1.06	0.84	<0.05/4.99	0.48/1.4		
	Chlorophyll A (mg/m <sup>3</sup> )	72	27.4	24.9	2.3/86.2	13.1/41.4	TSI = 63.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	1580.7	124.0	<10/18000	35/1775	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	322.8	115.0	<10/2415	51.5/333	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Cimarron River at Mocane



Sample Record	Times Visited	Station ID
October 1999 - Current	137	620930000010-001AT

Stream Data	County	Beaver	<a href="#">View Site Data</a>
	Location	North of the Town of Mocane off of US 64	
	Latitude/Longitude	36.97516467, -100.3141738	
	Planning Watershed	Panhandle (8-digit HUC -11040006)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	119	18.4	18.0	-0.6/34.9	11/25.7
Turbidity (NTU)	121		29	15	3/1000	7/26		
pH (units)	113		8.34	8.35	7.64/9.4	8.16/8.52		
Dissolved Oxygen (mg/L)	119		10.18	9.68	5.25/21.82	8.56/11.42		
Hardness (mg/L)	119		461	460	47/840	405/523		
Minerals	Total Dissolved Solids (mg/L)	60	2731	2640	2224/3610	2560/2908		
	Specific Conductivity (uS/cm)	119	4461	4461	405/8438	4232/4797		
	Chloride (mg/L)	117	1342	1300	184/2347	1199/1470		
	Sulfate (mg/L)	118	204	201	96/339	190/220		
Nutrients	Total Phosphorus (mg/L)	119	0.356	0.283	<0.005/1.32	0.12/0.54		
	Total Nitrogen (mg/L)	119	1.83	1.48	0.05/6.1	0.82/2.67		
	Nitrate/Nitrite (mg/L)	119	1.05	0.44	<0.05/5.48	<0.05/1.69		
	Chlorophyll A (mg/m <sup>3</sup> )	34	38.8	10.4	1.6/441	7.2/23.8	TSI= 66.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	713.4	110.0	<10/9000	40/500	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	31	125.6	97.0	<10/687	31/158		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								
	<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> Fish & Wildlife Propagation not supporting for Selenium										

# Cimarron River at Oilton



Sample Record	Times Visited	Station ID
December 1998 - 2012	136	620900010170-001AT

Stream Data	County	Creek	<a href="#">View Site Data</a>
	Location	North of the Town of Oilton off State Highway 99	
	Latitude/Longitude	36.09442186, -96.5787792	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11050003)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	121	17.7	17.4	-0.9/35.3	9.2/26.1
Turbidity (NTU)	120		207	55	4/1001	25/159	37% of values > OWQS	
pH (units)	120		8.22	8.23	7.11/9.31	7.95/8.5		
Dissolved Oxygen (mg/L)	121		9.81	9.13	0.72/24.36	7.25/11.8		
Hardness (mg/L)	119		481	498	34/1300	330/594		
Minerals	Total Dissolved Solids (mg/L)	52	2820	2757	10/13654	1680/3585	19.6% of values > OWQS	
	Specific Conductivity (uS/cm)	121	5093	5009	518/16339	2842/6990		
	Chloride (mg/L)	116	1464	1353	115/5600	848/1993		
	Sulfate (mg/L)	118	317	305	86/681	216/406		
Nutrients	Total Phosphorus (mg/L)	119	0.365	0.268	<0.005/1.78	0.176/0.455		
	Total Nitrogen (mg/L)	117	1.96	1.67	0.49/5.7	1.29/2.39		
	Nitrate/Nitrite (mg/L)	119	0.46	0.29	<0.05/1.86	<0.05/0.85		
	Chlorophyll A (mg/m <sup>3</sup> )	36	47.0	31.9	0.1/304	15.4/58.5	TSI = 68.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	738.3	85.5	<10/6000	30.3/420.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	162.3	20.0	<10/2014	<10/96.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	NS	S	S						NS	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish consumption not supporting for Lead</i>											

# Cimarron River at Ripley



Sample Record	Times Visited	Station ID
October 2000 - Current	135	620900030010-001AT

Stream Data	County	Payne	<a href="#">View Site Data</a>
	Location	South of the Town of Ripley on State Highway 33	
	Latitude/Longitude	35.98570275, -96.91305015	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11050003)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	114	17.3	18.3	-1/35.5	8.5/25.6
Turbidity (NTU)	115		192	38	5/1001	15/150	11% of values > OWQS	
pH (units)	113		8.21	8.20	7.15/9.18	7.9/8.52		
Dissolved Oxygen (mg/L)	114		10.06	9.53	4.16/19.26	7.67/12.01		
Hardness (mg/L)	115		512	510	142/1050	390/632		
Minerals	Total Dissolved Solids (mg/L)	50	3260	3380	470/6200	1980/4518		
	Specific Conductivity (uS/cm)	114	5801	5677	465/13560	3448/8011		
	Chloride (mg/L)	114	1725	1686	168/4490	1080/2278		
	Sulfate (mg/L)	113	331	307	61/660	242/429		
Nutrients	Total Phosphorus (mg/L)	114	0.376	0.294	0.112/1.37	0.201/0.455		
	Total Nitrogen (mg/L)	113	2.01	1.73	0.83/6.62	1.38/2.27		
	Nitrate/Nitrite (mg/L)	114	0.55	0.32	<0.05/4.96	<0.05/0.94		
	Chlorophyll A (mg/m <sup>3</sup> )	55	56.3	39.9	0.7/474	14.6/67.3	TSI = 70.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	614.9	109.0	<10/4000	20/600	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	31	363.9	31.0	<10/3654	<10/195		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** Fish Consumption not supporting for Lead

# Cimarron River at Waynoka



Sample Record		Times Visited	Station ID
March 2003 - Current		85	620920020010-001RS
Stream Data	County	Woods	<a href="#">View Site Data</a>
	Location	South of the Town of Waynoka on State Highway 281	
	Latitude/Longitude	36.516709, -98.87990179	
	Planning Watershed	Central (8-digit HUC - 11050001)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	70	18.7	18.8	-1.5/37.4	11.5/25.9
Turbidity (NTU)	71		13	5	1/134	3/12		
pH (units)	68		7.91	7.92	7.28/8.35	7.79/8.06		
Dissolved Oxygen (mg/L)	69		8.99	8.58	3.7/13.52	7.88/9.91		
Hardness (mg/L)	70		1540	1445	162/9160	1133/1718		
Minerals	Total Dissolved Solids (mg/L)	38	27676	25750	11400/55400	18800/35125	88% of values > OWQS	
	Specific Conductivity (uS/cm)	70	37225	36794	7575/74949	27203/46694		
	Chloride (mg/L)	72	13049	12100	804/31900	7585/17075	74% of values > OWQS	
	Sulfate (mg/L)	72	1105	1085	426/1760	911/1348		
Nutrients	Total Phosphorus (mg/L)	71	0.036	0.030	<0.005/0.189	0.013/0.039		
	Total Nitrogen (mg/L)	72	0.61	0.58	0.25/1.56	0.46/0.71		
	Nitrate/Nitrite (mg/L)	72	0.09	0.05	<0.05/0.99	<0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	30	6.6	4.5	0.9/26	2.7/8.2	TSI = 49.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	17	270.0	41.0	<10/2419.6	<10/143.1		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	17	1379.5	798.0	52/7270	313.5/2071	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	NS						NS	S
Aesthetics													S
Agriculture						S		NS	NS				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish &amp; Wildlife Propagation not supporting for Selenium</i> <i>Fish Consumption not supporting for Mercury</i>											

# Clear Boggy Creek at Caney



Sample Record	Times Visited	Station ID
November 1998 - Current	152	410400030010-001AT

Stream Data	County	Atoka	<a href="#">View Site Data</a>
	Location	North of the Town of Caney on US 69	
	Latitude/Longitude	34.25148276, -96.2052689	
	Planning Watershed	Blue-Boggy (8-digit HUC -11140104)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	131	18.3	18.0	1/31.8	12/25.8
Turbidity (NTU)	133		92	40	4/>1000	16/83	17% of values >OWQS	
pH (units)	130		7.92	7.95	6.48/9.32	7.74/8.13		
Dissolved Oxygen (mg/L)	131		8.66	8.22	4.73/22.11	6.9/9.93		
Hardness (mg/L)	132		204	207	<10/323	167/251		
Minerals	Total Dissolved Solids (mg/L)	38	257	257	8/366	220/319		
	Specific Conductivity (uS/cm)	130	457	455	117/1154	342/556		
	Chloride (mg/L)	103	28	22	<5/233	13/36		
	Sulfate (mg/L)	103	30	28	<5/101	23/34		
Nutrients	Total Phosphorus (mg/L)	135	0.158	0.093	<0.005/1.081	0.058/0.157		
	Total Nitrogen (mg/L)	133	0.76	0.59	<0.05/3.39	0.4/0.94		
	Nitrate/Nitrite (mg/L)	133	0.13	0.05	<0.05/1.19	0.05/0.16		
	Chlorophyll A (mg/m <sup>3</sup> )	17	4.6	3.3	0.9/18.2	1.5/6.3	TSI = 45.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	658.1	130.0	<10/5000	18.6/450		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	232.4	63.0	<10/2419.6	<10/273.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						NS	NS	NS
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish consumption not supporting for Lead

# Cow Creek at Waurika



Sample Record	Times Visited	Station ID
December 1998 - Current	58	31120000060-001AT

Stream Data	County	Jefferson	View Site Data
	Location	North of Waurika off State Highway 81	
	Latitude/Longitude	34.169208, -98.004862	
	Planning Watershed	Northern Beaver (8-digit HUC - 11130208)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	50	19.0	19.9	4.6/31.5	10.9/27
Turbidity (NTU)	51		119	70	23/622	44/139	54% of values > OWQS	
pH (units)	50		8.01	8.05	7.41/8.6	7.8/8.22		
Dissolved Oxygen (mg/L)	50		7.85	7.29	2.63/12.79	6.12/9.57		
Hardness (mg/L)	53		274	280	62/556	194/355		
Minerals	Total Dissolved Solids (mg/L)	33	483	527	136/1066	299/622		
	Specific Conductivity (uS/cm)	50	868	838	157/1820	516/1139		
	Chloride (mg/L)	54	118	93	12/1145	41/130		
	Sulfate (mg/L)	54	97	86	24/521	53/115		
Nutrients	Total Phosphorus (mg/L)	54	0.901	0.497	0.212/5.553	0.357/1.273		
	Total Nitrogen (mg/L)	54	3.71	2.02	0.68/16.96	1.37/4.67		
	Nitrate/Nitrite (mg/L)	54	2.51	0.88	<0.05/15.5	0.33/3.05		
	Chlorophyll A (mg/m <sup>3</sup> )	14	17.8	13.5	0.8/62.6	1.6/34.3	TSI=58.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	10	1792.2	362.8	130/8000	197.5/2989.7	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	10	179.6	114.7	20/780	37.4/213.1		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					NS		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NEI								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Deep Fork River at Beggs



Sample Record	Times Visited	Station ID
November 1998 - Current	150	520700020010-001AT

Stream Data	County	Okmulgee	<a href="#">View Site Data</a>
	Location	South of the Town of Beggs off State Highway 16	
	Latitude/Longitude	35.67424336, -96.06876654	
	Planning Watershed	Eufaula (8-digit HUC -11100303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	127	17.6	18.0	0.7/33	9.9/25
Turbidity (NTU)	128		176	87	7/>1000	50/220	67% of values > OWQS	
pH (units)	128		7.83	7.84	6.82/9.06	7.61/8.04		
Dissolved Oxygen (mg/L)	127		8.35	7.85	3.73/17.19	6.27/10.24		
Hardness (mg/L)	125		228	210	27/1500	159/279		
Minerals	Total Dissolved Solids (mg/L)	70	365	350	50/765	264/468		
	Specific Conductivity (uS/cm)	127	668	615	90/1469	422/899		
	Chloride (mg/L)	130	97	86	<5/273	48/135		
	Sulfate (mg/L)	130	46	41	10/129	32/58		
Nutrients	Total Phosphorus (mg/L)	129	0.180	0.159	0.014/0.79	0.1/0.223		
	Total Nitrogen (mg/L)	129	1.15	0.96	<0.05/3.53	0.73/1.47		
	Nitrate/Nitrite (mg/L)	130	0.29	0.23	<0.05/2.87	0.05/0.39		
	Chlorophyll A (mg/m <sup>3</sup> )	30	20.0	9.9	2.2/122	6.4/21.3	TSI = 60.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	4227.9	150.5	<10/113000	27.5/478.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	630.9	57.5	<10/14136	<10/201		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						NS	S	NS
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** Fish consumption not supporting for Lead

# Deep Fork River at Stroud



Sample Record	Times Visited	Station ID
November 1998 – December 2012	136	520700040010-001AT

Stream Data	County	Lincoln	<a href="#">View Site Data</a>
	Location	South of the Town of Stroud on US 377	
	Latitude/Longitude	35.68609365, -96.6622792	
	Planning Watershed	Central (8-digit HUC -11100303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	110	17.8	18.0	-0.3/39.3	11/24.7
Turbidity (NTU)	108		165	28	4/>1000	14/195		
pH (units)	110		8.21	8.24	7.02/9.65	8.04/8.47		
Dissolved Oxygen (mg/L)	110		9.15	9.12	4.5/14.65	7.63/10.26		
Hardness (mg/L)	110		263	284	63/541	196/320		
Minerals	Total Dissolved Solids (mg/L)	54	456	504	128/922	326/554		
	Specific Conductivity (uS/cm)	110	803	838	18/1990	549/1015		
	Chloride (mg/L)	114	111	108	10/500	54/145		
	Sulfate (mg/L)	114	54	47	19/174	36/60		
Nutrients	Total Phosphorus (mg/L)	122	0.295	0.215	0.017/1.767	0.15/0.35		
	Total Nitrogen (mg/L)	113	1.23	1.03	0.32/4.63	0.65/1.59		
	Nitrate/Nitrite (mg/L)	114	0.37	0.24	<0.05/2.73	<0.05/0.47		
	Chlorophyll A (mg/m <sup>3</sup> )	16	11.0	8.9	1.4/35	2.2/14.9	TSI = 54.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	817.7	282.5	<10/6131	88.8/990	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	201.9	63.0	<10/1785	20/238.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes											

# Deep Red Creek at Randlett



Sample Record	Times Visited	Station ID
January 2013 - Current	14	311310030010-001AT

Stream Data	County	Cotton	View Site Data
	Location	North of the Town of Randlett on US 277	
	Latitude/Longitude	34.220833, -98.452778	
	Planning Watershed	West Cache (8-digit HUC -11130203)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	12	19.1	19.4	4.9/29.5	14.4/26.3
Turbidity (NTU)	12		254	201	28/825	98/273		
pH (units)	12		8.22	8.25	7.66/8.87	7.97/8.41		
Dissolved Oxygen (mg/L)	12		7.45	8.25	3.6/10.7	5.05/9.39		
Hardness (mg/L)	12		162	153	75/274	129/186		
Minerals	Total Dissolved Solids (mg/L)	12	351	290	240/751	272/314		
	Specific Conductivity (uS/cm)	12	510	414	249/1348	354/550		
	Chloride (mg/L)	12	66	34	16/261	24/59		
	Sulfate (mg/L)	12	60	56	27/96	35/86		
Nutrients	Total Phosphorus (mg/L)	12	0.251	0.191	<0.05/0.55	0.122/0.409		
	Total Nitrogen (mg/L)	12	1.85	1.61	0.94/2.85	1.48/2.46		
	Nitrate/Nitrite (mg/L)	12	0.22	0.13	<0.05/0.64	<0.05/0.41		
	Chlorophyll A (mg/m <sup>3</sup> )	12	21.5	22.6	3.4/42.9	7.4/32.1	TSI= 60.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	3	1711.0	1986.3	727/2419.6	727/2419.6		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	3	1098.3	727.0	148.3/2419.6	148.3/2419.6		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NEI	NEI	NEI	NEI						NEI	NEI	NEI
	Aesthetics												NEI
	Agriculture					NEI		NEI	NEI				
	Primary Body Contact Recreation									NEI			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NEI								
	<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes										

# East Cache Creek at Walters



Sample Record	Times Visited	Station ID
November 1998 - Current	150	311300010020-001AT

Stream Data	County	Cotton	<a href="#">View Site Data</a>
	Location	East of the Town of Walters on State Highway 53	
	Latitude/Longitude	34.36188194, -98.28233417	
	Planning Watershed	Beaver-Cache (8-digit HUC -11130202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	130	18.4	18.9	2.1/35.4	11.2/26.3
Turbidity (NTU)	131		86	56	5/809	28/89	35% of values > OWQS	
pH (units)	129		7.90	7.88	7.37/8.64	7.7/8.08		
Dissolved Oxygen (mg/L)	130		8.29	7.56	3.39/16.1	6.46/10.13		
Hardness (mg/L)	131		219	204	95/638	174/248		
Minerals	Total Dissolved Solids (mg/L)	71	471	451	154/916	378/578		
	Specific Conductivity (uS/cm)	129	743	746	160/1893	582/872		
	Chloride (mg/L)	135	74	76	<5/194	44/93		
	Sulfate (mg/L)	135	93	87	31/326	67/106		
Nutrients	Total Phosphorus (mg/L)	135	1.024	0.945	0.047/3.58	0.459/1.45		
	Total Nitrogen (mg/L)	135	4.12	3.70	0.68/11.8	1.87/5.56		
	Nitrate/Nitrite (mg/L)	135	2.82	2.37	<0.05/9.93	0.87/4.15		
	Chlorophyll A (mg/m <sup>3</sup> )	29	14.7	8.4	1/77.7	5.3/17	TSI = 56.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	2363.7	485.0	109/43000	200/1100	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	337.2	109.0	<10/4352	60.3/246.6		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes											

