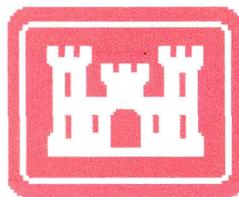


Faunal & Floral Inventory

FINAL REPORT TASK 1 ENVIRONMENTAL DATA FOR THE ARKANSAS RIVER CORRIDOR PROJECT, TULSA, OKLAHOMA W912BV-06-P-0303



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PURPOSE OF THE STUDY

The Greater Tulsa Area communities recognized that the Arkansas River Corridor (ARC) is an important natural resource that could be developed and greatly improve the quality of life for current and future generations. In August 2004, The Indian Nations Council of Government (INCOG) directed and oversaw the development of an Arkansas River Corridor Master Plan/Phase I Vision Plan. The purpose of this plan was to enhance the aesthetic quality and development opportunities along a 42 mile stretch of the Arkansas River through Tulsa County through the establishment of numerous low-water dams. In October 2005, the U.S. Army Corps of Engineers (USACE), Tulsa District and INCOG developed a Phase II Master Plan and Pre-Reconnaissance Study. Some of the objectives of the Phase II Plan involved addressing potential environmental initiatives. This led to a letter agreement between Tulsa County, the Oklahoma Water Resources Board and the USACE Tulsa District to inventory, assess and evaluate environmental data for the Arkansas River from the Keystone Dam to the Tulsa/Wagoner County line, a 42-mile long corridor.

In September 2006, the Tulsa District of the USACE began Phase III of the Arkansas River Corridor Study. The purpose of Phase III of the study is to collect baseline environmental data along the Arkansas River Corridor. The Arkansas River Corridor was divided into five sampling segments between Lake Keystone and the community of Broken Arrow and shown on *Appendix A*.

The environmental studies conducted included a: 1) faunal and floral inventory; 2) fish community structure and composition assessment; 3) aquatic macro-invertebrate structure and composition; 4) water quality data assessment, and; 5) cultural resource evaluation. This report presents the results of the faunal and floral inventory.

INTRODUCTION

The Arkansas River's headwaters begin near Leadville, Colorado and flows 1,450 miles across Colorado, Kansas, northeastern Oklahoma and Arkansas to the confluence of the Mississippi River about 600 miles north of New Orleans. The Arkansas River is the fourth longest river in the United States with a drainage basin of nearly 195,000 miles and is the largest tributary of the Mississippi-Missouri River System. The Arkansas River enters Oklahoma near Arkansas City on the Kansas border north of Kaw Lake in Kay County, then flows generally southeast through Tulsa and Muskogee and then veers to the east and flows across the Arkansas State Line to Fort Smith. Numerous dams have created very large lakes on the Arkansas River including Keystone Dam Lake near Tulsa. The Arkansas River is fed by the Salt Fork, Black Bear, Cimarron, Illinois, Verdigris and South Canadian Rivers along with several other smaller rivers, creeks and streams (McCord, 2002).

The climate, geology, and soils of a region are interrelated to the flora that grows and fauna that inhabits the Arkansas River Corridor study area. Climate regulates the temperature and the amount of precipitation that affects the abundance and location of plant and animal populations. The freeze and thaw of water in the winter and strong winds and precipitation in the summer help to breakdown the exposed bedrock which leads to the development of soils. The different soil types created by the mixture of clay, silt, and sand, and whether the soil is acidic or alkaline, is directly related to available parent material, topography, and material transported by wind or water from nearby sources.

The plants and animals that occur in a region are the direct result of the interrelations of climate and geology toward the formation of soil. The following paragraphs provide a summary of the climatic, geologic, and soil characteristics of the Arkansas River Corridor study area.

Climate

The climate of Tulsa County is a temperate. The normal annual temperature is about 60 degrees Fahrenheit (F). The average annual maximum and minimum temperatures are 71° and 49° F, respectively. The highest recorded temperature was 115° F and the lowest recorded temperature was -15° F. On average, the relative humidity ranges between 47% and 92%. The normal annual precipitation is about 42 inches with approximately 83 days per year of precipitation. The majority of the annual rainfall (64%) occurs between April and September. Thunderstorms occur predominantly in the spring and summer for about 50 days out of the year. The prevailing winds across Tulsa County are predominantly from the south to southeast and the wind speeds average nearly seven miles per hour on an annual basis (Bennison, 1972; Oklahoma Climatological Survey).

Geomorphology and Geology

Geomorphic features identified in Tulsa County include the Eastern Sandstone Cuesta Plain and the Claremore Cuesta Plain. The Eastern Sandstone Cuesta Plain forms rugged hills with one steep face. The Claremore Cuesta Plain produces less pronounced and frequent hills and is composed of sandstone and limestone on top of the broad shale plains. The Claremore Cuesta Plain occurs throughout the rest of the county (Johnson, 1979). These hills form the topographic highs while the Arkansas River forms the topographic lows. These topographic highs and lows define the watersheds and drainage basin boundaries for the Arkansas River within the study area. The relief ranges from 180 to 300 feet when the cuestas are close to the river and 20 to 60 feet when the floodplains dominate the landscape.

The geology of the ARC study area is underlain by rocks of Pennsylvanian age. The hills along the upper reaches of the river are composed of the Dewey Limestone and Nellie Bly Formation. The rock formations become progressively younger downstream and include the Coffeyville, Checkerboard Limestone, Seminole, Holdenville, and Nowata Shale. These rocks were formed in ancient river and sea deposits that include delta; prodelta; subtidal clastics and marine shell banks; shallow marine banks; platform shallow marine, and; marine basinal shales (Bennison, 1972; Marcher, 1988). Quaternary river deposits overlie the younger Pennsylvanian formations on the broad floodplains along the river. The younger Holocene deposits represent modern floodplain alluvium that overly older Pleistocene terrace deposits. The deposits consist of unconsolidated gravels, sands, silts and clays.

Soils

The Choska-Severn Association is the predominate soil along the Arkansas River. These soils are deep, nearly level, well drained, loamy to gravelly soils overlying loamy and sandy materials on the floodplains. There are four basic horizons with alternating colors of dark reddish brown and yellowish red. The depth to groundwater is typically six feet. The depth to bedrock is greater than 60 inches (Cole, 1977).

General Habitat Types

The ARC survey corridor traverses many different habitat types or ecotones. Overall, habitat diversity may be considered moderate with the following identified: upland forests (including northern cross timbers) near Keystone Dam and at Turkey Mountain, riparian corridors along the river channel and tributaries, tame pastures, agriculture fields, sod farms, native grass meadows, fallow fields in the rural areas, and variable habitats associated with human-use metropolitan areas. The goal of this baseline inventory was to sample the representative habitat types and identify the plant and animal species associated therewith. Future surveys may be replicated at the respective sample stations in an effort to detect changes in habitat and species richness that may result from construction projects, human population growth, and/or metropolitan expansion (urban sprawl). A variety of habitats were sampled ranging from residential developments to areas adjacent to commercial enterprises to relatively pristine or undeveloped rural areas.

METHODS

The principle objective of this fauna and flora report is to conduct an inventory of the terrestrial plant and vertebrate species up to a maximum distance of one-half mile from the centerline of the Arkansas River. First, an inventory and review of existing federal and state databases, studies, and surveys for species distribution and historical accounts was completed. The research focused on mammals, birds, sensitive environments, and threatened and endangered species. Historical accounts of the respective flora and fauna are provided at *Appendix B*. Finally, pedestrian surveys were conducted within the five segments of the project area on a quarterly basis. The comprehensive inventory was conducted to visually observe and document all mammals, amphibians, reptiles, birds, and plants species within and adjacent to the individual sample sites.

Terrestrial surveys were performed using randomly located sample plots within the five survey corridor segments to determine the general floral and faunal composition. Fifteen 30-meter plots were established along the river study corridor to survey the homogeneous habitat types either side of the Arkansas River up to a maximum distance of one-half mile measured from the centerline of the river.

The floral survey consisted of observations of the dominant vegetation in each plot identified to species (to the extent possible) during which each sample plot was photo-documented. Botanical preservation would be coordinated with the respective agencies regarding the requested species protocol. Floral inventories were conducted at each sample site within a 30-meter radius of sample plot center, specified by GPS coordinates. The dominant plant species were identified at a minimum. However, each observed species was identified to the extent practical and recorded resulting in a more detailed inventory of plants represented within the predominant habitat types. The sample station location maps are provided at *Appendix C* and selected photographs of each station are presented at *Appendix D*. A brief and general habitat description of each sample site is provided below:

Survey Corridor Segment 1

1TR11.1 is characterized as a riparian corridor area situated at a relatively low elevation located on the left descending bank of the river. The area is a moderately mature forested area with an open understory. Soils were described as sandy to sandy loam. The area is part of a trail system associated with the nature area and overlook downstream of Keystone Dam.

1TR11.2 is described as a narrow riparian zone adjacent to forested upland hillsides on the right descending bank of the river.

The area is relatively young-aged with a variety of species represented at 4 strata. Overstory composition was somewhat limited and open which promoted a relatively dense understory. Herbaceous species presence was limited and sparse.

1TR11.3 is located on a middle ridge bench on an upland forest hillside. The area was dominated by oak and hickory species along the rocky outcrop. Canopy closure was estimated at greater than 70% and the understory was comprised primarily of those species present in overstory. Herbaceous and vine species were present but somewhat sparse in terms of stem density.

Survey Corridor Segment 2

1TR12.1 is located on the left descending bank of the river near Sand Springs and on the river side of the levee. The area was very sandy and the observed vegetation was mostly at the herbaceous stratum. A few trees were present and associated with the levee, depressional areas, and along the riverbank.

1TR12.2 was very similar to the previous sample site however; a depression wetland was identified within the sample point. Dominated by herbaceous vegetation, the wetland area contained the majority of the identified trees and understory. The overall area appears to have been disturbed and depression area may be a former borrow or sand pit.

1TR12.3 is located on a very steep upland hillside situated well above the riverbank south of State Highway 51. The sample site lies on the north slope of the rocky hillsides that may be the ancient river bank bluff. The area is very rocky and rugged with relatively young-aged trees and a moderately open understory.

Survey Corridor Segment 3

1TR13.1 lies within a mature upland forest on the top of Turkey Mountain overlooking the Arkansas River to the east. Canopy closure was estimated at 50% with a moderately dense understory. The surrounding area has been preserved from development and is currently used for outdoor activities including hiking and off-road bicycling.

1TR13.2 is described as a moderately open second terrace riparian zone located on the left descending bank. The area is relatively narrow and exhibited a moderately mature overstory. The understory and herbaceous strata were well developed and diverse. Soils within this sample site were described as sandy to sandy loam and well drained.

1TR13.3 is located in well maintained a residential area and was described as a partially fenced yard dominated by Bermudagrass. Plant diversity appeared to be very low.

Survey Corridor Segment 4

1TR14.1 is very similar to 1TR13.2 and is also described as a moderately open second terrace riparian zone located on the left descending bank. The overstory component was more developed and canopy closure was ocularly estimated at 75%. The understory was not as diverse and the herb stratum was not well represented. Soils within this sample site were described as sandy to sandy loam and well drained.

1TR14.2 is situated in a developing riparian forest near the confluence the confluence of Polecat Creek with the Arkansas River. The sample site is relatively young but exhibited a diverse plant community at all four strata. The area lies within the floodplain of the river and the stem density within and adjacent to this site was considered moderate. Sandy well drained soils were prevalent throughout the area.

1TR14.3 is situated between a fallow, previously disturbed open field dominated by forb species and a well developed riparian corridor adjacent to the river. A small early successional stage upland forested area lies between the two more prominent habitat features. Species diversity was considered moderate.

Survey Corridor Segment 5

1TR15.1 is located adjacent to and partially within a remnant oxbow on the left descending bank of the river downstream of an active sand removal operation. The eastern edge of this sample site is situated along the former riverbank while the western portion may be part of the sand removal operation or former sand pit. The majority of the area was classified as a palustrine deciduous forest seasonally flooded wetland (Cowardin Nomenclature PFO1C).

1TR15.2 is characterized as a developing forested floodplain area located between agriculture fields and the ancient riverbank. While not classified as wetland, the area may be a remnant of a once expansive floodplain riparian corridor associated with the river and a nearby creek channel. Situated over one-quarter mile east of the left descending bank of the river, the area has not experienced appreciable disturbance and contained a diverse array of plant species across four strata.

1TR15.3 is considered a relatively pristine sample site nestled along the ancient river bank that does not appear to evidence any appreciable disturbance in recent history. The area contained several mature hardwood species and a very diverse understory. Many species of vine were present however due to the canopy coverage and additional understory shading the herbaceous component was somewhat limited.

The faunal survey consisted of the visual observation of species within each plot or evidence of the presence of the species, including but not limited to; observations of tracks, scat, carcasses, sign posts, scent, skin, hair, feathers, and song in each plot. Earthen sign stations and/or scent posts were not used. Detailed statistical analysis of populations were not considered a goal of this study rather a general overall species presence or baseline inventory was to focus.

The flora and fauna surveys along the ARC (Arkansas River Corridor) were conducted by the Eagle Environmental field sampling team based on the division of the 42-mile survey corridor along the Arkansas River into 5 segments with 3 sample points in each segment for a total of 15 individual sample points. Global Position System (GPS) coordinates for each flora and fauna sample point within the survey segments were collected using sub-meter accuracy hand held Trimble and Sokkia GPS units.

Surveys were performed to document those species present or utilizing the multiple different habitat types associated with the Arkansas River corridor within Tulsa County. Specific intervals of time, typically 15 minute intervals, were utilized to standardize the amount of time (effort) expended at each sample station. Standard time periods ranged between 1 and 2 hours and were primarily utilized for avian observation/detection surveys.

Avian surveys were conducted using a fixed plot sample method however; approval was provided by the USACE to include any species observed, detected, and/or evidenced within one-half mile of any one sample site.

Mammal, amphibian, and reptile surveys were not considered time sensitive and were based on the evidence of all species within the sample plot or vicinity. The preparation and archival of specimens, as appropriate, would be coordinated with an accredited zoological museum for faunal collections. However, no species of significance or special status has been observed or identified. Threatened and endangered species as well as species of special concern in the State of Oklahoma were afforded special attention to determine their use and locations.

Federal and State Database Inventory

Threatened and Endangered Species

The Endangered Species Act of 1973 declares the intention of Congress to protect all federally listed threatened and endangered species and designated habitat of such species occurring in the United States. The United States Fish and Wildlife Service (USFWS) is the primary regulatory agency responsible for ESA compliance. Coordination with the USFWS have determined that there are four federally listed species that occur in Tulsa County that included: the endangered American burying beetle (*Nicrophorus americanus*), the threatened (proposed for delisting) bald eagle (*Haliaeetus leucocephalus*), the endangered interior least tern (*Sterna antillarum*), and the threatened piping plover (*Charadrius melanotos*) (**Table 1**). Descriptions of the species are provided below.

Table 1
Threatened and Endangered Species

Common Name	Scientific Name	Status
American Burying Beetle	<i>Nicrophorus americanus</i>	Endangered
Interior Least Tern	<i>Sterna antillarum</i>	Endangered
Piping Plover	<i>Charadrius melanotos</i>	Threatened

Source: U.S. Fish and Wildlife Service, 2007

American Burying Beetle



The American Burying Beetle is large and has a shiny black appearance with four orange-red spots on the wing covers (elytra). A large red spot on the pronotum of the beetle is indicative of the species. The habitat requirements for this beetle are not fully known, however, the ABB is considered a habitat generalist and is known to occupy a diverse range of habitats. Habitats associated with the ABB include open grasslands, forests, as well as transitional areas.

The beetle is a carrion feeder and utilizes small vertebrate carcasses for food and reproductive purposes. Adult ABB's locate suitable food sources and mates through olfactory senses. Adults prepare and preserve the carrion by covering the carcass with mucilaginous secretions and burying in a shallow grave. Eggs are laid in a small chamber adjacent to the buried carrion by the adults (Schnell, et. al.1993). Both the male and female adults remain with the young until pupation is complete. The ABB appears to utilize a mixture of woodlands and open grasslands for protective cover, foraging, and brooding purposes however their potential presence in these areas may be more predicated on prey/forage availability rather than specific habitat selection. Surveys for the ABB were completed in the 4th sampling quarter between July 30 and August 1, 2007.

Interior Least Tern



The interior least tern is the smallest member of the tern family with a wingspan of 20 inches (50 cm). They have a grayish back and wings, and snowy white undersides. Least terns can be distinguished from all other terns by their combination of a black crown, white forehead, and a variable black-tipped yellow bill. Interior least terns arrive at breeding sites from late April to early June where they typically spend four to five months. Least terns nest in small colonies on exposed salt flats, river sandbars, or reservoir beaches. Nests are small scrapes in the sand, and usually two or three eggs are laid. Interior least terns favor islands or sandbars along large rivers for nesting. The sand must be mostly clear of vegetation to be used by terns. Least terns prefer shallow water for fishing. The traditional period of presence for the Interior least tern had not occurred through the latest sampling period. Surveys for this species were performed during the 4th quarter sampling period.

Piping Plover



The Piping Plover is described as a small compact shorebird with pale gray upperparts. The breast and stomach areas are white with a white neck collar. Piping plovers have orange legs and a short stout bill. Piping plovers forage on aquatic invertebrates and various terrestrial insects. Nests are described as shallow excavations in sand and are often lined with pebbles, shells, and/or small woody drift (Knopf 1996). Habitat degradation from reservoir construction, river channel alteration, and development are contributing factors for its decline. The piping plover is identified as a breeding resident of Oklahoma and arrives in April. The piping plover is normally associated with larger river waterway system with large isolated sand bars. No piping plovers were observed during the completed sampling periods.

Bald Eagle



The bald eagle was removed from the threatened species list in July 2007 (72 FR 37345-373732), but continues to be provided protection under the Bald and Golden Eagle Protection Act. Bald eagles are rather large raptorial birds measuring 3 feet in height with a 7-foot wingspan. The bald eagle prefers large trees or high cliffs along large waterways for perching and nesting purposes. Fish is the preferred diet of eagles, but they also eat small mammals, waterfowl, turtles and dead animals. Preferred foraging areas include quiet coastal areas, rivers or lakeshores with large tall trees (Buehler 2000). Generally, bald eagles migrate through Oklahoma in early spring and return by September or October. Bald eagles were observed from sampling point 1TR1.1 near Keystone Dam during the 2nd quarter sampling period.

State Species of Special Concern

Nine species of special concern listed by the State of Oklahoma occur in Tulsa County and are shown in **Table 2**. The species of special concern designation is primarily a planning tool for the Oklahoma Department of Wildlife Conservation and other conservation agencies interested in focused conservation efforts for declining species. State species of special concern do not receive the same legal protection as threatened and endangered species.

Table 2 STATE SPECIES OF CONCERN	
Scientific Name	Common Name
<i>Vireo bellii</i>	Bell's Vireo
<i>Macroclemys temminckii</i>	Alligator Snapping Turtle
<i>Cemophora coccinea copei</i>	Northern Scarlet Snake
<i>Lutra canadensis</i>	River Otter
<i>Phrynosoma cornutum</i>	Texas Horned Lizard
<i>Gryllotalpa major</i>	Prairie Mole Cricket
<i>Buteo swainsoni</i>	Swainson's Hawk
<i>Lanius ludovicianus</i>	Loggerhead Shrike
<i>Zapus hudsonius</i>	Meadow Jumping Mouse

Bell's Vireo



Bell's Vireo is found in open shrub land habitats that are dominated by willow, sand plum, roughleaf dogwood and hawthorn. They are found in shrubby rangeland and old-fields where sand plum and other deciduous thickets are common; and they are found in willow thickets along streams and the Arkansas River. While habitat for this species is believed to be present within some of the sample site locations, no sightings or song was confirmed.

Alligator Snapping Turtle



The Alligator snapping turtle is found in the vicinity of log/debris piles in the Arkansas River and its tributary streams. This aquatic turtle is usually found in forested, slow-moving waters such as backwater areas on the Arkansas River and some of its larger tributaries. Individual Alligator Snapping Turtles rarely leave the water (except females when they leave to lay their eggs) so they almost never colonize ponds or bodies of water not directly connected to perennial streams. This species has not been observed to date.

Northern Scarlet Snake



The northern scarlet snake is a rare snake that is usually associated with oak woodlands and forests on sandy soils. It has only been documented a few times in Tulsa County. The northern scarlet snake is generally found under boards, rocks, and logs, in forests and open adjacent fields with well drained soil. This species is nocturnal and is considered a burrower, spending most of its time underground. No observation or evidence of the Scarlet snake has been documented.

The River Otter



The River otter has been increasing in numbers and expanding its range over the past 25 years. Within the past 7 to 8 years the otter began to recolonize Tulsa County and a few are seen regularly along the Arkansas River and in its tributaries. When prime, river otter fur appears black-brown, with the belly slightly lighter in color than its back. The chin and throat are grayish. Otter fur consists of a very dense undercoat overlaid with longer guard hairs. Its tail is powerful and a little more than a third as long as its head and body. Only the hind feet are webbed. River otter presence has not been confirmed within or near the selected sampling locations.

The Texas Horned Lizard, Prairie Mole Cricket, Swainson's Hawk, Loggerhead Shrike, and the Meadow Jumping Mouse are typically associated with native prairie and grassland habitats and are most frequently observed in the grasslands in the northern part of Tulsa County:

The Texas Horned Lizard



The Texas Horned Lizard is found in tallgrass prairie and shrubby prairie habitats. It is not restricted to sites with sandy soils, but it does appear to be the most common in sandy soils. Most of the recent records have been in the northern part of Tulsa County and along the Arkansas River. Presence of this species has not been confirmed.

Prairie Mole Cricket



The Prairie Mole Cricket is found in native prairie and appears to survive well in hay meadows and grazed pasture land and does not appear to use Bermuda grass or fescue pastures. Prairie mole crickets may be present within or near some of the sampling sites however their presence was not detected.

Swainson's Hawk



Swainson's Hawk occurs at low densities in open grassland habitat in the northern part of the county. This hawk prefers open grasslands and desert-like habitats. It is common to see this hawk perched on a fence post in a prairie or open range. This hawk's most unique feature is its variation in color. The light color morph includes white patches on the forehead, the throat and the belly. These hawks vary in length from 19 to 22 inches, and have a wingspan of 47 to 57 inches. No Swainson's hawks have been observed during the previous sampling periods.

Loggerhead Shrike



The Loggerhead shrike is uncommon and with a spotted distribution and usually found in open grassland/prairie habitat. The loggerhead shrike is a masked, hook-billed songbird known for its habit of impaling prey on thorns or barbed wire and easily confused with mockingbirds. Specific habitat required for this species has not bee observed at or near any of the selected sample stations. Species observation or evidence of presence has not been documented.

Meadow Jumping Mouse



The meadow jumping mouse is very rare and only recorded twice in Tulsa County (both records are in excess of 30 years old) in shrubby, tallgrass prairie habitat. This species probably no longer occurs in Tulsa County and has not been confirmed as present within the survey corridor.

RESULTS

Surveys for flora and fauna were conducted quarterly from October 2006 to July 2007. Primarily opportunistic direct observation of the identified species was the primary methods of survey. Survey efforts were conducted each quarter at different times during diurnal periods ranging from crepuscular to midday. However, weather conditions were selected to avoid sampling during high wind and/or precipitation conditions. Ambient temperatures were not a factor in determining sample periods or timing. Fifteen sample plots were used to collect evidence of resident and/or migratory species within the five survey corridor segment and are shown on maps in *Appendix C*.

Fall 2006 Sampling

The fall quarterly sampling was conducted from October 1 to December 31, 2006. A total of 107 different species of animals were identified at the 15 sample stations including 21 species of mammals, 16 amphibian and reptile species, and 70 different species of birds. Species diversity ranged from 8 animals identified as using sample station 1TR13.3 to 46 species confirmed at station 1TR14.1. One hundred thirty-five plant species were identified during this survey corridor across the 15 sample stations. Station 1TR13.3 exhibited the least species diversity with 11 while station 1TR15.2 and 1TR13.2 maintained 48 different plants species. A detailed list of species observed and a representation of the species identified at each sampling site is provided in *Appendix E*.

Winter 2007 Sampling

The winter 2007 sampling was conducted from January 15 to April 15, 2007. A total of 56 species comprised of 10 mammals, no amphibians or reptiles, and 46 birds. Species diversity ranged from 2 animals identified as using sample station 1TR13.3 to 20 species confirmed at station 1TR11.1. The overall diversity of plants observed during the winter survey totaled 103 different species. Sample site 1TR13.3 exhibited 11 species and 1TR15.3 contained 37. A detailed list of species observed and a representation of the species identified at each sampling site is provided in *Appendix F*.

Spring 2007 Sampling

The spring 2007 sampling event was conducted from April 15, to June 15, 2007. A total 71 animal species were confirmed during this survey period consisting of 9 mammals, 19 amphibians and reptiles, and 43 birds. The range of species present was 6 at 1TR13.3 and 25 at 1TR11.1. The number of plant species identified throughout the 15 sample stations was 108. Stations 1TR12.3 and 1TR13.3 exhibited the least number of plant species with 12 and 1TR13.2 maintained the greatest diversity with 39 species observed. A detailed list of species observed and a representation of the species identified at each sampling site is provided in *Appendix G*.

Summer 2007 Sampling

The summer 2007 sampling even was conducted from June 15, 2007 and to August 15, 2007. A total 64 animal species were confirmed during this survey period consisting of 11 mammals, 3 amphibians and reptiles, and 69 birds. The range of species present was 7 at 1TR13.3 and 23 at 1TR11.1, 1TR12.2 and 1TR14.2. The number of plant species identified throughout the 15 sample stations was 95. Station 1TR13.3 exhibited the least number of plant species with 11 while 1TR15.3 experienced the greatest diversity with 40 species observed. A detailed list of species observed and a representation of the species identified at each sampling site is provided in *Appendix H*.

A survey was conducted to identify the presence or absence of the American Burying Beetle between July 30 and August 1, 2007 and completed after three nights of trapping. Members of the *Nicrophorus* genus were found including *Nicrophorus orbicollis* and *Nicrophorus americanus*. Four American Burying Beetles were collected. The report of survey is provided in *Appendix I*.

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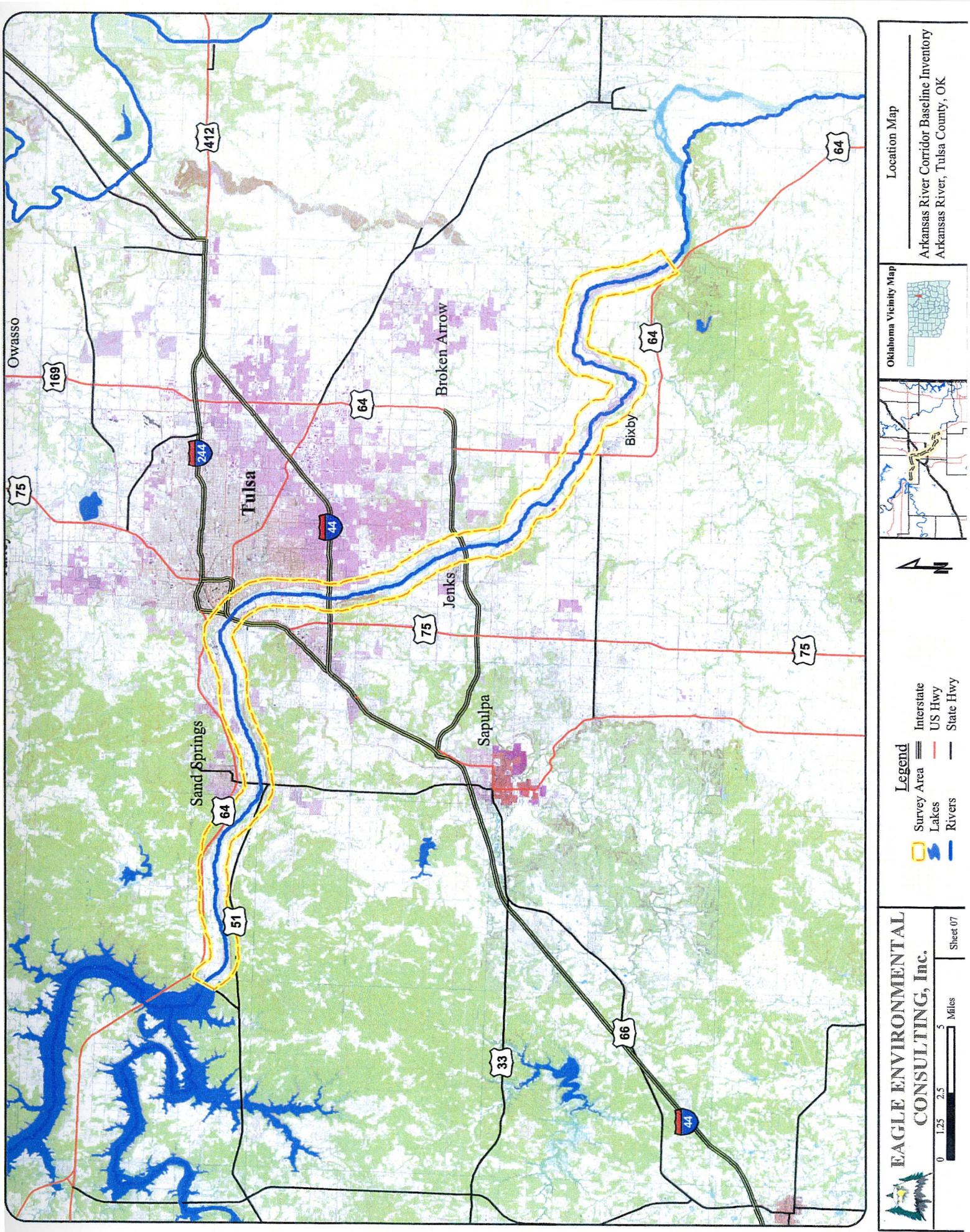
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Appendix A

Project Location Map



Appendix B

Comprehensive Historical List of Flora and Fauna Of Tulsa County

ARKANSAS RIVER CORRIDOR STUDY PROJECT TULSA COUNTY - KEYSTONE DAM TO THE WAGONER COUNTY LINE HISTORICAL AMPHIBIAN AND REPTILE OCCURRENCE LIST		
COMMON NAME	SCIENTIFIC NAME	
ALLIGATOR SNAPPING TURTLE	<i>MACROCLEMYS</i>	<i>TEMMINCKII</i>
AMERICAN TOAD	<i>BUFO</i>	<i>AMERICANUS</i>
BLACK RAT SNAKE	<i>ELAPHE</i>	<i>OBSOLETA OBSOLETA</i>
BLIND SNAKE	<i>LEPTOTYPHLOPS</i>	<i>DULCIS DISSECTUS</i>
BROAD HEADED SKINK	<i>EUMECES</i>	<i>LATICEPS</i>
BROWN SNAKE	<i>STORERIA</i>	<i>DEKAYI</i>
BULL SNAKE	<i>PITUOPHIS</i>	<i>MELANOLEUCUS</i>
BULLFROG	<i>RANA</i>	<i>CATESBEIANA</i>
CENTRAL NEWT	<i>NOTOPHTHALMUS</i>	<i>VIRIDESCENS LOUISIANENSIS</i>
COACHWHIP	<i>MASTICOPHIS</i>	<i>FLAGELLUM</i>
COAL SKINK	<i>EUMECES</i>	<i>ANTHRACINUS</i>
COLLARED LIZARD	<i>CROTAPHYTUS</i>	<i>COLLARIS COLLARIS</i>
COMMON GARTER SNAKE	<i>THAMNOPHIS</i>	<i>SIRTALIS PARIETALIS</i>
COMMON MUSK TURTLE	<i>STERNOTHERUS</i>	<i>ODORATUS</i>
COMMON SLIDER	<i>PSEUDEMYS</i>	<i>SCRIPTA ELEGANS</i>
COPPERHEAD	<i>AGKISTRODON</i>	<i>CONTORTRIX</i>
CORN SNAKE	<i>ELAPHE</i>	<i>GUTTATA</i>
COTTONMOUTH	<i>AGKISTRODON</i>	<i>PISCIVOROUS</i>
CRAWFISH FROG	<i>RANA</i>	<i>AREOLATA CIRCULOSA</i>
CRICKET FROG	<i>ACRIS</i>	<i>CREPITANS</i>
DIAMONDBACK WATER SNAKE	<i>NERODIA</i>	<i>RHOMBIFERA</i>
EASTERN BOX TURTLE	<i>TERRAPENE</i>	<i>CAROLINA TRIUNGUIS</i>
EASTERN HOG-NOSED SNAKE	<i>HETERODON</i>	<i>PLATYRHINOS</i>
EASTERN SPADEFoot	<i>SCAPHIOPUS</i>	<i>HOLBROOKII</i>
FENCE LIZARD	<i>SCELOPORUS</i>	<i>UNDULATUS</i>
FIVE-LINED SKINK	<i>EUMECES</i>	<i>FASCIATUS</i>
FLAT-HEADED SNAKE	<i>TANTILLA</i>	<i>GRACILIS</i>
GRAHAM'S CRAYFISH SNAKE	<i>REGINA</i>	<i>GRAHAMII</i>
GREAT PLAINS SKINK	<i>EUMECES</i>	<i>OBSOLETUS</i>
GREAT PLAINS RAT SNAKE	<i>ELAPHE</i>	<i>GUTTATA</i>
GREY TREEFROG	<i>HYLA</i>	<i>CHRYSOCELIS</i>
GROUND SKINK	<i>SCINCELLA</i>	<i>LATERALIS</i>
GROUND SNAKE	<i>SONORA</i>	<i>EPISCOPA EPISCOPA</i>
LINED SNAKE	<i>TROPIDOCOLONION</i>	<i>LINEATUM</i>
MILK SNAKE	<i>LAMPROPELTIS</i>	<i>TRIANGULUM GENTILIS</i>
MISSISSIPPI MUD TURTLE	<i>KINOSTERNON</i>	<i>SUBRUBRUM HIPPOCREPIS</i>
MISSISSIPPI MAP TURTLE	<i>GRAPTEMYS</i>	<i>KOHNI</i>
MISSOURI COOTER	<i>PSUEDOMYS</i>	<i>FLORIDANA</i>
NARROW MOUTH SALAMANDER	<i>AMBYSTOMA</i>	<i>TEXANUM</i>
NORTHERN BANDED WATER SNAKE	<i>NERODIA</i>	<i>SIPEDON PLEURALIS</i>
ORNATE BOX TURTLE	<i>TERRAPENE</i>	<i>ORNATA ORNATA</i>
OUACHITA MAP TURTLE	<i>GRAPTEMYS</i>	<i>PSEUDOGEOGRAPHICA</i>
PLAIN BELLIED WATER SNAKE	<i>NERODIA</i>	<i>ERYTHROGASTER</i>
PLAINS LEOPARD FROG	<i>RANA</i>	<i>BLAIRI</i>
PLAINS SPADEFoot	<i>SCAPHIOPUS</i>	<i>BOMBIFRONS</i>
PRAIRIE KINGSNAKE	<i>LAMPROPELTIS</i>	<i>CALLIGASTER</i>
PRAIRIE SKINK	<i>EUMECES</i>	<i>SEPTENTRIONALIS</i>
RACER	<i>COLUBER</i>	<i>CONSTRICTOR FLAVIVENTRIS</i>
RACERUNNER	<i>CNEMIDOPHORUS</i>	<i>SEXLINEATUS</i>
RED-BELLIED SNAKE	<i>STORERIA</i>	<i>OCCIPITOMACULATA</i>
RED EARED SLIDER	<i>TRACHEMYS</i>	<i>SCRIPTA ELEGANS</i>
RING-NECKED SNAKE	<i>DIADOPHIS</i>	<i>PUNCTATUS ARNYI</i>
ROUGH EARTH SNAKE	<i>VIRGINIA</i>	<i>STRIATULA</i>
ROUGH GREEN SNAKE	<i>OPHEODRYS</i>	<i>AESTIVUS</i>
SCARLET SNAKE	<i>CEMOPHORA</i>	<i>COCCINEA COPEI</i>
SIX-LINED RACERUNNER	<i>CNEMIDOPHORUS</i>	<i>SEXLINEATUS</i>
SLENDER GLASS LIZARD	<i>OPHISaurus</i>	<i>ATTENUATUS</i>
SMOOTH EARTH SNAKE	<i>VIRGINIA</i>	<i>VALERIAE ELEGANS</i>
SMOOTH SOFTSHELL TURTLE	<i>TRIONYX</i>	<i>MUTICUS MUTICUS</i>
SNAPPING TURTLE	<i>CHELYDRA</i>	<i>SERPENTINA</i>
SOUTHERN LEOPARD FROG	<i>RANA</i>	<i>UTRICULARIA</i>
SPECKLED KINGSNAKE	<i>LAMPROPELTIS</i>	<i>GETULUS</i>
SPINY SOFTSHELL TURTLE	<i>TRIONYX</i>	<i>SPINIFERUS</i>
STINKPOT	<i>STERNOTHERUS</i>	<i>ODORATUS</i>
STRECKER'S CHORUS FROG	<i>PSEUDACRIS</i>	<i>STRECKERI STRECKERI</i>
STRIPED CHORUS FROG	<i>PSEUDACRIS</i>	<i>TRISERIATA</i>
TEXAS HORNED LIZARD	<i>PHRYNOSOMA</i>	<i>CORNUTUM</i>
THREE TOED BOX TURTLE	<i>TERRAPENE</i>	<i>CAROLINA</i>
TIMBER RATTLESNAKE	<i>CROTALUS</i>	<i>HORRIDUS HORRIDUS</i>
W. DIAMONDBACK RATTLESNAKE	<i>CROTALUS</i>	<i>ATROX</i>
WESTERN EARTH SNAKE	<i>VIRGINIA</i>	<i>VALERIAE ELEGANS</i>
WESTERN HOG-NOSED SNAKE	<i>HETERODON</i>	<i>NASICUS</i>
WESTERN NARROW MOUTH TOAD	<i>GASTROPHRYNE</i>	<i>OLIVACEA</i>
WESTERN PYGMY RATTLESNAKE	<i>SISTRURUS</i>	<i>MILIARIUS</i>
WESTERN RIBBON SNAKE	<i>THAMNOPHIS</i>	<i>PROXIMUS PROXIMUS</i>
WORM SNAKE	<i>CARPHOPHIS</i>	<i>AMOENUS VERMIS</i>

ARKANSAS RIVER CORRIDOR STUDY PROJECT

Historic Bird Species List for Tulsa County, Oklahoma

Name	Scientific Name	Name	Scientific Name
Black-bellied Whistling-Duck	<i>Dendrocygna autumnalis</i>	Ladder-backed Woodpecker	<i>Picoides scalaris</i>
[Baikal Teal]	<i>Anas formosa</i>	Lapland Longspur	<i>Calcarius lapponicus</i>
[Bronzed Cowbird]	<i>Molothrus aeneus</i>	Lark Bunting	<i>Calamospiza melanocorys</i>
[Cave Swallow]	<i>Petrochelidon fulva</i>	Lark Sparrow	<i>Chondestes grammacus</i>
[Curlew Sandpiper]	<i>Calidris ferruginea</i>	Laughing Gull	<i>Larus atricilla</i>
[Dusky-capped Flycatcher]	<i>Myiarchus tuberculifer</i>	Lazuli Bunting	<i>Passerina amoena</i>
[Grace's Warbler]	<i>Dendroica graciae</i>	Le Conte's Sparrow	<i>Ammodramus leconteii</i>
[Gray Flycatcher]	<i>Empidonax wrightii</i>	Least Bittern	<i>Ixobrychus exilis</i>
[Gray Hawk]	<i>Asturina nitida</i>	Least Flycatcher	<i>Empidonax minimus</i>
[Gray Jay]	<i>Perisoreus canadensis</i>	Least Grebe	<i>Tachybaptus dominicus</i>
[Monk Parakeet]	<i>Myiopsitta monachus</i>	Least Sandpiper	<i>Calidris minutilla</i>
[Mute Swan]	<i>Cygnus olor</i>	Least Tern	<i>Sterna antillarum</i>
[Phainopepla]	<i>Phainopepla nitens</i>	Lesser Black-backed Gull	<i>Larus fuscus</i>
[Violet-green Swallow]	<i>Tachycineta thalassina</i>	Lesser Goldfinch	<i>Carduelis psaltria</i>
[White-throated Swift]	<i>Aeronautes saxatalis</i>	Lesser Nighthawk	<i>Chordeiles acutipennis</i>
Acadian Flycatcher	<i>Empidonax virescens</i>	Lesser Prairie-Chicken	<i>Tympanuchus pallidicinctus</i>
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	Lesser Scaup	<i>Aythya affinis</i>
Alder Flycatcher	<i>Empidonax alnorum</i>	Lesser Yellowlegs	<i>Tringa flavipes</i>
American Avocet	<i>Recurvirostra americana</i>	Lewis's Woodpecker	<i>Melanerpes lewis</i>
American Bittern	<i>Botaurus lentiginosus</i>	Lincoln's Sparrow	<i>Melospiza lincolni</i>
American Black Duck	<i>Anas rubripes</i>	Little Blue Heron	<i>Egretta caerulea</i>
American Coot	<i>Fulica americana</i>	Little Gull	<i>Larus minutus</i>
American Crow	<i>Corvus brachyrhynchos</i>	Loggerhead Shrike	<i>Lanius ludovicianus</i>
American Golden-Plover	<i>Pluvialis dominica</i>	Long-billed Curlew	<i>Numenius americanus</i>
American Goldfinch	<i>Carduelis tristis</i>	Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>
American Kestrel	<i>Falco sparverius</i>	Long-eared Owl	<i>Asio otus</i>
American Pipit	<i>Anthus rubescens</i>	Long-tailed Duck	<i>Clangula hyemalis</i>
American Redstart	<i>Setophaga ruticilla</i>	Louisiana Waterthrush	<i>Seiurus motacilla</i>
American Robin	<i>Turdus migratorius</i>	MacGillivray's Warbler	<i>Oporornis tolmiei</i>
American Tree Sparrow	<i>Spizella arborea</i>	Magnificent Frigatebird	<i>Fregata magnificens</i>
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Magnolia Warbler	<i>Dendroica magnolia</i>
American Wigeon	<i>Anas americana</i>	Mallard	<i>Anas platyrhynchos</i>
American Woodcock	<i>Scolopax minor</i>	Marbled Godwit	<i>Limosa fedoa</i>
Anhinga	<i>Anhinga anhinga</i>	Marsh Wren	<i>Cistothorus palustris</i>
Anna's Hummingbird	<i>Calypte anna</i>	McCown's Longspur	<i>Calcarius mccownii</i>
Arctic Tern	<i>Sterna paradisaea</i>	Merlin	<i>Falco columbarius</i>
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	Mew Gull	<i>Larus canus</i>

Bachman's Sparrow	<i>Aimophila aestivalis</i>	Mississippi Kite	<i>Ictinia mississippiensis</i>
Baird's Sandpiper	<i>Calidris bairdii</i>	Mottled Duck	<i>Anas fulvigula</i>
Baird's Sparrow	<i>Ammodramus bairdii</i>	Mountain Bluebird	<i>Sialia currucoides</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Mountain Chickadee	<i>Poecile gambeli</i>
Baltimore Oriole	<i>Icterus galbula</i>	Mountain Plover	<i>Charadrius montanus</i>
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	Mourning Dove	<i>Zenaida macroura</i>
Bank Swallow	<i>Riparia riparia</i>	Mourning Warbler	<i>Oporornis philadelphicus</i>
Barn Owl	<i>Tyto alba</i>	Nashville Warbler	<i>Vermivora ruficapilla</i>
Barn Swallow	<i>Hirundo rustica</i>	Nelson's Sharp-tailed Sparrow	<i>Ammodramus nelsoni</i>
Barnacle Goose	<i>Branta leucopsis</i>	Neotropic Cormorant	<i>Phalacrocorax brasiliensis</i>
Barred Owl	<i>Strix varia</i>	Northern Bobwhite	<i>Colinus virginianus</i>
Barrow's Goldeneye	<i>Bucephala islandica</i>	Northern Cardinal	<i>Cardinalis cardinalis</i>
Bay-breasted Warbler	<i>Dendroica castanea</i>	Northern Flicker	<i>Colaptes auratus</i>
Bell's Vireo	<i>Vireo bellii</i>	Northern Gannet	<i>Morus bassanus</i>
Belted Kingfisher	<i>Ceryle alcyon</i>	Northern Goshawk	<i>Accipiter gentilis</i>
Bewick's Wren	<i>Thryomanes bewickii</i>	Northern Harrier	<i>Circus cyaneus</i>
Black Phoebe	<i>Sayornis nigricans</i>	Northern Mockingbird	<i>Mimus polyglottos</i>
Black Rail	<i>Laterallus jamaicensis</i>	Northern Parula	<i>Parula americana</i>
Black Scoter	<i>Melanitta nigra</i>	Northern Pintail	<i>Anas acuta</i>
Black Skimmer	<i>Rynchops niger</i>	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Black Tern	<i>Chlidonias niger</i>	Northern Saw-whet Owl	<i>Aegolius acadicus</i>
Black Vulture	<i>Coragyps atratus</i>	Northern Shoveler	<i>Anas clypeata</i>
Black-and-white Warbler	<i>Mniotilla varia</i>	Northern Shrike	<i>Lanius excubitor</i>
Black-bellied Plover	<i>Pluvialis squatarola</i>	Northern Waterthrush	<i>Seiurus noveboracensis</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Olive-sided Flycatcher	<i>Contopus cooperi</i>
Black-billed Magpie	<i>Pica hudsonia</i>	Orange-crowned Warbler	<i>Vermivora celata</i>
Blackburnian Warbler	<i>Dendroica fusca</i>	Orchard Oriole	<i>Icterus spurius</i>
Black-capped Chickadee	<i>Poecile atricapilla</i>	Osprey	<i>Pandion haliaetus</i>
Black-capped Vireo	<i>Vireo atricapilla</i>	Ovenbird	<i>Seiurus aurocapilla</i>
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Pacific Loon	<i>Gavia pacifica</i>
Black-crested Titmouse	<i>Baeolophus atricristatus</i>	Painted Bunting	<i>Passerina ciris</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	Palm Warbler	<i>Dendroica palmarum</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	Parasitic Jaeger	<i>Stercorarius parasiticus</i>
Black-headed Gull	<i>Larus ridibundus</i>	Passenger Pigeon*	<i>Ectopistes migratorius</i>
Black-legged Kittiwake	<i>Rissa tridactyla</i>	Pectoral Sandpiper	<i>Calidris melanotos</i>
Black-necked Stilt	<i>Himantopus mexicanus</i>	Peregrine Falcon	<i>Falco peregrinus</i>
Blackpoll Warbler	<i>Dendroica striata</i>	Philadelphia Vireo	<i>Vireo philadelphicus</i>
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Pied-billed Grebe	<i>Podilymbus podiceps</i>
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	Pileated Woodpecker	<i>Dryocopus pileatus</i>
Black-throated Green Warbler	<i>Dendroica virens</i>	Pine Grosbeak	<i>Pinicola enucleator</i>
Black-throated Sparrow	<i>Amphispiza bilineata</i>	Pine Siskin	<i>Carduelis pinus</i>
Blue Grosbeak	<i>Passerina caerulea</i>	Pine Warbler	<i>Dendroica pinus</i>
Blue Jay	<i>Cyanocitta cristata</i>	Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>

Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	Piping Plover	<i>Charadrius melanotos</i>
Blue-headed Vireo	<i>Vireo solitarius</i>	Plumbeous Vireo	<i>Vireo plumbeus</i>
Blue-winged Teal	<i>Anas discors</i>	Pomarine Jaeger	<i>Stercorarius pomarinus</i>
Blue-winged Warbler	<i>Vermivora pinus</i>	Prairie Falcon	<i>Falco mexicanus</i>
Bobolink	<i>Dolichonyx oryzivorus</i>	Prairie Warbler	<i>Dendroica discolor</i>
Bohemian Waxwing	<i>Bombycilla garrulus</i>	Prothonotary Warbler	<i>Protonotaria citrea</i>
Bonaparte's Gull	<i>Larus philadelphia</i>	Purple Finch	<i>Carpodacus purpureus</i>
Brant	<i>Branta bernicla</i>	Purple Gallinule	<i>Porphyrio martinica</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	Purple Martin	<i>Progne subis</i>
Brewer's Sparrow	<i>Spizella breweri</i>	Purple Sandpiper	<i>Calidris maritima</i>
Broad-billed Hummingbird	<i>Cynanthus latirostris</i>	Pygmy Nuthatch	<i>Sitta pygmaea</i>
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	Pyrrhuloxia	<i>Cardinalis sinuatus</i>
Broad-winged Hawk	<i>Buteo platypterus</i>	Red Crossbill	<i>Loxia curvirostra</i>
Brown Creeper	<i>Certhia americana</i>	Red Knot	<i>Calidris canutus</i>
Brown Pelican	<i>Pelecanus occidentalis</i>	Red Phalarope	<i>Phalaropus fulicarius</i>
Brown Thrasher	<i>Toxostoma rufum</i>	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>	Red-breasted Merganser	<i>Mergus serrator</i>
Brown-headed Nuthatch	<i>Sitta pusilla</i>	Red-breasted Nuthatch	<i>Sitta canadensis</i>
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	Red-cockaded Woodpecker	<i>Picoides borealis</i>
Bufflehead	<i>Bucephala albeola</i>	Reddish Egret	<i>Egretta rufescens</i>
Bullock's Oriole	<i>Icterus bullockii</i>	Red-eyed Vireo	<i>Vireo olivaceus</i>
Burrowing Owl	<i>Athene cunicularia</i>	Redhead	<i>Aythya americana</i>
Bushtit	<i>Psaltriparus minimus</i>	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Cackling Goose	<i>Branta hutchinsii</i>	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>
California Gull	<i>Larus californicus</i>	Red-necked Grebe	<i>Podiceps grisegena</i>
Calliope Hummingbird	<i>Stellula calliope</i>	Red-necked Phalarope	<i>Phalaropus lobatus</i>
Canada Goose	<i>Branta canadensis</i>	Red-shouldered Hawk	<i>Buteo lineatus</i>
Canada Warbler	<i>Wilsonia canadensis</i>	Red-tailed Hawk	<i>Buteo jamaicensis</i>
Canvasback	<i>Aythya valisineria</i>	Red-throated Loon	<i>Gavia stellata</i>
Canyon Towhee	<i>Pipilo fuscus</i>	Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Canyon Wren	<i>Catherpes mexicanus</i>	Ring-billed Gull	<i>Larus delawarensis</i>
Cape May Warbler	<i>Dendroica tigrina</i>	Ringed Kingfisher	<i>Ceryle torquatus</i>
Carolina Chickadee	<i>Poecile carolinensis</i>	Ring-necked Duck	<i>Aythya collaris</i>
Carolina Parakeet*	<i>Conuropsis carolinensis</i>	Ring-necked Pheasant	<i>Phasianus colchicus</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>	Rock Pigeon	<i>Columba livia</i>
Caspian Tern	<i>Sterna caspia</i>	Rock Wren	<i>Salpinctes obsoletus</i>
Cassin's Finch	<i>Carpodacus cassini</i>	Roseate Spoonbill	<i>Platalea ajaja</i>
Cassin's Kingbird	<i>Tyrannus vociferans</i>	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Cassin's Sparrow	<i>Aimophila cassinii</i>	Ross's Goose	<i>Chen rossii</i>
Cassin's Vireo	<i>Vireo cassinii</i>	Rough-legged Hawk	<i>Buteo lagopus</i>
Cattle Egret	<i>Bubulcus ibis</i>	Royal Tern	<i>Sterna maxima</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Ruby-crowned Kinglet	<i>Regulus calendula</i>
Cerulean Warbler	<i>Dendroica cerulea</i>	Ruby-throated Hummingbird	<i>Archilochus colubris</i>