# Elk River at Tiff City (MO)



Sample Record	Times Visited	Station ID
May 1999 – December 2012	197	121600030440-001AT

Stream Data	County	McDonald	<a href="#">View Site Data</a>
	Location	Southeast of the Town of Tiff City (MO) on SH 43	
	Latitude/Longitude	36.6314, -94.5867	
	Planning Watershed	Grand (8-digit HUC -11070208)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	114	17.5	17.0	4.1/32.9	11.2/24.0
Turbidity (NTU)	111		4	2	1/26	2/4		
pH (units)	113		7.95	7.91	6.64/8.89	7.74/8.18		
Dissolved Oxygen (mg/L)	114		9.63	9.58	0.02/19.55	7.68/11.25		
Hardness (mg/L)	113		139	139	15/240	127/153		
Minerals	Total Dissolved Solids (mg/L)	114	185.2	179.5	105.0/331.0	167.0/201.3		
	Specific Conductivity (uS/cm)	113	291.8	285.3	3.0/790.0	261.2/316.0		
	Chloride (mg/L)	100	11.0	<10.0	<10.0/19.0	<10.0/10.3		
	Sulfate (mg/L)	100	10.8	<10.0	<10.0/22.7	<10.0/10.6		
Nutrients	Total Phosphorus (mg/L)	114	0.101	0.056	<0.005/0.559	0.031/0.122		
	Total Nitrogen (mg/L)	116	1.694	1.650	<0.150/4.520	1.044/2.168		
	Nitrate/Nitrite (mg/L)	110	1.528	1.528	<0.050/4.280	0.901/2.016		
	Chlorophyll A (mg/m <sup>3</sup> )	50	2.6	1.2	<0.1/37.4	0.7/2.0	TSI=42.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	32	112.6	45.5	<10.0/1300.0	<10.0/90.8		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	32	79.6	25.5	<10.0/563.0	<10.0/51.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	S						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										S			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes											

# Elk Creek at Roosevelt



Sample Record	Times Visited	Station ID
March 2006 - Current	120	311500030010-002AT

Stream Data	County	Kiowa	<a href="#">View Site Data</a>
	Location	West of the Town of Roosevelt off State Highway 19	
	Latitude/Longitude	34.91426897, -99.1137584	
	Planning Watershed	Southwest (8-digit HUC -11120303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	98	17.6	18.9	-0.7/31.1	9.3/25.5
Turbidity (NTU)	102		111	39	3/>1000	20/72	30% of values > OWQS	
pH (units)	97		8.17	8.20	7.45/8.55	8.08/8.31		
Dissolved Oxygen (mg/L)	98		9.59	9.07	3.58/17.43	6.84/12.3		
Hardness (mg/L)	102		753	738	212/1980	508/941		
Minerals	Total Dissolved Solids (mg/L)	106	1176	1175	200/2960	855/1503		
	Specific Conductivity (uS/cm)	99	1669	1761	375/3098	1242/2055		
	Chloride (mg/L)	108	133	127	24/428	93/159		
	Sulfate (mg/L)	108	492	482	67/1070	290/680		
Nutrients	Total Phosphorus (mg/L)	67	0.140	0.114	<0.005/0.614	0.078/0.168		
	Total Nitrogen (mg/L)	68	1.39	1.32	0.6/2.63	0.99/1.73		
	Nitrate/Nitrite (mg/L)	68	0.32	0.05	<0.05/1.41	<0.05/0.57		
	Chlorophyll A (mg/m <sup>3</sup> )	40	34.7	29.2	0.4/91.7	13.1/45.7	TSI=65.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	13	180.1	85.0	<10/703	41/288.9	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	13	143.2	85.0	<10/629.4	41/207		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	NS						S	NS
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish &amp; Wildlife Propagation not supporting for Selenium</i>											

# Elm Fork of the Red River at Carl



Sample Record	Times Visited	Station ID
May 2006 - Current	112	31180000010-002RS

Stream Data	County	Harmon	<a href="#">View Site Data</a>
	Location	North of the Town of Carl on State Highway 30	
	Latitude/Longitude	35.011719, -99.903717	
	Planning Watershed	Southwest (8-digit HUC -11120304)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	99	19.5	21.8	-0.9/37.6	10.3/28.2
Turbidity (NTU)	102		44	5	1/>1000	3/8		
pH (units)	98		7.78	7.89	6.8/8.25	7.63/8.01		
Dissolved Oxygen (mg/L)	100		7.45	7.63	0.91/13.18	5.47/9.33		
Hardness (mg/L)	103		4460	3380	870/13670	2620/4950		
Minerals	Total Dissolved Solids (mg/L)	105	54989	27400	900/270000	17750/58950	23% of values > OWQS	
	Specific Conductivity (uS/cm)	100	67524	45018	1678/235299	27935/102689		
	Chloride (mg/L)	107	31438	14200	313/181000	7780/31900	98% of values > OWQS	
	Sulfate (mg/L)	106	4182	1990	138/231001	1550/2345	28% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	49	0.024	0.008	<0.005/0.47	<0.005/0.019		
	Total Nitrogen (mg/L)	53	1.71	1.43	0.43/4.78	1.1/2.11		
	Nitrate/Nitrite (mg/L)	53	0.30	0.17	<0.05/1.48	0.08/0.44		
	Chlorophyll A (mg/m <sup>3</sup> )	16	3.2	2.3	<0.1/15.2	0.6/2.8	TSI = 42.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	3	807.2	1.0	<10/2419.6	<10/2419.6		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	3	1.0	1.0	<10/<10	<10/<10		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	NS	NS						NS	S
Aesthetics													S
Agriculture						NS		NS	NS				
Primary Body Contact Recreation										NEI			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish &amp; Wildlife Propagation not supporting for Selenium</i>											

# Elm Fork of the Red River at Granite



Sample Record	Times Visited	Station ID
June 2004 - Current	129	31180000010-002AT

Stream Data	County	Bryan	<a href="#">View Site Data</a>
	Location	South of the city of Granite on State Highway 6	
	Latitude/Longitude	34.92637482, -99.50197667	
	Planning Watershed	Southwest (8-digit HUC - 11120304)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	106	17.8	18.5	-0.1/35.3	8.7/25.4
Turbidity (NTU)	109		81	12	2/1001	5/28		
pH (units)	106		7.92	7.92	7.2/8.91	7.8/8.02		
Dissolved Oxygen (mg/L)	106		9.11	9.43	2.24/15.84	7.57/10.69		
Hardness (mg/L)	108		2253	2250	240/7140	1803/2650		
Minerals	Total Dissolved Solids (mg/L)	110	12981	12500	890/35400	8125/15850		
	Specific Conductivity (uS/cm)	106	20579	19828	1413/55147	13283/24806		
	Chloride (mg/L)	112	6485	6250	192/22000	3178/7885		
	Sulfate (mg/L)	112	1404	1450	126/2520	1195/1623		
Nutrients	Total Phosphorus (mg/L)	66	0.066	0.026	<0.005/1.7	0.015/0.047		
	Total Nitrogen (mg/L)	69	1.12	0.97	0.51/5.42	0.78/1.22		
	Nitrate/Nitrite (mg/L)	69	0.23	0.06	<0.05/1.35	0.05/0.3		
	Chlorophyll A (mg/m <sup>3</sup> )	41	9.9	5.6	0.5/73.9	2.7/9.5	TSI= 53.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	15	803.0	158.0	<10/2419.6	52/2014	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	15	2826.0	1782.0	278/15531	733/2495	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						NS	NS	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead  
 Fish & Wildlife Propagation not supporting for Selenium

# Flint Creek at Flint



Sample Record	Times Visited	Station ID
November 1998 - Current	181	121700060010-001AT

Stream Data	County	Delaware	<a href="#">View Site Data</a>
	Location	North of the Town of Flint on county road	
	Latitude/Longitude	36.1867733, -94.70680493	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	119	16.8	16.4	2.5/28.7	11/22.8
Turbidity (NTU)	119		3	1	1/58	1/2		
pH (units)	118		7.65	7.67	6.44/8.79	7.41/7.88		
Dissolved Oxygen (mg/L)	119		9.36	9.13	4.97/14.94	7.86/10.69		
Hardness (mg/L)	121		114	114	<10/218	103/124		
Minerals	Total Dissolved Solids (mg/L)	21	183	159	112/552	148/186		
	Specific Conductivity (uS/cm)	117	291	293	152/452	259/326		
	Chloride (mg/L)	100	15	14	<5/43	10/18		
	Sulfate (mg/L)	100	17	15	<5/69	11/20		
Nutrients	Total Phosphorus (mg/L)	131	0.199	0.163	0.055/1.45	0.132/0.197	See Notes	
	Total Nitrogen (mg/L)	125	3.07	2.95	0.97/7.95	2.43/3.7		
	Nitrate/Nitrite (mg/L)	127	2.85	2.73	0.8/7.55	2.17/3.41		
	Chlorophyll A (mg/m <sup>3</sup> )	66	1.0	0.7	<0.1/4.2	0.5/1.2	TSI= 30.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	63	570.5	52.0	<10/18000	13.4/120	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	63	199.7	31.0	<10/4611	<10/74	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus	
	Fish & Wildlife Propagation		S	S	S	S						S	S	S	
Aesthetics													S	NS	
Agriculture						S		S	S						
Primary Body Contact Recreation										NS					
Public & Private Water Supply					S					S					
Fish Consumption					S										
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> 100%(72 of 72) of rolling Geo. Mean exceed OWQS criterion of 0.037 ppm													

# Fourche-Maline Creek at Red Oak



Sample Record	Times Visited	Station ID
November 1998 - Current	163	220100040020-001AT

Stream Data	County	Latimer	<a href="#">View Site Data</a>
	Location	S.E. of the Town of Red Oak off US Highway 270	
	Latitude/Longitude	34.91232472, -95.15608416	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	132	17.5	18.7	1/31.6	10.1/24
Turbidity (NTU)	136		39	29	5/390	18/44		
pH (units)	133		7.14	7.03	5.77/8.76	6.82/7.48		
Dissolved Oxygen (mg/L)	132		6.08	6.09	0.84/15.69	3.11/8.53	35% of values < OWQS	
Hardness (mg/L)	133		53	48	<10/212	33/64		
Minerals	Total Dissolved Solids (mg/L)	36	102	99	50/175	78/123		
	Specific Conductivity (uS/cm)	131	158	134	11/1106	98/196		
	Chloride (mg/L)	101	9	10	<5/22	7/10		
	Sulfate (mg/L)	102	22	21	10/49	15/25		
Nutrients	Total Phosphorus (mg/L)	133	0.085	0.070	<0.005/0.867	0.047/0.092		
	Total Nitrogen (mg/L)	131	0.78	0.76	0.16/1.7	0.54/0.97		
	Nitrate/Nitrite (mg/L)	133	0.15	0.12	<0.05/0.97	<0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	15	8.8	3.2	1/34	2.3/13.4	TSI = 52.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	33	470.8	100.0	<10/8000	50.4/273.5	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	33	215.6	85.0	<10/1986.3	24.3/227.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	NS	NS						S	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish and Wildlife Propagation not supporting for Lead</i>											

# Glover River at Glover



Sample Record	Times Visited	Station ID
November 1998 - Current	178	410210080010-001AT

Stream Data	County	McCurtain	<a href="#">View Site Data</a>
	Location	West of the Town of Broken Bow on State Highway 3	
	Latitude/Longitude	34.09774144, -94.90248786	
	Planning Watershed	Southeast (8-digit HUC - 11140107)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	137	19.8	20.0	1.8/34	12.1/27.5
Turbidity (NTU)	141		11	6	1/89	4/11		
pH (units)	137		7.28	7.19	5.07/9.26	7/7.5		
Dissolved Oxygen (mg/L)	137		8.48	8.67	2.52/14.41	6.96/9.87		
Hardness (mg/L)	139		26	16	<10/231	12/29		
Minerals	Total Dissolved Solids (mg/L)	24	45	44	25/95	34/55		
	Specific Conductivity (uS/cm)	137	55	46	0/437	35/70		
	Chloride (mg/L)	87	8	10	<5/18	<5/10		
	Sulfate (mg/L)	87	9	10	<5/34	6/10		
Nutrients	Total Phosphorus (mg/L)	133	0.028	0.018	<0.005/0.5	0.013/0.028		
	Total Nitrogen (mg/L)	131	0.47	0.41	<0.05/1.92	0.28/0.57		
	Nitrate/Nitrite (mg/L)	131	0.16	<0.05	<0.05/1.42	<0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	67	2.2	2.0	<0.1/8.7	0.8/3	TSI=38.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	41	51.9	20.0	<10/400	<10/57.5		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	41	40.1	18.5	<10/354	<10/31		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish & Wildlife Propagation not supporting for Lead

# Honey Creek at Grove



Sample Record	Times Visited	Station ID
December 1998-June 2006	108	121600030290-001AT

Stream Data	County	Delaware	<a href="#">View Site Data</a>
	Location	Southeast of the City of Grove on County Road N4670	
	Latitude/Longitude	36.54773713, -94.12072263	
	Planning Watershed	Grand (8-digit HUC - 11070206)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	89	16.6	16.7	6/27	11.3/21.4
Turbidity (NTU)	89		3	2	1/24	1/4		
pH (units)	89		7.70	7.65	6.29/9.04	7.5/7.89		
Dissolved Oxygen (mg/L)	88		8.72	8.35	4.38/16.51	7.37/10.03		
Hardness (mg/L)	89		150	150	18/260	128/170		
Minerals	Total Dissolved Solids (mg/L)	18	228	230	102/367	179/265		
	Specific Conductivity (uS/cm)	89	495	451	182/929	370/626		
	Chloride (mg/L)	86	58	45	<5/148	27/92		
	Sulfate (mg/L)	86	35	28	<5/112	17/50		
Nutrients	Total Phosphorus (mg/L)	93	0.088	0.074	0.025/0.403	0.05/0.099		
	Total Nitrogen (mg/L)	87	2.87	2.73	0.19/9	2.05/3.18		
	Nitrate/Nitrite (mg/L)	88	2.55	2.31	<0.05/8.71	1.69/2.91		
	Chlorophyll A (mg/m <sup>3</sup> )	28	2.3	0.7	<0.1/17.9	0.4/1.2	TSI= 38.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	2107.2	200.0	41/35000	89.5/700	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	211.2	103.0	<10/2046	46.5/210.5	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Illinois River at Tahlequah

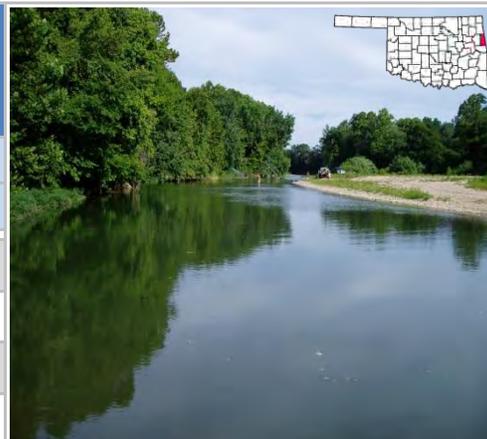


Sample Record		Times Visited	Station ID
November 1998 - Current		181	121700030010-001AT
Stream Data	County	Cherokee	<a href="#">View Site Data</a>
	Location	East of the Town of Tahlequah on US Highway 62	
	Latitude/Longitude	35.92606447, -94.92380373	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	121	17.4	17.2	0.8/31.7	10.9/23.9
Turbidity (NTU)	121		7	4	1/84	3/6		
pH (units)	119		7.86	7.82	6.47/9.29	7.56/8.1		
Dissolved Oxygen (mg/L)	121		9.88	10.00	4.66/15.88	7.63/11.97		
Hardness (mg/L)	121		114	113	69/161	106/123		
Minerals	Total Dissolved Solids (mg/L)	21	172	141	104/565	132/168		
	Specific Conductivity (uS/cm)	121	265	270	66/713	237/292		
	Chloride (mg/L)	100	11	10	<5/24	8/13		
	Sulfate (mg/L)	100	14	13	<5/48	11/15		
Nutrients	Total Phosphorus (mg/L)	128	0.085	0.074	<0.005/0.438	0.044/0.11	See Notes	
	Total Nitrogen (mg/L)	127	1.77	1.72	0.4/3.76	1.16/2.28		
	Nitrate/Nitrite (mg/L)	128	1.52	1.52	0.23/3.61	0.95/1.97		
	Chlorophyll A (mg/m <sup>3</sup> )	66	3.4	2.0	<0.1/46.4	1.2/3.1	TSI=42.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	63	153.7	20.0	<10/2500	<10/100		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	63	63.1	<10.0	<10/884	<10/41		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	S						S	S	S	
	Aesthetics												S	NS
	Agriculture					S		S	S					
	Primary Body Contact Recreation									S				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				S									
	<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes	92.5%(74 of 80) of 3-month rolling Geo. Mean above OWQS Criterion of 0.037 ppm										

# Illinois River at Watts



Sample Record	Times Visited	Station ID
November 1998 - Current	180	121700030350-001AT