Chestnut-collared Longspur	<i>Calcarius ornatus</i>	Ruddy Duck	<i>Oxyura jamaicensis</i>
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Ruddy Turnstone	<i>Arenaria interpres</i>
Chihuahuan Raven	<i>Corvus cryptoleucus</i>	Ruff	<i>Philomachus pugnax</i>
Chimney Swift	<i>Chaetura pelagica</i>	Rufous Hummingbird	<i>Selasphorus rufus</i>
Chipping Sparrow	<i>Spizella passerina</i>	Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	Rusty Blackbird	<i>Euphagus carolinus</i>
Cinnamon Teal	<i>Anas cyanoptera</i>	Sabine's Gull	<i>Xema sabini</i>
Clark's Grebe	<i>Aechmophorus clarkii</i>	Sage Sparrow	<i>Amphispiza belli</i>
Clark's Nutcracker	<i>Nucifraga columbiana</i>	Sage Thrasher	<i>Oreoscoptes montanus</i>
Clay-colored Sparrow	<i>Spizella pallida</i>	Sanderling	<i>Calidris alba</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Sandhill Crane	<i>Grus canadensis</i>
Common Goldeneye	<i>Bucephala clangula</i>	Savannah Sparrow	<i>Passerculus sandwichensis</i>
Common Grackle	<i>Quiscalus quiscula</i>	Say's Phoebe	<i>Sayornis saya</i>
Common Ground-Dove	<i>Columbina passerina</i>	Scaled Quail	<i>Callipepla squamata</i>
Common Loon	<i>Gavia immer</i>	Scarlet Tanager	<i>Piranga olivacea</i>
Common Merganser	<i>Mergus merganser</i>	Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>
Common Moorhen	<i>Gallinula chloropus</i>	Sedge Wren	<i>Cistothorus platensis</i>
Common Nighthawk	<i>Chordeiles minor</i>	Semipalmated Plover	<i>Charadrius semipalmatus</i>
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	Semipalmated Sandpiper	<i>Calidris pusilla</i>
Common Raven	<i>Corvus corax</i>	Sharp-shinned Hawk	<i>Accipiter striatus</i>
Common Redpoll	<i>Carduelis flammea</i>	Shiny Cowbird	<i>Molothrus bonariensis</i>
Common Tern	<i>Sterna hirundo</i>	Short-billed Dowitcher	<i>Limnodromus griseus</i>
Common Yellowthroat	<i>Geothlypis trichas</i>	Short-eared Owl	<i>Asio flammeus</i>
Connecticut Warbler	<i>Oporornis agilis</i>	Smith's Longspur	<i>Calcarius pictus</i>
Cooper's Hawk	<i>Accipiter cooperii</i>	Snow Bunting	<i>Plectrophenax nivalis</i>
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	Snow Goose	<i>Chen caerulescens</i>
Crested Caracara	<i>Caracara cheriway</i>	Snowy Egret	<i>Egretta thula</i>
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	Snowy Owl	<i>Bubo scandiacus</i>
Dark-eyed Junco	<i>Junco hyemalis</i>	Snowy Plover	<i>Charadrius alexandrinus</i>
Dickcissel	<i>Spiza americana</i>	Solitary Sandpiper	<i>Tringa solitaria</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Song Sparrow	<i>Melospiza melodia</i>
Downy Woodpecker	<i>Picoides pubescens</i>	Sora	<i>Porzana carolina</i>
Dunlin	<i>Calidris alpina</i>	Spotted Sandpiper	<i>Actitis macularius</i>
Dusky Flycatcher	<i>Empidonax oberholseri</i>	Spotted Towhee	<i>Pipilo maculatus</i>
Eared Grebe	<i>Podiceps nigricollis</i>	Sprague's Pipit	<i>Anthus spragueii</i>
Eastern Bluebird	<i>Sialia sialis</i>	Steller's Jay	<i>Cyanocitta stelleri</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Stilt Sandpiper	<i>Calidris himantopus</i>
Eastern Meadowlark	<i>Sturnella magna</i>	Summer Tanager	<i>Piranga rubra</i>
Eastern Phoebe	<i>Sayornis phoebe</i>	Surf Scoter	<i>Melanitta perspicillata</i>
Eastern Screech-Owl	<i>Megascops asio</i>	Swainson's Hawk	<i>Buteo swainsoni</i>
Eastern Towhee	<i>Pipilo erythrorththalmus</i>	Swainson's Thrush	<i>Catharus ustulatus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>	Swainson's Warbler	<i>Limnothlypis swainsonii</i>
Eskimo Curlew*	<i>Numenius borealis</i>	Swallow-tailed Kite	<i>Elanoides forficatus</i>

Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	Swamp Sparrow	<i>Melospiza georgiana</i>
Eurasian Wigeon	<i>Anas penelope</i>	Tennessee Warbler	<i>Vermivora peregrina</i>
European Starling	<i>Sturnus vulgaris</i>	Thayer's Gull	<i>Larus thayeri</i>
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Townsend's Solitaire	<i>Myadestes townsendi</i>
Ferruginous Hawk	<i>Buteo regalis</i>	Townsend's Warbler	<i>Dendroica townsendi</i>
Field Sparrow	<i>Spizella pusilla</i>	Tree Swallow	<i>Tachycineta bicolor</i>
Fish Crow	<i>Corvus ossifragus</i>	Tricolored Heron	<i>Egretta tricolor</i>
Forster's Tern	<i>Sterna forsteri</i>	Trumpeter Swan	<i>Cygnus buccinator</i>
Fox Sparrow	<i>Passerella iliaca</i>	Tufted Titmouse	<i>Baeolophus bicolor</i>
Franklin's Gull	<i>Larus pipixcan</i>	Tundra Swan	<i>Cygnus columbianus</i>
Fulvous Whistling-Duck	<i>Dendrocygna bicolor</i>	Turkey Vulture	<i>Cathartes aura</i>
Gadwall	<i>Anas strepera</i>	Upland Sandpiper	<i>Bartramia longicauda</i>
Garganey	<i>Anas querquedula</i>	Varied Thrush	<i>Ixoreus naevius</i>
Glaucous Gull	<i>Larus hyperboreus</i>	Veery	<i>Catharus fuscescens</i>
Glaucous-winged Gull	<i>Larus glaucescens</i>	Verdin	<i>Auriparus flaviceps</i>
Glossy Ibis	<i>Plegadis falcinellus</i>	Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>
Golden Eagle	<i>Aquila chrysaetos</i>	Vesper Sparrow	<i>Pooecetes gramineus</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Virginia Rail	<i>Rallus limicola</i>
Golden-fronted Woodpecker	<i>Melanerpes aurifrons</i>	Virginia's Warbler	<i>Vermivora virginiae</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Warbling Vireo	<i>Vireo gilvus</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Western Bluebird	<i>Sialia mexicana</i>
Gray Catbird	<i>Dumetella carolinensis</i>	Western Grebe	<i>Aechmophorus occidentalis</i>
Gray Vireo	<i>Vireo vicinior</i>	Western Kingbird	<i>Tyrannus verticalis</i>
Gray-cheeked Thrush	<i>Catharus minimus</i>	Western Meadowlark	<i>Sturnella neglecta</i>
Great Black-backed Gull	<i>Larus marinus</i>	Western Sandpiper	<i>Calidris mauri</i>
Great Blue Heron	<i>Ardea herodias</i>	Western Screech-Owl	<i>Megascops kennicottii</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Western Scrub-jay	<i>Aphelocoma californica</i>
Great Egret	<i>Ardea alba</i>	Western Tanager	<i>Piranga ludoviciana</i>
Great Frigatebird	<i>Fregata minor</i>	Western Wood-Pewee	<i>Contopus sordidulus</i>
Great Horned Owl	<i>Bubo virginianus</i>	Whimbrel	<i>Numenius phaeopus</i>
Great Kiskadee	<i>Pitangus sulphuratus</i>	Whip-poor-will	<i>Caprimulgus vociferus</i>
Greater Prairie-Chicken	<i>Tympanuchus cupido</i>	White Ibis	<i>Eudocimus albus</i>
Greater Roadrunner	<i>Geococcyx californianus</i>	White-breasted Nuthatch	<i>Sitta carolinensis</i>
Greater Scaup	<i>Aythya marila</i>	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
Greater White-fronted Goose	<i>Anser albifrons</i>	White-eyed Vireo	<i>Vireo griseus</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>	White-faced Ibis	<i>Plegadis chihi</i>
Great-tailed Grackle	<i>Quiscalus mexicanus</i>	White-rumped Sandpiper	<i>Calidris fuscicollis</i>
Green Heron	<i>Butorides virescens</i>	White-tailed Kite	<i>Elanus leucurus</i>
Green Violet-ear	<i>Colibri thalassinus</i>	White-throated Sparrow	<i>Zonotrichia albicollis</i>
Green-tailed Towhee	<i>Pipilo chlorurus</i>	White-winged Crossbill	<i>Loxia leucoptera</i>
Green-winged Teal	<i>Anas crecca</i>	White-winged Dove	<i>Zenaida asiatica</i>
Groove-billed Ani	<i>Crotophaga sulcirostris</i>	White-winged Scoter	<i>Melanitta fusca</i>
Gyrfalcon	<i>Falco rusticolus</i>	Whooping Crane	<i>Grus americana</i>

Hairy Woodpecker	<i>Picoides villosus</i>	Wild Turkey	<i>Meleagris gallopavo</i>
Hammond's Flycatcher	<i>Empidonax hammondi</i>	Willet	<i>Catoptrophorus semipalmatus</i>
Harris's Hawk	<i>Parabuteo unicinctus</i>	Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>
Harris's Sparrow	<i>Zonotrichia querula</i>	Willow Flycatcher	<i>Empidonax traillii</i>
Heermann's Gull	<i>Larus heermanni</i>	Wilson's Phalarope	<i>Phalaropus tricolor</i>
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Wilson's Plover	<i>Charadrius wilsonia</i>
Hermit Thrush	<i>Catharus guttatus</i>	Wilson's Snipe	<i>Gallinago delicata</i>
Herring Gull	<i>Larus argentatus</i>	Wilson's Warbler	<i>Wilsonia pusilla</i>
Hooded Merganser	<i>Lophodytes cucullatus</i>	Winter Wren	<i>Troglodytes troglodytes</i>
Hooded Warbler	<i>Wilsonia citrina</i>	Wood Duck	<i>Aix sponsa</i>
Horned Grebe	<i>Podiceps auritus</i>	Wood Stork	<i>Mycteria americana</i>
Horned Lark	<i>Eremophila alpestris</i>	Wood Thrush	<i>Hylocichla mustelina</i>
House Finch	<i>Carpodacus mexicanus</i>	Worm-eating Warbler	<i>Helmintheros vermivorum</i>
House Sparrow	<i>Passer domesticus</i>	Yellow Rail	<i>Coturnicops noveboracensis</i>
House Wren	<i>Troglodytes aedon</i>	Yellow Warbler	<i>Dendroica petechia</i>
Hudsonian Godwit	<i>Limosa haemastica</i>	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>
Iceland Gull	<i>Larus glaucopterus</i>	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
Inca Dove	<i>Columbina inca</i>	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Indigo Bunting	<i>Passerina cyanea</i>	Yellow-billed Loon	<i>Gavia adamsii</i>
Ivory-billed Woodpecker*	<i>Campephilus principalis</i>	Yellow-breasted Chat	<i>Icteria virens</i>
Jabiru	<i>Jabiru mycteria</i>	Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>
Juniper Titmouse	<i>Baeolophus ridgwayi</i>	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Kentucky Warbler	<i>Oporornis formosus</i>	Yellow-rumped Warbler	<i>Dendroica coronata</i>
Killdeer	<i>Charadrius vociferus</i>	Yellow-throated Vireo	<i>Vireo flavifrons</i>
King Rail	<i>Rallus elegans</i>	Yellow-throated Warbler	<i>Dendroica dominica</i>

ARKANSAS RIVER CORRIDOR STUDY PROJECT

Historic Mammal Species List for Tulsa County, Oklahoma

Name	Scientific Name	Name	Scientific Name
American Badger	<i>Taxidea taxus</i>	Mink	<i>Mustela vison</i>
American Beaver	<i>Castor canadensis</i>	Mountain Lion	<i>Felis concolor</i>
Big Brown Bat	<i>Eptesicus fuscus</i>	Mule Deer	<i>Odocoileus hemionus</i>
Big Free-tailed Bat	<i>Tadarida macrotis</i>	Nine-banded Armadillo	<i>Dasyurus novemcinctus</i>
Black Bear	<i>Ursus americanus</i>	Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>
Black Rat	<i>Rattus rattus</i>	Northern Myotis	<i>Myotis keenii</i>
Black-footed Ferret	<i>Mustela nigripes</i>	Northern Pygmy Mouse	<i>Baiomys taylori</i>
Black-tailed Jackrabbit	<i>Lepus californicus</i>	Norway Rat	<i>Rattus norvegicus</i>
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	Nutria	<i>Myocastor coypus</i>
Bobcat	<i>Lynx rufus</i>	Ocelot	<i>Felis pardalis</i>
Botta's Pocket Gopher	<i>Thomomys bottae</i>	Ord's Kangaroo Rat	<i>Dipodomys ordii</i>
Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>	Pallid Bat	<i>Antrozous pallidus</i>
Brush Mouse	<i>Peromyscus boylii</i>	Pinon Mouse	<i>Peromyscus truei</i>
Cave Myotis	<i>Myotis velifer</i>	Plains Harvest Mouse	<i>Reithrodontomys montanus</i>
Collared Peccary	<i>Tayassu tajacu</i>	Plains Pocket Gopher	<i>Geomys bursarius</i>
Colorado Chipmunk	<i>Eutamias quadrivittatus</i>	Plains Pocket Mouse	<i>Perognathus flavescens</i>
Common Gray Fox	<i>Urocyon cinereoargenteus</i>	Porcupine	<i>Erethizon dorsatum</i>
Common Hog-nosed Skunk	<i>Conepatus mesoleucus</i>	Prairie Vole	<i>Microtus ochrogaster</i>
Common Raccoon	<i>Procyon lotor</i>	Rafinesque's Big-eared Bat	<i>Plecotus rafinesquii</i>
Cotton Mouse	<i>Peromyscus gossypinus</i>	Red Fox	<i>Vulpes vulpes</i>
Coyote	<i>Canis latrans</i>	Red Wolf	<i>Canis rufus</i>
Deer Mouse	<i>Peromyscus maniculatus</i>	Ringtail	<i>Bassaris astutus</i>
Desert Cottontail	<i>Sylvilagus audubonii</i>	River Otter	<i>Lutra canadensis</i>
Desert Shrew	<i>Notiosorex crawfordi</i>	Rock Mouse	<i>Peromyscus difficilis</i>
Eastern Chipmunk	<i>Tamias striatus</i>	Rock Squirrel	<i>Spermophilus variegatus</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>	Seminole Bat	<i>Lasiurus seminolus</i>
Eastern Fox Squirrel	<i>Sciurus niger</i>	Silky Pocket Mouse	<i>Perognathus flavus</i>
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	Small-footed Myotis	<i>Myotis leibii</i>
Eastern Mole	<i>Scalopus aquaticus</i>	Southeastern Myotis	<i>Myotis austroriparius</i>
Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	Southeastern Shrew	<i>Sorex longirostris</i>
Eastern Red Bat	<i>Lasiurus borealis</i>	Southern Bog Lemming	<i>Synaptomys cooperi</i>
Eastern Spotted Skunk	<i>Spilogale putorius</i>	Southern Flying Squirrel	<i>Glaucomys volans</i>
Eastern Woodrat	<i>Neotoma floridana</i>	Southern Plains Woodrat	<i>Neotoma micropus</i>
Elk	<i>Cervus elaphus</i>	Southern Short-tailed Shrew	<i>Blarina carolinensis</i>
Elliot's short-tailed Shrew	<i>Blarina hylophaga</i>	Spotted Ground Squirrel	<i>Spermophilus spilosoma</i>
Evening Bat	<i>Nycticeius humeralis</i>	Striped Skunk	<i>Mephitis mephitis</i>

Fulvous Harvest Mouse	<i>Reithrodontomys fulvescens</i>	Swamp Rabbit	<i>Sylvilagus aquaticus</i>
Golden Mouse	<i>Ochrotomys nuttalli</i>	Swift or Kit Fox	<i>Vulpes velox</i>
Gray Myotis	<i>Myotis griseescens</i>	<i>Synaptomys cooperi</i>	<i>Ondantra zibethicus</i>
Gray Wolf	<i>Canis lupus</i>	Texas Kangaroo Rat	<i>Dipodomys elator</i>
Grizzly or Brown Bear	<i>Ursus arctos</i>	Texas Mouse	<i>Peromyscus attwateri</i>
Hispid Cotton Rat	<i>Sigmodon hispidus</i>	Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>
Hispid Pocket Mouse	<i>Chaetodipus hispidus</i>	Townsend's Big-eared Ba	<i>Plecotus townsendii</i>
Hoary Bat	<i>Lasiurus cinereus</i>	Virginia Opossum	<i>Didelphis virginiana</i>
House Mouse	<i>Mus musculus</i>	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
Indiana Myotis	<i>Myotis sodalis</i>	Western Pipistrelle	<i>Pipistrellus hesperu</i>
Jaguar	<i>Panthera onca</i>	Western Spotted Skunk	<i>Spilogale gracilis</i>
Least Shrew	<i>Cryptotis parva</i>	White-ankled Mouse	<i>Peromyscus pectoralis</i>
Least Weasel	<i>Mustela nivalis</i>	White-footed Mouse	<i>Peromyscus leucopus</i>
Little Brown Myotis	<i>Myotis lucifugus</i>	White-tailed Deer	<i>Odocoileus virginianus</i>
Long-tailed Weasel	<i>Mustela frenata</i>	White-throated Woodrat	<i>Neotoma albigenula</i>
Marsh Rice Rat	<i>Oryzomys palustris</i>	Woodchuck	<i>Marmota monax</i>
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	Woodland Vole	<i>Microtus pinetorum</i>
Mexican Woodrat	<i>Neotoma mexicana</i>	Yellow-faced Pocket Gopher	<i>Cratogeomys castanops</i>
		Yuma Myotis	<i>Myotis yumanensis</i>

ARKANSAS RIVER CORRIDOR STUDY PROJECT
Historic Plant Distribution List for Tulsa County, Oklahoma

Name	Scientific Name	Name	Scientific Name
Alfalfa	<i>Medicago sativa</i>	man of the earth	<i>Ipomoea pandurata</i>
Allegheny monkeyflower	<i>Mimulus ringens</i>	mapleleaf goosefoot	<i>Chenopodium simplex</i>
Alsike clover	<i>Trifolium hybridum</i>	Mare's-Tail	<i>Erigeron canadensis</i>
American beautyberry	<i>Callicarpa americana</i>	marijuana	<i>Cannabis sativa</i>
American bellflower	<i>Campanulastrum americanum</i>	marsh bristlegrass	<i>Setaria parviflora</i>
American bittersweet	<i>Celastrus scandens</i> **	marsh seedbox	<i>Ludwigia palustris</i>
American black nightshade	<i>Solanum americanum</i>	Maryland senna	<i>Senna marilandica</i>
American bladdernut	<i>Staphylea trifolia</i>	matrimony vine	<i>Lycium barbarum</i>
American bluehearts	<i>Buchnera americana</i>	Maximilian sunflower	<i>Helianthus maximiliani</i>
American elm	<i>Ulmus americana</i>	mayapple	<i>Podophyllum peltatum</i>
American false pennyroyal	<i>Hedeoma pulegioides</i>	meadow flax	<i>Linum pratense</i>
American ginseng	<i>Panax quinquefolius</i>	meadow garlic	<i>Allium canadense</i>
American holly	<i>Ilex opaca</i>	meadow ryegrass	<i>Lolium pratense</i>
American licorice	<i>Glycyrrhiza lepidota</i>	meadow zizia	<i>Zizia aptera</i>
American lopseed	<i>Phryma leptostachya</i>	mealy fumewort	<i>Corydalis crystallina</i>
American lotus	<i>Nelumbo lutea</i>	Mexican fireplant	<i>Euphorbia heterophylla</i>
American plum	<i>Prunus americana</i>	Mexican plum	<i>Prunus mexicana</i>
American pokeweed	<i>Phytolacca americana</i>	Mexican tea	<i>Chenopodium ambrosioides</i>
American smoketree	<i>Cotinus obovatus</i>	Mexican tea	<i>Chenopodium ambrosioides</i>
American star-thistle	<i>Centaurea americana</i>	Michaux's croton	<i>Croton michauxii</i>
American sycamore	<i>Platanus occidentalis</i>	microphylla elmleaf goldenrod	<i>Solidago ulmifolia</i>
American water plantain	<i>Alisma subcordatum</i>	midland fawnlily	<i>Erythronium mesochoreum</i>
American water-willow	<i>Justicia americana</i>	Milkvine	<i>Matelea gonocarpos</i>
American white waterlily	<i>Nymphaea odorata</i>	Mimosa strigillosa	<i>Mimosa strigillosa</i>
American wild carrot	<i>Daucus pusillus</i>	downy lobelia	<i>Lobelia puberula</i>
American witchhazel	<i>Hamamelis virginiana</i>	minor blue wild indigo	<i>Baptisia australis</i>
Annual buckwheat	<i>Eriogonum annuum</i>	Missouri goldenrod	<i>Solidago missouriensis</i>
Annual marshelder	<i>Iva annua</i>	Missouri gourd	<i>Cucurbita foetidissima</i>
Annual ragweed	<i>Ambrosia artemisiifolia</i>	Missouri ironweed	<i>Vernonia missurica</i>
Antelopehorns	<i>Asclepias asperula capricornu</i>	Missouri maidenbush	<i>Leptopus phyllanthoides</i>

Arkansas beardtongue	<i>Penstemon arkansanus</i>	Leonard's skullcap	<i>Scutellaria parvula</i>
Arkansas bedstraw	<i>Galium arkansanum</i>	mobilense meadow garlic	<i>Allium canadense</i>
Arkansas dozedaisy	<i>Aphanostephus skirrhobasis</i>	mockernut hickory	<i>Carya alba</i>
Arkansas ironweed	<i>Vernonia arkansana</i>	mollis wild bergamot	<i>Monarda fistulosa fistulosa</i>
Arkansas yucca	<i>Yucca arkansana</i>	morning lovegrass	<i>Eragrostis lugens</i>
Arnold hawthorn	<i>Crataegus mollis</i>	mountain tansymustard	<i>Descurainia incana incisa</i>
Aromatic aster	<i>Symphyotrichum oblongifolium</i>	mucronate sprangletop	<i>Leptochloa panicea brachiata</i>
Arrowfeather threeawn	<i>Aristida purpurascens</i>	mullein foxglove	<i>Dasistoma macrophylla</i>
Arrowhead rattlebox	<i>Crotalaria sagittalis</i>	multicaule St. Andrew's cross	<i>Hypericum hypericoides multicaule</i>
Ashy sunflower	<i>Helianthus mollis</i>	nakedflower ticktrefoil	<i>Desmodium nudiflorum</i>
Asiatic dayflower	<i>Commelina communis</i>	narrowleaf blue-eyed grass	<i>Sisyrinchium angustifolium</i>
Atlantic camas	<i>Camassia scilloides</i>	narrowleaf cattail	<i>Typha angustifolia</i>
Atlantic pigeonwings	<i>Clitoria mariana</i>	narrowleaf false dragonhead	<i>Physostegia angustifolia</i>
Atlantic poison oak	<i>Toxicodendron pubescens</i>	narrowleaf gumweed	<i>Grindelia lanceolata</i>
Aunt Lucy	<i>Ellisia nyctelea</i>	narrowleaf marshelder	<i>Iva angustifolia</i>
Autumn onion	<i>Allium stellatum</i>	narrowleaf mountainmint	<i>Pycnanthemum tenuifolium</i>
Axilflower	<i>Mecardonia acuminata</i>	narrowleaf paleseed	<i>Leucospora multifida</i>
Azure blue sage	<i>Salvia azurea</i>	narrowleaf pinweed	<i>Lechea tenuifolia</i>
Babyslippers	<i>Hybanthus verticillatus</i>	narrowleaf plantain	<i>Plantago lanceolata</i>
Baldwin's ironweed	<i>Vernonia baldwinii</i>	narrowleaf stoneseed	<i>Lithospermum incisum</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>	narrowleaf vervain	<i>Verbena simplex</i>
Bastard toadflax	<i>Comandra umbellata</i>	Nebraska blazing star	<i>Liatris punctata</i>
Beaked agrimony	<i>Agrimonia rostellata</i>	neckweed	<i>Veronica peregrina</i>
Beaked cornsalad	<i>Valerianella radiata</i>	nettleleaf noseburn	<i>Tragia urticifolia</i>
Beaked panicgrass	<i>Panicum anceps</i>	New Jersey tea ..	<i>Ceanothus americanus</i>
Bearded beggarticks	<i>Bidens aristosa</i>	nimblewill	<i>Muhlenbergia schreberi</i>
Bearded skeletongrass	<i>Gymnopogon ambiguus</i>	nits and lice	<i>Hypericum drummondii</i>
Bearded sprangletop	<i>Leptochloa fusca fascicularis</i>	nodding plumeless thistle	<i>Carduus nutans</i>
Bermudagrass	<i>Cynodon dactylon</i>	northern catalpa	<i>Catalpa speciosa</i>
Biennial beeblissom	<i>Gaura biennis</i>	northern marsh yellowcress	<i>Rorippa islandica</i>
Big bluestem	<i>Andropogon gerardii</i>	Northern red oak	<i>Quercus rubra</i>
Bigbract verbena	<i>Verbena bracteata</i>	northern red oak	<i>Quercus rubra</i>
Bighead pygmycudweed	<i>Evax prolifera</i>	northern red oak	<i>Quercus rubra</i>
Bigpod sesbania	<i>Sesbania herbacea</i>	northern slender ladies'-tresses	<i>Spiranthes lacera</i>
Bigseed alfalfa dodder	<i>Cuscuta indecora</i>	northern spicebush	<i>Lindera benzoin</i>

Bigtop lovegrass	<i>Eragrostis hirsuta</i>	Noseburn	<i>Tragia betonicifolia</i>
Dakota mock vervain	<i>Glandularia bipinnatifida</i>	Nuttall's bladderpod	<i>Lesquerella gracilis nuttallii</i>
Birdfoot violet	<i>Viola pedata</i>	Nuttall's deathcamas	<i>Zigadenus nuttallii</i>
Black bindweed	<i>Polygonum convolvulus</i>	Nuttall's prairie parsley	<i>Polytaenia nuttallii</i>
Black cherry	<i>Prunus serotina</i>	Nuttall's sensitive-briar	<i>Mimosa nuttallii</i>
Black hickory	<i>Carya texana</i>	oak mistletoe	<i>Phoradendron leucarpum</i>
Black locust	<i>Robinia pseudoacacia</i>	Ohio buckeye	<i>Aesculus glabra</i>
black medick	<i>Medicago lupulina</i>	Ohio buckeye	<i>Aesculus glabra</i>
black mustard	<i>Brassica nigra</i>	Oklahoma beardtongue	<i>Penstemon oklahomensis</i>
black oak	<i>Quercus velutina</i>	Oklahoma plum	<i>Prunus gracilis</i>
black raspberry	<i>Rubus occidentalis</i>	oneflowered broomrape	<i>Orobanche uniflora</i>
black walnut	<i>Juglans nigra</i>	oneseed burr cucumber	<i>Sicyos angulatus</i>
black willow	<i>Salix nigra</i>	orchardgrass	<i>Dactylis glomerata</i>
blackdisk medick	<i>Medicago orbicularis</i>	osage orange	<i>Maclura pomifera</i>
blacked Susan	<i>Rudbeckia hirta</i>	Ozark phlox	<i>Phlox pilosa ozarkana</i>
blacked Susan	<i>Rudbeckia hirta</i>	Ozark witchhazel	<i>Hamamelis vernalis</i>
blackgum	<i>Nyssa sylvatica</i>	pale dock	<i>Rumex altissimus</i>
blackhaw	<i>Viburnum prunifolium</i>	pale lobelia	<i>Lobelia appendiculata</i>
blackjack oak	<i>Quercus marilandica</i>	pale purple coneflower	<i>Echinacea pallida</i>
blackseed plantain	<i>Plantago rugelii</i>	palespike lobelia	<i>Lobelia spicata</i>
blackstem spleenwort	<i>Asplenium resiliens</i>	panicleleaf ticktrefoil	<i>Desmodium paniculatum</i>
blindegies	<i>Papaver dubium</i>	paper mulberry	<i>Broussonetia papyrifera</i>
bloodroot	<i>Sanguinaria canadensis</i>	Parlin's pussytoes	<i>Antennaria parlinii fallax</i>
blue ash	<i>Fraxinus quadrangulata</i>	pasture heliotrope	<i>Heliotropium tenellum</i>
blue fieldmadder	<i>Sherardia arvensis</i>	patens late purple aster	<i>Sympphyotrichum patens</i>
Blue Grass	<i>Poa annua</i>	pawpaw	<i>Asimina triloba</i>
blue lettuce	<i>Lactuca tatarica</i>	pear hawthorn	<i>Crataegus calpodendron</i>
blue mistflower	<i>Conoclinium coelestinum</i>	pearl millet	<i>Pennisetum glaucum</i>
blue mudplantain	<i>Heteranthera limosa</i>	pecan	<i>Carya illinoinensis</i>
Blue Ridge carionflower	<i>Smilax lasioneura</i>	Pennsylvania bittercress	<i>Cardamine pensylvanica</i>
blue waxweed	<i>Cuphea viscosissima</i>	Pennsylvania pellitory	<i>Parietaria pensylvanica</i>
blue wild indigo	<i>Baptisia australis</i>	Pennsylvania smartweed	<i>Polygonum pensylvanicum</i>
bluebill	<i>Clematis pitcheri</i>	peppervine	<i>Ampelopsis arborea</i>
bluejacket	<i>Tradescantia ohiensis</i>	perennial pea	<i>Lathyrus latifolius</i>
bluestem pricklypoppy	<i>Argemone albiflora albiflora</i>	perfumeballs	<i>Gaillardia suavis</i>

blunt spikerush	<i>Eleocharis obtusa</i>	Philadelphia fleabane	<i>Erigeron philadelphicus</i>
bluntlobe cliff fern	<i>Woodsia obtusa</i>	hairy white oldfield aster	<i>Symphyotrichum pilosum</i>
bootii Boott's goldenrod	<i>Solidago arguta</i>	pin oak	<i>Quercus palustris</i>
Boxelder	<i>Acer negundo</i>	pine barren flatsedge	<i>Cyperus retrorsus</i>
American hogpeanut	<i>Amphicarpaea bracteata</i>	pineland threeseed mercury	<i>Acalypha ostryifolia</i>
branched bur-reed	<i>Sparganium androcladum</i>	pinewoods coneflower	<i>Rudbeckia bicolor</i>
Branched foldwing	<i>Dicliptera brachiata</i>	pinkladies	<i>Oenothera speciosa</i>
branched noseburn	<i>Tragia ramosa</i>	pinnate prairie coneflower	<i>Ratibida pinnata</i>
Brand's phacelia	<i>Phacelia gilioides</i>	pitcher's stitchwort	<i>Minuartia patula</i>
bristly buttercup	<i>Ranunculus hispidus</i>	pitseed goosefoot	<i>Chenopodium berlandieri</i>
bristly greenbrier	<i>Smilax tamnoides</i>	plains cottonwood	<i>Populus deltoides monilifera</i>
bristly locust	<i>Robinia hispida</i>	plains lovegrass	<i>Eragrostis intermedia</i>
bristly nama	<i>Nama hispidum</i>	plains snakecotton	<i>Froelichia floridana</i>
bristly scaleseed	<i>Spermolepis echinata</i>	Platte River milkvetch	<i>Astragalus plattensis</i>
broadleaf cattail	<i>Typha latifolia</i>	pleatleaf knotweed	<i>Polygonum tenue</i>
broomsedge bluestem	<i>Andropogon virginicus</i>	poaceum skyblue aster	<i>Symphyotrichum oolentangiense</i>
browneyed Susan	<i>Rudbeckia triloba</i>	pointedleaf ticktrefoil	<i>Desmodium glutinosum</i>
buffalo clover	<i>Trifolium reflexum</i>	poison hemlock	<i>Conium maculatum</i>
buffalobur nightshade	<i>Solanum rostratum</i>	poorjoe	<i>Diodia teres</i>
buffalograss	<i>Buchloe dactyloides</i>	poorjoe	<i>Diodia teres</i>
bulbous bluegrass	<i>Poa bulbosa</i>	possumhaw	<i>Ilex decidua</i>
bur oak	<i>Quercus macrocarpa</i>	post oak	<i>Quercus stellata</i>
burclover	<i>Medicago polymorpha</i>	potato dwarfdandelion	<i>Krigia dandelion</i>
burr medick	<i>Medicago minima</i>	poverty dropseed	<i>Sporobolus vaginiflorus</i>
Bush's poppymallow	<i>Callirhoe bushii</i>	poverty rush	<i>Juncus tenuis</i>
Butler's sandparsley	<i>Ammoselinum butleri</i>	powdery alligator-flag	<i>Thalia dealbata</i>
butterfly milkweed	<i>Asclepias tuberosa</i>	powdery false cloak fern	<i>Argyrochosma dealbata</i>
butterweed	<i>Packera glabella</i>	praealtum willowleaf aster	<i>Symphyotrichum praealtum</i>
button eryngo	<i>Eryngium yuccifolium</i>	prairie acacia	<i>Acacia angustissima</i>
calycina hooded arrowhead	<i>Sagittaria calycina</i>	prairie acacia	<i>Acacia angustissima</i>
plains snakecotton	<i>Froelichia floridana</i>	prairie beebllossom	<i>Gaura triangulata</i>
camphor pluchea	<i>Pluchea camphorata</i>	prairie bishop	<i>Bifora americana</i>
camphorweed	<i>Heterotheca subaxillaris</i>	prairie blazing star	<i>Liatris pycnostachya</i>
camporum white avens	<i>Geum canadense</i>	prairie blue-eyed grass	<i>Sisyrinchium campestre</i>
Canada germander	<i>Teucrium canadense</i>	prairie broomweed	<i>Amphiachyris dracunculoides</i>

Canada goldenrod	<i>Solidago canadensis</i>	prairie bundleflower	<i>Desmanthus illinoensis</i>
Canada lettuce	<i>Lactuca canadensis</i>	prairie burnet	<i>Sanguisorba annua</i>
Canada toadflax	<i>Nuttallanthus canadensis</i>	prairie camas	<i>Camassia angusta</i>
Canada wildrye	<i>Elymus canadensis</i>	prairie cordgrass	<i>Spartina pectinata</i>
Canada cockleburr	<i>Xanthium strumarium</i>	prairie cupgrass	<i>Eriochloa contracta</i>
Canada germander	<i>Teucrium canadense</i>	prairie false foxglove	<i>Agalinis heterophylla</i>
meadow garlic	<i>Allium canadense</i>	prairie fleabane	<i>Erigeron strigosus</i>
Canadian horseweed	<i>Conyza canadensis</i>	prairie groundsel	<i>Packera plattensis</i>
Canadian milkvetch	<i>Astragalus canadensis</i>	prairie Junegrass	<i>Koeleria macrantha</i>
eastern redbud	<i>Cercis canadensis</i>	prairie pleatleaf	<i>Nemastylis geminiflora</i>
Canadian blacksnakeroot	<i>Sanicula canadensis</i>	prairie rose	<i>Rosa arkansana</i>
Canadian clearweed	<i>Pilea pumila</i>	prairie sandmat	<i>Chamaesyce missurica</i>
Canadian honewort	<i>Cryptotaenia canadensis</i>	prairie snoutbean	<i>Rhynchosia latifolia</i>
Canadian milkvetch	<i>Astragalus canadensis</i>	prairie spiderwort	<i>Tradescantia occidentalis</i>
Canadian woodnettle	<i>Laportea canadensis</i>	prairie sunflower	<i>Helianthus petiolaris</i>
candida white prairie clover	<i>Dalea candida</i>	prairie tea	<i>Croton monanthogynus</i>
sanddune wallflower	<i>Erysimum capitatum</i>	prairie threeawn	<i>Aristida oligantha</i>
capitatus hogwort	<i>Croton capitatus</i>	prickly fanpetals	<i>Sida spinosa</i>
cardinalflower	<i>Lobelia cardinalis</i>	prickly lettuce	<i>Lactuca serriola</i>
carelessweed	<i>Amaranthus palmeri</i>	prickly Russian thistle	<i>Salsola tragus</i>
Carolina anemone	<i>Anemone caroliniana</i>	pride of Ohio	<i>Dodecatheon meadia</i>
Carolina canarygrass	<i>Phalaris caroliniana</i>	procession flower	<i>Polygala incarnata</i>
carolina Carolina rose	<i>Rosa carolina</i>	prostrate knotweed	<i>Polygonum aviculare</i>
Carolina coralbead	<i>Cocculus carolinus</i>	prostrate sandmat	<i>Chamaesyce prostrata</i>
Carolina desert-chicory	<i>Pyrrhopappus carolinianus</i>	puffsheath dropseed	<i>Sporobolus neglectus</i>
Carolina draba	<i>Draba reptans</i>	puncturevine	<i>Tribulus terrestris</i>
Carolina elephantsfoot	<i>Elephantopus carolinianus</i>	purple cliffbrake	<i>Pellaea atropurpurea</i>
Carolina foxtail	<i>Alopecurus carolinianus</i>	purple crownvetch	<i>Coronilla varia</i>
Carolina geranium	<i>Geranium carolinianum</i>	purple deadnettle	<i>Lamium purpureum</i>
Carolina holly	<i>Ilex ambigua</i>	purple deadnettle	<i>Lamium purpureum</i>
Carolina horsetail	<i>Solanum carolinense</i>	purple lovegrass	<i>Eragrostis spectabilis</i>
Carolina larkspur	<i>Delphinium carolinianum</i>	purple meadow-rue	<i>Thalictrum dasycarpum</i>
Carolina larkspur	<i>Delphinium carolinianum</i>	purple milkwort	<i>Polygala sanguinea</i>
Carolina ponysfoot	<i>Dichondra carolinensis</i>	purple passionflower	<i>Passiflora incarnata</i>
Carolina rose	<i>Rosa carolina</i>	purple poppymallow	<i>Callirhoe involucrata</i>

Carolina spiderlily	<i>Hymenocallis caroliniana</i>	purple poppy-mallow	<i>Callirhoe involucrata</i>
Carolina woollywhite	<i>Hymenopappus scabiosaeus</i>	purple rocket	<i>Iodanthus pinnatifidus</i>
carpenter's square	<i>Scrophularia marilandica</i>	purpletop tridens	<i>Tridens flavus</i>
cat greenbrier	<i>Smilax glauca</i>	pygmyflower vetch	<i>Vicia minutiflora</i>
chaffweed	<i>Anagallis minima</i>	Queen Anne's lace	<i>Daucus carota</i>
cheerful sunflower	<i>Helianthus X laetiflorus</i>	queendevil	<i>Hieracium gronovii</i>
Cherokee sedge	<i>Carex cherokeensis</i>	queen's-delight	<i>Stillingia sylvatica</i>
Chickasaw plum	<i>Prunus angustifolia</i>	rabbit tobacco	<i>Pseudognaphalium obtusifolium</i>
chickenthief	<i>Mentzelia oligosperma</i>	rabbit tobacco	<i>Pseudognaphalium obtusifolium</i>
chicory	<i>Cichorium intybus</i>	ram's horn	<i>Proboscidea louisianica</i>
Chinaberrytree	<i>Melia azedarach</i>	rattlesnake fern	<i>Botrychium virginianum</i>
Chinese elm	<i>Ulmus parvifolia</i>	ravenfoot sedge	<i>Carex crus-corvi</i>
Chinese lespedeza	<i>Lespedeza cuneata</i>	red clover	<i>Trifolium pratense</i>
chinkapin oak	<i>Quercus muehlenbergii</i>	red columbine	<i>Aquilegia canadensis</i>
chufo flatsedge	<i>Cyperus esculentus</i>	red lovegrass	<i>Eragrostis secundiflora</i>
churchmouse threeawn	<i>Aristida dichotoma</i>	red lovegrass	<i>Eragrostis secundiflora</i>
citriodora lemon beebalm	<i>Monarda citriodora citriodora</i>	red mulberry	<i>Morus rubra</i>
clasping coneflower	<i>Dracopis amplexicaulis</i>	Red River scaleseed	<i>Spermolepis inermis</i>
clasping milkweed	<i>Asclepias amplexicaulis</i>	redpurple beebalm	<i>Monarda russeliana</i>
clasping pepperweed	<i>Lepidium perfoliatum</i>	redroot amaranth	<i>Amaranthus retroflexus</i>
clasping Venus' looking-glass	<i>Triodanis perfoliata</i>	redroot flatsedge	<i>Cyperus erythrorhizos</i>
claspingleaf St. Johnswort	<i>Hypericum gymnanthum</i>	redseed plantain	<i>Plantago rhodosperma</i>
climbing dayflower	<i>Commelina diffusa</i>	redtop	<i>Agrostis gigantea</i>
climbing false buckwheat	<i>Polygonum scandens</i>	resurrection fern	<i>Pleopeltis polypodioides</i>
climbing rose	<i>Rosa setigera</i>	Reverchon's hawthorn	<i>Crataegus reverchonii</i>
clustered blacksnakeroot	<i>Sanicula odorata</i>	ribseed sandmat	<i>Chamaesyce glyptosperma</i>
coastal indigo	<i>Indigofera miniata</i>	rice cutgrass	<i>Leersia oryzoides</i>
coastal sandbur	<i>Cenchrus spinifex</i>	river birch	<i>Betula nigra</i>
cobaea beardtongue	<i>Penstemon cobaea</i>	riverbank grape	<i>Vitis riparia</i>
cognata Carolina crabgrass	<i>Digitaria cognata</i>	roadside blue-eyed grass	<i>Sisyrinchium langloisii</i>
common blue violet	<i>Viola sororia</i>	robin's plantain	<i>Erigeron pulchellus</i>
common buttonbush	<i>Cephaelanthus occidentalis</i>	Robinson's compassplant	<i>Silphium laciniatum</i>
common chickweed	<i>Stellaria media</i>	rock dandelion	<i>Taraxacum laevigatum</i>
common cinquefoil	<i>Potentilla simplex</i>	rock muhly	<i>Muhlenbergia sobolifera</i>
common dandelion	<i>Taraxacum officinale</i>	Rocky Mountain beeplant	<i>Cleome serrulata</i>

common duckmeat	<i>Spirodela polyrrhiza</i>	Rocky Mountain juniper	<i>Juniperus scopulorum</i>
common duckweed	<i>Lemna minor</i>	rose mock vervain	<i>Glandularia canadensis</i>
common elderberry	<i>Sambucus nigra canadensis</i>	rosepink	<i>Sabatia angularis</i>
common evening-primrose	<i>Oenothera biennis</i>	rough cocklebur	<i>Xanthium strumarium</i>
common gaillardia	<i>Gaillardia aristata</i>	rough coneflower	<i>Rudbeckia grandiflora</i>
common goldstar	<i>Hypoxis hirsuta</i>	rough dropseed	<i>Sporobolus clandestinus</i>
common hackberry	<i>Celtis occidentalis</i>	rough false pennyroyal	<i>Hedeoma hispida</i>
common hardgrass	<i>Sclerochloa dura</i>	roughfruit scaleseed	<i>Spermolepis divaricata</i>
common hop	<i>Humulus lupulus</i>	roughleaf dogwood	<i>Cornus drummondii</i>
common milkweed	<i>Asclepias syriaca</i>	roughstem rosinweed	<i>Silphium radula</i>
common moonseed	<i>Menispermum canadense</i>	roundhead lespedeza	<i>Lespedeza capitata</i>
common mullein	<i>Verbascum thapsus</i>	roundhead prairie clover	<i>Dalea multiflora</i>
common pepperweed	<i>Lepidium densiflorum</i>	roundleaf greenbrier	<i>Smilax rotundifolia</i>
common persimmon	<i>Diospyros virginiana</i>	roundleaf ragwort	<i>Packera obovata</i>
common pricklyash	<i>Zanthoxylum americanum</i>	roundseed St. Johnswort	<i>Hypericum sphaerocarpum</i>
common reed	<i>Phragmites australis</i>	roundstem false foxglove	<i>Agalinis gattingeri</i>
common selfheal	<i>Prunella vulgaris</i>	rush skeletonplant	<i>Lygodesmia juncea</i>
common serviceberry	<i>Amelanchier arborea</i>	Russian olive	<i>Elaeagnus angustifolia</i>
common sowthistle	<i>Sonchus oleraceus</i>	rusty blackhaw	<i>Viburnum rufidulum</i>
common spikerush	<i>Eleocharis palustris</i>	sacred thorn-apple	<i>Datura wrightii</i>
common sunflower	<i>Helianthus annuus</i>	salsify	<i>Tragopogon porrifolius</i>
common water hyacinth	<i>Eichhornia crassipes</i>	salt cedar, French tamarisk	<i>Tamarix gallica</i>
common yarrow	<i>Achillea millefolium</i>	salt heliotrope	<i>Heliotropium curassavicum</i>
common yellow oxalis	<i>Oxalis stricta</i>	Sampson's snakeroot	<i>Orbexilum pedunculatum</i>
smooth Solomon's seal	<i>Polygonatum biflorum</i>	Sand bittercress	<i>Cardamine parviflora</i>
compassplant	<i>Silphium laciniatum</i>	sand bittercress	<i>Cardamine parviflora</i>
composite dropseed	<i>Sporobolus compositus</i>	sand dropseed	<i>Sporobolus cryptandrus</i>
smooth blue aster	<i>Sympyotrichum laeve</i>	sand lovegrass	<i>Eragrostis trichodes</i>
coralberry	<i>Symporicarpos orbiculatus</i>	sand violet	<i>Viola affinis</i>
corn gromwell	<i>Buglossoides arvensis</i>	sandbar lovegrass	<i>Eragrostis frankii</i>
corn speedwell	<i>Veronica arvensis</i>	sandbar willow	<i>Salix exigua</i>
Carolina woollywhite	<i>Hymenopappus scabiosaeus</i>	sandbar willow	<i>Salix interior</i>
false boneset	<i>Brickellia eupatorioides</i>	sanddune wallflower	<i>Erysimum capitatum</i>
groundplum milkvetch	<i>Astragalus crassicarpus</i>	sandhill amaranth	<i>Amaranthus arenicola</i>
creek plum	<i>Prunus rivularis</i>	sandyseed clammyweed	<i>Polanisia dodecandra trachysperma</i>

creeping burrhead	<i>Echinodorus cordifolius</i>	saw greenbrier	<i>Smilax bona-nox</i>
creeping woodssorrel	<i>Oxalis corniculata</i>	sawtooth blackberry	<i>Rubus argutus</i>
crested pricklypoppy	<i>Argemone polyanthemos</i>	sawtooth sunflower	<i>Helianthus grosseserratus</i>
crimson clover	<i>Trifolium incarnatum</i>	Carolina woollywhite	<i>Hymenopappus scabiosaeus</i>
crimsoneyed rosemallow	<i>Hibiscus moscheutos</i>	scaldweed	<i>Cuscuta gronovii</i>
climbing false buckwheat	<i>Polygonum scandens</i>	scaly blazing star	<i>Liatris squarrosa</i>
crowpoison	<i>Nothoscordum bivalve</i>	scarlet Indian paintbrush	<i>Castilleja coccinea</i>
Cuman ragweed	<i>Ambrosia psilostachya</i>	scarlet pimpernel	<i>Anagallis arvensis</i>
cup plant	<i>Silphium perfoliatum</i>	Schneck oak	<i>Quercus shumardii</i>
cupseed	<i>Calycocarpum lyonii</i>	scouringrush horsetail	<i>Equisetum hyemale</i>
curly dock	<i>Rumex crispus</i>	Scribner's rosette grass	<i>Dichanthelium oligosanthes</i>
curlytop knotweed	<i>Polygonum lapathifolium</i>	seaside brookweed	<i>Samolus valerandi parviflorus</i>
cursed buttercup	<i>Ranunculus sceleratus</i>	seedbox	<i>Ludwigia alternifolia</i>
cusp blazing star	<i>Liatris mucronata</i>	sensitive plant	<i>Mimosa microphylla</i>
cusp dodder	<i>Cuscuta cuspidata</i>	vente conmigo	<i>Croton glandulosus</i>
largebract ticktrefoil	<i>Desmodium cuspidatum</i>	sessileleaf ticktrefoil	<i>Desmodium sessilifolium</i>
cutleaf cyclanthera	<i>Cyclanthera dissecta</i>	shaggy crabgrass	<i>Digitaria villosa</i>
cutleaf evening-primrose	<i>Oenothera laciniata</i>	sharpleaf cancerwort	<i>Kickxia elatine</i>
cutleaf grapefern	<i>Botrychium dissectum</i>	sharpwing monkeyflower	<i>Mimulus alatus</i>
cutleaf groundcherry	<i>Physalis angulata</i>	Shepherd's purse	<i>Capsella bursa-pastoris</i>
cutleaf toothwort	<i>Cardamine concatenata</i>	shoreline sedge	<i>Carex hyalinolepis</i>
cylinder jointtail grass	<i>Coelorachis cylindrica</i>	shortbeak arrowhead	<i>Sagittaria brevirostra</i>
daggerleaf spikerush	<i>Eleocharis lanceolata</i>	shortbeak sedge	<i>Carex brevior</i>
dallisgrass	<i>Paspalum dilatatum</i>	shortpod draba	<i>Draba brachycarpa</i>
delta arrowhead	<i>Sagittaria platyphylla</i>	shortstalk chickweed	<i>Cerastium brachypodium</i>
toothed spurge	<i>Euphorbia dentata</i>	showy ticktrefoil	<i>Desmodium canadense</i>
desert biscuitroot	<i>Lomatium foeniculaceum</i>	shrubby St. Johnswort	<i>Hypericum prolificum</i>
desert biscuitroot	<i>Lomatium foeniculaceum</i>	Shumard oak	<i>Quercus shumardii</i>
desert false indigo	<i>Amorpha fruticosa</i>	Siberian elm	<i>Ulmus pumila</i>
desert goosefoot	<i>Chenopodium pratericola</i>	sicklepod	<i>Arabis canadensis</i>
devil's beggartick	<i>Bidens frondosa</i>	sidebeak pencilflower	<i>Stylosanthes biflora</i>
diamondflowers	<i>Hedyotis nigricans</i>	sideoats grama	<i>Bouteloua curtipendula</i>
diamondflowers	<i>Hedyotis nigricans</i>	silktree	<i>Albizia julibrissin</i>
disk waterhyssop	<i>Bacopa rotundifolia</i>	silky prairie clover	<i>Dalea villosa</i>
ditch stonecrop	<i>Penthorum sedoides</i>	silver beardgrass	<i>Bothriochloa laguroides</i>

dotted blazing star	<i>Liatris punctata</i>	silver bluestem	<i>Bothriochloa saccharoides</i>
dotted blazing star	<i>Liatris punctata</i>	silver maple	<i>Acer saccharinum</i>
dotted smartweed	<i>Polygonum punctatum</i>	silverleaf nightshade	<i>Solanum elaeagnifolium</i>
dotted smartweed	<i>Polygonum punctatum</i>	sixangle spurge	<i>Euphorbia hexagona</i>
doubtful knight's-spur	<i>Consolida ajacis</i>	sixweeks fescue	<i>Vulpia octoflora</i>
downy Indian paintbrush	<i>Castilleja purpurea</i>	Arkansas dozedaisy	<i>Aphanostephus skirrhobasis</i>
downy milkpea	<i>Galactia volubilis</i>	skunkbush sumac	<i>Rhus trilobata</i>
downy phlox	<i>Phlox pilosa</i>	sleepy silene	<i>Silene antirrhina</i>
Downy ragged goldenrod	<i>Solidago petiolaris</i>	sleepydick	<i>Ornithogalum umbellatum</i>
downy ragged goldenrod	<i>Solidago petiolaris</i>	slender crabgrass	<i>Digitaria filiformis</i>
downy yellow violet	<i>Viola pubescens</i>	slender lespedeza	<i>Lespedeza virginica</i>
downy yellow violet	<i>Viola pubescens</i>	slender scratchdaisy	<i>Croptilon divaricatum</i>
western soapberry	<i>Sapindus saponaria</i>	slender snakecotton	<i>Froelichia gracilis</i>
Drummond's onion	<i>Allium drummondii</i>	slender threeseed mercury	<i>Acalypha gracilens</i>
Drummond's stitchwort	<i>Minuartia drummondii</i>	slenderleaf fleabane	<i>Erigeron tenuis</i>
Dudley's rush	<i>Juncus dudleyi</i>	slickseed fuzzybean	<i>Strophostyles leiosperma</i>
dutchman's breeches	<i>Dicentra cucullaria</i>	slim amaranth	<i>Amaranthus hybridus</i>
dwarf chinkapin oak	<i>Quercus prinoides</i>	slimflower scurfpea	<i>Psoralidium tenuiflorum</i>
dwarf groundcherry	<i>Physalis pumila</i>	slimleaf milkweed	<i>Asclepias stenophylla</i>
dwarf larkspur	<i>Delphinium tricorne</i>	slimleaf panicgrass	<i>Dichanthelium linearifolium</i>
dwarf plantain	<i>Plantago pusilla</i>	slimpod rush	<i>Juncus diffusissimus</i>
dwarf snapdragon	<i>Chaenorhinum minus</i>	slimpod Venus' looking-glass	<i>Triodanis leptocarpa</i>
dwarf St. Johnswort	<i>Hypericum mutilum</i>	slippery elm	<i>Ulmus rubra</i>
eared redstem	<i>Ammannia auriculata</i>	small beggarticks	<i>Bidens discoidea</i>
early blue violet	<i>Viola palmata</i>	Small skullcap..	<i>Scutellaria parvula</i>
early buttercup	<i>Ranunculus fascicularis</i>	small skullcap	<i>Scutellaria parvula</i>
eastern cottonwood	<i>Populus deltoides</i>	smallflower buttercup	<i>Ranunculus parviflorus</i>
eastern daisy fleabane	<i>Erigeron annuus</i>	smallflower fumewort	<i>Corydalis micrantha</i>
eastern false rue anemone	<i>Enemion biternatum</i>	smallflower fumewort	<i>Corydalis micrantha micrantha</i>
eastern gamagrass	<i>Tripsacum dactyloides</i>	smallflower thoroughwort	<i>Eupatorium semiserratum</i>
eastern poison ivy	<i>Toxicodendron radicans</i>	smallflowered milkvetch	<i>Astragalus nuttallianus</i>
eastern redbud	<i>Cercis canadensis</i>	smallhead doll's daisy	<i>Boltonia diffusa</i>
eastern redcedar	<i>Juniperus virginiana</i>	smartweed dodder	<i>Cuscuta polygonorum</i>
eastern swampprivet	<i>Forestiera acuminata</i>	smooth brome	<i>Bromus inermis</i>
eastern wahoo	<i>Euonymus atropurpurea</i>	smooth carriónflower	<i>Smilax herbacea</i>