Stream Data	County	Adair	<a href="#">View Site Data</a>
	Location	North of the Town of Watts on US Highway 59	
	Latitude/Longitude	36.12994064, -94.57151225	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments	
		In-Situ	Water Temperature (°C)	121	17.0	16.1	2/31.5	10.5/23.7	
			Turbidity (NTU)	120	11	7	2/95	4/13	
			pH (units)	120	7.89	7.92	6.51/9.03	7.68/8.1	
			Dissolved Oxygen (mg/L)	121	10.50	9.99	4.51/18.88	8.6/11.81	
			Hardness (mg/L)	122	126	126	<10/215	113/137	
		Minerals	Total Dissolved Solids (mg/L)	21	188	171	116/566	145/202	
			Specific Conductivity (uS/cm)	121	305	310	149/713	273/338	
			Chloride (mg/L)	99	13	13	<5/28	10/17	
			Sulfate (mg/L)	99	16	14	7/97	12/18	
		Nutrients	Total Phosphorus (mg/L)	127	0.156	0.110	<0.005/1.153	0.063/0.223	See Notes
			Total Nitrogen (mg/L)	126	2.52	2.46	0.86/5.06	2.03/2.9	
			Nitrate/Nitrite (mg/L)	127	2.18	2.13	0.65/4.64	1.7/2.55	
			Chlorophyll A (mg/m <sup>3</sup> )	66	3.0	2.2	<0.1/15.3	1.4/3.3	TSI=41.3
		Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	63	575.4	20.0	<10/15531	<10/100	Mean > OWQS
			E. Coli (cfu/100ml)(* -Geo. Mn.)	63	377.6	20.0	<10/12997	<10/63	Mean > OWQS

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	S						S	S	S	
	Aesthetics												S	NS
	Agriculture					S		S	S					
	Primary Body Contact Recreation									NS				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				S									

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** 92%(76 of 83) of rolling Geo. Mean exceed OWQS criterion of 0.037 ppm

# Island Bayou at Albany



Sample Record	Times Visited	Station ID
November 1998 - Current	19	410700000040-001AT

Stream Data	County	Bryan	View Site Data
	Location	South of the Town of Albany off State Highway 70E	
	Latitude/Longitude	33.853576, -96.16512	
	Planning Watershed	Blue-Boggy (8-digit HUC - 11140101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	14	17.4	19.7	2.9/28.1	9.5/25.6
Turbidity (NTU)	14		98	13	6/798	10/34		
pH (units)	14		7.75	7.78	7.2/8.2	7.53/8.02		
Dissolved Oxygen (mg/L)	14		8.76	7.28	5.55/15.22	6.26/11.43		
Hardness (mg/L)	14		209	224	59/289	187/263		
Minerals	Total Dissolved Solids (mg/L)	16	388	406	150/528	328/492		
	Specific Conductivity (uS/cm)	14	694	722	132/1037	559/920		
	Chloride (mg/L)	16	73	71	10/134	39/116		
	Sulfate (mg/L)	16	80	79	44/126	69/93		
Nutrients	Total Phosphorus (mg/L)	16	0.428	0.347	0.006/1.2	0.195/0.724		
	Total Nitrogen (mg/L)	16	1.60	1.09	0.88/3.97	0.97/1.97		
	Nitrate/Nitrite (mg/L)	16	0.37	0.15	<0.05/1.69	<0.05/0.73		
	Chlorophyll A (mg/m <sup>3</sup> )	16	3.7	3.1	<0.1/12.5	1.6/4.9	TSI = 43.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	3	495.5	488.4	131.7/866.4	131.7/866.4		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	3	379.8	307.6	218.7/613.1	218.7/613.1		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NEI	NEI	NEI	NEI						NEI	NEI	NEI
	Aesthetics												NEI
	Agriculture					NEI		NEI	NEI				
	Primary Body Contact Recreation									NEI			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NEI								

S = Fully Supporting  
NS = Not Supporting  
NEI = Not Enough Information

Notes

# Kiamichi River at Antlers



Sample Record	Times Visited	Station ID
November 1998 - Current	164	410300030010-001AT

Stream Data	County	Pushmataha	<a href="#">View Site Data</a>
	Location	North of the Town of Antlers on US Highway 271	
	Latitude/Longitude	34.24876734, -95.60509256	
	Planning Watershed	Southeast (8-digit HUC - 11140105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	136	18.9	18.8	4.4/34	11.8/25.6
Turbidity (NTU)	139		27	18	2/173	11/29		
pH (units)	135		7.32	7.31	5.04/9.31	6.91/7.72		
Dissolved Oxygen (mg/L)	135		8.36	7.91	2.47/20.26	7.07/9.72		
Hardness (mg/L)	138		25	18	<10/324	13/26		
Minerals	Total Dissolved Solids (mg/L)	38	52	54	30/77	46/59		
	Specific Conductivity (uS/cm)	136	53	50	0/390	32/69		
	Chloride (mg/L)	108	8	10	<5/10	<5/10		
	Sulfate (mg/L)	108	13	11	<5/33	10/14		
Nutrients	Total Phosphorus (mg/L)	141	0.047	0.034	<0.005/0.328	0.024/0.053		
	Total Nitrogen (mg/L)	138	0.58	0.52	<0.05/1.85	0.39/0.72		
	Nitrate/Nitrite (mg/L)	139	0.12	<0.05	<0.05/1.49	<0.05/0.15		
	Chlorophyll A (mg/m <sup>3</sup> )	64	14.1	4.0	0.5/520	2.1/6.6	TSI=56.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	32	394.6	30.0	<10/6000	<10/275		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	32	303.9	31.0	<10/4106	<10/93.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish consumption and Fish & Wildlife Propagation not supporting for Lead

# Kiamichi River at Big Cedar



Sample Record	Times Visited	Station ID
November 1998 - Current	165	410310020010-001AT

Stream Data	County	LeFlore	<a href="#">View Site Data</a>
	Location	East of the Town of Big Cedar on State Highway 63	
	Latitude/Longitude	34.63884253, -94.61226313	
	Planning Watershed	Southeast (8-digit HUC - 11140105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	132	17.1	17.2	4.2/33.5	10.8/22.5
Turbidity (NTU)	135		7	6	1/64	4/8		
pH (units)	133		7.02	6.87	5.71/9.02	6.59/7.4	22% of values < OWQS	
Dissolved Oxygen (mg/L)	133		8.47	8.53	3.02/15.05	6.88/10.09		
Hardness (mg/L)	133		16	<10	<10/134	10/12		
Minerals	Total Dissolved Solids (mg/L)	21	30	25	11/60	22/35		
	Specific Conductivity (uS/cm)	130	20	20	0/163	4/26		
	Chloride (mg/L)	83	7	<5	<5/10	<5/10		
	Sulfate (mg/L)	83	8	9	<5/23	<5/10		
Nutrients	Total Phosphorus (mg/L)	133	0.015	0.011	<0.005/0.076	0.006/0.018		
	Total Nitrogen (mg/L)	126	0.28	0.25	<0.05/1.13	0.16/0.37		
	Nitrate/Nitrite (mg/L)	127	0.07	<0.05	<0.05/0.7	<0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	30	1.1	0.5	<0.1/7	0.2/1	TSI=31.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	37	835.9	25.3	<10/24000	<10/78		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	37	99.2	<10.0	<10/1317	<10/41.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	NS	S	NS						S	NS	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish and Wildlife Propagation not supporting for Copper, Lead, Silver, and Zinc

# Kiamichi River at Fort Towson



Sample Record	Times Visited	Station ID
February 2002 - 2012	105	410300010010-002AT

Stream Data	County	Bryan	<a href="#">View Site Data</a>
	Location	South of the Town of Fort Towson on State Highway 109	
	Latitude/Longitude	33.96940193, -95.27829905	
	Planning Watershed	Southeast (8-digit HUC - 11140150)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	85	18.9	19.1	5.5/30.9	11.8/26.3
Turbidity (NTU)	86		43	35	8/260	24/50		
pH (units)	85		7.59	7.63	6.43/8.6	7.21/7.91		
Dissolved Oxygen (mg/L)	85		8.83	8.56	4.13/15.07	6.79/10.5		
Hardness (mg/L)	85		41	31	12/235	24/44		
Minerals	Total Dissolved Solids (mg/L)	16	68	66	45/93	58/77		
	Specific Conductivity (uS/cm)	85	76	74	0/299	51/94		
	Chloride (mg/L)	70	11	10	5/69	10/10		
	Sulfate (mg/L)	70	18	17	10/56	13/22		
Nutrients	Total Phosphorus (mg/L)	86	0.069	0.061	0.022/0.259	0.043/0.081		
	Total Nitrogen (mg/L)	85	0.64	0.57	0.13/1.47	0.47/0.74		
	Nitrate/Nitrite (mg/L)	85	0.11	0.05	<0.05/1.02	<0.05/0.15		
	Chlorophyll A (mg/m <sup>3</sup> )	33	9.7	7.2	1/34.3	3.1/12.7	TSI=52.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	24	418.8	10.0	<10/6700	<10/65		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	24	60.3	30.5	<10/528	<10/71.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NS		S			S			
	Fish Consumption				NS								

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 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** Fish consumption not supporting for Lead  
 Fish and Wildlife Propagation not supporting for Lead  
 Public and Private Water Supply not supporting for Lead

# Kiamichi River at Tuskahoma



Sample Record	Times Visited	Station ID
December 1998 - Current	136	410310010010-001AT

Stream Data	County	Pushmataha	<a href="#">View Site Data</a>
	Location	South of the Town of Tuskahoma off US Highway 271	
	Latitude/Longitude	34.61236033, -95.27727429	
	Planning Watershed	Southeast (8-digit HUC - 11140105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	115	19.3	19.0	3.4/34	12.6/26.7
Turbidity (NTU)	118		21	13	1/159	10/24		
pH (units)	116		7.24	7.21	5.47/8.72	6.91/7.64		
Dissolved Oxygen (mg/L)	116		8.43	8.38	3.08/17.75	6.99/9.61		
Hardness (mg/L)	116		20	15	<10/144	11/22		
Minerals	Total Dissolved Solids (mg/L)	19	43	41	30/65	38/45		
	Specific Conductivity (uS/cm)	115	42	41	0/200	19/54		
	Chloride (mg/L)	83	7	7	<5/10	<5/10		
	Sulfate (mg/L)	82	12	10	<5/41	8/13		
Nutrients	Total Phosphorus (mg/L)	126	0.041	0.032	<0.005/0.506	0.023/0.047		
	Total Nitrogen (mg/L)	115	0.47	0.40	<0.05/1.72	0.28/0.56		
	Nitrate/Nitrite (mg/L)	116	0.10	<0.05	<0.05/0.86	<0.05/0.07		
	Chlorophyll A (mg/m <sup>3</sup> )	30	6.5	2.5	0.3/32.4	1.2/5.7	TSI=49.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	1539.2	45.5	<10/35000	<10/88		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	318.7	41.0	<10/4611	17.5/92		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish and Wildlife Propagation not supporting for Lead and Silver

# Lee Creek at Short



Sample Record	Times Visited	Station ID
January 2003 - Present	169	220200050010-001AT

Stream Data	County	Sequoyah	<a href="#">View Site Data</a>
	Location	West of the Town of Short on State Highway 101	
	Latitude/Longitude	35.56589868, -94.53152717	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110104)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	128	17.0	16.0	0.2/32.5	9.8/24.8
Turbidity (NTU)	128		9	5	1/124	4/8		
pH (units)	128		7.57	7.58	6.31/8.7	7.32/7.84		
Dissolved Oxygen (mg/L)	128		9.38	9.15	5.23/13.94	7.56/11.17		
Hardness (mg/L)	126		47	44	<10/130	36/55		
Minerals	Total Dissolved Solids (mg/L)	6	54	57	40/66	42/64		
	Specific Conductivity (uS/cm)	128	94	94	6/266	72/109		
	Chloride (mg/L)	73	10	10	10/10	10/10		
	Sulfate (mg/L)	73	11	10	10/49	10/10		
Nutrients	Total Phosphorus (mg/L)	128	0.013	0.010	<0.005/0.149	<0.005/0.015		
	Total Nitrogen (mg/L)	128	0.31	0.26	<0.05/1.72	0.16/0.35		
	Nitrate/Nitrite (mg/L)	128	0.15	0.06	<0.05/1.62	<0.05/0.17		
	Chlorophyll A (mg/m <sup>3</sup> )	97	2.6	0.9	<0.1/92	0.4/1.7	TSI=40.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	52	437.4	<10.0	<10/7100	<10/57.5		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	52	126.5	<10.0	<10/2359	<10/39		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S	
	Aesthetics												NEI	NEI
	Agriculture					S		S	S					
	Primary Body Contact Recreation									S				
	Public & Private Water Supply				S									
	Fish Consumption				S									

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish & Wildlife Propagation not supporting for Lead

# Little River at Cloudy



Sample Record	Times Visited	Station ID
November 1998 - Current	155	410210020140-001AT

Stream Data	County	Pushmataha	<a href="#">View Site Data</a>
	Location	East of the Town of Cloudy on Cloudy Road	
	Latitude/Longitude	34.32564049, -95.19911409	
	Planning Watershed	southeast (8-digit HUC - 11140107)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	126	19.4	19.6	2/36.3	12/26.9
Turbidity (NTU)	125		12	9	1/91	5/15	25% of values > OWQS	
pH (units)	125		7.20	7.16	5.16/8.63	6.87/7.47		
Dissolved Oxygen (mg/L)	125		8.98	8.93	2.81/14.13	7.63/10.35		
Hardness (mg/L)	127		16	<10	<10/200	10/13		
Minerals	Total Dissolved Solids (mg/L)	40	44	43	20/94	32/53		
	Specific Conductivity (uS/cm)	126	31	33	0/130	16/41		
	Chloride (mg/L)	99	8	10	<5/17	<5/10		
	Sulfate (mg/L)	99	10	10	<5/46	7/10		
Nutrients	Total Phosphorus (mg/L)	126	0.030	0.019	<0.005/1.043	0.013/0.025		
	Total Nitrogen (mg/L)	120	0.39	0.35	<0.05/1.45	0.25/0.49		
	Nitrate/Nitrite (mg/L)	120	0.10	<0.05	<0.05/0.84	<0.05/0.12		
	Chlorophyll A (mg/m <sup>3</sup> )	46	2.9	1.1	<0.1/45.4	0.7/1.9	TSI=41.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	35	248.1	70.0	<10/2800	<10/160		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	35	117.0	17.1	<10/1012	<10/105		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish consumption not supporting for Lead  
 Fish and Wildlife Propagation not supporting for Copper, Lead, Zinc, and Silver

# Little River at Holly Creek



Sample Record	Times Visited	Station ID
November 2003 - Current	112	410200010200-002AT

Stream Data	County	McCurtain	<a href="#">View Site Data</a>
	Location	North of the Town of Idabel on County Road 4615	
	Latitude/Longitude	33.93595796, -94.82864529	
	Planning Watershed	Southeast (8-digit HUC - 11140107)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	81	18.7	19.7	4.2/32.3	11.8/25.9
Turbidity (NTU)	85		17	13	0/65	10/21	38% of values > OWQS	
pH (units)	82		7.25	7.19	6.15/8.37	6.9/7.56		
Dissolved Oxygen (mg/L)	81		7.79	7.30	3.72/12.64	5.9/9.89		
Hardness (mg/L)	82		37	25	<10/251	17/43		
Minerals	Total Dissolved Solids (mg/L)	17	56	52	34/104	43/66		
	Specific Conductivity (uS/cm)	81	91	74	0/257	46/126		
	Chloride (mg/L)	53	13	10	10/31	10/13		
	Sulfate (mg/L)	52	12	11	10/22	10/13		
Nutrients	Total Phosphorus (mg/L)	84	0.037	0.033	<0.005/0.14	0.024/0.044		
	Total Nitrogen (mg/L)	83	0.57	0.53	<0.05/1.4	0.37/0.69		
	Nitrate/Nitrite (mg/L)	83	0.14	0.07	<0.05/0.82	<0.05/0.18		
	Chlorophyll A (mg/m <sup>3</sup> )	46	6.6	5.8	0.3/48.2	2.3/8.8	TSI=49.1	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	35	110.5	20.0	<10/2200	<10/41		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	35	83.0	25.6	<10/1296	<10/52		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish and Wildlife Propagation not supporting for Lead and Silver

# Little Lee Creek at Nicut



Sample Record	Times Visited	Station ID
February 2008 - Current	96	220200050040-001AT

Stream Data	County	Sequoyah	<a href="#">View Site Data</a>
	Location	West of the Town of Short on State Highway 101	
	Latitude/Longitude	35.58, -94.56	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110104)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	83	16.5	15.8	0.3/31.4	9.1/23.3
Turbidity (NTU)	87		10	4	1/223	2/5		
pH (units)	84		7.54	7.53	6.3/8.35	7.34/7.82		
Dissolved Oxygen (mg/L)	84		9.86	9.81	5.01/14.47	8.22/11.83		
Hardness (mg/L)	83		65	63	36/140	53/72		
Minerals	Total Dissolved Solids (mg/L)	11	71	72	50/94	60/76		
	Specific Conductivity (uS/cm)	83	138	135	75/314	115/152		
	Chloride (mg/L)	33	10	10	10/10	10/10		
	Sulfate (mg/L)	33	10	10	10/15	10/10		
Nutrients	Total Phosphorus (mg/L)	82	0.016	<0.005	<0.005/0.259	<0.005/0.009		
	Total Nitrogen (mg/L)	81	0.28	0.20	0.15/1.41	0.16/0.29		
	Nitrate/Nitrite (mg/L)	81	0.12	<0.05	<0.05/0.96	<0.05/0.13		
	Chlorophyll A (mg/m <sup>3</sup> )	60	0.8	0.6	<0.1/4.4	0.3/0.9	TSI=28.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	14	220.5	<10.0	<10/2419.6	<10/22.8		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	14	540.3	10.4	<10/6488	<10/86.2		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	S						S	S	S	
	Aesthetics												S	
	Agriculture					S		S	S					
	Primary Body Contact Recreation									NEI				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				S									
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes												