annual ragweed	<i>Ambrosia artemisiifolia</i>	smooth cliffbrake	<i>Pellaea glabella</i> <i>gabella</i>
slim tridens	<i>Tridens muticus</i>	smooth false buttonweed	<i>Spermacoce glabra</i>
golden crownbeard	<i>Verbesina encelioides</i>	smooth forked nailwort	<i>Paronychia canadensis</i>
Engelmann's milkweed	<i>Asclepias engelmanniana</i>	smooth hedgenettle	<i>Stachys tenuifolia</i>
entireleaf Indian paintbrush	<i>Castilleja indivisa</i>	smooth oxeye	<i>Heliopsis helianthoides</i>
entireleaf western daisy	<i>Astranthium integrifolium</i>	smooth rockcress	<i>Arabis laevigata</i>
erect hedgeparsley	<i>Torilis japonica</i>	smooth sumac	<i>Rhus glabra</i>
whitemouth dayflower	<i>Commelina erecta</i>	snow on the mountain	<i>Euphorbia marginata</i>
white heath aster	<i>Symphyotrichum ericoides</i>	soft agrimony	<i>Agrimonia pubescens</i>
false boneset	<i>Brickellia eupatorioides</i>	soft goldenaster	<i>Chrysopsis pilosa</i>
European black elderberry	<i>Sambucus nigra</i>	soft thistle	<i>Cirsium carolinianum</i>
European privet	<i>Ligustrum vulgare</i>	softhair marbleseed	<i>Onosmodium molle</i>
evening rainlily	<i>Cooperia drummondii</i>	softleaf blackberry	<i>Rubus mollior</i>
eyebane	<i>Chamaesyce nutans</i>	softstem bulrush	<i>Schoenoplectus tabernaemontani</i>
fall panicgrass	<i>Panicum dichotomiflorum</i>	sorrelvine	<i>Cissus trifoliata</i>
false daisy	<i>Eclipta prostrata</i>	annual saltmarsh aster	<i>Symphyotrichum divaricatum</i>
false flowering spurge	<i>Euphorbia pubentissima</i>	southern catalpa	<i>Catalpa bignonioides</i>
false hop sedge	<i>Carex lupuliformis</i>	southern dewberry	<i>Rubus trivialis</i>
false mallow	<i>Malvastrum hispidum</i>	southern pepperwort	<i>Lepidium austrinum</i>
fanleaf vervain	<i>Verbena plicata</i>	southern sedge	<i>Carex austrina</i>
farkleberry	<i>Vaccinium arboreum</i>	southern waternymph	<i>Najas guadalupensis</i>
Missouri goldenrod	<i>Solidago missouriensis</i>	southwestern bedstraw	<i>Galium virgatum</i>
sleepingplant	<i>Chamaecrista fasciculata</i>	Spach's evening-primrose	<i>Oenothera spachiana</i>
western panicgrass	<i>Dichanthelium acuminatum</i>	Spanish gold	<i>Grindelia papposa</i>
hairy forked nailwort	<i>Paronychia fastigiata</i>	Spanish needles	<i>Bidens bipinnata</i>
Fernald's yellowcress	<i>Rorippa palustris fernaldiana</i>	spearmint	<i>Mentha spicata</i>
feverwort	<i>Triosteum perfoliatum</i>	roundseed panicgrass	<i>Dichanthelium sphaerocarpum</i>
fewflower beaksedge	<i>Rhynchospora rariflora</i>	spiny amaranth	<i>Amaranthus spinosus</i>
field bindweed	<i>Convolvulus arvensis</i>	spiny sowthistle	<i>Sonchus asper</i>
field clover	<i>Trifolium campestre</i>	spiny spiderflower	<i>Cleome spinosa</i>
field groundcherry	<i>Physalis mollis</i>	splitbeard bluestem	<i>Andropogon ternarius</i>
field pansy	<i>Viola bicolor</i>	spoonleaf purple everlasting	<i>Gamochaeta purpurea</i>
field paspalum	<i>Paspalum laeve</i>	spotted beebealm	<i>Monarda punctata punctata</i>
field pennycress	<i>Thlaspi arvense</i>	spotted beebealm	<i>Monarda punctata</i>
field pussytoes	<i>Antennaria neglecta</i>	spotted ladysthumb	<i>Polygonum persicaria</i>

field thistle	<i>Cirsium discolor</i>	spotted medick	<i>Medicago arabica</i>
fire on the mountain	<i>Euphorbia cyathophora</i>	spotted sandmat	<i>Chamaesyce maculata</i>
firewheel	<i>Gaillardia pulchella</i>	spotted St. Johnswort	<i>Hypericum punctatum</i>
wild bergamot	<i>Monarda fistulosa fistulosa</i>	spotted water hemlock	<i>Cicuta maculata</i>
fiveangled dodder	<i>Cuscuta pentagona</i>	spreading bladderpod	<i>Lesquerella gracilis</i>
flameleaf sumac	<i>Rhus copallina</i>	spreading chervil	<i>Chaerophyllum procumbens</i>
flatspine stickseed	<i>Lappula occidentalis</i>	spreading hedgeparsley	<i>Torilis arvensis</i>
floating primrose-willow	<i>Ludwigia peploides</i>	spreading wallflower	<i>Erysimum repandum</i>
Florida paspalum	<i>Paspalum floridanum</i>	spring avens	<i>Geum vernum</i>
flower of an hour	<i>Hibiscus trionum</i>	spring forget-me-not	<i>Myosotis verna</i>
flowering dogwood	<i>Cornus florida</i>	spring ladies'-tresses	<i>Spiranthes vernalis</i>
flowering spurge	<i>Euphorbia corollata</i>	St. Andrew's cross	<i>Hypericum hypericoides</i>
fluxweed	<i>Isanthus brachiatus</i>	stalkless yellowcress	<i>Rorippa sessiliflora</i>
fourleaf milkweed	<i>Asclepias quadrifolia</i>	stemless evening-primrose	<i>Oenothera triloba</i>
fourpoint evening-primrose	<i>Oenothera rhombipetala</i>	sticky chickweed	<i>Cerastium glomeratum</i>
fox sedge	<i>Carex vulpinoidea</i>	stickywilly	<i>Galium aparine</i>
fragrant bedstraw	<i>Galium triflorum</i>	stiff goldenrod	<i>Oligoneuron rigidum</i>
fragrant flatsedge	<i>Cyperus odoratus</i>	stiff greenthread	<i>Thelesperma filifolium</i>
fraseri Fraser meadow garlic	<i>Allium canadense</i>	stiff marsh bedstraw	<i>Galium tinctorium</i>
fringed loosestrife	<i>Lysimachia ciliata</i>	stiff sunflower	<i>Helianthus pauciflorus</i>
fringeleaf wild petunia	<i>Ruellia humilis</i>	stiff tickseed	<i>Coreopsis palmata</i>
frost grape	<i>Vitis vulpina</i>	stinging nettle	<i>Urtica dioica</i>
Fuller's teasel	<i>Dipsacus fullonum</i>	stinkgrass	<i>Eragrostis cilianensis</i>
fuzzy phacelia	<i>Phacelia hirsuta</i>	stinking chamomile	<i>Anthemis cotula</i>
garden asparagus	<i>Asparagus officinalis</i>	stout rush	<i>Juncus nodatus</i>
garden cornflower	<i>Centaurea cyanus</i>	strawcolored flatsedge	<i>Cyperus strigosus</i>
giant goldenrod	<i>Solidago gigantea</i>	strict forget-me-not	<i>Myosotis stricta</i>
giant ironweed	<i>Vernonia gigantea gigantea</i>	prairie fleabane	<i>Erigeron strigosus</i>
giant sumpweed	<i>Iva xanthifolia</i>	subglabrata longleaf groundchen	<i>Physalis longifolia</i>
shorthair goldenrod	<i>Solidago canadensis</i>	suckling clover	<i>Trifolium dubium</i>
scaly blazing star	<i>Liatris squarrosa</i>	sugar maple	<i>Acer saccharum</i>
rough cocklebur	<i>Xanthium strumarium</i>	sugarberry	<i>Celtis laevigata</i>
honey mesquite	<i>Prosopis glandulosa</i>	sulphur cinquefoil	<i>Potentilla recta</i>
soapweed yucca	<i>Yucca glauca</i>	Summer grape	<i>Vitis aestivalis</i>
globe flatsedge	<i>Cyperus echinatus</i>	sunbright	<i>Talinum parviflorum</i>

golden crownbeard	<i>Verbesina encelioides</i>	swamp milkweed	<i>Asclepias incarnata</i>
golden currant	<i>Ribes aureum</i>	swamp smartweed	<i>Polygonum hydropiperoides</i>
golden ragwort	<i>Packera aurea</i>	sweet autumn virginsbower	<i>Clematis terniflora</i>
golden selenia	<i>Selenia aurea</i>	sweet woodreed	<i>Cinna arundinacea</i>
golden tickseed	<i>Coreopsis tinctoria</i>	sweetgum	<i>Liquidambar styraciflua</i>
golden zizia	<i>Zizia aurea</i>	sweetscent	<i>Pluchea odorata</i>
gracile late purple aster	<i>Sympyotrichum patens</i>	sweetscented joepyeweek	<i>Eupatorium purpureum</i>
grandiflora largeflower tickseed	<i>Coreopsis grandiflora</i>	switchgrass	<i>Panicum virgatum</i>
grandiflora pitcher sage	<i>Salvia azurea</i>	tall amaranth	<i>Amaranthus rudis</i>
grassy arrowhead	<i>Sagittaria graminea</i>	tall blazing star	<i>Liatris aspera</i>
gray field speedwell	<i>Veronica polita</i>	tall cinquefoil	<i>Potentilla arguta</i>
gray goldenrod	<i>Solidago nemoralis</i>	Tall false foxglove	<i>Agalinis aspera</i>
graybark grape	<i>Vitis cinerea</i>	tall lespedeza	<i>Lespedeza stuevei</i>
grayleaf red raspberry	<i>Rubus idaeus strigosus</i>	tall poppymallow	<i>Callirhoe leiocarpa</i>
great ragweed	<i>Ambrosia trifida</i>	tall thistle	<i>Cirsium altissimum</i>
green antelopehorn	<i>Asclepias viridis</i>	tall thoroughwort	<i>Eupatorium altissimum</i>
green ash	<i>Fraxinus pennsylvanica</i>	talus slope penstemon	<i>Penstemon digitalis</i>
green bristlegrass	<i>Setaria viridis</i>	tansy dogshade	<i>Limnosciadium pinnatum</i>
green carpetweed	<i>Mollugo verticillata</i>	tansyaster	<i>Rayjacksonia annua</i>
green comet milkweed	<i>Asclepias viridiflora</i>	teal lovegrass	<i>Eragrostis hypnoides</i>
green dragon	<i>Arisaema dracontium</i>	Tennessee bladderfern	<i>Cystopteris tennesseensis</i>
green hawthorn	<i>Crataegus viridis</i>	terrestrial water-starwort	<i>Callitricha terrestris</i>
green milkweed	<i>Asclepias hirtella</i>	Texan great ragweed	<i>Ambrosia trifida</i>
grooved flax	<i>Linum sulcatum</i>	Texan sugarberry	<i>Celtis laevigata</i>
grooved flax	<i>Linum sulcatum</i>	Texas stitchwort "	<i>Minuartia michauxii</i>
groovestem Indian plantain	<i>Arnoglossum plantagineum</i>	Drummond's aster	<i>Sympyotrichum drummondii</i>
Ground plum milkvetch	<i>Astragalus crassicarpus</i>	stiff yellow flax	<i>Linum medium</i>
groundnut	<i>Apios americana</i>	Texas bullnettle	<i>Cnidoscolus texanus</i>
groundplum milkvetch	<i>Astragalus crassicarpus</i>	Texas croton	<i>Croton texensis</i>
Guadeloupe cucumber	<i>Melothria pendula</i>	Texas dropseed	<i>Sporobolus texanus</i>
gum bully	<i>Sideroxylon lanuginosum</i>	Texas fescue	<i>Festuca versuta</i>
gummy lovegrass	<i>Eragrostis curtipedicellata</i>	Texas goldentop	<i>Euthamia gymnospermoides</i>
hairawn muhly	<i>Muhlenbergia capillaris</i>	Texas saxifrage	<i>Saxifraga texana</i>
hairy bedstraw	<i>Galium pilosum</i>	Texas star	<i>Sabatia campestris</i>
hairy crabgrass	<i>Digitaria sanguinalis</i>	Texas thistle	<i>Cirsium texanum</i>

hairy crabweed	<i>Fatoua villosa</i>	Texas toadflax	<i>Nuttallanthus texanus</i>
hairy evening-primrose	<i>Oenothera villosa villosa</i>	thin paspalum	<i>Paspalum setaceum</i>
hairy fimbry	<i>Fimbristylis puberula</i>	Thistle	<i>Cirsium iowense</i>
hairy forked nailwort	<i>Paronychia fastigiata</i>	threadleaf evening-primrose	<i>Oenothera linifolia</i>
hairy hawkweed	<i>Hieracium longipilum</i>	tinctoria golden tickseed	<i>Coreopsis tinctoria</i>
hairy leafcup	<i>Smallanthus uvedaliaus</i>	tiny bluet	<i>Houstonia pusilla</i>
hairy lipfern	<i>Cheilanthes lanosa</i>	tiny mousetail	<i>Myosurus minimus</i>
hairy purslane speedwell	<i>Veronica peregrina xalapensis</i>	tiny pea	<i>Lathyrus pusillus</i>
hairy sunflower	<i>Helianthus hirsutus</i>	toothed spurge	<i>Euphorbia dentata</i>
hairy wildrye	<i>Elymus villosus</i>	western honey mesquite	<i>Prosopis glandulosa</i>
hairyfruit chervil	<i>Chaerophyllum tainturieri</i>	trailing fuzzybean	<i>Strophostyles helvula</i>
hairyseed paspalum	<i>Paspalum pubiflorum</i>	trailing lespedeza	<i>Lespedeza procumbens</i>
halberdleaf rosemallow	<i>Hibiscus laevis</i>	trailing pearlwort	<i>Sagina decumbens</i>
hammock sedge	<i>Carex fissa</i>	tree of heaven	<i>Ailanthus altissima</i>
hare's ear mustard	<i>Conringia orientalis</i>	trumpet creeper	<i>Campsis radicans</i>
harveyana largeflower tickseed	<i>Coreopsis grandiflora</i>	trumpet honeysuckle	<i>Lonicera sempervirens</i>
hawthorn	<i>Rosaceae Crataegus</i>	trumpetweed	<i>Eupatorium fistulosum</i>
heartleaf four o'clock	<i>Mirabilis nyctaginea</i>	tuberous desert-chicory	<i>Pyrrhopappus grandiflorus</i>
heartleaf nettle	<i>Urtica chamaedryoides</i>	tufted lovegrass	<i>Eragrostis pectinacea</i>
heartleaf peppervine	<i>Ampelopsis cordata</i>	tumble windmill grass	<i>Chloris verticillata</i>
heartleaf skullcap	<i>Scutellaria ovata</i>	tumblegrass	<i>Schedonnardus paniculatus</i>
heartwing sorrel	<i>Rumex hastatulus</i>	Tuna cactus	<i>Opuntia ficus-indica</i>
Heller's rosette grass	<i>Dichanthelium oligosanthes</i>	turkey tangle fogfruit	<i>Phyla nodiflora</i>
henbit deadnettle	<i>Lamium amplexicaule</i>	twoheaded water-starwort	<i>Callitrichie heterophylla</i>
herbwilliam	<i>Ptilimnium capillaceum</i>	elmleaf goldenrod	<i>Solidago ulmifolia</i>
hoary ticktrefoil	<i>Desmodium canescens</i>	American bird's-foot trefoil	<i>Lotus unifoliolatus</i>
hoary verbena	<i>Verbena stricta</i>	upright burrhead	<i>Echinodorus berteroii</i>
hogwort	<i>Croton capitatus</i>	upright prairie coneflower	<i>Ratibida columnifera</i>
honeylocust	<i>Gleditsia triacanthos</i>	urticifolia white vervain	<i>Verbena urticifolia</i>
honeysuckle	<i>Caprifoliaceae Lonicera</i>	Vahl's fimbry	<i>Fimbristylis vahlii</i>
honeyvine	<i>Cynanchum laeve</i>	valley redstem	<i>Ammannia coccinea</i>
hooded arrowhead	<i>Sagittaria calycina</i>	velvetleaf	<i>Abutilon theophrasti</i>
Hooker's scratchdaisy	<i>Croptilon hookerianum</i>	velvetweed	<i>Gaura mollis</i>
Hooker's evening-primrose	<i>Oenothera elata</i>	velvety goldenrod	<i>Solidago mollis</i>
hophornbeam	<i>Ostrya virginiana</i>	vente conmigo	<i>Croton glandulosus</i>

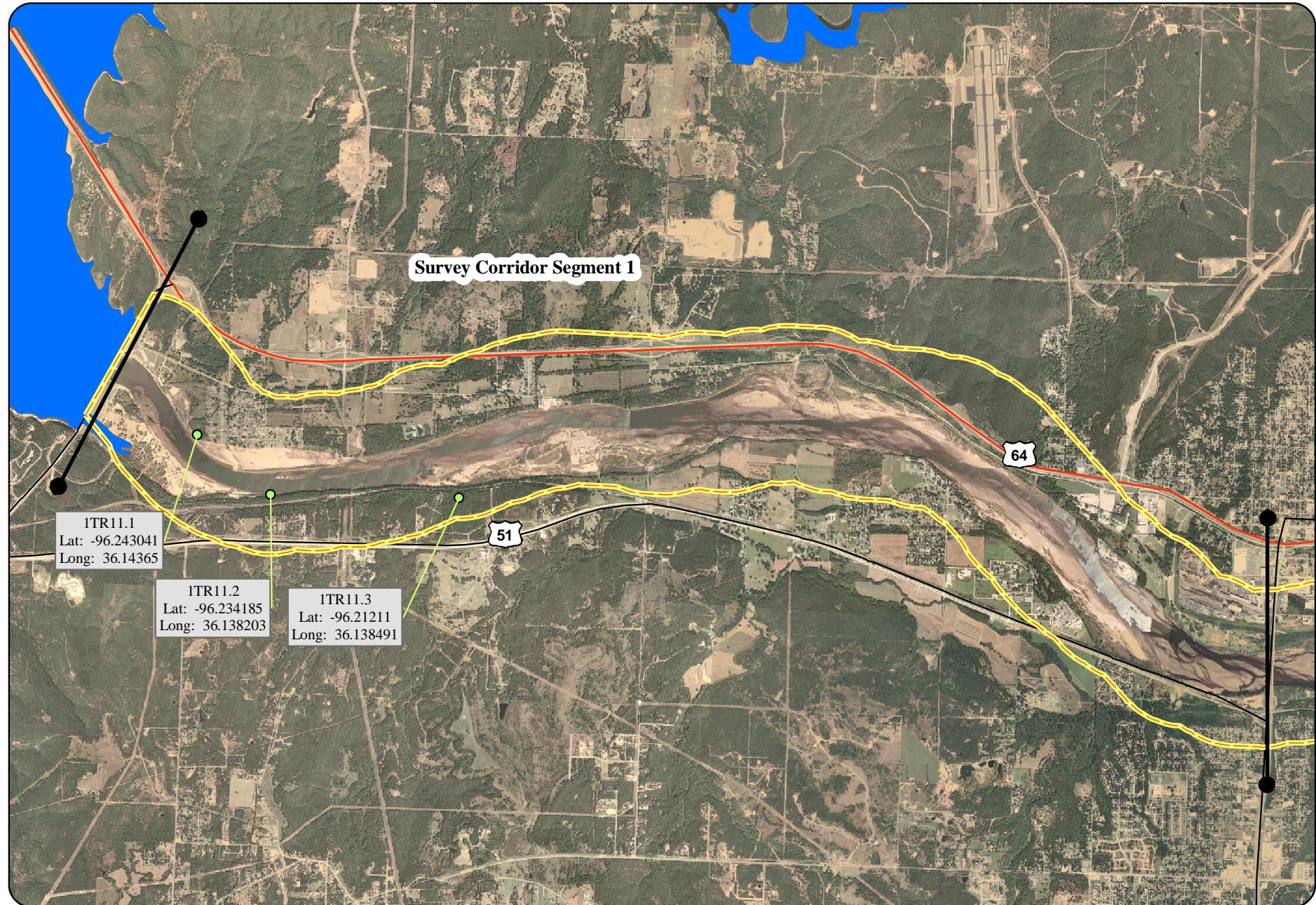
horehound	<i>Marrubium vulgare</i>	vine mesquite	<i>Panicum obtusum</i>
horsetail paspalum	<i>Paspalum fluitans</i>	violet blue eyed Mary	<i>Collinsia violacea</i>
hortulan plum	<i>Prunus hortulana</i>	violet lespedeza	<i>Lespedeza violacea</i>
humped bladderwort	<i>Utricularia gibba</i>	violet prairie clover	<i>Dalea purpurea</i>
husk tomato	<i>Physalis pubescens</i>	violet woodsorrel	<i>Oxalis violacea</i>
hyacinth meadow garlic	<i>Allium canadense</i>	Virginia creeper	<i>Parthenocissus quinquefolia</i>
Illinois ticktrefoil	<i>Desmodium illinoense</i>	Virginia dayflower	<i>Commelina virginica</i>
Indian goosegrass	<i>Eleusine indica</i>	Virginia pepperweed	<i>Lepidium virginicum</i>
Indian heliotrope	<i>Heliotropium indicum</i>	Virginia plantain	<i>Plantago virginica</i>
Indian lovegrass	<i>Eragrostis pilosa</i>	Virginia springbeauty	<i>Claytonia virginica</i>
Indian strawberry	<i>Duchesnea indica</i>	Virginia strawberry	<i>Fragaria virginiana</i>
Indian woodoats	<i>Chasmanthium latifolium</i>	Virginia tephrosia	<i>Tephrosia virginiana</i>
Indiangrass	<i>Sorghastrum nutans</i>	Virginia threeseed mercury	<i>Acalypha rhomboidea</i>
Indianhemp	<i>Apocynum cannabinum</i>	Virginia winged rockcress	<i>Sibara virginica</i>
Indianpipe	<i>Monotropa uniflora</i>	broomsedge bluestem	<i>Andropogon virginicus</i>
interior ironweed	<i>Vernonia baldwinii interior</i>	Virginia wildrye	<i>Elymus virginicus</i>
Italian ryegrass	<i>Lolium perenne multiflorum</i>	walking fern	<i>Asplenium rhizophyllum</i>
ivyleaf morning-glory	<i>Ipomoea hederacea</i>	warty caltrop	<i>Kallstroemia parviflora</i>
ivyleaf speedwell	<i>Veronica hederifolia</i>	warty spurge	<i>Euphorbia spathulata</i>
Jack in the pulpit	<i>Arisaema triphyllum</i>	water knotweed	<i>Polygonum amphibium</i>
jagged chickweed	<i>Holosteum umbellatum</i>	waterpurslane	<i>Didiplis diandra</i>
Japanese brome	<i>Bromus japonicus</i>	wavyleaf thistle	<i>Cirsium undulatum</i>
Japanese honeysuckle	<i>Lonicera japonica</i>	weak rush	<i>Juncus debilis</i>
Japanese mazus	<i>Mazus pumilus</i>	wedgeleaf draba	<i>Draba cuneifolia</i>
Jerusalem artichoke	<i>Helianthus tuberosus</i>	weedy dwarfdandelion	<i>Krigia caespitosa</i>
jewelweed	<i>Impatiens capensis</i>	West Indian nightshade	<i>Solanum ptychanthum</i>
jimsonweed	<i>Datura stramonium</i>	western dwarfdandelion	<i>Krigia occidentalis</i>
Johnsongrass	<i>Sorghum halepense</i>	western indigo	<i>Indigofera miniata</i>
jointed goatgrass	<i>Aegilops cylindrica</i>	western marbleseed	<i>Onosmodium molle occidentale</i>
Juda's bush	<i>Iresine rhizomatosa</i>	western rockjasmine	<i>Androsace occidentalis</i>
jumpseed	<i>Polygonum virginianum</i>	western rough goldenrod	<i>Solidago radula</i>
Kentucky bluegrass	<i>Poa pratensis</i>	western tansymustard	<i>Descurainia pinnata</i>
Kentucky coffeetree	<i>Gymnocladus dioicus</i>	western yarrow	<i>Achillea millefolium</i>
Kentucky yellowwood	<i>Cladrastis kentukea</i>	white ash	<i>Fraxinus americana</i>
kidneyleaf mudplantain	<i>Heteranthera reniformis</i>	white avens	<i>Geum canadense</i>

kiss me quick	<i>Portulaca pilosa</i>	white clover	<i>Trifolium repens</i>
kisses	<i>Gaura suffulta</i>	white crownbeard	<i>Verbesina virginica</i>
Korean clover	<i>Kummerowia stipulacea</i>	white fawnlily	<i>Erythronium albidum</i>
kudzu	<i>Pueraria montana</i>	white four o'clock	<i>Mirabilis albida</i>
lace grass	<i>Eragrostis capillaris</i>	white mulberry	<i>Morus alba</i>
laceflower	<i>Ptilimnium nuttallii</i>	white pea	<i>Lathyrus sativus</i>
lambsquarters	<i>Chenopodium album</i>	white prairie rose	<i>Rosa foliolosa</i>
lanata woolly prairie clover	<i>Dalea lanata</i>	white sagebrush	<i>Artemisia ludoviciana mexicana</i>
lance selfheal	<i>Prunella vulgaris lanceolata</i>	White snakeroot	<i>Ageratina altissima</i>
lanceleaf fogfruit	<i>Phyla lanceolata</i>	white sweet clover	<i>Melilotus alba</i>
lanceleaf loosestrife	<i>Lysimachia lanceolata</i>	white vervain	<i>Verbena urticifolia</i>
lanceleaf ragweed	<i>Ambrosia bidentata</i>	white wand beardtongue	<i>Penstemon tubiflorus</i>
lanceleaf tickseed	<i>Coreopsis lanceolata</i>	whiteflower leafcup	<i>Polymnia canadensis</i>
narrowleaf gumweed	<i>Grindelia lanceolata</i>	whitehair rosette grass	<i>Dichanthelium villosissimum</i>
white panicle aster	<i>Sympyotrichum lanceolatum</i>	Whitemouth dayflower	<i>Commelina erecta</i>
winged lythrum	<i>Lythrum alatum</i>	whiteroot rush	<i>Juncus brachycarpus</i>
Lapham's phlox	<i>Phlox divaricata laphamii</i>	whitestar	<i>Ipomoea lacunosa</i>
large buttercup	<i>Ranunculus macranthus</i>	Whitetinge sedge	<i>Carex albicans</i>
large Indian breadroot	<i>Pediomelum esculentum</i>	wholeleaf rosinweed	<i>Silphium integrifolium</i>
largebracted plantain	<i>Plantago aristata</i>	whorled milkweed	<i>Asclepias verticillata</i>
largeflower fameflower	<i>Talinum calycinum</i>	widowscross	<i>Sedum pulchellum</i>
largeflower tickseed	<i>Coreopsis grandiflora</i>	widowsfrill	<i>Silene stellata</i>
yellow false foxglove	<i>Aureolaria grandiflora</i>	wild bergamot	<i>Monarda fistulosa</i>
largeleaf wild indigo	<i>Baptisia alba</i>	wild blue phlox	<i>Phlox divaricata</i>
lateflowering thoroughwort	<i>Eupatorium serotinum</i>	wild quinine	<i>Parthenium integrifolium</i>
winged sumac	<i>Rhus copallina</i>	Willdenow's croton	<i>Croton willdenowii</i>
white doll's daisy	<i>Boltonia asteroides</i>	willowleaf sunflower	<i>Helianthus salicifolius</i>
meadow garlic	<i>Allium canadense</i>	winecup	<i>Callirhoe digitata</i>
leadplant	<i>Amorpha canescens</i>	winged elm	<i>Ulmus alata</i>
Leavenworth's eryngo	<i>Eryngium leavenworthii</i>	Winged lythrum	<i>Lythrum alatum</i>
Lehmann lovegrass	<i>Eragrostis lehmanniana</i>	winged lythrum	<i>Lythrum alatum</i>
lemon bee-balm	<i>Monarda citriodora</i>	winged pigweed	<i>Cycloloma atriplicifolium</i>
lemon bee-balm	<i>Monarda citriodora citriodora</i>	wingleaf primrose-willow	<i>Ludwigia decurrens</i>
Lespedeza X neglecta	<i>Lespedeza X neglecta</i>	wingstem	<i>Verbesina alternifolia</i>
licorice bedstraw	<i>Galium circaeza</i>	winter bentgrass	<i>Agrostis hyemalis</i>

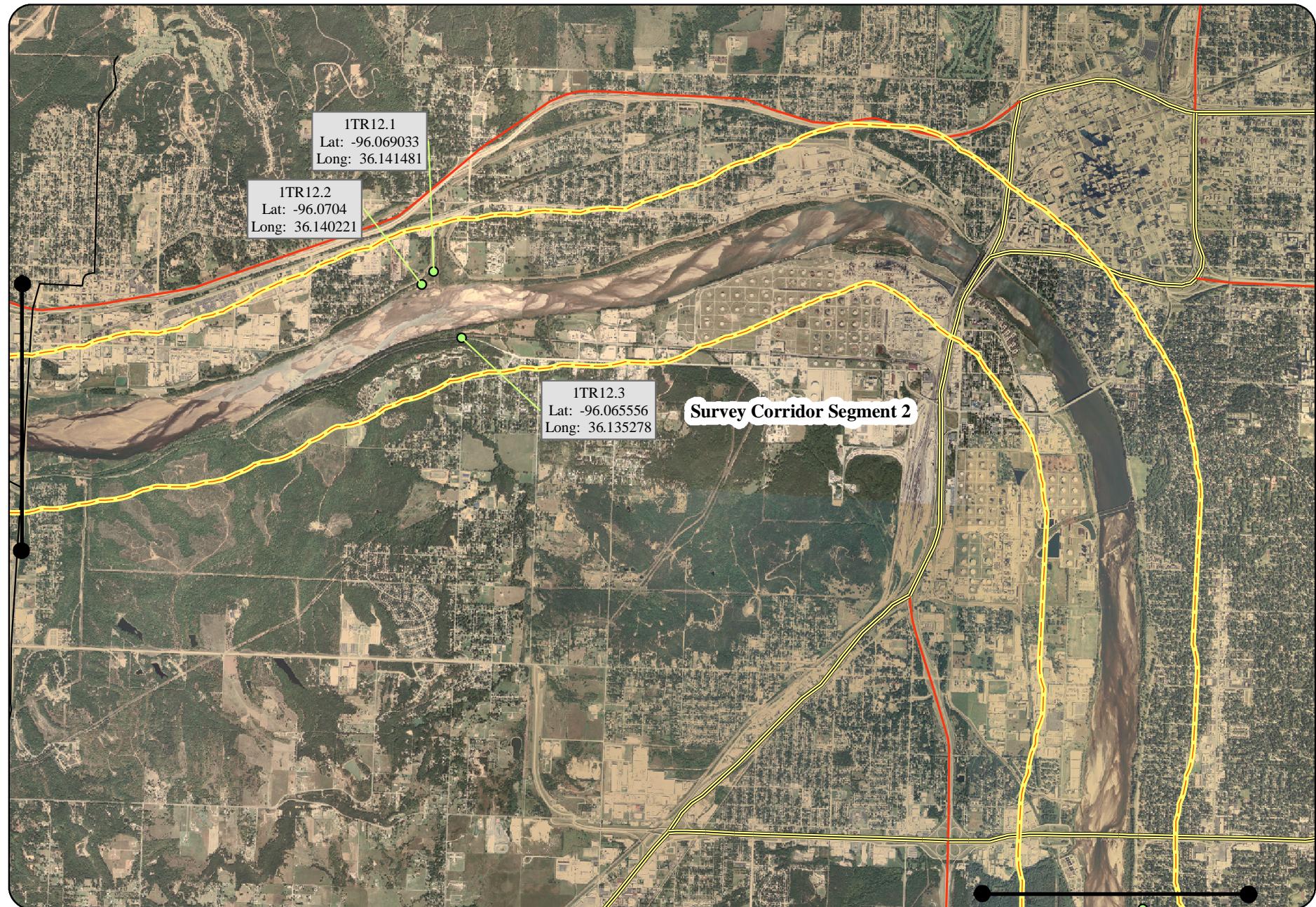
light poppy-mallow	<i>Callirhoe alcaeoides</i>	winter vetch	<i>Vicia villosa</i>
limestone adderstongue	<i>Ophioglossum engelmannii</i>	witchgrass	<i>Panicum capillare</i>
limestone calamint	<i>Clinopodium arkansanum</i>	woman's tobacco	<i>Antennaria plantaginifolia</i>
limestone wild petunia	<i>Ruellia strepens</i>	woolly dutchman's pipe	<i>Aristolochia tomentosa</i>
Lindheimer panicgrass	<i>Dichanthelium acuminatum</i>	woolly plantain	<i>Plantago patagonica</i>
purple poppy-mallow	<i>Callirhoe involucrata</i>	woolly prairie clover	<i>Dalea lanata</i>
little barley	<i>Hordeum pusillum</i>	wrinkleleaf goldenrod	<i>Solidago rugosa aspera</i>
little bluestem	<i>Schizachyrium scoparium</i>	yellow fumewort	<i>Corydalis flavula</i>
little hogweed	<i>Portulaca oleracea</i>	yellow giant hyssop	<i>Agastache nepetoides</i>
little lovegrass	<i>Eragrostis minor</i>	yellow honeysuckle	<i>Lonicera flava</i>
littleleaf buttercup	<i>Ranunculus abortivus</i>	yellow passionflower	<i>Passiflora lutea</i>
littlepod false flax	<i>Camelina microcarpa</i>	yellow puff	<i>Neptunia lutea</i>
littletooth sedge	<i>Carex microdonta</i>	yellow stonecrop	<i>Sedum nuttallianum</i>
longbract wild indigo	<i>Baptisia bracteata</i>	yellow sundrops	<i>Calylophus serrulatus</i>
longflower bee-blossom	<i>Gaura longiflora</i>	yellow sweetclover	<i>Melilotus officinalis</i>
longleaf groundcherry	<i>Physalis longifolia</i>	Yellowdicks	<i>Helenium amarum</i>
gray goldenrod	<i>Solidago nemoralis</i>	yellowdicks	<i>Helenium amarum</i>
longleaf buckwheat	<i>Eriogonum longifolium</i>	Yellowseed false pimpernel	<i>Lindernia dubia</i>
longleaf groundcherry	<i>Physalis longifolia</i>	Bitternut hickory	<i>Carya cordiformis</i>
longspike tridens	<i>Tridens strictus</i>	button eryngo	<i>Eryngium yuccifolium</i>
longstyle sweetroot	<i>Osmorrhiza longistylis</i>	Canada goldenrod	<i>Solidago canadensis</i>
lotus sweetjuice	<i>Glinus lotoides</i>	climbing rose	<i>Rosa setigera</i>
Louisiana vetch	<i>Vicia ludoviciana</i>	downy Indian paintbrush	<i>Castilleja purpurea</i>
love in a puff	<i>Cardiospermum halicacabum</i>	golden currant	<i>Ribes aureum</i>
low spikesedge	<i>Kyllinga pumila</i>	hairyfruit chervil "	<i>Chaerophyllum tainturieri</i>
lowland rotala	<i>Rotala ramosior</i>	partridge pea	<i>Chamaecrista nictitans</i>
Lundell's phacelia	<i>Phacelia strictiflora</i>	redtop panicgrass	<i>Panicum rigidulum</i>
composite dropseed	<i>Sporobolus compositus</i>	Tall blazing star	<i>Liatris aspera</i>
Madagascar dropseed	<i>Sporobolus coromandelianus</i>	violet prairie clover	<i>Dalea purpurea</i>
maidenhair tree	<i>Ginkgo biloba</i>	white doll's daisy	<i>Boltonia asteroides</i>

Appendix C

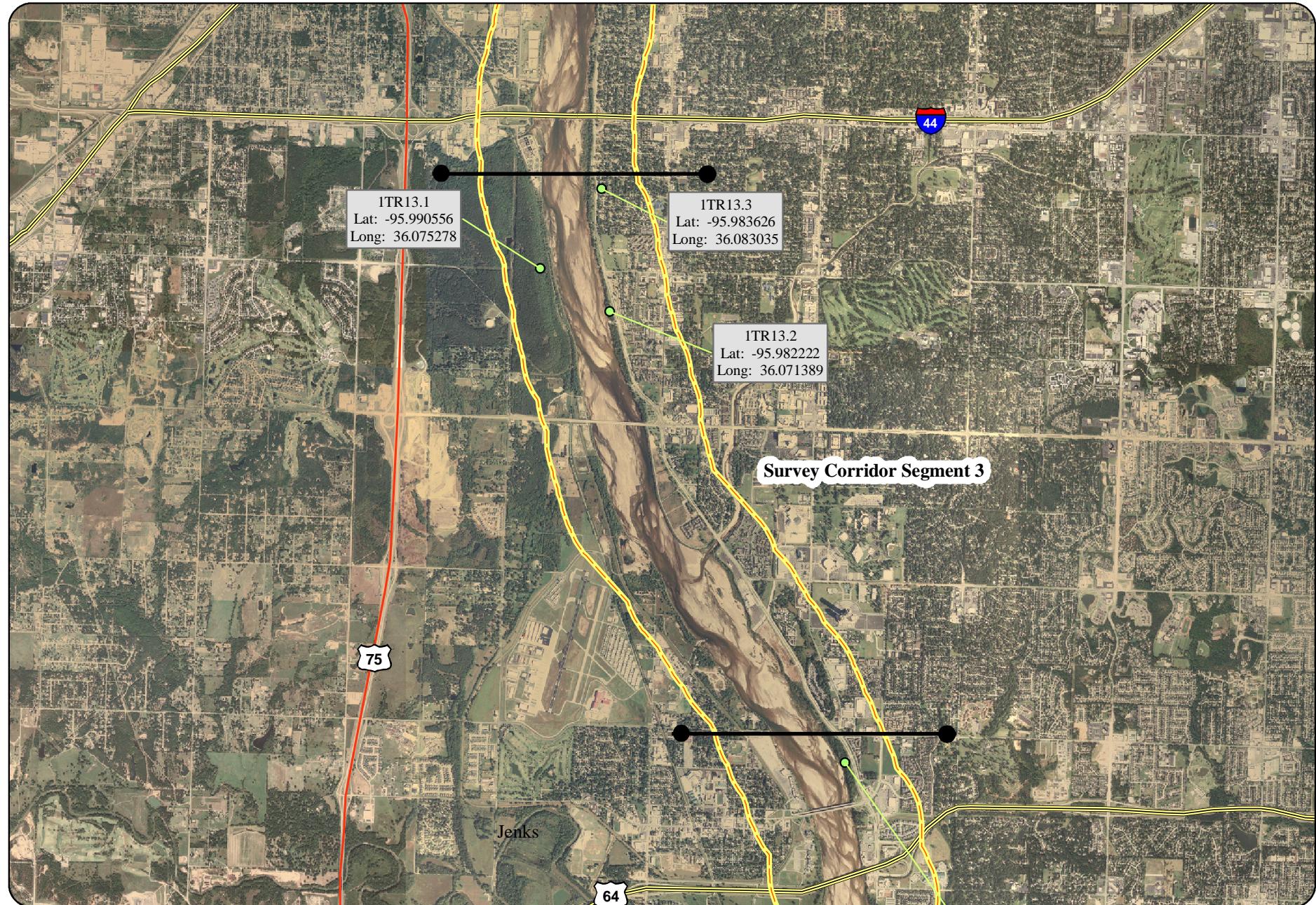
Sample Station Location Maps



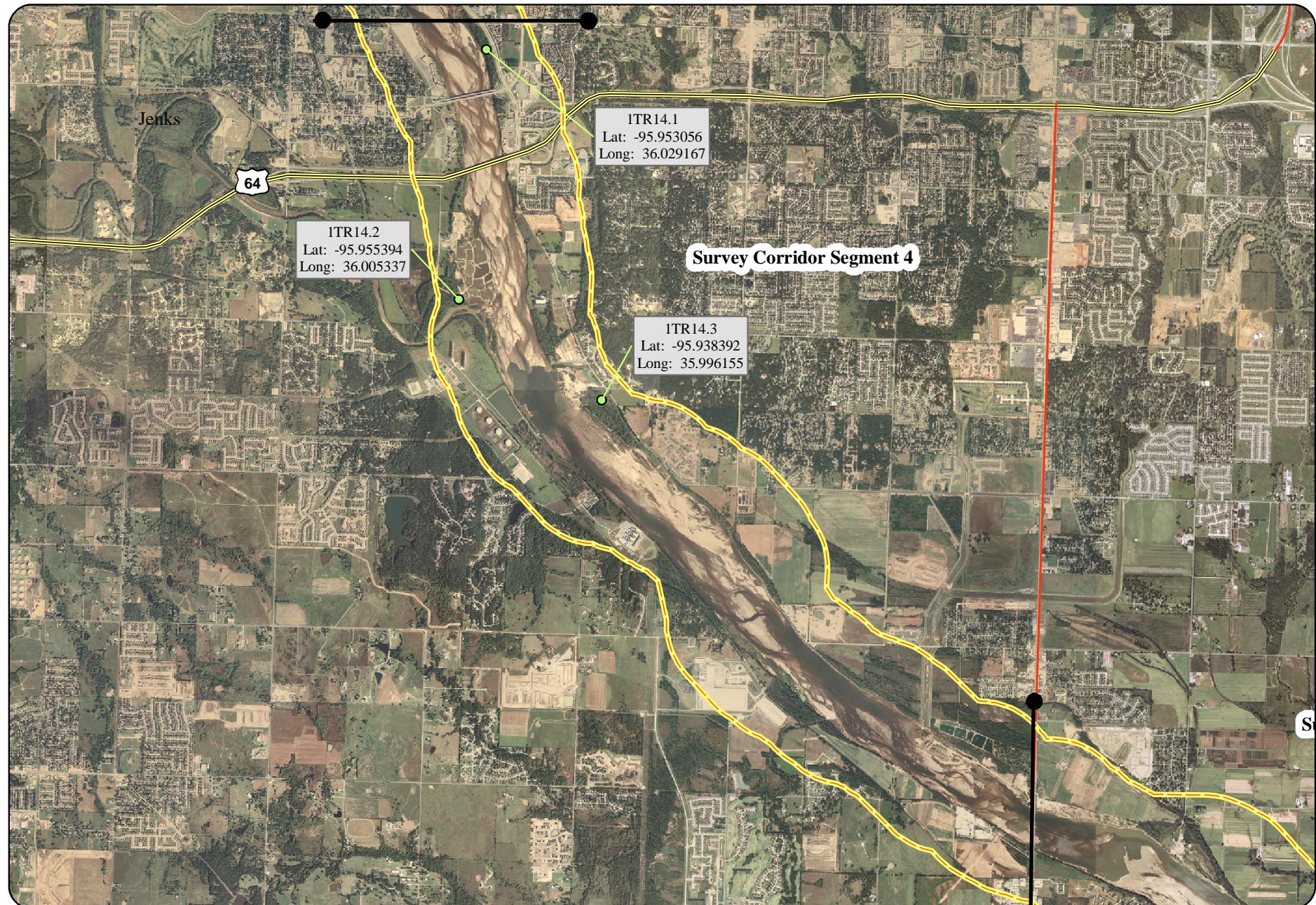
EAGLE ENVIRONMENTAL CONSULTING, Inc.		Legend □ Survey Area ● Task 1 Sites			Task 1 Flora & Fauna Survey Corridor Segment 1 <hr/> Arkansas River Corridor Baseline Inventory U.S Army Corps of Engineers Arkansas River, Tulsa County, OK		
0 0.25 0.5 0.75 1 Miles							
Sheet 01							



EAGLE ENVIRONMENTAL CONSULTING, Inc.		Legend □ Survey Area ● Task 1 Sites			Task 1 Flora & Fauna Survey Corridor Segment 2 <hr/> Arkansas River Corridor Baseline Inventory U.S Army Corps of Engineers Arkansas River, Tulsa County, OK		
0 0.25 0.5 0.75 1 Miles							
Sheet 02							



EAGLE ENVIRONMENTAL CONSULTING, Inc.		Legend □ Survey Area ● Task 1 Sites			Task 1 Flora & Fauna Survey Corridor Segment 3 <hr/> Arkansas River Corridor Baseline Inventory U.S. Army Corps of Engineers Arkansas River, Tulsa County, OK		
0 0.25 0.5 0.75 1 Miles							
Sheet 03							



EAGLE ENVIRONMENTAL CONSULTING, Inc.		Legend □ Survey Area ● Task 1 Sites	 	Task 1 Flora & Fauna Survey Corridor Segment 4 <hr/> Arkansas River Corridor Baseline Inventory U.S Army Corps of Engineers Arkansas River, Tulsa County, OK		
0 0.25 0.5 0.75 1 Miles						
Sheet 04						



EAGLE ENVIRONMENTAL CONSULTING, Inc.	Legend Survey Area • Task 1 Sites	Oklahoma Vicinity Map	Task 1 Flora & Fauna Survey Corridor Segment 5
0 0.25 0.5 0.75 1 Miles	Sheet 05	N	Arkansas River Corridor Baseline Inventory U.S Army Corps of Engineers Arkansas River, Tulsa County, OK