# Little River at Sasakwa



Sample Record	Times Visited	Station ID
November 1998 - Current	152	520800010010-001AT

Stream Data	County	Seminole	<a href="#">View Site Data</a>
	Location	North of the Town of Sasakwa on State Highway 56	
	Latitude/Longitude	34.96534987, -96.5120113	
	Planning Watershed	Central (8-digit HUC - 11090204)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	131	17.8	19.0	0.3/32.3	10.8/26
Turbidity (NTU)	128		156	44	2/>1000	18/146	19% of values > OWQS	
pH (units)	130		8.06	8.07	6.84/8.67	7.93/8.26		
Dissolved Oxygen (mg/L)	131		9.04	8.63	3.88/17.75	7.43/10.29		
Hardness (mg/L)	131		311	302	72/980	220/376		
Minerals	Total Dissolved Solids (mg/L)	68	661	665	200/2290	441/795		
	Specific Conductivity (uS/cm)	131	1175	1183	204/4335	710/1561		
	Chloride (mg/L)	131	246	231	29/1360	138/295		
	Sulfate (mg/L)	130	42	37	10/261	30/45		
Nutrients	Total Phosphorus (mg/L)	133	0.131	0.058	<0.005/2.05	0.032/0.116		
	Total Nitrogen (mg/L)	132	0.82	0.62	<0.05/6.06	0.41/0.91		
	Nitrate/Nitrite (mg/L)	133	0.11	<0.05	<0.05/1.07	<0.05/0.12		
	Chlorophyll A (mg/m <sup>3</sup> )	30	7.1	3.2	<0.1/90.3	1.5/6.8	TSI = 49.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	32	3557.1	74.0	<10/93000	30.3/408	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	32	394.2	46.5	<10/5794	20/159.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

S = Fully Supporting  
NS = Not Supporting  
NEI = Not Enough Information

Notes

# Mountain Fork River at Eagletown



Sample Record	Times Visited	Station ID
November 1998 - Current	165	410210040010-001AT

Stream Data	County	McCurtain	<a href="#">View Site Data</a>
	Location	East of the Town of Broken Bow on US Highway 70	
	Latitude/Longitude	34.04168908, -94.62071144	
	Planning Watershed	Southeast (8-digit HUC - 11140108)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	131	16.6	16.9	2.6/29.5	12/21.1
Turbidity (NTU)	136		4	3	1/29	2/5		
pH (units)	130		7.25	7.18	4.68/9.3	6.88/7.63		
Dissolved Oxygen (mg/L)	131		9.17	9.08	4.99/12.85	7.97/10.35		
Hardness (mg/L)	132		15	<10	<10/93	10/14		
Minerals	Total Dissolved Solids (mg/L)	39	31	30	8/84	24/35		
	Specific Conductivity (uS/cm)	130	26	29	0/181	7/35		
	Chloride (mg/L)	106	8	10	<5/27	<5/10		
	Sulfate (mg/L)	106	8	10	<5/15	<5/10		
Nutrients	Total Phosphorus (mg/L)	135	0.020	0.011	<0.005/0.808	0.006/0.016		
	Total Nitrogen (mg/L)	135	0.44	0.37	<0.05/6.22	0.28/0.47		
	Nitrate/Nitrite (mg/L)	135	0.16	0.15	<0.05/0.5	0.11/0.19		
	Chlorophyll A (mg/m <sup>3</sup> )	49	1.3	1.2	<0.1/2.9	0.9/1.7	TSI=33.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	42	318.6	30.3	<10/4000	<10/193.9		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	42	78.5	20.0	<10/1956	<10/31		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S								
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish & Wildlife Propagation not supporting for Lead and Silver

# Mountain Fork River at Smithville



Sample Record		Times Visited	Station ID
November 1998 - Current		223	410210060010-001AT
Stream Data	County	McCurtain	<a href="#">View Site Data</a>
	Location	East of the Town of Smithville on State Highway 4	
	Latitude/Longitude	34.4616061, -94.63230583	
	Planning Watershed	Southeast (8-digit HUC - 11140108)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	177	18.3	18.5	0.5/33.5	10.7/26
Turbidity (NTU)	182		16	8	1/347	5/13		
pH (units)	178		7.17	7.08	4.73/9.04	6.81/7.54		
Dissolved Oxygen (mg/L)	177		8.94	8.73	3.66/19	7.25/10.4		
Hardness (mg/L)	178		16	10	<10/135	10/14		
Minerals	Total Dissolved Solids (mg/L)	23	36	36	14/59	26/45		
	Specific Conductivity (uS/cm)	177	33	36	0/180	24/42		
	Chloride (mg/L)	88	8	10	<5/28	<5/10		
	Sulfate (mg/L)	87	9	10	<5/28	6/10		
Nutrients	Total Phosphorus (mg/L)	175	0.029	0.020	<0.005/0.281	0.012/0.031		
	Total Nitrogen (mg/L)	169	0.50	0.44	<0.05/2.11	0.31/0.58		
	Nitrate/Nitrite (mg/L)	170	0.14	<0.05	<0.05/1.46	<0.05/0.19		
	Chlorophyll A (mg/m <sup>3</sup> )	102	2.8	1.9	<0.1/15.8	0.9/3.6	TSI=40.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	53	1285.4	<10.0	<10/57000	<10/56		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	53	90.9	<10.0	<10/2419.6	<10/41		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	Total Phosphorus
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S	
	Aesthetics												S	NEI
	Agriculture					S		S	S					
	Primary Body Contact Recreation									S				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				S									
<p><i>S = Fully Supporting</i>  <i>NS = Not Supporting</i>  <i>NEI = Not Enough Information</i></p>		<p><b>Notes</b> 19%(11of 57) of rolling Geo. Mean exceed OWQS criterion of 0.037 ppm            Fish and Wildlife Propagation not supporting for Copper, Lead, Silver and Zinc</p>												

# Mud Creek at Courtney



Sample Record	Times Visited	Station ID
November 1998 - Current	151	311100040010-001AT

Stream Data	County	Love	<a href="#">View Site Data</a>
	Location	Near the Town of Courtney on State Highway 32	
	Latitude/Longitude	34.004167, -97.566667	
	Planning Watershed	Lower Washita (8-digit HUC - 11130201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	133	19.1	19.3	3.4/32.6	12.6/26.7
Turbidity (NTU)	134		220	97	15/>1000	50/303	60% of values > OWQS	
pH (units)	132		7.87	7.90	7.14/8.81	7.66/8.07		
Dissolved Oxygen (mg/L)	133		6.75	6.63	1.42/17.43	5.17/8.16	13% of values > OWQS	
Hardness (mg/L)	132		241	221	30/670	137/299		
Minerals	Total Dissolved Solids (mg/L)	68	476	395	93/1310	306/558		
	Specific Conductivity (uS/cm)	132	740	659	90/2292	353/895		
	Chloride (mg/L)	132	95	69	<5/568	27/128		
	Sulfate (mg/L)	131	74	65	20/247	42/95		
Nutrients	Total Phosphorus (mg/L)	133	0.241	0.166	0.024/1.609	0.105/0.327		
	Total Nitrogen (mg/L)	132	1.36	1.12	0.3/3.85	0.82/1.77		
	Nitrate/Nitrite (mg/L)	133	0.19	0.08	<0.05/0.97	<0.05/0.32		
	Chlorophyll A (mg/m <sup>3</sup> )	14	33.1	15.6	1.8/164	6.1/52.4	TSI = 64.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	950.6	201.0	<10/17000	45.5/600	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	246.0	63.0	<10/1986	25.5/301.9		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	NS	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Muddy Boggy Creek at Atoka



Sample Record	Times Visited	Station ID
November 1998 - Current	159	410400050270-001AT

Stream Data	County	Atoka	<a href="#">View Site Data</a>
	Location	North of the Town of Atoka on US 69	
	Latitude/Longitude	34.39420542, -96.12436418	
	Planning Watershed	Blue-Boggy (8-digit HUC -11140103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	130	17.7	17.6	1.7/31.3	10.5/25.4
Turbidity (NTU)	130		136	74	5/>1000	37/148	57% of values > OWQS	
pH (units)	130		7.32	7.35	5.92/8.31	7.08/7.57		
Dissolved Oxygen (mg/L)	130		7.43	6.61	2.97/34.62	5.24/9.06		
Hardness (mg/L)	129		88	85	24/197	63/108		
Minerals	Total Dissolved Solids (mg/L)	36	194	180	51/405	140/243		
	Specific Conductivity (uS/cm)	129	250	227	62/757	151/313		
	Chloride (mg/L)	101	22	15	<5/148	10/24		
	Sulfate (mg/L)	101	53	46	16/134	34/64		
Nutrients	Total Phosphorus (mg/L)	133	0.138	0.100	<0.005/0.632	0.066/0.172		
	Total Nitrogen (mg/L)	132	1.10	1.00	0.36/4.21	0.75/1.31		
	Nitrate/Nitrite (mg/L)	132	0.15	0.12	<0.05/0.7	<0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	32	10.6	5.4	0.3/42.5	2.3/16.5	TSI=53.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	38	949.7	85.0	<10/19863	37.8/825	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	38	985.9	52.0	<10/19863	16.5/326.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	NEI	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead  
 Fish and Wildlife Propagation not supporting for Lead

# Muddy Boggy Creek at Unger



Sample Record	Times Visited	Station ID
July 1999 - Current	151	410400010070-001AT

Stream Data	County	Choctaw	<a href="#">View Site Data</a>
	Location	East of the Town of Unger on US 70	
	Latitude/Longitude	34.02512076, -95.7511845	
	Planning Watershed	Blue-Boggy (8-digit HUC -11140103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	125	18.8	18.9	2.8/36.3	11.6/26.5
Turbidity (NTU)	126		115	65	3/857	35/119	36% of values > OWQS	
pH (units)	124		7.67	7.69	6.71/8.21	7.5/7.89		
Dissolved Oxygen (mg/L)	125		8.30	7.69	3.87/40.07	6.19/10.09		
Hardness (mg/L)	126		134	137	21/268	102/168		
Minerals	Total Dissolved Solids (mg/L)	30	267	248	117/921	165/290		
	Specific Conductivity (uS/cm)	124	360	370	100/732	230/459		
	Chloride (mg/L)	94	41	30	<5/181	14/59		
	Sulfate (mg/L)	94	35	29	13/134	22/41		
Nutrients	Total Phosphorus (mg/L)	127	0.136	0.096	<0.005/1.017	0.065/0.155		
	Total Nitrogen (mg/L)	126	0.86	0.74	<0.05/2.19	0.55/1.09		
	Nitrate/Nitrite (mg/L)	126	0.14	0.08	<0.05/0.88	<0.05/0.2		
	Chlorophyll A (mg/m <sup>3</sup> )	32	9.2	8.2	<0.1/22.3	2.9/14.6	TSI = 52.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	675.6	47.4	<10/8000	17.5/576.3	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	289.1	63.0	<10/2755	<10/196		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

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 NEI = Not Enough Information

Notes

Fish consumption not supporting for Lead

# Neosho River at Chouteau



Sample Record	Times Visited	Station ID
November 1998 - Current	149	121600010280-001AT

Stream Data	County	Mayes	<a href="#">View Site Data</a>
	Location	East of the Town of Chouteau on US 412	
	Latitude/Longitude	36.17655098, -95.27570708	
	Planning Watershed	Grand (8-digit HUC - 11070209)	

	Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
In-Situ	Water Temperature ( °C)	116	17.6	17.6	3.8/35.3	10.4/24.8	
	Turbidity (NTU)	117	16	12	4/72	9/17	
	pH (units)	116	7.95	7.92	7.11/9.41	7.61/8.23	
	Dissolved Oxygen (mg/L)	116	9.42	9.17	2.45/17.25	7.4/11.39	See Notes
	Hardness (mg/L)	117	127	125	75/204	111/140	
Minerals	Total Dissolved Solids (mg/L)	20	172	162	128/240	152/196	
	Specific Conductivity (uS/cm)	116	283	279	141/535	243/319	
	Chloride (mg/L)	72	11	10	<5/26	6/15	
	Sulfate (mg/L)	72	35	31	22/157	27/35	
Nutrients	Total Phosphorus (mg/L)	122	0.242	0.136	<0.005/1.38	0.095/0.274	
	Total Nitrogen (mg/L)	122	1.22	1.17	0.49/2.41	0.86/1.54	
	Nitrate/Nitrite (mg/L)	123	0.55	0.47	<0.05/1.4	0.25/0.8	
	Chlorophyll A (mg/m <sup>3</sup> )	60	16.2	12.6	1.5/70	7.5/19.6	TSI=57.9
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	34	89.2	<10.0	<10/1400	<10/43.3	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	34	52.2	<10.0	<10/882	<10/25.1	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
		Fish & Wildlife Propagation	S	S	NS	S							S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										S			
Public & Private Water Supply					S		S			S			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes											

# Neosho River at Commerce



Sample Record	Times Visited	Station ID
October 2000 - Current	139	121600040220-001AT

Stream Data	County	Ottawa	<a href="#">View Site Data</a>
	Location	West of the Town of Commerce on County Road E60	
	Latitude/Longitude	36.92899836, -94.95707349	
	Planning Watershed	Grand (8-digit HUC - 11070206)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	112	16.7	17.6	0.3/33.2	8.2/25.2
Turbidity (NTU)	114		115	53	4/>1000	26/103	21% of values > OWQS	
pH (units)	113		7.91	7.94	6.53/9.05	7.69/8.14		
Dissolved Oxygen (mg/L)	113		9.08	8.31	3.34/15.43	7.08/11.37		
Hardness (mg/L)	113		178	177	15/300	149/221		
Minerals	Total Dissolved Solids (mg/L)	8	223	208	140/337	160/291		
	Specific Conductivity (uS/cm)	113	379	384	81/701	300/458		
	Chloride (mg/L)	84	11	10	<5/20	10/13		
	Sulfate (mg/L)	84	61	57	22/166	39/77		
Nutrients	Total Phosphorus (mg/L)	116	0.196	0.151	0.007/1.04	0.101/0.239		
	Total Nitrogen (mg/L)	116	1.43	1.20	0.3/4.42	0.73/1.9		
	Nitrate/Nitrite (mg/L)	116	0.45	0.29	<0.05/3.59	<0.05/0.66		
	Chlorophyll A (mg/m <sup>3</sup> )	75	20.4	12.4	<0.1/200	6.2/23.8	TSI=60.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	32	9258.7	50.5	<10/282000	<10/347.5	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	32	399.3	20.0	<10/8074	<10/73.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	NS	NS
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish consumption not supporting for Lead

# Neosho River at Connor Bridge



Sample Record	Times Visited	Station ID
December 1998 – March 2007	105	121600040010-001AT

Stream Data	County	Ottawa	<a href="#">View Site Data</a>
	Location	Northeast of the Town of Fairland on County Road S 590	
	Latitude/Longitude	36.79864906, -94.81927419	
	Planning Watershed	Grand (8-digit HUC -11070206)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	68	17.5	18.0	2.9/33.1	8.3/24.5
Turbidity (NTU)	68		87	37	4/>1000	17/97		
pH (units)	67		7.83	7.80	6.66/9.33	7.43/8.20		
Dissolved Oxygen (mg/L)	68		8.54	8.35	1.69/13.58	6.59/11.03		
Hardness (mg/L)	69		181	191	76/277	135/218		
Minerals	Total Dissolved Solids (mg/L)	69	233.3	235.0	88.0/413.3	192.7/272.9		
	Specific Conductivity (uS/cm)	68	375.9	377.4	137.0/860.0	301.3/448.8		
	Chloride (mg/L)	69	11.6	<10.0	<10.0/30.5	<10.0/11.6		
	Sulfate (mg/L)	69	66.4	67.4	<10.0/117.0	46.5/85.5		
Nutrients	Total Phosphorus (mg/L)	70	0.198	0.163	0.047/0.890	0.118/0.251		
	Total Nitrogen (mg/L)	68	1.285	1.180	0.310/3.140	0.770/1.543		
	Nitrate/Nitrite (mg/L)	69	0.438	0.300	<0.050/1.630	0.123/0.718		
	Chlorophyll A (mg/m <sup>3</sup> )	15	13.88	11.40	0.86/45.4	4.6/18.0	TSI=56.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	23	1697.0	<10.0	<10.0/37000.0	<10.0/30.0		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	23	152.0	<10.0	<10.0/2359.0	<10.0/52.0		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Neosho River at Langley



Sample Record	Times Visited	Station ID
December 1998 - Current	156	121600020170-001AT

Stream Data	County	Mayes	<a href="#">View Site Data</a>
	Location	South of the Town of Langley on State Highway 82	
	Latitude/Longitude	36.44372767, -95.05554329	
	Planning Watershed	Grand (8-digit HUC - 11070209)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	125	16.1	16.4	2.1/27.1	10.1/22.9
Turbidity (NTU)	128		10	7	1/59	5/11		
pH (units)	125		7.74	7.78	6.89/9.26	7.53/7.98		
Dissolved Oxygen (mg/L)	126		8.13	7.93	2.12/15.73	6.15/10.34	See Notes	
Hardness (mg/L)	127		125	122	11/236	109/141		
Minerals	Total Dissolved Solids (mg/L)	25	172	161	125/283	147/195		
	Specific Conductivity (uS/cm)	126	264	267	4/475	234/296		
	Chloride (mg/L)	101	9	10	<5/65	<5/10		
	Sulfate (mg/L)	101	28	26	17/61	23/31		
Nutrients	Total Phosphorus (mg/L)	131	0.090	0.080	<0.005/0.251	0.062/0.114		
	Total Nitrogen (mg/L)	131	1.06	0.94	0.3/3.56	0.68/1.35		
	Nitrate/Nitrite (mg/L)	132	0.56	0.49	<0.05/3.14	0.25/0.76		
	Chlorophyll A (mg/m <sup>3</sup> )	71	5.8	4.0	0.6/23.2	2.3/7.8	TSI=47.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	32	40.6	<10.0	<10/300	<10/46		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	32	15.2	<10.0	<10/86	<10/10		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	NS	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# North Canadian River at Dustin