Appendix D

Selected Photographs of Sampling Stations



1TR11.1 – North View



1TR11.1 – West View



1TR11.1 – East View



1TR11.2 – East View



1TR11.1 – South View



1TR11.2 – North View



1TR11.2 – South View



1TR11.3 - North View



1TR11.2 – West View



1TR11.3 – South View



1TR11.3 - East View



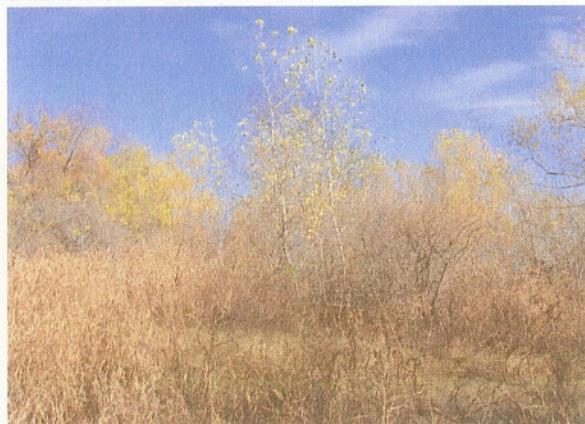
1TR11.3 – West View



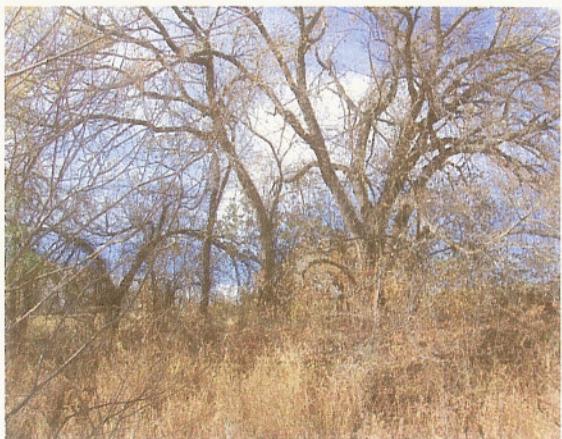
1TR11.3 – East View



1TR11.3 – North View



1TR12.1 – East View



1TR12.1 – North View



1TR12.1 – South View



1TR12.1 – West View



1TR12.2 – East View



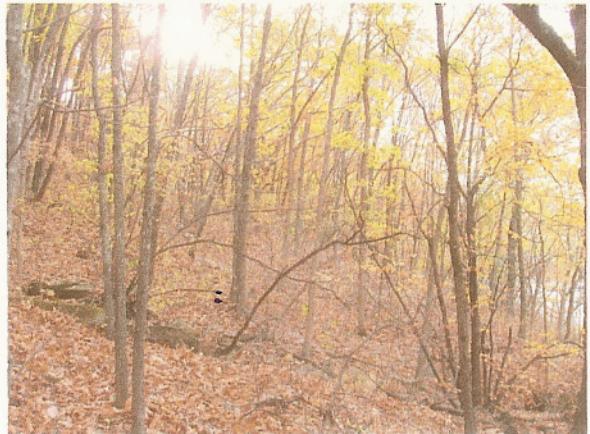
1TR12.2 – North View



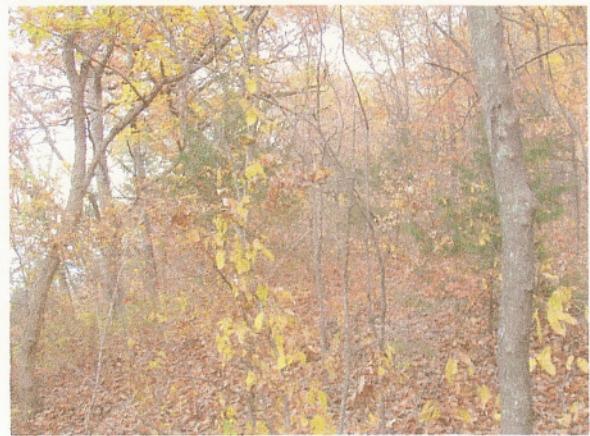
1TR12.2 – South View



1TR12.2 – West View



1TR12.3 – West View



1TR12.3 – East View



1TR12.3 – South View



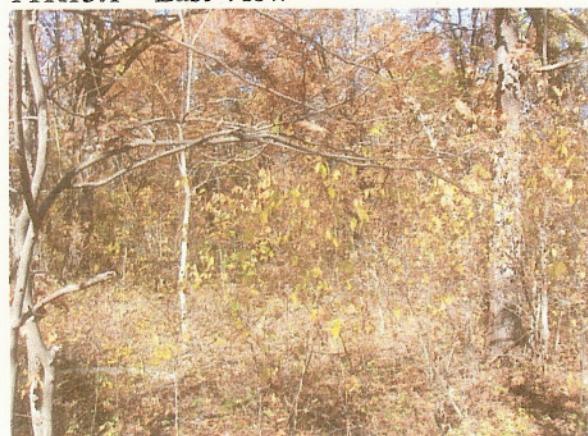
1TR13.1 – South View



1TR13.1 – East View



1TR13.1 – North View



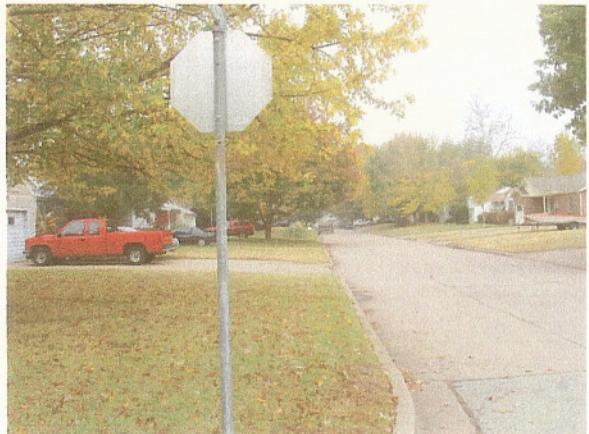
1TR13.1 – West View



1TR13.2 – East View



1TR13.2 – South View



1TR13.3 – North View



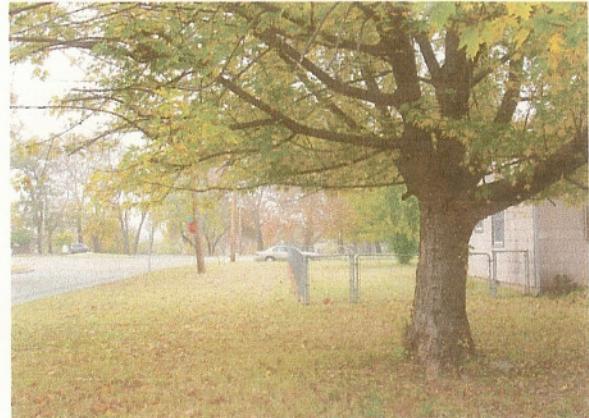
1TR13.2 – West View



1TR13.3 – South View



1TR13.3 – East View



1TR13.3 – West View



1TR14.1 – South View



1TR14.1 – West View



1TR14.1 – East View



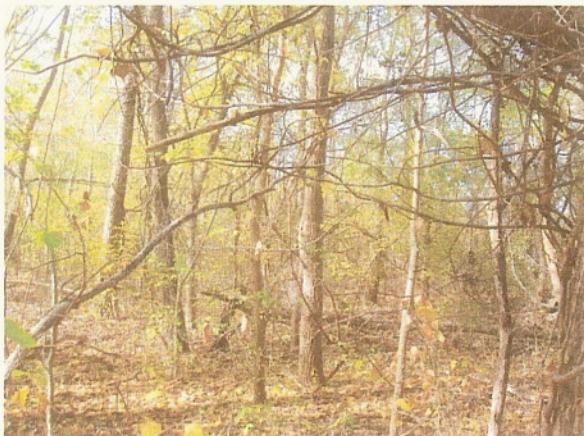
1TR14.2 – East View



1TR14.1 – North View



1TR14.2 – South View



1TR14.2 – North View



1TR14.3 – South View



1TR14.2 – West View



1TR14.3 – East View



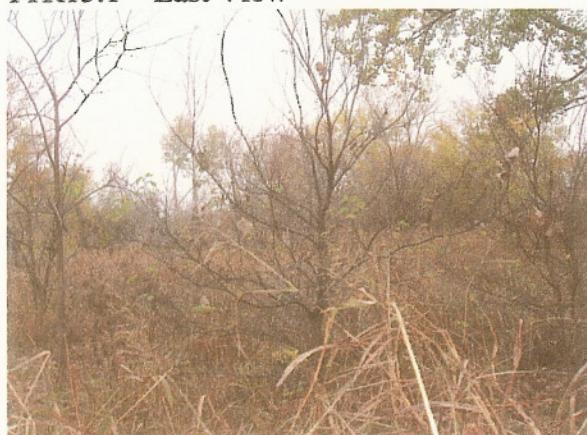
1TR14.3 – West View



1TR14.3 – North View



1TR15.1 – East View



1TR15.1 – North View



1TR15.1 – West View



1TR15.1 – South View



1TR15.2 – East View



1TR15.2 – North View



1TR15.2 – South View



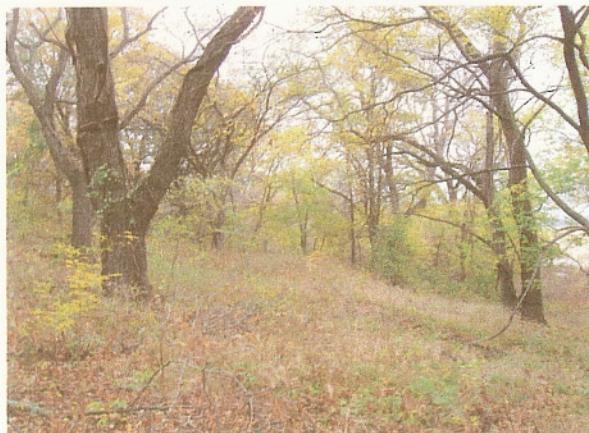
1TR15.3 – North View



1TR15.2 – West View



1TR15.3 – South View



1TR15.3 – East View



1TR15.3 – West View

Appendix E

Fall 2006 Sampling List of Observed Species

Arkansas River Corridor Study		Survey Period 1: October 1 through December 31, 2006																
Observed Fauna Species		Survey廊道 Segment 1			Survey廊道 Segment 2			Survey廊道 Segment 3			Survey廊道 Segment 4			Survey廊道 Segment 5			Total Species List	
Species Common Name	Scientific Name	Sample Site #			Sample Site #			Sample Site #			Sample Site #			Sample Site #				
		1TR1.1	1TR1.2	1TR1.3	1TR2.1	1TR2.2	1TR2.3	1TR3.1	1TR3.2	1TR3.3	1TR4.1	1TR4.2	1TR4.3	1TR5.1	1TR5.2	1TR5.3		
Mammals																		
American Beaver	<i>Castor canadensis</i>							1						1	1		1	
Black Rat	<i>Rattus rattus</i>	1	1	1	1	1		1	1		1	1				1	1	
Bobcat	<i>Lynx rufus</i>	1		1			1								1	1	1	
Common Gray Fox	<i>Urocyon cinereoargenteus</i>							1		1							1	
Common Raccoon	<i>Procyon lotor</i>	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	
Cotton rat	<i>Sigmodon hispidus</i>				1	1	1		1				1	1	1	1	1	
Cottontail rabbit	<i>Sylvilagus floridanus</i>	1			1	1		1	1		1		1	1	1	1	1	
Coyote	<i>Canis latrans</i>	1	1	1	1	1		1	1			1	1	1	1	1	1	
Eastern Gray Squirrel	<i>Sciurus virginiana</i>				1			1	1						1	1	1	
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>															1	1	
Eastern Woodrat	<i>Neotoma floridana</i>	1						1	1				1		1	1	1	
Fox Squirrel	<i>Sciurus niger</i>	1	1	1	1	1	1	1	1	1		1	1		1	1	1	
Gopher	<i>Cratogeomys castanops</i>					1	1			1			1	1	1		1	
Mink	<i>Mustela vison</i>							1		1							1	
Muskrat	<i>Ondatra zibethicus</i>									1							1	
Nine-banded Armadillo	<i>Dasypus novemcinctus</i>					1		1			1	1	1	1			1	
Striped skunk	<i>Mephitis mephitis</i>							1					1		1	1	1	
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>																1	
Virginia Opossum	<i>Didelphis virginiana</i>							1		1			1	1		1	1	
White-tailed Deer	<i>Odocoileus virginianus</i>							1		1			1	1	1	1	1	
Woodchuck	<i>Marmota monax</i>	1															1	
Birds																		
American Coot	<i>Fulica americana</i>										1						1	
American Crow	<i>Corvus brachyrhynchos</i>	1	1	1	1	1		1	1		1	1			1	1	1	
American Goldfinch	<i>Carduelis tristis</i>				1				1				1				1	
American Kestrel	<i>Falco sparverius</i>													1			1	
American Robin	<i>Turdus migratorius</i>	1													1	1	1	
Bald Eagle	<i>Haliaeetus leucocephalus</i>					1	1				1			1			1	
Belted Kingfisher	<i>Ceryle alcyon</i>										1	1		1			1	
Blue Jay	<i>Cyanocitta cristata</i>		1		1	1		1	1	1	1	1	1	1	1	1	1	
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>																1	
Brown Creeper	<i>Certhia americana</i>											1					1	
Brown Thrasher	<i>Toxostoma rufum</i>	1										1					1	
Brown-headed Cowbird	<i>Molothrus ater</i>										1						1	
Carolina Chickadee	<i>Poecile carolinensis</i>	1	1	1		1		1	1		1	1	1	1	1	1	1	
Carolina Wren	<i>Thryothorus ludovicianus</i>	1		1	1	1		1	1	1		1		1	1	1	1	
Dark-eyed Junco	<i>Junco hyemalis</i>		1			1						1	1	1			1	
Double-crested Cormorant	<i>Phalacrocorax auritus</i>													1			1	
Downy Woodpecker	<i>Picoides pubescens</i>		1					1			1	1			1	1	1	
Eastern Bluebird	<i>Sialia sialis</i>		1								1				1	1	1	
Eastern Meadowlark	<i>Sturnella magna</i>										1						1	
Eurasian Wigeon	<i>Anas penelope</i>										1						1	
European Starling	<i>Sturnus vulgaris</i>										1		1	1	1	1	1	
Field Sparrow	<i>Spizella pusilla</i>						1								1	1	1	

Fox Sparrow	<i>Passerella iliaca</i>	1											1	1	1
Franklin's Gull	<i>Larus pipixcan</i>	1	1	1											1
Gadwall	<i>Anas strepera</i>	1									1				1
Golden-crowned Kinglet	<i>Regulus satrapa</i>		1				1			1	1		1	1	1
Great Blue Heron	<i>Ardea herodias</i>	1	1		1					1	1		1		1
Greater Scaup	<i>Aythya marila</i>									1					1
Green-winged Teal	<i>Anas crecca</i>									1					1
Hairy Woodpecker	<i>Picoides villosus</i>				1		1			1			1		1
Harris's Sparrow	<i>Zonotrichia querula</i>	1													1
Hermit Thrush	<i>Catharus guttatus</i>											1			1
Herring Gull	<i>Larus argentatus</i>	1									1				1
Horned Grebe	<i>Podiceps auritus</i>									1					1
Horned Lark	<i>Eremophila alpestris</i>												1		1
House Finch	<i>Carpodacus mexicanus</i>			1											1
House Sparrow	<i>Passer domesticus</i>								1						1
Killdeer	<i>Charadrius vociferus</i>		1		1			1		1	1		1		1
Lincoln's Sparrow	<i>Melospiza lincolni</i>				1								1	1	1
Mallard	<i>Anas platyrhynchos</i>	1								1			1		1
Marsh Wren	<i>Cistothorus palustris</i>														1
Mourning Dove	<i>Zenaida macroura</i>	1			1	1		1		1			1		1
Northern Cardinal	<i>Cardinalis cardinalis</i>	1			1	1		1		1	1	1	1	1	1
Northern Flicker	<i>Colaptes auratus</i>		1			1			1				1	1	1
Northern Harrier	<i>Circus cyaneus</i>								1						1
Northern Mockingbird	<i>Mimus polyglottos</i>							1	1			1			1
Northern Pintail	<i>Anas acuta</i>								1						1
Orange-crowned Warbler	<i>Vermivora celata</i>												1	1	1
Pied-billed Grebe	<i>Podilymbus podiceps</i>									1					1
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	1	1							1		1	1	1	1
Red-shouldered Hawk	<i>Buteo lineatus</i>						1		1						1
Red-tailed Hawk	<i>Buteo jamaicensis</i>		1			1				1		1	1	1	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>					1				1		1	1		1
Ring-billed Gull	<i>Larus delawarensis</i>	1	1	1		1		1	1	1	1	1			1
Ring-necked Duck	<i>Aythya collaris</i>								1						1
Rock Pigeon	<i>Columba livia</i>								1	1					1
Ruby-crowned Kinglet	<i>Regulus calendula</i>			1						1	1	1	1	1	1
Ruddy Duck	<i>Oxyura jamaicensis</i>								1						1
Savannah Sparrow	<i>Passerculus sandwichensis</i>											1			1
Sharp-shinned Hawk	<i>Accipiter striatus</i>				1								1	1	1
Song Sparrow	<i>Melospiza melodia</i>	1			1	1				1	1		1	1	1
Spotted Towhee	<i>Pipilo maculatus</i>	1													1
Swamp Sparrow	<i>Melospiza georgiana</i>	1								1		1	1	1	1
Tufted Titmouse	<i>Baeolophus bicolor</i>						1			1	1	1	1	1	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>		1												1
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>					1									1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1	1				1	1	1	1	1	1
Wilson's Snipe	<i>Gallinago delicata</i>									1					1
Wood Thrush	<i>Hylocichla mustelina</i>							1	1						1
Yellow-rumped Warbler	<i>Dendroica coronata</i>	1						1	1		1	1			1
Reptiles and Amphibians															
American toad	<i>Bufo americanus</i>			1							1			1	1
Black rat snake	<i>Elaphe obsoleta</i>												1		1

Bullfrog	<i>Rana catesbeiana</i>												1			1	
Common slider	<i>Pseudemys scripta</i>					1		1								1	
Eastern box turtle	<i>Terrapene carolina</i>	1	1			1	1						1	1	1		
Eastern spadefoot frog	<i>Scaphiopus holbrookii</i>		1										1		1		
Fence lizard	<i>Sceloporus undulatus</i>						1									1	
Green snake	<i>Opheodrys aestivus</i>							1								1	
Grey treefrog	<i>Hyla chrysoscelis</i>	1	1	1	1	1						1	1	1	1	1	
Ground skink	<i>Scincella lateralis</i>	1					1									1	
Northern banded water snake	<i>Nerodia sipedon</i>						1									1	
Red eared slider	<i>Trachemys scripta</i>					1	1		1							1	
Smooth softshell turtle	<i>Trionyx muticus</i>					1	1									1	
Snapping turtle	<i>Chelydra serpentina</i>					1										1	
Southern leopard frog	<i>Rana utricularia</i>					1	1									1	
Western hog nosed snake	<i>Heterodon nasicus</i>							1						1		1	
Total Observed Species by Sample Site		29	24	14	19	35	18	26	22	8	46	30	25	36	40	39	107

Arkansas River Corridor Study Observed Plant Species		Survey Period 1: October 1 through December 31, 2006															Total Species List								
		Survey廊道 Segment 1			Survey廊道 Segment 2			Survey廊道 Segment 3			Survey廊道 Segment 4			Survey廊道 Segment 5											
		Sample Site #		ITR1.1	ITR1.2	ITR1.3	Sample Site #		ITR2.1	ITR2.2	ITR2.3	Sample Site #		ITR3.1	ITR3.2	ITR3.3	Sample Site #		ITR4.1	ITR4.2	ITR4.3	Sample Site #		ITR5.1	ITR5.2
Herbaceous Species																									
Annual ragweed	<i>Ambrosia artemisiifolia</i>							1																1	
Bee balm	<i>Monarda citriodora</i>																	1						1	
Beggars lice	<i>Desmodium</i>					1														1				1	
Beggars ticks	<i>Bidens</i>																			1				1	
Bermuda grass	<i>Cynodon dactylon</i>						1					1	1											1	
Boneset	<i>Eupatorium perfoliatum</i>						1													1				1	
Brome	<i>Bromus japonicus</i>																				1			1	
Camphorweed	<i>Heterotheca subaxillaris</i>							1																1	
Canada rye	<i>Elymus canadensis</i>																							1	
Cheat grass	<i>Bromus tectorum</i>																	1	1				1		
Chufa	<i>Cyperus esculentus</i>							1	1									1	1				1		
Clover	<i>Trifolium repens</i>											1												1	
Common chickweed	<i>Stellaria media</i>	1																						1	
Common sunflower	<i>Helianthus annuus</i>							1																1	
Golden crown beard	<i>Verbesina encelioides</i>		1					1	1			1					1	1		1	1		1		
Curlycup gumweed	<i>Grindelia squarosa</i>								1															1	
Dandelion	<i>Taraxacum officinale</i>											1												1	
Dayflower	<i>Commelinia communis</i>											1							1	1			1		
Evening primrose	<i>Oenothera biennis</i>							1																1	
False artichoke	<i>Helianopsis helianthoides</i>											1												1	
Fleabane	<i>Erigeron annuus</i>																1							1	
Foxtail	<i>Setaria gracilis</i>								1									1	1				1		
Franks sedge	<i>Carex frankii</i>																		1					1	
Frog fruit	<i>Phyla lanceolata</i>								1															1	
Goldenrod	<i>Solidago rigida</i>		1	1	1	1			1	1						1	1	1		1			1		
Great ragweed	<i>Ambrosia trifida</i>								1	1								1	1				1		
Henbit deadnettle	<i>Lamium amplexicaule</i>	1								1													1		
Horse mint	<i>Monarda punctata</i>								1										1				1		
Horse nettle	<i>Solanum carolinense</i>																	1	1				1		
Indian grass	<i>Sorghastrum nutans</i>								1	1													1		
Indian sea oats	<i>Chasmanthium latifolium</i>	1	1	1					1										1				1		
Johnson grass	<i>Sorghum halapense</i>								1	1							1	1					1		
Mares tail	<i>Conyza canadensis</i>								1	1							1						1		
Mist flower	<i>Eupatorium coelestinum</i>											1							1				1		
Pepper grass	<i>Lepidium virginicum</i>								1														1		
Poke weed	<i>Phytolacca americana</i>	1															1		1	1			1		
Purple top	<i>Tridens flavus</i>											1							1					1	
Sand bur	<i>Cenchrus longispinus</i>								1	1														1	
Sand dropseed	<i>Sporobolus cryptandrus</i>								1	1														1	
Scribner's panicum	<i>Panicum oliganthes</i>								1	1														1	
Spanish needles	<i>Bidens bipinnata</i>	1										1							1	1			1		
Sprangletop	<i>Leptochloa dubia</i>								1															1	
Spurge	<i>Euphorbia sp.</i>											1		1										1	
Switch grass	<i>Panicum virgatum</i>									1								1						1	
Thistle	<i>Cirsium sp.</i>								1			1						1					1		
Three seeded mercury	<i>Acalypha rhomboidea</i>											1												1	
Vetch	<i>Vicia sp.</i>								1									1						1	

Violet	<i>Viola sp.</i>																1		1
Virginia wild rye	<i>Elymus virginicus</i>	1			1	1													1
Western ragweed	<i>Ambrosia psilostachya</i>				1			1											1
White heath aster	<i>Aster ericoides</i>					1	1		1						1	1	1	1	
Wild geranium	<i>Geranium sp.</i>					1								1	1		1	1	
Wild pionsettia	<i>Euphorbia heterophylla</i>																	1	1
Windmill grass	<i>Chloris truncata</i>					1													1
Wood sorrell	<i>Oxalis regnelli</i>						1			1									1
Woodland sunflower	<i>Helianthus strumosus</i>			1															1
Yellow nut sedge	<i>Carex annexans</i>	1	1		1				1		1	1			1	1	1		1
Woody Species																			
American beautyberry	<i>Callicarpa americana</i>																1		1
American elm	<i>Ulmus americana</i>	1	1			1			1			1	1		1	1	1	1	
American plum	<i>Prunus americana</i>																1		1
Bittersweet vine	<i>Celastrus scandens</i>			1															1
Black cherry	<i>Prunus serotina</i>	1			1			1						1			1	1	1
Black hickory	<i>Carya texana</i>		1	1	1			1											1
Black locust	<i>Robinia pseudoacacia</i>														1				1
Black oak	<i>Quercus velutina</i>			1													1	1	1
Black walnut	<i>Juglans nigra</i>								1								1	1	1
Black willow	<i>Salix nigra</i>					1	1		1			1	1	1					1
Blackjack oak	<i>Quercus marilandica</i>							1											1
Box elder	<i>Acer negundo</i>						1	1					1	1	1	1	1	1	
Bur oak	<i>Quercus macrocarpa</i>																	1	1
Catalpa	<i>Catalpa speciosa</i>											1							1
Chinkapin oak	<i>Quercus muehlenbergii</i>	1	1	1	1				1				1				1	1	
Chittamwood	<i>Bumelia lanuginosa</i>	1		1	1	1			1				1	1	1	1	1	1	
Climbing milkweed	<i>Matelea gonocarpa</i>					1										1			1
Common privet	<i>Ligustrum vulgare</i>								1										1
Coralberry	<i>Symporicarpus orbiculatus</i>	1	1	1	1				1	1				1			1	1	1
Crape myrtle	<i>Lagerstroemia indica</i>											1							1
Cucumber vine	<i>Cucumis sativus</i>								1										1
Deciduous holly	<i>Ilex decidua</i>				1				1				1						1
Dewberry	<i>Rubus trivialis</i>		1		1				1	1		1					1	1	1
Eastern cottonwood	<i>Populus deltoides</i>	1					1	1				1	1	1	1	1			1
Eastern poison ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1	1		1		1	1	1	1	1	1	1	1	
Eastern red bud	<i>Cercis canadensis</i>		1	1		1					1		1	1					1
Eastern red cedar	<i>Juniperus virginiana</i>	1	1	1	1				1				1					1	1
Elderberry	<i>Sambucus nigra</i>				1				1	1								1	1
False indigo	<i>Amorpha fruticosa</i>														1				1
Field bindweed	<i>Convolvulus arvensis</i>						1		1					1					1
Green ash	<i>Fraxinus pennsylvanica</i>	1										1	1		1				1
Greenbrier	<i>Smilax bona-nox</i>	1		1	1	1											1	1	
Greenbrier	<i>Smilax rotundifolia</i>		1							1		1				1	1	1	
Hackberry	<i>Celtis occidentalis</i>	1								1		1		1					1
Hawthorn	<i>Crataegus viridis</i>																1		1
Honey locust	<i>Gleditsia triacanthos</i>													1		1	1		1
Japanese honeysuckle	<i>Lonicera japonica</i>										1	1						1	
Kentucky coffee tree	<i>Gymnocladus dioica</i>	1																	1
Milkweed vine	<i>Matelea reticulata</i>													1					1
Mimosa	<i>Albizia julibrissin</i>													1					1
Moonseed	<i>Coccinia carolinus</i>	1										1	1	1					1
Morning glory	<i>Ipomea hederacea</i>								1							1		1	
Northern red oak	<i>Quercus rubra</i>		1	1	1				1								1	1	
Passion flower	<i>Passiflora incarnata</i>																1		1
Pecan	<i>Carya illinoensis</i>							1			1						1		1

Persimmon	<i>Diospyros virginiana</i>													1		1	
Pignut hickory	<i>Carya tomentosa</i>			1												1	
Pipevine	<i>Aristolochia macrophylla</i>	1						1		1					1	1	
Pokeweed	<i>Phytolacca americana</i>								1					1		1	
Post oak	<i>Quercus stellata</i>		1	1				1								1	
Red mulberry	<i>Morus rubra</i>	1				1	1				1		1	1	1	1	
Rose	<i>Rosa multiflora</i>													1		1	
Roughleaf dogwood	<i>Cornus drumondii</i>		1	1	1			1	1		1	1	1	1		1	
Rusty blackhaw	<i>Viburnum rufidulum</i>		1	1	1								1	1	1	1	
Salt cedar	<i>Tamarix ramosissima</i>					1										1	
Scotch pine	<i>Pinus sylvestris</i>									1						1	
September elm	<i>Ulmus rubra</i>					1	1	1			1					1	
Service berry	<i>Amelanchier arborea</i>		1		1			1								1	
Shumard oak	<i>Quercus shumardii</i>	1							1	1						1	
Silver maple	<i>Acer saccharinum</i>						1			1						1	
Skunkbush sumac	<i>Rhus trilobata</i>			1												1	
Slippery elm	<i>Ulmus rubra</i>		1	1	1			1	1				1	1	1	1	
Smoketree	<i>Cotinus obovatus</i>		1		1			1								1	
Smooth sumac	<i>Rhus glabra</i>		1			1			1				1			1	
Snail seed	<i>Cocculus carolinus</i>			1				1	1		1	1	1	1	1	1	
Strawberry bush	<i>Euonymus americanus</i>									1						1	
Sugarberry	<i>Celtis laevigata</i>	1				1			1			1		1	1	1	
Sycamore	<i>Platanus occidentalis</i>						1							1		1	
Trumpet vine	<i>Campsis radicans</i>		1								1	1	1	1	1	1	
Virginia creeper	<i>Parthenocissus quinquefolia</i>								1					1	1	1	
Western Soapberry	<i>Sapindus drumondii</i>	1							1		1	1	1		1	1	
White ash	<i>Fraxinus americana</i>		1	1	1				1							1	
White mulberry	<i>Morus alba</i>					1					1			1		1	
Wild bean	<i>Apios americana</i>							1								1	
Wild grape	<i>Vitis aestivalis</i>			1	1				1	1		1	1	1	1	1	
Winged elm	<i>Ulmus alata</i>								1				1		1	1	
Winged sumac	<i>Rhus copallina</i>												1			1	
Yucca	<i>Yucca yucca</i>											1				1	
Total Observed Species by Sample Site		24	23	24	23	38	30	18	43	11	23	29	33	21	48	43	135

Appendix F

Winter 2007 Sampling List of Observed Species

Arkansas River Corridor Study Observed Plant Species		Survey Period 2: January 15, 2007 through April 15, 2007														Total	
		Survey Corridor Segment 1			Survey Corridor Segment 2			Survey Corridor Segment 3			Survey Corridor Segment 4			Survey Corridor Segment 5			
Common Name	Scientific Name	Sample Site #			Sample Site #			Sample Site #			Sample Site #			Sample Site #			Species List
		ITR1.1	ITR1.2	ITR1.3	ITR2.1	ITR2.2	ITR2.3	ITR3.1	ITR3.2	ITR3.3	ITR4.1	ITR4.2	ITR4.3	ITR5.1	ITR5.2	ITR5.3	
Herbaceous Species																	
Albicans white tinge sedge	<i>Carex albicans</i>			1			1										1
American Pokeweed	<i>Phytolacca americana</i>												1		1	1	1
Birdfoot Violet	<i>Viola pedata</i>	1	1	1												1	1
Canada Goldenrod	<i>Solidago canadensis</i>	1	1		1	1	1	1					1	1	1	1	1
Canadian blacksnake root	<i>Sanicula canadensis</i>												1				1
Carolina coralbead	<i>Cocculus carolinus</i>	1										1					1
Carolina Geranium	<i>Geranium carolinianum</i>					1							1	1	1	1	1
Common Elderberry	<i>Sambucus nigra canadensis</i>														1		1
Common Mullein	<i>Verbascum thapsus</i>													1			1
Common sunflower	<i>Helianthus annuus</i>		1														1
Common Yellow Oxalis	<i>Oxalis stricta</i>										1				1		1
Henbit deadnettle	<i>Lamium amplexicaule</i>	1				1			1	1		1	1	1	1	1	1
Indian Hemp	<i>Apocynum cannabinum</i>													1			1
Japanese Honeysuckle	<i>Lonicera japonica</i>								1			1		1			1
Johnson grass	<i>Sorghum halapense</i>					1								1			1
Prairie fleabane	<i>Sorghum halapense</i>								1								1
Soft Agrimony	<i>Agrimonia pubescens</i>		1														1
Stickywilly	<i>Galium aparine</i>	1	1		1	1	1		1		1	1	1	1	1	1	1
Virginia Pepperweed	<i>Lepidium virginicum</i>								1								1
Virginia Springbeauty	<i>Claytonia virginica</i>								1								1
Virginia Strawberry	<i>Fragaria virginiana</i>												1		1		1
Western Tansymustard	<i>Descurainia pinnata</i>				1	1								1			1
Winter Vetch	<i>Vicia villosa</i>													1	1	1	1
Womans Tobacco	<i>Antennaria plantaginifolia</i>		1	1		1							1				1
Yellow Fumewort	<i>Corydalis flavula</i>	1			1											1	1
Woody Species																	
American beautyberry	<i>Callicarpa americana</i>														1		1
American elm	<i>Ulmus americana</i>	1	1			1			1		1	1	1	1	1	1	1
American plum	<i>Prunus americana</i>													1			1
Bittersweet vine	<i>Celastrus scandens</i>			1													1
Black cherry	<i>Prunus serotina</i>	1			1			1				1			1	1	1
Black hickory	<i>Carya texana</i>		1	1	1			1									1
Black locust	<i>Robinia pseudoacacia</i>												1				1
Black oak	<i>Quercus velutina</i>			1											1	1	1
Black walnut	<i>Juglans nigra</i>								1						1	1	1
Black willow	<i>Salix nigra</i>					1	1				1	1	1				1
Blackjack oak	<i>Quercus marilandica</i>							1									1
Box elder	<i>Acer negundo</i>					1	1				1	1	1	1	1		1
Bur oak	<i>Quercus macrocarpa</i>															1	1
Catalpa	<i>Catalpa speciosa</i>									1							1
Chinkapin oak	<i>Quercus muehlenbergii</i>	1	1	1	1				1			1			1		1
Chittamwood	<i>Bumelia lanuginosa</i>	1		1	1	1			1			1	1		1	1	1
Climbing milkweed	<i>Matelea gonocarpa</i>					1								1			1
Common privet	<i>Ligustrum vulgare</i>								1								1
Coralberry	<i>Symporicarpos orbiculatus</i>		1	1	1			1	1			1			1	1	1
Crape myrtle	<i>Lagerstroemia indica</i>										1						1