Sample Record	Times Visited	Station ID
November 1998 – May 2008	122	520500010110-001AT

Stream Data	County	McIntosh	<a href="#">View Site Data</a>
	Location	North of the Town of Dustin on State Highway 84	
	Latitude/Longitude	35.31617996, -95.95493326	
	Planning Watershed	Eufaula (8-digit HUC - 11100302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	86	18.2	18.2	-0.5/34.4	10.8/26.2
Turbidity (NTU)	85		246	133	21/>1000	55/294	78% of values > OWQS	
pH (units)	85		8.27	8.23	7.02/9.48	7.94/8.58		
Dissolved Oxygen (mg/L)	85		9.18	8.98	3.89/16.80	7.22/10.99		
Hardness (mg/L)	87		242.4	210.0	89.0/1900.0	162.5/260.0		
Minerals	Total Dissolved Solids (mg/L)	86	454.8	451.0	127.1/800.0	367.0/581.0		
	Specific Conductivity (uS/cm)	85	724.8	709.7	198.6/1271.0	586.5/921.2		
	Chloride (mg/L)	90	107.2	112.5	14.7/218.0	72.8/137.3		
	Sulfate (mg/L)	89	98.1	89.0	33.9/316.0	60.8/118.5		
Nutrients	Total Phosphorus (mg/L)	90	0.475	0.394	0.147/1.220	0.323/0.598		
	Total Nitrogen (mg/L)	88	2.312	2.075	0.585/5.440	1.599/2.858		
	Nitrate/Nitrite (mg/L)	90	0.593	0.280	<0.050/3.490	<0.050/0.756		
	Chlorophyll A (mg/m <sup>3</sup> )	13	93.6	50.3	11.5/287.5	21.1/148.0	TSI=75.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	860.7	200.0	<10.0/12000.0	20.0/536.5	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	74.9	<10.0	<10.0/528.0	<10.0/79.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# North Canadian River at El Reno



Sample Record	Times Visited	Station ID
November 1998 - Current	152	520530000010-001AT

Stream Data	County	Canadian	<a href="#">View Site Data</a>
	Location	North of the Town of El Reno on US 81	
	Latitude/Longitude	35.56261214, -97.95884556	
	Planning Watershed	Central (8-digit HUC -11100301)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	130	17.7	18.3	-0.3/34.8	9/25.3
Turbidity (NTU)	127		50	19	2/>1000	7/47		
pH (units)	127		8.20	8.23	7.1/9.3	8.01/8.38		
Dissolved Oxygen (mg/L)	130		9.73	9.31	0.34/18.69	7.95/11.47		
Hardness (mg/L)	129		445	442	<10/1080	384/491		
Minerals	Total Dissolved Solids (mg/L)	69	846	886	326/1200	772/939		
	Specific Conductivity (uS/cm)	130	1312	1380	1/2270	1201/1494		
	Chloride (mg/L)	128	150	159	10/239	125/184		
	Sulfate (mg/L)	128	269	277	111/474	226/300		
Nutrients	Total Phosphorus (mg/L)	130	0.156	0.119	<0.005/1.45	0.065/0.216		
	Total Nitrogen (mg/L)	128	1.04	0.90	0.16/4.7	0.67/1.35		
	Nitrate/Nitrite (mg/L)	128	0.14	<0.05	<0.05/0.69	<0.05/0.19		
	Chlorophyll A (mg/m <sup>3</sup> )	63	22.7	15.0	0.5/143	5.4/32.8	TSI=61.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	514.1	150.0	<10/6000	41/443	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	31	169.3	31.0	<10/2419.6	<10/120		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# North Canadian River at Harrah



Sample Record		Times Visited	Station ID
November 1998 – December 2012		96	520510000110-001AT
Stream Data	County	Oklahoma	<a href="#">View Site Data</a>
	Location	North of the Town of Harrah on State Highway 62	
	Latitude/Longitude	35.50033302, -97.19429527	
	Planning Watershed	Central (8-digit HUC - 11100302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	80	19.8	20.3	1.4/34.3	12.7/26.5
Turbidity (NTU)	79		119	46	6/>1000	20/91	33% of values > OWQS	
pH (units)	79		8.20	8.11	7.25/9.6	7.84/8.44		
Dissolved Oxygen (mg/L)	80		9.82	9.36	5.22/20	7.83/11.22		
Hardness (mg/L)	79		314	254	80/3950	201/328		
Minerals	Total Dissolved Solids (mg/L)	18	596	620	332/848	498/666	14% of values > OWQS	
	Specific Conductivity (uS/cm)	80	934	955	153/1394	738/1125		
	Chloride (mg/L)	81	131	137	21/290	98/164		
	Sulfate (mg/L)	80	128	118	40/240	88/168		
Nutrients	Total Phosphorus (mg/L)	81	1.028	0.900	0.285/3.12	0.573/1.315		
	Total Nitrogen (mg/L)	80	4.31	3.72	0.91/11.65	2.64/5.32		
	Nitrate/Nitrite (mg/L)	81	2.76	2.01	0.14/10.11	0.91/3.78		
	Chlorophyll A (mg/m <sup>3</sup> )	24	45.4	36.0	2.6/157	22.3/64.8	TSI=68.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	27	1470.4	298.0	40/12000	85/1182	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	27	914.9	74.0	<10/10462	20/305		

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	NS				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					S								

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Notes

# North Canadian River at Seiling



Sample Record	Times Visited	Station ID
November 1998 - Current	153	720500010010-001AT

Stream Data	County	Major	<a href="#">View Site Data</a>
	Location	North of the Town of Seiling on US 281	
	Latitude/Longitude	36.18359095, -98.92046478	
	Planning Watershed	Panhandle (8-digit HUC -11100301)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	130	16.6	16.5	-0.5/36.5	9.3/23.9
Turbidity (NTU)	131		44	21	1/>1000	7/42		
pH (units)	126		8.15	8.18	7.19/9.1	8.04/8.31		
Dissolved Oxygen (mg/L)	129		10.12	10.00	1.2/21.73	8.49/11.6		
Hardness (mg/L)	129		537	533	40/2098	440/600		
Minerals	Total Dissolved Solids (mg/L)	69	1064	1080	787/1336	981/1173		
	Specific Conductivity (uS/cm)	129	1535	1547	547/3250	1404/1679		
	Chloride (mg/L)	128	188	183	<5/540	167/210		
	Sulfate (mg/L)	129	330	331	106/669	281/383		
Nutrients	Total Phosphorus (mg/L)	128	0.105	0.088	<0.005/0.363	0.045/0.128		
	Total Nitrogen (mg/L)	129	1.08	1.04	0.29/2.58	0.78/1.34		
	Nitrate/Nitrite (mg/L)	129	0.32	0.23	<0.05/1.19	<0.05/0.55		
	Chlorophyll A (mg/m <sup>3</sup> )	24	10.6	7.0	0.9/52.5	2.2/13.3	TSI = 53.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	2891.6	161.2	<10/76000	27.5/520.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	160.1	31.0	<10/3130	<10/97.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						NS	S	NS
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# North Canadian River at Shawnee



Sample Record		Times Visited	Station ID
February 2002 - 2012		105	520510000110-005AT
Stream Data	County	Pottawatomie	<a href="#">View Site Data</a>
	Location	East of the Town of Shawnee on State Highway 3E	
	Latitude/Longitude	35.41056345, -96.78883533	
	Planning Watershed	Central (8-digit HUC - 11100302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	86	17.9	18.6	-0.4/34.4	10.4/25.6
Turbidity (NTU)	87		133	56	3/>1000	22/143	33% of values > OWQS	
pH (units)	85		8.30	8.23	7.26/9.98	7.93/8.52		
Dissolved Oxygen (mg/L)	85		10.30	9.46	2.64/25.01	8.06/12.48		
Hardness (mg/L)	84		260	260	116/449	207/307		
Minerals	Total Dissolved Solids (mg/L)	35	579	600	327/752	558/634	14% of values > OWQS	
	Specific Conductivity (uS/cm)	86	854	884	242/1387	688/1040		
	Chloride (mg/L)	85	119	127	18/181	94/150		
	Sulfate (mg/L)	84	112	107	55/266	78/128		
Nutrients	Total Phosphorus (mg/L)	87	0.887	0.760	0.137/2.47	0.618/1.05		
	Total Nitrogen (mg/L)	87	4.34	3.87	1.67/9.42	2.95/5.3		
	Nitrate/Nitrite (mg/L)	87	2.34	1.84	<0.05/7.79	1.04/3.17		
	Chlorophyll A (mg/m <sup>3</sup> )	52	92.5	61.2	<0.1/408	40.5/125.3	TSI=75.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	30	1674.1	105.0	<10/24192	17.5/600	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	30	1188.9	41.0	<10/24192	<10/165		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	NS				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					S								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes											

# North Canadian River at Wetumka



Sample Record	Times Visited	Station ID
September 1999 - Current	154	520510000010-001AT

Stream Data	County	Hughes	<a href="#">View Site Data</a>
	Location	Northeast of the Town of Wetumka on US 75	
	Latitude/Longitude	35.26449455, -96.20706383	
	Planning Watershed	Central (8-digit HUC -11100302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	126	18.8	19.3	0.8/36.2	11.7/27.2
Turbidity (NTU)	128		220	101	16/>1000	45/257	40% of values > OWQS	
pH (units)	125		8.41	8.33	7.47/9.9	8.08/8.72	31% of values > OWQS	
Dissolved Oxygen (mg/L)	125		10.32	10.18	4.64/19.46	8.11/12.23		
Hardness (mg/L)	126		241	202	60/2500	172/266		
Minerals	Total Dissolved Solids (mg/L)	60	461	454	238/726	383/534		
	Specific Conductivity (uS/cm)	126	749	742	244/1208	629/910		
	Chloride (mg/L)	124	104	109	20/260	82/127		
	Sulfate (mg/L)	123	94	87	23/247	62/117		
Nutrients	Total Phosphorus (mg/L)	126	0.577	0.481	0.049/1.51	0.402/0.713		
	Total Nitrogen (mg/L)	125	2.94	2.69	0.61/6.39	2.01/3.83		
	Nitrate/Nitrite (mg/L)	126	0.93	0.43	<0.05/4.89	<0.05/1.41		
	Chlorophyll A (mg/m <sup>3</sup> )	66	108.3	82.0	5.1/502	36.5/133.8	TSI=76.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	45	1814.1	100.0	<10/34000	20/603.2	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	45	386.5	30.0	<10/7701	<10/154.2		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	NS	S	S						NS	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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Notes

Fish Consumption not supporting for Lead

# North Canadian River at Woodward



Sample Record	Times Visited	Station ID
October 2000 - Current	135	720500010140-001AT

Stream Data	County	Woodward	<a href="#">View Site Data</a>
	Location	East of the Town of Woodward on US 412	
	Latitude/Longitude	36.43687215, -99.27835799	
	Planning Watershed	Panhandle (8-digit HUC -11100301)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	109	18.3	19.1	0.3/35.9	12.2/25.8
Turbidity (NTU)	111		21	10	2/125	4/28		
pH (units)	105		8.20	8.21	7.4/9.15	7.99/8.38		
Dissolved Oxygen (mg/L)	107		10.84	10.64	4.67/23.29	8.81/12.37		
Hardness (mg/L)	109		540	498	188/3620	407/620		
Minerals	Total Dissolved Solids (mg/L)	49	1271	1290	384/1930	966/1550		
	Specific Conductivity (uS/cm)	109	1749	1670	650/3002	1401/2049		
	Chloride (mg/L)	110	265	243	95/498	205/298		
	Sulfate (mg/L)	109	317	281	78/743	210/409		
Nutrients	Total Phosphorus (mg/L)	110	0.161	0.105	0.009/0.745	0.081/0.204		
	Total Nitrogen (mg/L)	111	1.94	1.58	0.53/7.55	1.22/2.32		
	Nitrate/Nitrite (mg/L)	111	0.96	0.61	<0.05/5.91	0.38/1.17		
	Chlorophyll A (mg/m <sup>3</sup> )	50	28.5	12.3	2.5/489	7.7/23.8	TSI=63.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	31	2651.2	109.0	<10/65000	31/700	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	31	693.6	41.0	<10/19862.8	20/66.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Poteau River at Heavener



Sample Record	Times Visited	Station ID
November 1998 – December 2012	141	220100020010-001AT

Stream Data	County	LeFlore	<a href="#">View Site Data</a>
	Location	South of the Town of Heavener on State Highway 59	
	Latitude/Longitude	34.85833476, -94.62923436	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	118	19.0	19.2	1.8/34.9	12.1/25.8
Turbidity (NTU)	121		23	16	0/152	11/25		
pH (units)	118		7.27	7.25	5.96/8.97	6.92/7.63		
Dissolved Oxygen (mg/L)	118		8.19	7.80	3.77/16	6.58/9.79		
Hardness (mg/L)	118		48	35	<10/188	21/62		
Minerals	Total Dissolved Solids (mg/L)	20	94	66	42/292	53/112		
	Specific Conductivity (uS/cm)	118	136	102	0/486	57/180		
	Chloride (mg/L)	77	10	10	<5/105	<5/10		
	Sulfate (mg/L)	78	35	21	10/146	16/41		
Nutrients	Total Phosphorus (mg/L)	114	0.075	0.054	0.008/0.43	0.038/0.087		
	Total Nitrogen (mg/L)	112	0.67	0.64	0.19/1.62	0.46/0.78		
	Nitrate/Nitrite (mg/L)	113	0.19	0.16	<0.05/0.74	<0.05/0.29		
	Chlorophyll A (mg/m <sup>3</sup> )	13	9.5	9.4	1.8/29.7	3.2/13.1	TSI=52.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	64.5	20.0	<10/400	<10/80	Mean>OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	58.4	31.0	<10/393	12.5/51.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# Poteau River at Pocola



Sample Record	Times Visited	Station ID
November 1998 - Current	158	220100010010-001AT

Stream Data	County	LeFlore	<a href="#">View Site Data</a>
	Location	West of the Town of Pocola on County Road E 1220	
	Latitude/Longitude	35.23864842, -94.52021262	
	Planning Watershed	Lower Arkansas (8-digit HUC -11110105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	137	18.9	19.6	2.9/34.6	11.9/26.1
Turbidity (NTU)	144		76	52	11/476	36/90	13% of values > OWQS	
pH (units)	139		7.29	7.24	5.39/8.99	6.96/7.63		
Dissolved Oxygen (mg/L)	140		7.92	7.65	3.31/15.94	6.08/9.53		
Hardness (mg/L)	142		52	46	<10/414	33/58		
Minerals	Total Dissolved Solids (mg/L)	23	126	98	48/675	70/128		
	Specific Conductivity (uS/cm)	138	141	128	0/530	80/180		
	Chloride (mg/L)	84	9	10	<5/33	<5/10		
	Sulfate (mg/L)	84	37	34	<5/88	25/46		
Nutrients	Total Phosphorus (mg/L)	144	0.128	0.111	0.017/0.416	0.075/0.158		
	Total Nitrogen (mg/L)	141	1.08	0.94	0.17/6.45	0.77/1.2		
	Nitrate/Nitrite (mg/L)	143	0.35	0.24	<0.05/4.96	0.11/0.4		
	Chlorophyll A (mg/m <sup>3</sup> )	58	16.0	14.2	1.9/77.3	8.9/18.7	TSI=57.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	37	150.6	31.0	<10/2419.6	15/81.7		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	37	105.9	30.0	<10/2419.6	<10/68.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

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 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead  
 Fish and Wildlife Propagation not supporting for Lead

# North Fork of the Red River at Carter



Sample Record	Times Visited	Station ID
November 1998 - Current	143	311510010010-001AT

Stream Data	County	Beckham	<a href="#">View Site Data</a>
	Location	South of the Town of Carter on State Highway 34	
	Latitude/Longitude	35.16712931, -99.50730365	
	Planning Watershed	Southwest (8-digit HUC -11120302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	119	17.8	18.1	-0.9/36.5	9.9/25
Turbidity (NTU)	122		58	17	2/>1000	6/38		
pH (units)	117		8.09	8.11	7.61/8.55	7.93/8.25		
Dissolved Oxygen (mg/L)	119		9.64	9.10	5.33/17	7.99/11.04		
Hardness (mg/L)	121		933	920	89/1960	801/1071		
Minerals	Total Dissolved Solids (mg/L)	61	1931	1880	1132/3050	1747/2063		
	Specific Conductivity (uS/cm)	119	2743	2705	970/5645	2435/3077		
	Chloride (mg/L)	122	387	376	39/1100	295/464		
	Sulfate (mg/L)	122	727	721	64/1240	583/877		
Nutrients	Total Phosphorus (mg/L)	119	0.084	0.036	<0.005/1.333	0.022/0.07		
	Total Nitrogen (mg/L)	119	1.06	0.94	0.34/3.17	0.68/1.25		
	Nitrate/Nitrite (mg/L)	120	0.36	0.27	<0.05/2.77	<0.05/0.58		
	Chlorophyll A (mg/m <sup>3</sup> )	39	12.0	7.9	0.9/70.7	3.8/14.2	TSI=55.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	226.9	30.0	<10/2419.6	<10/82		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	139.0	20.0	<10/1732.9	15.4/84.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# North Fork of the Red River at Headrick



Sample Record	Times Visited	Station ID
November 1998 - Current	198	311500010020-001AT

Stream Data	County	Tillman	<a href="#">View Site Data</a>
	Location	East of the Town of Headrick on US 62	
	Latitude/Longitude	34.6379245, -99.10311528	
	Planning Watershed	Southwest (8-digit HUC -11120303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	168	19.5	20.6	-1.2/35.3	11.7/27.3
Turbidity (NTU)	176		126	13	1/>1000	6/46		
pH (units)	165		8.06	8.11	6.8/9.1	7.88/8.24		
Dissolved Oxygen (mg/L)	168		9.56	9.16	3.57/15.21	8.22/11.04		
Hardness (mg/L)	172		1123	1123	100/4154	844/1349		
Minerals	Total Dissolved Solids (mg/L)	121	5317	5120	1024/13700	3660/6543	90% of values > OWQS	
	Specific Conductivity (uS/cm)	169	8451	8268	594/22420	5851/10400		
	Chloride (mg/L)	179	2450	2270	151/9620	1430/2940	98% of values > OWQS	
	Sulfate (mg/L)	179	788	767	34/2702	612/930	30% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	145	0.140	0.045	<0.005/2.461	0.027/0.092		
	Total Nitrogen (mg/L)	137	1.04	0.77	0.27/7.28	0.64/1.18		
	Nitrate/Nitrite (mg/L)	138	0.23	<0.05	<0.05/1.52	<0.05/0.32		
	Chlorophyll A (mg/m <sup>3</sup> )	68	21.2	13.0	0.2/269	6.5/25.3	TSI=60.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	24	1115.9	114.5	<10/19863	43.3/244.6	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	24	525.5	138.5	<10/8164	46.5/261.9	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					NS		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

Fish and Wildlife Propagation not supporting for Selenium

# Red River at Burkburnett



Sample Record	Times Visited	Station ID
January 2013 - Current	17	311310010010-002AT

Stream Data	County	Cotton	View Site Data
	Location	North of the Town of Burkburnett, Texas on Interstate 44	
	Latitude/Longitude	34.2095473, -98.33061891	
	Planning Watershed	Blue-China (8-digit HUC - 11130102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	14	18.7	19.4	2.9/30.1	12.2/27.7
Turbidity (NTU)	14		429	115	21/>1000	31/>1000	28% of values > OWQS	
pH (units)	14		7.98	7.99	7.59/8.3	7.8/8.2		
Dissolved Oxygen (mg/L)	14		9.57	9.53	6.96/13.85	7.62/10.64		
Hardness (mg/L)	14		1871	1805	1108/2820	1286/2465		
Minerals	Total Dissolved Solids (mg/L)	15	6940	6820	3770/10200	5510/7880	100% of values > OWQS	
	Specific Conductivity (uS/cm)	14	11481	10955	7529/18690	9769/12116		
	Chloride (mg/L)	15	3393	3440	2070/5320	2620/3700	100% of values > OWQS	
	Sulfate (mg/L)	15	1289	1360	764/1950	1040/1430	100% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	15	1.309	0.166	<0.051/5.9	0.123/2.4		
	Total Nitrogen (mg/L)	15	4.60	1.65	1.04/17.97	1.49/7.11		
	Nitrate/Nitrite (mg/L)	15	0.26	0.05	<0.05/0.97	<0.05/0.56		
	Chlorophyll A (mg/m <sup>3</sup> )	15	33.3	24.1	8.7/99.6	12.8/43.1	TSI = 65.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	3	1869.8	2419.6	770.1/2419.6	770.1/2419.6	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	3	548.0	461.1	62.9/1119.9	62.9/1119.9		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						NS	S	NS
	Aesthetics												NEI
	Agriculture					NS		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

Fish & Wildlife Propagation not supporting for Selenium

# Red River at Davidson



Sample Record	Times Visited	Station ID
November 1998 - Current	189	311310010010-001AT

Stream Data	County	Tillman	<a href="#">View Site Data</a>
	Location	South of the Town of Davidson on State Highway 183	
	Latitude/Longitude	34.2115454, -99.08155505	
	Planning Watershed	Beaver-Cache (8-digit HUC - 11130102)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	162	18.2	18.7	-0.8/34.5	10.9/25.2
Turbidity (NTU)	165		252	58	5/3920	23/236	28% of values > OWQS	
pH (units)	160		8.07	8.10	6.98/9.12	7.91/8.22		
Dissolved Oxygen (mg/L)	162		10.10	9.71	0.48/21.97	8.25/11.94		
Hardness (mg/L)	164		1379	1358	277/2700	1044/1710		
Minerals	Total Dissolved Solids (mg/L)	115	5119	5120	520/13600	3750/6370	100% of values > OWQS	
	Specific Conductivity (uS/cm)	163	7861	8189	1261/21375	5836/9606		
	Chloride (mg/L)	171	2095	2070	219/5980	1479/2567	100% of values > OWQS	
	Sulfate (mg/L)	171	1161	1090	182/6680	867/1340	100% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	133	0.357	0.156	<0.005/9.4	0.095/0.306		
	Total Nitrogen (mg/L)	133	2.24	1.48	0.58/34.95	1.14/2.09		
	Nitrate/Nitrite (mg/L)	134	0.40	0.19	<0.05/2.34	<0.05/0.66		
	Chlorophyll A (mg/m <sup>3</sup> )	64	51.5	42.1	1.6/192	21.2/69.3	TSI=69.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	2072.7	70.0	<10/21000	<10/2419.6	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	1246.2	87.6	<10/17329	17.5/212.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						NS	S	NS
	Aesthetics												NEI
	Agriculture					NS		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

Fish and Wildlife Propagation not supporting for Selenium

# Red River at Harris



Sample Record	Times Visited	Station ID
November 1998 - Current	161	410100010010-001AT

Stream Data	County	McCurtain	<a href="#">View Site Data</a>
	Location	South of the Town of Harris on State Highway 259	
	Latitude/Longitude	33.68687568, -94.69422864	
	Planning Watershed	Southeast (8-digit HUC - 11140106)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	130	19.7	20.4	3/33.5	12.7/26.8
Turbidity (NTU)	135		73	42	9/614	24/85	22% of values > OWQS	
pH (units)	130		7.97	8.01	7.1/8.74	7.77/8.18		
Dissolved Oxygen (mg/L)	129		8.51	8.35	4.17/13.86	7.02/9.96		
Hardness (mg/L)	132		275	282	14/758	212/327		
Minerals	Total Dissolved Solids (mg/L)	68	592	589	112/1204	389/839		
	Specific Conductivity (uS/cm)	130	1076	1079	156/2423	671/1489		
	Chloride (mg/L)	131	175	173	8/395	108/249		
	Sulfate (mg/L)	131	154	150	38/308	100/207		
Nutrients	Total Phosphorus (mg/L)	132	0.135	0.102	0.022/0.715	0.078/0.155		
	Total Nitrogen (mg/L)	132	0.96	0.88	0.15/2.81	0.68/1.15		
	Nitrate/Nitrite (mg/L)	132	0.13	<0.05	<0.05/0.78	<0.05/0.2		
	Chlorophyll A (mg/m <sup>3</sup> )	46	25.7	24.0	2.9/87.8	13.8/34.3	TSI=62.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	40	62.7	21.4	<10/600	<10/60.9		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	40	23.2	<10.0	<10/134	<10/27.7		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

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Notes

Fish Consumption not supporting for Lead

# Red River at Hugo



Sample Record	Times Visited	Station ID
November 1998 - Current	158	410400010010-001AT

Stream Data	County	Choctaw	<a href="#">View Site Data</a>
	Location	South of the Town of Hugo on State Highway 271	
	Latitude/Longitude	33.87545921, -95.50182137	
	Planning Watershed	Blue-Boggy (8-digit HUC - 11140101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments	
		In-Situ	Water Temperature ( °C)	130	19.5	19.9	3.5/34.4	12.2/27.2	
			Turbidity (NTU)	132	85	35	7/766	23/73	
			pH (units)	129	8.02	8.06	6.79/8.73	7.76/8.26	
			Dissolved Oxygen (mg/L)	130	9.37	9.08	4.18/39.16	7.59/10.87	
			Hardness (mg/L)	131	294	305	72/480	238/350	
		Minerals	Total Dissolved Solids (mg/L)	72	673	700	130/1080	531/881	
			Specific Conductivity (uS/cm)	130	1176	1179	210/2739	892/1554	
			Chloride (mg/L)	132	196	206	<5/394	138/268	
			Sulfate (mg/L)	132	165	171	32/320	118/209	
		Nutrients	Total Phosphorus (mg/L)	140	0.123	0.083	0.013/0.925	0.059/0.13	
			Total Nitrogen (mg/L)	131	0.93	0.83	0.24/2.87	0.63/1.03	
			Nitrate/Nitrite (mg/L)	131	0.16	0.06	<0.05/0.82	<0.05/0.24	
			Chlorophyll A (mg/m <sup>3</sup> )	49	19.4	18.5	2.7/45	9.3/27.3	TSI=59.7
		Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	33	327.7	20.1	<10/3300	<10/340	
			E. Coli (cfu/100ml)(* -Geo. Mn.)	33	123.1	<10.0	<10/1607	<10/96	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Red River at Terral



Sample Record	Times Visited	Station ID
December 1998 - Current	152	311100010190-001AT

Stream Data	County	Jefferson	<a href="#">View Site Data</a>
	Location	South of the Town of Terral on State Highway 81	
	Latitude/Longitude	33.8786094, -97.93457247	
	Planning Watershed	Lower Washita (8-digit HUC - 11130201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	129	20.1	21.2	3.1/38.4	13.1/27.4
Turbidity (NTU)	131		314	100	4/>1000	45/474	50% of values > OWQS	
pH (units)	128		8.22	8.23	6.73/9.11	8/8.46		
Dissolved Oxygen (mg/L)	129		10.46	10.06	3.42/20.13	7.95/12.73		
Hardness (mg/L)	131		820	820	168/2075	548/1055		
Minerals	Total Dissolved Solids (mg/L)	71	2914	2880	456/6840	1990/3788		
	Specific Conductivity (uS/cm)	128	4905	4972	157/14458	3476/6388		
	Chloride (mg/L)	132	1221	1200	151/4200	802/1567		
	Sulfate (mg/L)	132	620	612	96/2110	387/768		
Nutrients	Total Phosphorus (mg/L)	141	0.445	0.293	0.021/4.21	0.199/0.452		
	Total Nitrogen (mg/L)	133	2.26	1.80	0.59/23.1	1.39/2.47		
	Nitrate/Nitrite (mg/L)	133	0.43	0.22	<0.05/2.84	<0.05/0.65		
	Chlorophyll A (mg/m <sup>3</sup> )	50	73.4	59.8	2.5/368	29.3/90.4	TSI=72.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	537.0	59.8	<10/3654	<10/400	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	270.0	20.0	<10/2419.6	<10/180.7	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												NEI
	Agriculture					NS		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead  
 Fish and Wildlife Propagation not supporting for Selenium

# Salt Fork Of The Red River at Elmer



Sample Record	Times Visited	Station ID
November 1998 - Current	191	311600020010-002AT

Stream Data	County	Jackson	<a href="#">View Site Data</a>
	Location	West of the Town of Elmer near US 283	
	Latitude/Longitude	34.47893211, -99.38286717	
	Planning Watershed	Southwest (8-digit HUC -11120202)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	164	19.5	19.8	0.5/34.7	12.4/26.9
Turbidity (NTU)	167		86	24	3/>1000	12/50	12% of values > OWQS	
pH (units)	160		8.05	8.09	7.53/8.56	7.9/8.19		
Dissolved Oxygen (mg/L)	164		10.06	10.19	3.59/17.59	8.31/11.81		
Hardness (mg/L)	169		1541	1575	200/2513	1153/1953		
Minerals	Total Dissolved Solids (mg/L)	118	3017	3175	240/4860	2494/3703		
	Specific Conductivity (uS/cm)	165	3972	3985	356/7648	3264/4596		
	Chloride (mg/L)	176	619	561	19/2097	457/789	29% of values > OWQS	
	Sulfate (mg/L)	175	1285	1290	87/3485	955/1601	28% of values > OWQS	
Nutrients	Total Phosphorus (mg/L)	136	0.110	0.077	<0.005/0.722	0.038/0.14		
	Total Nitrogen (mg/L)	136	2.20	2.00	0.59/7.14	1.41/2.62		
	Nitrate/Nitrite (mg/L)	137	1.13	0.88	<0.05/5.93	0.28/1.46		
	Chlorophyll A (mg/m <sup>3</sup> )	43	25.7	22.3	<0.1/73.1	10/39.8	TSI = 62.4	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	21	3518.3	300.0	<10/51800	85/1406.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	21	344.9	49.6	<10/5172	11.5/147		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												NEI
	Agriculture					NS		NS	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NS		S			S			
	Fish Consumption				NS								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

**Notes** Fish Consumption not supporting for Lead  
 Fish & Wildlife Propagation not supporting for Selenium  
 Public & Private Water Supply not supporting for Selenium

# Salt Fork Of The Red River at Mangum



Sample Record		Times Visited	Station ID
October 2000 – September 2007		54	311600020010-001AT
Stream Data	County	Greer	<a href="#">View Site Data</a>
	Location	South of the Town of Mangum on State Highway 34	
	Latitude/Longitude	34.85764987, -99.50925729	
	Planning Watershed	Southwest (8-digit HUC -11120202)	

Parameters		Parameter ( <i>Descriptions</i> )	Mean	Median	Range	Comments
		In-Situ	Water Temperature (C°)	18.6	18.9	2.7/37.0
	In-Situ	Turbidity (NTU)	9	6	1/30	
		pH (units)	7.93	7.96	6.60/8.56	
		Dissolved Oxygen (ppm)	8.61	8.22	5.62/12.84	
		Hardness (ppm)	1531.9	1500.5	660.0/2380.0	
		Minerals	Total Dissolved Solids (ppm)	2216.4	2115.0	798.6/8895.0
	Specific Conductivity (uS)		3584.3	3238.0	1369.0/21559	
	Chloride (ppm)		278.2	270.0	63.1/464.0	
	Sulfate (ppm)		1254.3	1300.0	471.0/1800.0	
	Nutrients	Total Phosphorus (ppm)	0.028	0.016	0.007/0.154	
		Nitrate/Nitrite (ppm)	0.258	0.210	0.050/0.970	
		Chlorophyll A (mg/m <sup>3</sup> )	54.3	38.4	6.0/175.0	TSI=69.8
	Bacteria	Fecal Coliform (cfu/100ml)(* -Geo. Mn.)	271.1*	310.0	<10/3400	
		Enterococcus (cfu/100ml)(* -Geo. Mn.)	240.7*	167.5	<10/11000	Mean > OWQS of 33
		E. Coli (MPN/100ml)(* -Geo. Mean)	84.9*	74.0	<10/1785	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		S	S	S	S						NS	S
Aesthetics													S
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					S		S			S			
Fish Consumption					NS								
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		<b>Notes</b> <i>Fish consumption not supporting for Thallium</i>											

# Sager Creek at West Siloam Springs



Sample Record	Times Visited	Station ID
November 1998 – December 2012	162	121700060080-001AT

Stream Data	County	Delaware	<a href="#">View Site Data</a>
	Location	West of the Town of West Siloam Springs off US Highway 412	
	Latitude/Longitude	36.20164298, -94.60538182	
	Planning Watershed	Lower Arkansas (8-digit HUC - 11110103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	108	17.4	17.2	5.9/29.2	12.1/22.1
Turbidity (NTU)	109		3	1	1/55	1/2		
pH (units)	107		7.71	7.71	6.59/8.65	7.46/7.96		
Dissolved Oxygen (mg/L)	108		9.10	8.74	4.66/15.35	8.04/10.21		
Hardness (mg/L)	107		132	134	<10/198	120/146		
Minerals	Total Dissolved Solids (mg/L)	21	244	227	10/657	186/283		
	Specific Conductivity (uS/cm)	108	425	428	164/713	356/496		
	Chloride (mg/L)	100	36	34	<5/95	23/47		
	Sulfate (mg/L)	100	25	21	<5/64	16/29		
Nutrients	Total Phosphorus (mg/L)	114	1.117	1.040	0.012/3.965	0.644/1.501		
	Total Nitrogen (mg/L)	113	7.46	7.20	2.32/17.55	4.88/9.08		
	Nitrate/Nitrite (mg/L)	114	7.02	6.48	2.01/17.5	4.39/8.62		
	Chlorophyll A (mg/m <sup>3</sup> )	54	1.6	0.7	<0.1/8.3	0.4/2.4	TSI=35.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	56	512.1	109.0	<10/9700	33.5/475	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	56	217.9	31.0	<10/4360	<10/98		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	NS	S						S	NS	NS
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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 NEI = Not Enough Information

Notes

# Salt Fork of the Arkansas River at Ingersol



Sample Record	Times Visited	Station ID
December 1998 - Current	144	621010010160-001AT

Stream Data	County	Alfalfa	<a href="#">View Site Data</a>
	Location	Northeast of the Town of Ingersol on State Highway 58	
	Latitude/Longitude	36.82018011, -98.35994081	
	Planning Watershed	Upper Arkansas (8-digit HUC - 11060002)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	126	17.8	18.7	-0.8/36.7	9.4/26.5
Turbidity (NTU)	128		98	36	1/<1000	11/91	11% of values > OWQS	
pH (units)	124		7.93	7.94	7.15/8.42	7.81/8.09		
Dissolved Oxygen (mg/L)	126		9.84	9.32	4.49/26.91	8.14/11.5		
Hardness (mg/L)	125		889	884	432/1660	800/970		
Minerals	Total Dissolved Solids (mg/L)	57	1585	1560	520/3170	1475/1665		
	Specific Conductivity (uS/cm)	126	2003	2028	905/3688	1831/2204		
	Chloride (mg/L)	124	167	162	29/591	128/196		
	Sulfate (mg/L)	125	738	737	150/1130	668/824		
Nutrients	Total Phosphorus (mg/L)	126	0.104	0.056	<0.005/1.71	0.026/0.106		
	Total Nitrogen (mg/L)	125	1.15	0.83	0.3/18.71	0.68/1.07		
	Nitrate/Nitrite (mg/L)	126	0.35	0.34	<0.05/0.97	0.2/0.48		
	Chlorophyll A (mg/m <sup>3</sup> )	33	7.8	4.8	<0.1/53.4	2.6/8.3	TSI=50.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	5613.3	1500.0	74/46080	315/7250	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	1306.7	272.0	20/19863	114.5/702	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Salt Fork of the Arkansas River at Tonkawa



Sample Record	Times Visited	Station ID
October 2000 - Current	130	621000010010-001AT

Stream Data	County	Kay	<a href="#">View Site Data</a>
	Location	South of the Town of Tonkawa on US 77	
	Latitude/Longitude	36.67070374, -97.30951657	
	Planning Watershed	Upper Arkansas (8-digit HUC -11060004 )	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	113	18.0	18.6	-0.9/36.6	9.4/27
Turbidity (NTU)	111		128	48	6/>1000	20/143	35% of values > OWQS	
pH (units)	113		8.16	8.17	7/9.45	8/8.41		
Dissolved Oxygen (mg/L)	113		10.52	10.23	3.77/24.35	8.21/12.89		
Hardness (mg/L)	112		461	462	126/930	365/545		
Minerals	Total Dissolved Solids (mg/L)	45	2951	2110	544/9680	1570/3920		
	Specific Conductivity (uS/cm)	113	4567	3860	563/15758	2730/5393		
	Chloride (mg/L)	110	1332	1105	223/5320	702/1439		
	Sulfate (mg/L)	110	279	263	49/637	213/328		
Nutrients	Total Phosphorus (mg/L)	110	0.240	0.220	0.06/0.975	0.147/0.302		
	Total Nitrogen (mg/L)	110	1.52	1.44	0.36/3.47	1.12/1.76		
	Nitrate/Nitrite (mg/L)	110	0.17	<0.05	<0.05/1.12	<0.05/0.21		
	Chlorophyll A (mg/m <sup>3</sup> )	48	54.5	41.4	2.7/261	22.2/65.6	TSI=69.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	7578.4	984.0	20/161000	193.8/1925	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	27	616.5	41.0	<10/9804	<10/181		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Sandy Creek at Eldorado



Sample Record	Times Visited	Station ID
November 1998 - Current	149	311600010040-001AT

Stream Data	County	Jackson	<a href="#">View Site Data</a>
	Location	Southwest of the Town of Eldorado on State Highway 6	
	Latitude/Longitude	34.46433562, -99.66255838	
	Planning Watershed	Southwest (8-digit HUC -11130101)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	128	18.8	20.0	2.7/33.2	12.8/25
Turbidity (NTU)	134		71	45	4/<1000	21/74	37% of values > OWQS	
pH (units)	125		7.76	7.75	7.09/8.44	7.57/7.94		
Dissolved Oxygen (mg/L)	128		11.29	11.28	2.59/22.54	8.15/14.48		
Hardness (mg/L)	131		2377	2475	190/3974	2150/2740		
Minerals	Total Dissolved Solids (mg/L)	69	6337	6520	2042/7290	6197/6790	94% of values > OWQS	
	Specific Conductivity (uS/cm)	128	8602	9223	803/11175	8584/9542		
	Chloride (mg/L)	132	2038	2100	159/3750	1900/2258	100% of Values > OWQS	
	Sulfate (mg/L)	133	1906	1982	191/3680	1702/2180	97% of Values > OWQS	
Nutrients	Total Phosphorus (mg/L)	132	0.123	0.088	<0.005/1.356	0.043/0.154		
	Total Nitrogen (mg/L)	132	3.65	3.60	0.54/8.38	3.12/4.2		
	Nitrate/Nitrite (mg/L)	133	2.27	2.22	0.13/4.86	1.47/3.1		
	Chlorophyll A (mg/m <sup>3</sup> )	14	34.4	17.9	1.3/140	7/38.8	TSI = 65.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	2717.8	500.0	<10/37300	116/1275	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	286.6	97.0	<10/3448	39.3/198.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	
	Fish & Wildlife Propagation	NS	S	S	NS						NS	NS	S	
	Aesthetics													S
	Agriculture					NS		NS	NS					
	Primary Body Contact Recreation									NS				
	Public & Private Water Supply				NS		S			S				
	Fish Consumption				S									

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 NEI = Not Enough Information

Notes

Public & Private Water Supply not supporting for Selenium  
 Fish & Wildlife Propagation not supporting for Selenium

# Skeleton Creek at Lovell



Sample Record	Times Visited	Station ID
December 1998 - Current	151	620910030010-001AT

Stream Data	County	Logan	<a href="#">View Site Data</a>
	Location	East of the Town of Lovell on State Highway 74	
	Latitude/Longitude	36.06098714, -97.58584155	
	Planning Watershed	Upper Arkansas (8-digit HUC -11050002)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	134	16.8	17.2	-1.4/33.9	7.5/25
Turbidity (NTU)	136		140	76	4/>1000	41/147	36% of values > OWQS	
pH (units)	134		8.21	8.18	7.51/9.08	8.02/8.4		
Dissolved Oxygen (mg/L)	133		10.26	9.99	2.69/25.2	7.53/12.4		
Hardness (mg/L)	134		384	407	100/690	296/474		
Minerals	Total Dissolved Solids (mg/L)	67	926	960	264/1950	760/1120		
	Specific Conductivity (uS/cm)	134	1621	1677	338/2904	1284/1994		
	Chloride (mg/L)	134	237	240	52/458	186/278		
	Sulfate (mg/L)	134	222	203	64/3200	155/241		
Nutrients	Total Phosphorus (mg/L)	135	0.525	0.457	0.078/1.63	0.331/0.705		
	Total Nitrogen (mg/L)	134	4.66	4.01	0.67/15.51	2.93/5.75		
	Nitrate/Nitrite (mg/L)	135	3.33	2.62	<0.05/14.55	1.51/4.53		
	Chlorophyll A (mg/m <sup>3</sup> )	14	66.5	53.4	16.2/233	27.8/81.7	TSI = 71.8	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	29	3297.2	344.8	20/41000	63/2209.8	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	29	587.4	74.0	<10/9804	25.5/319.1		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

Fish & Wildlife Propagation not supporting for Selenium

# Spring Creek at Murphy



Sample Record	Times Visited	Station ID
November 1998 - Current	169	121600010290-001AT

Stream Data	County	Mayes	<a href="#">View Site Data</a>
	Location	South of the Town of Locust Grove off State Highway 82	
	Latitude/Longitude	36.13104241, -95.19015604	
	Planning Watershed	Grand (8-digit HUC -11070209)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	128	16.6	16.5	7.2/26.8	11.8/21.2
Turbidity (NTU)	128		2	1	1/15	1/2		
pH (units)	127		7.48	7.48	6.8/8.59	7.25/7.73		
Dissolved Oxygen (mg/L)	128		9.07	8.95	2.68/13.82	7.73/10.5		
Hardness (mg/L)	128		86	79	<10/728	70/89		
Minerals	Total Dissolved Solids (mg/L)	27	110	93	6/498	83/107		
	Specific Conductivity (uS/cm)	127	164	159	32/425	140/188		
	Chloride (mg/L)	111	9	10	<5/96	<5/10		
	Sulfate (mg/L)	110	9	10	<5/40	6/10		
Nutrients	Total Phosphorus (mg/L)	132	0.021	0.013	<0.005/0.392	0.009/0.018		
	Total Nitrogen (mg/L)	133	0.67	0.57	<0.05/3.03	0.4/0.79		
	Nitrate/Nitrite (mg/L)	134	0.51	0.45	<0.05/1.5	0.3/0.64		
	Chlorophyll A (mg/m <sup>3</sup> )	70	1.1	0.4	<0.1/29.5	0.2/0.6	TSI=31.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	46	191.5	30.0	<10/3000	<10/120.5	Mean>OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	46	117.3	<10.0	<10/4352	<10/31		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

S = Fully Supporting  
 NS = Not Supporting  
 NEI = Not Enough Information

Notes

# Spring River at Quapaw



Sample Record	Times Visited	Station ID
December 1998 - Current	160	121600070010-001AT

Stream Data	County	Ottawa	<a href="#">View Site Data</a>
	Location	East of the Town of Quapaw near State Highway 137	
	Latitude/Longitude	36.93462871, -94.74614371	
	Planning Watershed	Grand (8-digit HUC -11070207)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	134	17.4	17.5	1/32.1	10.6/24.4
Turbidity (NTU)	134		36	15	1/581	10/25	19% of values > OWQS	
pH (units)	133		7.87	7.91	6.64/8.92	7.69/8.06		
Dissolved Oxygen (mg/L)	134		9.03	8.95	0.16/14.9	7.21/10.7		
Hardness (mg/L)	133		156	160	17/258	141/178		
Minerals	Total Dissolved Solids (mg/L)	25	208	214	120/280	179/238		
	Specific Conductivity (uS/cm)	134	360	362	111/827	309/412		
	Chloride (mg/L)	105	14	12	<5/36	10/16		
	Sulfate (mg/L)	104	35	33	18/75	27/41		
Nutrients	Total Phosphorus (mg/L)	136	0.200	0.182	0.048/0.64	0.133/0.25		
	Total Nitrogen (mg/L)	136	2.29	2.27	0.49/4.78	1.78/2.75		
	Nitrate/Nitrite (mg/L)	137	1.60	1.65	<0.05/3.37	1.07/2.05		
	Chlorophyll A (mg/m <sup>3</sup> )	55	9.1	7.8	1.4/37.4	3.2/13.3	TSI=52.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	33	1864.6	20.0	<10/33000	<10/55.5		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	33	241.6	20.0	<10/3448	<10/87		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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NS = Not Supporting  
NEI = Not Enough Information

Notes

# Verdigris River at Inola



Sample Record	Times Visited	Station ID
November 2000 - Current	87	121500020260-001AT

Stream Data	County	Rogers	<a href="#">View Site Data</a>
	Location	West of Inola on US 412	
	Latitude/Longitude	36.16167837, -95.49637137	
	Planning Watershed	Middle Arkansas (8-digit HUC -11070105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	74	17.4	17.8	3.3/32.4	9.9/25.3
Turbidity (NTU)	74		67	41	3/891	21/75	25% of values > OWQS	
pH (units)	74		7.84	7.80	7.14/8.71	7.63/8.06		
Dissolved Oxygen (mg/L)	73		9.15	8.47	3.71/18.73	7.17/10.9		
Hardness (mg/L)	74		147	141	<10/301	123/161		
Minerals	Total Dissolved Solids (mg/L)	12	215	223	156/276	182/238		
	Specific Conductivity (uS/cm)	74	355	324	158/626	285/423		
	Chloride (mg/L)	57	27	18	7/145	12/37		
	Sulfate (mg/L)	57	46	41	20/129	33/53		
Nutrients	Total Phosphorus (mg/L)	77	0.240	0.189	0.069/1.039	0.121/0.279		
	Total Nitrogen (mg/L)	77	1.90	1.52	0.61/5.98	1.09/2.55		
	Nitrate/Nitrite (mg/L)	77	0.99	0.64	0.13/4.67	0.41/1.56		
	Chlorophyll A (mg/m <sup>3</sup> )	43	11.5	6.6	1.2/76.7	3.8/14.2	TSI=54.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	21	6562.9	72.0	<10/81000	15/382.7	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	21	612.8	20.0	<10/7270	<10/66.2		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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NS = Not Supporting  
NEI = Not Enough Information

Notes

# Verdigris River at Keetonville



Sample Record	Times Visited	Station ID
November 1998 – December 2012	131	121500030010-001AT

Stream Data	County	Rogers	<a href="#">View Site Data</a>
	Location	East of the Town of Keetonville on State Highway 20	
	Latitude/Longitude	36.30724953, -95.69794268	
	Planning Watershed	Middle Arkansas (8-digit HUC -11070105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	113	17.5	18.0	1.8/32	10.3/25.7
Turbidity (NTU)	115		68	31	3/919	20/70	12.5% of values > OWQS	
pH (units)	114		7.84	7.85	5.09/8.76	7.7/8.03		
Dissolved Oxygen (mg/L)	113		8.79	8.18	3.38/16.05	6.7/10.39		
Hardness (mg/L)	114		156	152	16/320	127/187		
Minerals	Total Dissolved Solids (mg/L)	35	226	214	88/556	169/261		
	Specific Conductivity (uS/cm)	111	372	353	21/1072	285/445		
	Chloride (mg/L)	102	22	15	<5/120	10/31		
	Sulfate (mg/L)	102	46	41	13/173	33/53		
Nutrients	Total Phosphorus (mg/L)	116	0.110	0.086	0.022/0.59	0.058/0.131		
	Total Nitrogen (mg/L)	115	0.88	0.78	0.28/2.53	0.63/1.02		
	Nitrate/Nitrite (mg/L)	116	0.27	0.24	<0.05/1.2	0.07/0.37		
	Chlorophyll A (mg/m <sup>3</sup> )	53	8.5	5.4	0.5/50.2	3/11.7	TSI=51.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	21	5094.2	41.0	<10/89000	15/359	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	21	592.2	20.0	<10/7915	<10/62.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# Verdigris River at Lenepah



Sample Record	Times Visited	Station ID
December 1998 - Current	156	121510020010-001AT

Stream Data	County	Nowata	<a href="#">View Site Data</a>
	Location	East of the Town of Lenepah on State Highway 10	
	Latitude/Longitude	36.85121639, -95.58531345	
	Planning Watershed	Middle Arkansas (8-digit HUC -11070103)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	131	16.8	17.9	0.7/33.7	10/24.7
Turbidity (NTU)	138		135	41	6/>1000	18/109	15% of values > OWQS	
pH (units)	132		7.82	7.82	4.98/8.78	7.62/8.08		
Dissolved Oxygen (mg/L)	131		8.93	8.36	3.83/18.49	6.82/10.7		
Hardness (mg/L)	134		161	161	<10/300	133/189		
Minerals	Total Dissolved Solids (mg/L)	36	210	211	92/327	175/249		
	Specific Conductivity (uS/cm)	130	365	363	5/764	264/461		
	Chloride (mg/L)	102	21	14	<5/123	10/23		
	Sulfate (mg/L)	101	36	32	12/97	27/42		
Nutrients	Total Phosphorus (mg/L)	136	0.169	0.105	0.019/1.22	0.064/0.181		
	Total Nitrogen (mg/L)	135	1.25	1.02	<0.05/3.97	0.74/1.43		
	Nitrate/Nitrite (mg/L)	136	0.39	0.35	<0.05/1.95	0.11/0.5		
	Chlorophyll A (mg/m <sup>3</sup> )	74	15.7	9.7	<0.1/173	4.8/19.6	TSI=57.6	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	15169.2	52.0	<10/321000	25/353	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	741.3	52.1	<10/6294	30.5/707.5		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	NS						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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 NEI = Not Enough Information

**Notes** Fish & Wildlife Propagation not supporting for Lead

# Verdigris River at Wagoner



Sample Record	Times Visited	Station ID
September 1999 - Current	95	121500010200-001AT

Stream Data	County	Wagoner	<a href="#">View Site Data</a>
	Location	West of the Town of Wagoner on US 51	
	Latitude/Longitude	35.95547322, -95.49477619	
	Planning Watershed	Middle Arkansas (8-digit HUC -11070105)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	82	18.5	20.1	1.8/32.8	11.1/26.3
Turbidity (NTU)	84		55	34	6/327	19/69	15% of values > OWQS	
pH (units)	81		7.80	7.80	6.98/8.84	7.56/7.97		
Dissolved Oxygen (mg/L)	81		8.83	8.14	4.57/16.44	7.15/10.48		
Hardness (mg/L)	81		144	140	56/740	118/158		
Minerals	Total Dissolved Solids (mg/L)	36	197	192	108/304	177/212		
	Specific Conductivity (uS/cm)	82	331	319	200/616	272/365		
	Chloride (mg/L)	85	21	15	<5/143	11/24		
	Sulfate (mg/L)	84	45	40	18/132	33/51		
Nutrients	Total Phosphorus (mg/L)	85	0.163	0.132	0.052/0.57	0.101/0.196		
	Total Nitrogen (mg/L)	85	1.48	1.19	0.48/4.76	0.89/1.69		
	Nitrate/Nitrite (mg/L)	86	0.77	0.51	<0.05/3.37	0.31/0.93		
	Chlorophyll A (mg/m <sup>3</sup> )	40	8.4	6.0	<0.1/39.5	3.1/11.4	TSI=51.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	21	6193.0	100.0	<10/82000	15/1351.7	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	21	347.8	62.0	<10/3130	15/177		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Walnut Bayou at Burneyville



Sample Record	Times Visited	Station ID
January 2013 - Current	16	311100010250-001AT

Stream Data	County	Love	View Site Data
	Location	North of the Town of Burneyville on State Highway 96	
	Latitude/Longitude	33.916559, -97.282427	
	Planning Watershed	Lower Washita (8-digit HUC - 11130201)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	10	19.8	19.2	6.4/33.7	12/29.3
Turbidity (NTU)	10		46	10	3/189	6/76		
pH (units)	10		7.94	7.95	7.68/8.36	7.7/8.08		
Dissolved Oxygen (mg/L)	10		9.57	9.27	6.24/12.54	7.84/11.7		
Hardness (mg/L)	10		262	200	132/685	163/306		
Minerals	Total Dissolved Solids (mg/L)	12	347	343	229/428	302/406		
	Specific Conductivity (uS/cm)	10	600	592	372/767	515/710		
	Chloride (mg/L)	12	57	57	23/93	43/72		
	Sulfate (mg/L)	12	48	48	27/74	40/57		
Nutrients	Total Phosphorus (mg/L)	12	0.104	0.081	<0.005/0.224	0.038/0.2		
	Total Nitrogen (mg/L)	12	0.90	0.80	0.37/1.95	0.56/0.99		
	Nitrate/Nitrite (mg/L)	12	0.06	0.05	<0.05/0.12	< 0.05/0.05		
	Chlorophyll A (mg/m <sup>3</sup> )	13	6.1	2.6	0.6/29.6	1.2/6.1	TSI= 48.3	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	3	960.6	343.6	118.7/2419.6	118.7/2419.6		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	3	92.5	129.1	<10/142.1	<10/142.1		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NEI	NEI	NEI	NEI						NEI	NEI	NEI
	Aesthetics												NEI
	Agriculture					NEI		NEI	NEI				
	Primary Body Contact Recreation									NEI			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				NEI								

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Notes

# Washita River at Alex



Sample Record	Times Visited	Station ID
January 2003 – Current	81	310810020010-001AT

Stream Data	County	Grady	<a href="#">View Site Data</a>
	Location	North of the Town of Alex on Highway 19C	
	Latitude/Longitude	34.9261546, -97.77397966	
	Planning Watershed	Lower Washita (8-digit HUC -11130303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	64	18.0	18.4	0.3/33.6	10.8/25.4
Turbidity (NTU)	64		248	84	6/>1000	25/267	37% of values > OWQS	
pH (units)	63		8.07	8.05	7.22/9.26	7.86/8.21		
Dissolved Oxygen (mg/L)	64		9.35	8.75	4.59/15.76	7.66/11.23		
Hardness (mg/L)	64		769	812	248/1668	549/980		
Minerals	Total Dissolved Solids (mg/L)	22	1100	1175	340/1670	781/1450		
	Specific Conductivity (uS/cm)	63	1570	1690	353/2690	1268/1930		
	Chloride (mg/L)	65	83	85	11/202	55/108		
	Sulfate (mg/L)	65	603	640	151/1260	438/770		
Nutrients	Total Phosphorus (mg/L)	65	0.372	0.185	0.01/2.06	0.104/0.426		
	Total Nitrogen (mg/L)	65	1.83	1.35	0.68/5.77	1.09/2.19		
	Nitrate/Nitrite (mg/L)	65	0.37	0.25	<0.05/1.8	<0.05/0.59		
	Chlorophyll A (mg/m <sup>3</sup> )	44	40.9	32.1	5.9/144	17.6/52.3	TSI=67.0	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	23	1291.2	179.0	<10/11000	41/2419.6	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	23	670.8	74.0	<10/9208	<10/712		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation		NS	S	S	S						S	S
Aesthetics													NEI
Agriculture						S		S	S				
Primary Body Contact Recreation										NS			
Public & Private Water Supply					NEI		NEI			NEI			
Fish Consumption					NS								

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 NEI = Not Enough Information

Notes

Fish Consumption not supporting for Lead

# Washita River at Anadarko



Sample Record	Times Visited	Station ID
February 1999 - Current	150	310830010010-001AT

Stream Data	County	Caddo	<a href="#">View Site Data</a>
	Location	North of the Town of Anadarko on US 281	
	Latitude/Longitude	35.08448153, -98.24330303	
	Planning Watershed	Lower Washita (8-digit HUC -11130302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	131	18.2	20.1	-0.1/35	9.9/26.9
Turbidity (NTU)	133		169	37	4/>1000	17/147	20% of values > OWQS	
pH (units)	129		8.10	8.11	7.01/8.8	7.94/8.25		
Dissolved Oxygen (mg/L)	131		9.89	9.49	1.33/19.66	7.99/11.97		
Hardness (mg/L)	130		850	880	185/1580	629/1057		
Minerals	Total Dissolved Solids (mg/L)	67	1293	1430	150/2260	945/1665		
	Specific Conductivity (uS/cm)	130	1727	1896	144/2925	1397/2080		
	Chloride (mg/L)	134	82	82	<5/233	50/108		
	Sulfate (mg/L)	133	693	747	56/1280	491/845		
Nutrients	Total Phosphorus (mg/L)	134	0.288	0.176	0.026/3.297	0.091/0.275		
	Total Nitrogen (mg/L)	133	1.59	1.34	0.52/7.1	0.93/1.8		
	Nitrate/Nitrite (mg/L)	134	0.46	0.34	<0.05/2.28	<0.05/0.72		
	Chlorophyll A (mg/m <sup>3</sup> )	67	38.8	22.3	3.5/597	13.6/39.9	TSI=66.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	28	1427.7	435.0	<10/12997	75.5/1876	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	28	450.3	112.5	<10/2723	<10/365.3		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						NS	S	NS
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Washita River at Cordell



Sample Record	Times Visited	Station ID
November 1998 - Current	168	310830030010-001AT

Stream Data	County	Washita	<a href="#">View Site Data</a>
	Location	East of the Town of Cordell on State Highway 152	
	Latitude/Longitude	35.29115498, -98.83671818	
	Planning Watershed	West Central (8-digit HUC -11130302)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	135	17.2	17.9	-1/35.3	8.7/24.8
Turbidity (NTU)	135		93	22	3/>1000	9/80	11% of values > OWQS	
pH (units)	132		8.02	8.02	5.93/9.02	7.85/8.22		
Dissolved Oxygen (mg/L)	134		10.10	9.84	1.95/22.1	7.8/12.1		
Hardness (mg/L)	134		1303	1317	415/2835	1122/1526		
Minerals	Total Dissolved Solids (mg/L)	74	2068	2125	450/4150	1848/2367		
	Specific Conductivity (uS/cm)	135	2394	2424	348/5634	2094/2790		
	Chloride (mg/L)	133	112	87	10/862	62/141		
	Sulfate (mg/L)	133	1120	1150	223/1880	998/1280		
Nutrients	Total Phosphorus (mg/L)	134	0.284	0.201	0.046/3.09	0.13/0.319		
	Total Nitrogen (mg/L)	133	1.93	1.80	0.7/8.68	1.41/2.27		
	Nitrate/Nitrite (mg/L)	134	0.85	0.76	<0.05/3.09	0.41/1.26		
	Chlorophyll A (mg/m <sup>3</sup> )	24	28.6	12.7	1.8/114	5.9/31.3	TSI=63.5	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	40	2048.9	303.8	<10/24192	87.8/1650	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	40	1866.2	85.0	<10/24192	22.5/344	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						NEI	S	NEI
	Aesthetics												NEI
	Agriculture					NS		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				S								

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Notes

# Washita River at Durwood



Sample Record	Times Visited	Station ID
November 1998 - Current	119	310800020010-001AT

Stream Data	County	Carter	<a href="#">View Site Data</a>
	Location	Northwest of the Town of Durwood on US 177	
	Latitude/Longitude	34.23354963, -96.97638301	
	Planning Watershed	Lower Washita (8-digit HUC -11130303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	101	19.6	20.1	3.8/33.7	13.1/27
Turbidity (NTU)	99		304	74	8/>1000	39/587	45% of values > OWQS	
pH (units)	100		8.08	8.04	7.1/8.86	7.9/8.26		
Dissolved Oxygen (mg/L)	101		9.13	8.71	3.45/19.04	7.29/10.89		
Hardness (mg/L)	100		522	529	187/885	397/655		
Minerals	Total Dissolved Solids (mg/L)	36	850	851	258/1604	606/1133		
	Specific Conductivity (uS/cm)	100	1177	1227	355/2037	836/1538		
	Chloride (mg/L)	101	76	76	10/163	44/109		
	Sulfate (mg/L)	102	363	341	26/787	256/491		
Nutrients	Total Phosphorus (mg/L)	102	0.399	0.194	0.008/4.183	0.116/0.408		
	Total Nitrogen (mg/L)	101	1.65	1.20	0.33/7.42	0.82/2.18		
	Nitrate/Nitrite (mg/L)	102	0.28	0.14	<0.05/1.04	<0.05/0.45		
	Chlorophyll A (mg/m <sup>3</sup> )	37	27.0	18.6	<0.1/177	7/31.8	TSI=62.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	425.0	100.0	<10/2419.6	20/525	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	420.9	41.0	<10/8164	<10/188.8		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				S		S			S			
	Fish Consumption				NS								

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Notes

Fish Consumption not supporting for Lead

# Washita River at McClure



Sample Record	Times Visited	Station ID
November 1998 - Current	86	310840010010-003RS

Stream Data	County	Custer	<a href="#">View Site Data</a>
	Location	North of the Town of McClure off of State Highway 33	
	Latitude/Longitude	35.656289, -99.306207	
	Planning Watershed	West Central (8-digit HUC -11130301)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	64	16.3	18.6	-0.8/33.3	7.8/23.5
Turbidity (NTU)	65		85	25	1/>1000	8/83	22% of values > OWQS	
pH (units)	64		8.08	8.10	7.46/9.11	7.93/8.22		
Dissolved Oxygen (mg/L)	63		9.93	10.16	3.77/19.46	8.4/11.39		
Hardness (mg/L)	64		1162	1096	291/2255	985/1376		
Minerals	Total Dissolved Solids (mg/L)	51	1614	1650	420/2760	1460/1960		
	Specific Conductivity (uS/cm)	64	1905	1938	601/2897	1681/2235		
	Chloride (mg/L)	66	60	63	10/409	39/68		
	Sulfate (mg/L)	66	877	855	170/1760	668/1103		
Nutrients	Total Phosphorus (mg/L)	65	0.155	0.065	<0.005/1.71	0.041/0.188		
	Total Nitrogen (mg/L)	66	1.66	1.26	0.57/5.49	0.91/1.88		
	Nitrate/Nitrite (mg/L)	66	0.63	0.32	<0.05/4.96	0.2/0.49		
	Chlorophyll A (mg/m <sup>3</sup> )	30	17.6	8.8	1.7/103	3.4/19.2	TSI=58.7	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	999.5	407.5	63/5172	112/1665.4	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	1646.4	209.0	<10/24192	52/873.8	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment	
	Fish & Wildlife Propagation	NS	S	S	S						NS	S	NS	
	Aesthetics													S
	Agriculture					S		S	S					
	Primary Body Contact Recreation									NS				
	Public & Private Water Supply				S		S			S				
	Fish Consumption				NS									

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Notes

Fish Consumption not supporting for Lead

# Washita River at Pauls Valley



Sample Record	Times Visited	Station ID
December 1998 - Current	156	310810010010-001AT

Stream Data	County	Garvin	<a href="#">View site data</a>
	Location	East of the Town of Pauls Valley on county road E1570	
	Latitude/Longitude	34.73848401, -97. 16538162	
	Planning Watershed	Lower Washita (8-digit HUC -11130303)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature ( °C)	133	18.2	18.8	0.1/33	9.5/26.8
Turbidity (NTU)	134		288	77	8/>1000	45/420	46% of values > OWQS	
pH (units)	133		8.08	8.09	7.01/8.74	7.95/8.23		
Dissolved Oxygen (mg/L)	133		9.46	9.01	3.83/22.13	7.35/11.33		
Hardness (mg/L)	132		639	645	171/1210	476/804		
Minerals	Total Dissolved Solids (mg/L)	70	1006	1025	250/2577	707/1288		
	Specific Conductivity (uS/cm)	134	1414	1500	304/2237	1116/1785		
	Chloride (mg/L)	138	77	71	10/238	46/100		
	Sulfate (mg/L)	135	499	524	94/1240	333/655		
Nutrients	Total Phosphorus (mg/L)	145	0.397	0.187	0.027/3.16	0.109/0.421		
	Total Nitrogen (mg/L)	136	1.78	1.37	0.46/7.2	0.97/2.19		
	Nitrate/Nitrite (mg/L)	137	0.31	<0.05	<0.05/1.71	<0.05/0.53		
	Chlorophyll A (mg/m <sup>3</sup> )	52	54.7	29.4	8.7/783	18.7/48.7	TSI=69.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	25	1174.8	200.0	<10/10462	36/1943.2	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	25	349.0	31.0	<10/3873	<10/176	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		S	S				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# West Cache Creek at Taylor



Sample Record	Times Visited	Station ID
November 1998 - Current	126	311310020010-001AT

Stream Data	County	Cotton	<a href="#">View Site Data</a>
	Location	North of the Town of Taylor on State Highway 5B	
	Latitude/Longitude	34.2095473, -98.33061891	
	Planning Watershed	Beaver-Cache (8-digit HUC - 11130203)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	110	19.0	21.3	2.6/35.2	9.9/26.9
Turbidity (NTU)	114		144	43	4/1000	16/99	19% of values > OWQS	
pH (units)	109		8.04	8.05	6.51/8.78	7.84/8.22		
Dissolved Oxygen (mg/L)	110		8.70	8.73	3.71/15.3	6.65/10.46		
Hardness (mg/L)	114		263	213	78/790	152/329		
Minerals	Total Dissolved Solids (mg/L)	58	558	436	144/2260	262/670	40% of values > OWQS	
	Specific Conductivity (uS/cm)	109	1090	884	137/4559	574/1346		
	Chloride (mg/L)	116	203	136	<5/1010	75/262	12% of values > OWQS	
	Sulfate (mg/L)	116	87	62	18/300	44/110		
Nutrients	Total Phosphorus (mg/L)	116	0.208	0.136	0.031/1.204	0.097/0.253		
	Total Nitrogen (mg/L)	116	1.16	0.78	0.22/6.33	0.57/1.39		
	Nitrate/Nitrite (mg/L)	116	0.31	<0.05	<0.05/2.91	<0.05/0.45		
	Chlorophyll A (mg/m <sup>3</sup> )	21	16.7	13.1	1.1/55.1	4.4/21.6	TSI=58.2	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	22	1104.8	280.0	<10/10000	190/889.5	Mean > OWQS	
	E. Coli (cfu/100ml)(* -Geo. Mn.)	22	370.6	104.5	<10/2419.6	49.3/377	Mean > OWQS	

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	NS	S	S	S						S	S	S
	Aesthetics												NEI
	Agriculture					S		NS	NS				
	Primary Body Contact Recreation									NS			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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Notes

# Wolf Creek at Ft. Supply



Sample Record	Times Visited	Station ID
November 1998 - Current	154	720500030010-001AT

Stream Data	County	Woodward	<a href="#">View Site Data</a>
	Location	East of the Town of Ft. Supply off US 270	
	Latitude/Longitude	36.44954552, -99.58872133	
	Planning Watershed	Panhandle (8-digit HUC -11100203)	

Parameters		Parameter ( <i>Descriptions</i> )	n	Mean	Median	Min./Max	p25/p75	Comments
		In-Situ	Water Temperature (°C)	130	17.9	19.0	-0.1/36.2	10.9/25.2
Turbidity (NTU)	131		20	12	2/81	7/29		
pH (units)	127		8.16	8.18	7.33/9	8.03/8.3		
Dissolved Oxygen (mg/L)	129		10.04	9.96	0.12/26.42	8.62/11.21		
Hardness (mg/L)	131		320	312	163/615	282/350		
Minerals	Total Dissolved Solids (mg/L)	70	623	614	424/920	582/659		
	Specific Conductivity (uS/cm)	129	991	978	464/1835	904/1055		
	Chloride (mg/L)	131	136	131	89/200	122/146		
	Sulfate (mg/L)	131	109	104	48/186	92/123		
Nutrients	Total Phosphorus (mg/L)	139	0.052	0.037	<0.005/0.228	0.019/0.07		
	Total Nitrogen (mg/L)	132	1.21	1.18	0.42/2.83	0.91/1.47		
	Nitrate/Nitrite (mg/L)	132	0.69	0.67	<0.05/2.2	0.4/0.94		
	Chlorophyll A (mg/m <sup>3</sup> )	26	5.3	3.3	0.6/21.4	2.2/6.9	TSI=46.9	
Bacteria	Enterococcus (cfu/100ml)(* -Geo. Mn.)	26	1034.4	106.3	<10/10000	20/525		
	E. Coli (cfu/100ml)(* -Geo. Mn.)	26	170.7	68.5	<10/2282	27.5/97.1		

Beneficial Uses	<a href="#">Click to learn more about Beneficial Uses</a>	Turbidity	pH	Dissolved Oxygen	Metals	Sulfates	Nitrates	Chlorides	Total Dissolved Solids	Bacteria	Bio. Fish	Bio. BMI	Sediment
	Fish & Wildlife Propagation	S	S	S	S						S	S	S
	Aesthetics												S
	Agriculture					S		S	S				
	Primary Body Contact Recreation									S			
	Public & Private Water Supply				NEI		NEI			NEI			
	Fish Consumption				S								

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