Cucumber vine	<i>Cucumis sativus</i>							1									1
Deciduous holly	<i>Ilex decidua</i>			1				1			1						1
Dewberry	<i>Rubus trivialis</i>		1		1			1	1		1				1	1	1
Eastern cottonwood	<i>Populus deltoides</i>	1				1	1				1	1	1	1			1
Eastern poison ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1	1		1		1	1	1	1	1	1	1
Eastern red bud	<i>Cercis canadensis</i>		1	1		1				1		1	1				1
Eastern red cedar	<i>Juniperus virginiana</i>	1	1	1	1				1			1				1	1
Elderberry	<i>Sambucus nigra</i>				1			1	1							1	1
False indigo	<i>Amorpha fruticosa</i>														1		1
Field bindweed	<i>Convolvulus arvensis</i>						1		1				1				1
Green ash	<i>Fraxinus pennsylvanica</i>	1									1	1		1			1
Greenbrier	<i>Smilax bona-nox</i>	1		1	1	1										1	1
Greenbrier	<i>Smilax rotundifolia</i>		1						1		1				1	1	1
Hackberry	<i>Celtis occidentalis</i>	1							1		1		1				1
Hawthorn	<i>Crataegus viridis</i>														1		1
Honey locust	<i>Gleditsia triacanthos</i>												1	1	1	1	1
Japanese honeysuckle	<i>Lonicera japonica</i>										1	1				1	1
Kentucky coffee tree	<i>Gymnocladus dioica</i>	1															1
Milkweed vine	<i>Maclura reticulata</i>												1				1
Mimosa	<i>Albizia julibrissin</i>											1					1
Moonseed	<i>Cocculus carolinus</i>	1									1	1	1				1
Morning glory	<i>Ipomea hederacea</i>							1							1		1
Northern red oak	<i>Quercus rubra</i>	1	1	1				1								1	1
Passion flower	<i>Passiflora incarnata</i>														1		1
Pecan	<i>Carya illinoensis</i>				1				1	1		1			1		1
Persimmon	<i>Diospyros virginiana</i>														1		1
Pignut hickory	<i>Carya tomentosa</i>		1														1
Pipevine	<i>Aristolochia macrophylla</i>	1							1		1					1	1
Pokeweed	<i>Phytolacca americana</i>									1		1			1		1
Post oak	<i>Quercus stellata</i>		1	1				1									1
Red mulberry	<i>Morus rubra</i>	1				1	1					1		1	1	1	1
Rose	<i>Rosa multiflora</i>															1	1
Roughleaf dogwood	<i>Cornus drumondii</i>		1	1	1				1	1		1	1	1	1	1	1
Rusty blackhaw	<i>Viburnum rufidulum</i>		1	1	1										1	1	1
Salt cedar	<i>Tamarix ramossissima</i>					1											1
Scotch pine	<i>Pinus sylvestris</i>										1						1
September elm	<i>Ulmus rubra</i>					1	1	1				1					1
Service berry	<i>Amelanchier arborea</i>		1		1			1									1
Shumard oak	<i>Quercus shumardii</i>	1								1	1						1
Silver maple	<i>Acer saccharinum</i>						1				1						1
Skunkbush sumac	<i>Rhus trilobata</i>			1													1
Slippery elm	<i>Ulmus rubra</i>		1	1	1				1	1				1		1	1
Smoketree	<i>Cotinus obovatus</i>		1		1				1								1
Smooth sumac	<i>Rhus glabra</i>		1			1				1			1				1
Snail seed	<i>Cocculus carolinus</i>		1					1	1		1	1	1		1	1	1
Strawberry bush	<i>Euonymus americanus</i>										1						1
Sugarberry	<i>Celtis laevigata</i>	1				1			1			1			1	1	1
Sycamore	<i>Platanus occidentalis</i>						1								1		1
Trumpet vine	<i>Campsis radicans</i>		1									1	1	1	1	1	1
Virginia creeper	<i>Parthenocissus quinquefolia</i>								1						1	1	1
Western Soapberry	<i>Sapindus drumondii</i>	1							1		1	1	1			1	1
White ash	<i>Fraxinus americana</i>		1	1	1			1									1
White mulberry	<i>Morus alba</i>						1				1			1			1

Wild bean	<i>Apios americana</i>					1											1
Wild grape	<i>Vitis aestivalis</i>			1	1			1	1			1	1		1	1	1
Winged elm	<i>Ulmus alata</i>						1							1		1	1
Winged sumac	<i>Rhus copallina</i>												1				1
Yucca	<i>Yucca yucca</i>											1					1
Total Observed Species by Sample Site		23	24	25	22	23	13	19	33	11	22	29	28	21	36	37	103

Appendix G

Spring 2007 Sampling List of Observed Species

		Total Observed Species by Sample Site	25	17	22	19	20	19	18	13	6	20	17	16	20	20	21	71
Red winged blackbird	<i>Agelaius phoeniceus</i>	1													1		1	1
Red-bellied woodpecker	<i>Melanerpes carolinus</i>																	1
Rock Pigeon	<i>Columba livia</i>														1			
Ruby throated hummingbird	<i>Archilochus colubris</i>														1			
Scarlet Tanager	<i>Piranga olivacea</i>														1			
Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>														1			
Summer Tanager	<i>Piranga rubra</i>														1			
Tufted titmouse	<i>Baeolophus bicolor</i>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Reptiles and Amphibians																		
American toad	<i>Bufo americanus</i>																	1
Black rat snake	<i>Erythrolamprus obsoleta</i>																	1
Bullfrog	<i>Rana catesbeiana</i>																	1
Common slider	<i>Pseudemys scripta</i>																	1
Cottonmouth	<i>Agkistrodon piscivorus</i>		1															1
Eastern box turtle	<i>Terrapene carolina</i>																	1
Eastern spadefoot frog	<i>Scaphiopus holbrookii</i>																	1
Fence lizard	<i>Sceloporus undulatus</i>																	1
Green snake	<i>Ophicordylus aestivus</i>																	1
Grey treefrog	<i>Hyla chrysoscelis</i>																	1
Ground skink	<i>Scincella lateralis</i>	1													1			1
Northern banded water snake	<i>Nerodia sipedon</i>																	1
Ornate box turtle	<i>Terrapene ornata</i>																	1
Red eared slider	<i>Trachemys scripta</i>														1			1
Smooth softshell turtle	<i>Tritonia mutica</i>																	1
Snapping turtle	<i>Chelydra serpentina</i>														1			1
Southern leopard frog	<i>Rana utricularia</i>																	1
Three toed box turtle	<i>Terrapene carolina</i>	1													1			1
Western hog nosed snake	<i>Heterodon nasicus</i>															1		1

Arkansas River Corridor Study Observed Plant Species		Survey Period 3: April 15, 2007 through June 15, 2007														Total Species List		
		Survey Corridor Segment 1			Survey Corridor Segment 2			Survey Corridor Segment 3			Survey Corridor Segment 4			Survey Corridor Segment 5				
Common Name	Scientific Name	Sample Site #			Sample Site #			Sample Site #			Sample Site #			Sample Site #				
		ITR1.1	ITR1.2	ITR1.3	ITR2.1	ITR2.2	ITR2.3	ITR3.1	ITR3.2	ITR3.3	ITR4.1	ITR4.2	ITR4.3	ITR5.1	ITR5.2	ITR5.3		
Herbaceous Species																		
American Pokeweed	<i>Phytolacca americana</i>	1								1						1	1	1
Annual ragweed	<i>Ambrosia artemisiifolia</i>	1			1	1				1		1	1	1	1	1	1	1
Baldwin's Ragweed	<i>Vernonia baldwinii</i>	1																1
Bermuda grass	<i>Cynodon dactylon</i>										1							1
Bluegrass	<i>Poa annua</i>					1	1			1					1			1
Canada Goldenrod	<i>Solidago canadensis</i>			1	1	1	1	1		1				1	1		1	
Carolina Horesnettle	<i>Solanum carolinense</i>	1																1
Chinese lespepedeza	<i>Lespedeza cuneata</i>													1				1
Common chickweed	<i>Stellaria media</i>	1																1
Common dandelion	<i>Taraxacum officinale</i>										1							1
Common pepperweed	<i>Lepidium densiflorum</i>	1				1								1				1
Common sunflower	<i>Helianthus annuus</i>	1																1
Creeping woodsorrelle	<i>Oxalis corniculata</i>									1								1
Eastern poison ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1				1		1	1	1				1
False hop sedge	<i>Carex lupuliformis</i>												1				1	1
Great ragweed	<i>Ambrosia trifida</i>	1				1	1			1		1	1	1	1	1	1	1
Henbit deadnettle	<i>Lamium amplexicaule</i>										1							1
Japanese Honeysuckle	<i>Lonicera japonica</i>		1	1		1		1	1		1							1
Jerusalem artichoke	<i>Helianthus tuberosus</i>									1								1
Johnson grass	<i>Sorghum halapense</i>	1				1	1							1	1	1		1
Mares tail	<i>Conyzza canadensis</i>		1	1	1	1			1				1		1	1	1	1
Pale dock	<i>Rumex altissimus</i>																	1
Prairie fleabane	<i>Sorghum halapense</i>												1					1
Purple crownvetch	<i>Coronilla varia</i>					1	1							1	1	1	1	1
Sawtooth blackberry	<i>Rubus argutus</i>																1	1
Stickywilly	<i>Galium aparine</i>	1				1				1		1				1	1	1
Stinging nettle	<i>Urtica dioica</i>																	1
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	1	1	1		1	1	1	1		1	1	1	1	1			1
White sweet clover	<i>Melilotus alba</i>						1						1					1
Womans Tobacco	<i>Antennaria plantaginifolia</i>	1	1															1
Woody Species																		
American beautyberry	<i>Callicarpa americana</i>														1			1
American elm	<i>Ulmus americana</i>	1	1			1			1		1	1		1	1	1	1	1
American plum	<i>Prunus americana</i>														1			1
Bittersweet vine	<i>Celastrus scandens</i>				1													1
Black cherry	<i>Prunus serotina</i>	1				1			1				1		1	1	1	1
Black hickory	<i>Carya texana</i>		1	1	1			1										1
Black locust	<i>Robinia pseudoacacia</i>												1					1
Black oak	<i>Quercus velutina</i>				1										1	1	1	1
Black walnut	<i>Juglans nigra</i>								1						1	1	1	1
Black willow	<i>Salix nigra</i>						1	1				1	1	1				1
Blackjack oak	<i>Quercus marilandica</i>								1									1
Box elder	<i>Acer negundo</i>						1	1				1	1	1	1	1		1
Bur oak	<i>Quercus macrocarpa</i>												1					1
Catalpa	<i>Catalpa speciosa</i>										1							1
Chinkapin oak	<i>Quercus muehlenbergii</i>	1	1	1	1				1				1			1	1	1

Chittamwood	<i>Bumelia lanuginosa</i>	1		1	1	1			1			1	1		1	1	1
Climbing milkweed	<i>Matelea gonocarpa</i>					1								1			1
Common privet	<i>Ligustrum vulgare</i>							1									1
Coralberry	<i>Symporicarpus orbiculatus</i>	1	1	1				1	1			1			1	1	1
Crape myrtle	<i>Lagerstroemia indica</i>									1							1
Cucumber vine	<i>Cucumis sativus</i>								1								1
Deciduous holly	<i>Ilex decidua</i>			1				1			1						1
Dewberry	<i>Rubus trivialis</i>		1		1			1	1		1				1	1	1
Eastern cottonwood	<i>Populus deltoides</i>	1				1	1				1	1	1	1			1
Eastern poison ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1	1		1		1	1	1	1	1	1	1
Eastern red bud	<i>Cercis canadensis</i>		1	1		1				1		1	1				1
Eastern red cedar	<i>Juniperus virginiana</i>	1	1	1	1				1			1				1	1
Elderberry	<i>Sambucus nigra</i>				1			1	1							1	1
False indigo	<i>Amorpha fruticosa</i>													1			1
Field bindweed	<i>Convolvulus arvensis</i>						1		1				1				1
Green ash	<i>Fraxinus pennsylvanica</i>	1									1	1		1			1
Greenbrier	<i>Smilax bona-nox</i>	1		1	1	1										1	1
Greenbrier	<i>Smilax rotundifolia</i>		1						1		1				1	1	1
Hackberry	<i>Celtis occidentalis</i>	1							1		1		1				1
Hawthorn	<i>Crataegus viridis</i>															1	1
Honey locust	<i>Gleditsia triacanthos</i>												1		1	1	1
Japanese honeysuckle	<i>Lonicera japonica</i>										1	1				1	1
Kentucky coffee tree	<i>Gymnocladus dioicia</i>	1															1
Milkweed vine	<i>Matelea reticulata</i>												1				1
Mimosa	<i>Albizia julibrissin</i>											1					1
Moonseed	<i>Coccinia carolinus</i>	1									1	1	1				1
Morning glory	<i>Ipomea hederacea</i>							1							1		1
Northern red oak	<i>Quercus rubra</i>	1	1	1				1								1	1
Passion flower	<i>Passiflora incarnata</i>													1			1
Pecan	<i>Carya illinoensis</i>					1			1	1		1			1		1
Persimmon	<i>Diospyros virginiana</i>														1		1
Pignut hickory	<i>Carya tomentosa</i>		1														1
Pipevine	<i>Aristolochia macrophylla</i>	1							1		1					1	1
Pokeweed	<i>Phytolacca americana</i>									1			1		1	1	1
Post oak	<i>Quercus stellata</i>		1	1				1									1
Red mulberry	<i>Morus rubra</i>	1				1	1					1		1	1	1	1
Rose	<i>Rosa multiflora</i>															1	1
Roughleaf dogwood	<i>Cornus drumondii</i>	1	1	1				1	1		1	1	1	1	1		1
Rusty blackhaw	<i>Viburnum rufidulum</i>	1	1	1											1	1	1
Salt cedar	<i>Tamarix ramosissima</i>					1											1
Scotch pine	<i>Pinus sylvestris</i>										1						1
September elm	<i>Ulmus rubra</i>					1	1	1			1						1
Service berry	<i>Amelanchier arborea</i>	1			1			1									1
Shumard oak	<i>Quercus shumardii</i>	1							1	1							1
Silver maple	<i>Acer saccharinum</i>						1			1							1
Skunkbush sumac	<i>Rhus trilobata</i>			1													1
Slippery elm	<i>Ulmus rubra</i>	1	1	1				1	1				1		1	1	1
Smoketree	<i>Cotinus obovatus</i>	1		1				1									1
Smooth sumac	<i>Rhus glabra</i>	1			1				1				1				1
Snail seed	<i>Coccinia carolinus</i>			1				1	1		1	1	1		1	1	1
Strawberry bush	<i>Euonymus americanus</i>									1							1
Sugarberry	<i>Celtis laevigata</i>	1				1			1			1			1	1	1
Sycamore	<i>Platanus occidentalis</i>							1							1		1

Trumpet vine	<i>Campsis radicans</i>		1							1	1	1	1	1	1	1	
Virginia creeper	<i>Parthenocissus quinquefolia</i>							1					1	1	1	1	
Western Soapberry	<i>Sapindus drumondii</i>	1						1		1	1	1		1	1	1	
White ash	<i>Fraxinus americana</i>		1	1	1			1								1	
White mulberry	<i>Morus alba</i>				1					1		1				1	
Wild bean	<i>Apios americana</i>					1										1	
Wild grape	<i>Vitis aestivalis</i>			1	1			1	1		1	1	1	1	1	1	
Winged elm	<i>Ulmus alata</i>						1					1			1	1	
Winged sumac	<i>Rhus copallina</i>											1				1	
Yucca	<i>Yucca yucca</i>											1				1	
Total Observed Species by Sample Site		30	25	26	28	27	12	19	39	12	26	29	32	20	37	38	108

Appendix H

Summer 2007 Sampling List of Observed Species

Arkansas River Corridor Study Observed Fauna Species		Survey Period 4: June 15 through August 15, 2007															Total Species List	
		Survey Corridor Segment 1			Survey Corridor Segment 2			Survey Corridor Segment 3			Survey Corridor Segment 4			Survey Corridor Segment 5				
Common Name	Scientific Name	Sample Site #			Sample Site #			Sample Site #			Sample Site #			Sample Site #				
		ITR1.1	ITR1.2	ITR1.3	ITR2.1	ITR2.2	ITR2.3	ITR3.1	ITR3.2	ITR3.3	ITR4.1	ITR4.2	ITR4.3	ITR5.1	ITR5.2	ITR5.3		
Mammals																		
Virginia Opossum	<i>Didelphis virginiana</i>	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	
Woodchuck	<i>Mamota monax</i>																	
Nine-banded Armadillo	<i>Dasyppus novemcinctus</i>		1	1	1		1					1	1	1	1	1	1	
Eastern Gray Squirrel	<i>Sciurus virginiana</i>			1			1					1					1	
Fox Squirrel	<i>Sciurus niger</i>		1				1	1	1		1		1	1	1	1	1	
American Beaver	<i>Castor canadensis</i>											1		1			1	
Coyote	<i>Canis latrans</i>				1									1	1	1	1	
Common Raccoon	<i>Procyon lotor</i>	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	
Cotton-tail Rabbit	<i>Sylvilagus audubonii</i>	1				1	1					1					1	
Striped skunk	<i>Mephitis mephitis</i>				1	1						1		1	1	1	1	
White-tailed Deer	<i>Odocoileus virginiana</i>	1		1	1		1	1				1	1	1	1	1	1	
Birds																		
American crow	<i>Corvus brachyrhynchos</i>		1	1	1	1	1	1	1					1	1	1	1	
American Goldfinch	<i>Carduelis tristis</i>	1				1								1			1	
American Kestrel	<i>Falco sparverius</i>				1								1				1	
American robin	<i>Turdus migratorius</i>				1	1			1	1	1						1	
American White Pelican	<i>Pelecanus erythrorhynchos</i>	1		1													1	
Bald eagle	<i>Haliaeetus leucocephalus</i>					1			1								1	
Bank swallow	<i>Riparia riparia</i>																	
Barn swallow	<i>Hirundo rustica</i>																	
Bell's vireo	<i>Vireo bellii</i>							1										
Black vulture	<i>Coragyps atratus</i>	1			1	1	1	1	1				1	1			1	
Blue gray gnatcatcher	<i>Polioptila caerulea</i>		1				1								1	1		
Blue jay	<i>Cyanocitta cristata</i>	1	1		1	1	1	1							1	1		
Blue winged teal	<i>Anas discors</i>											1					1	
Brown creeper	<i>Certhia americana</i>																	
Brown headed cowbird	<i>Molothrus ater</i>	1														1	1	
Canada goose	<i>Branta canadensis</i>																	
Carolina chickadee	<i>Poecile carolinensis</i>	1	1	1	1			1	1				1	1	1	1	1	
Carolina wren	<i>Thryothorus ludovicianus</i>			1			1	1						1		1		
Cedar waxwing	<i>Bombycilla cedrorum</i>																	
Chipping sparrow	<i>Spizella passerina</i>	1		1		1			1				1	1	1	1	1	
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	1										1					1	
Common grackle	<i>Quiscalus quiscula</i>								1	1							1	
Double crested cormorant	<i>Phalacrocorax auritus</i>																	
Downy woodpecker	<i>Picoides pubescens</i>													1			1	
Eastern bluebird	<i>Sialia sialis</i>				1							1		1			1	
Eastern kingbird	<i>Tyrannus tyrannus</i>				1	1			1			1		1			1	
Eastern phoebe	<i>Sayornis phoebe</i>				1	1					1	1		1	1		1	
Eastern meadowlark	<i>Sturnella magna</i>											1				1	1	
European starling	<i>Sturnus vulgaris</i>	1			1			1	1	1	1		1	1			1	
Field sparrow	<i>Spizella pusilla</i>	1									1						1	
Fish crow	<i>Corvus ossifragus</i>	1	1		1	1			1				1				1	
Gadwall	<i>Anas strepera</i>																	
Great blue heron	<i>Ardea herodias</i>	1	1	1	1		1						1	1			1	

Great Egret	<i>Ardea alba</i>	1	1								1					1			
Green heron	<i>Butorides virescens</i>					1										1			
Hermit thrush	<i>Catharus guttatus</i>																		
House sparrow	<i>Passer domesticus</i>								1							1			
Indigo bunting	<i>Passerina cyanea</i>	1				1					1		1	1		1			
Killdeer	<i>Charadrius vociferus</i>										1	1				1			
Little blue heron	<i>Egretta caerulea</i>																		
Mallard	<i>Anas platyrhynchos</i>																		
Mourning dove	<i>Zenaida macroura</i>	1				1				1	1	1	1			1			
Northern cardinal	<i>Cardinalis cardinalis</i>	1	1	1	1	1	1	1	1	1	1	1	1	1		1			
Northern flicker	<i>Colaptes auratus</i>																		
Northern mockingbird	<i>Mimus polyglottos</i>	1				1				1	1	1				1			
Northern rough winged swallow	<i>Stelgidopteryx serripennis</i>					1	1							1		1			
Painted bunting	<i>Passerina ciris</i>									1						1			
Pileated woodpecker	<i>Dryocopus pileatus</i>						1									1			
Purple martin	<i>Progne subis</i>								1							1			
Red shouldered hawk	<i>Buteo lineatus</i>							1						1		1			
Red tailed hawk	<i>Buteo jamaicensis</i>			1								1		1	1	1			
Red winged blackbird	<i>Agelaius phoeniceus</i>	1				1	1						1			1			
Red-bellied woodpecker	<i>Melanerpes carolinus</i>																		
Ring billed gull	<i>Larus delawarensis</i>	1														1			
Rock Pigeon	<i>Columba livia</i>						1									1			
Ruby-throated hummingbird	<i>Archilochus colubris</i>												1	1		1			
Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	1				1					1	1	1			1			
Snowy egret	<i>Egretta thula</i>															1			
Summer tanager	<i>Piranga rubra</i>						1									1			
Tree swallow	<i>Tachycineta bicolor</i>																		
Tufted Titmouse	<i>Baeolophus bicolor</i>		1					1	1				1		1	1			
Turkey vulture	<i>Cathartes aura</i>													1	1	1			
Warbling vireo	<i>Vireo gilvus</i>					1										1			
White throated sparrow	<i>Zonotrichia albicollis</i>																		
White-crowned sparrow	<i>Zonotrichia leucophrys</i>																		
White-breasted nuthatch	<i>Sitta carolinensis</i>												1			1			
Yellow throated warbler	<i>Dendroica dominica</i>																		
Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>																		
Yellow billed cuckoo	<i>Coccyzus americanus</i>			1												1			
Reptiles and Amphibians																			
Ground Skink	<i>Scincella lateralis</i>							1								1			
Green snake	<i>Opheodrus aestivus</i>									1						1			
Red eared slider	<i>Trachemys scripta</i>							1	1		1					1			
Total Observed Species by Sample Site				23	13	16	20	23	18	15	18	7	12	23	16	22	17	18	64

Johnson grass	<i>Sorghum halapense</i>				1	1					1	1			1
Mares tail	<i>Conyza canadensis</i>	1			1	1			1		1	1	1	1	1
Mist flower	<i>Eupatorium coelestinum</i>														
Pale dock	<i>Rumex altissimus</i>														
Pepper grass	<i>Lepidium virginicum</i>														
Pepper weed	<i>Lepidium L.</i>					1						1		1	1
Poison Ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1	1			1	1	1	1	1	1
Poke weed	<i>Phytolacca americana</i>														
Prairie fleabane	<i>Sorghum halapense</i>														
Purple crownvetch	<i>Coronilla varia</i>														
Purple top	<i>Tridens flavus</i>														
Sand bur	<i>Cenchrus longispinus</i>														
Sand dropseed	<i>Sporobolus cryptandrus</i>														
Sawtooth blackberry	<i>Rubus argutus</i>														
Scribner's panicum	<i>Panicum oliganthes</i>														
Soft Agrimony	<i>Agrimonia pubescens</i>														
Spanish needles	<i>Bidens bipinnata</i>														
Sprangletop	<i>Leptochloa dubia</i>														
Spurge	<i>Euphorbia sp.</i>														
Stickywilly	<i>Gallium aparine</i>														
Stinging nettle	<i>Urtica dioica</i>														
Switch grass	<i>Panicum virgatum</i>														
Thistle	<i>Cirsium sp.</i>														
Three seeded mercury	<i>Acalypha rhomboidea</i>														
Trumpet Vine	<i>Campsis radicans</i>														
Vetch	<i>Vicia sp.</i>														
Violet	<i>Viola sp.</i>														
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	1	1	1				1	1	1				1	1
Virginia Pepperweed	<i>Lepidium virginicum</i>														
Virginia Springbeauty	<i>Claytonia virginica</i>														
Virginia Strawberry	<i>Fragaria virginiana</i>														
Virginia wild rye	<i>Elymus virginicus</i>														
Western ragweed	<i>Ambrosia psilostachya</i>														
Western Tansymustard	<i>Descurainia pinnata</i>														
White heath aster	<i>Aster ericoides</i>						1					1			
White sweet clover	<i>Melilotus alba</i>														1
Wild geranium	<i>Geranium sp.</i>														
Wild pionsetta	<i>Euphorbia heterophylla</i>														
Winter Vetch	<i>Vicia villosa</i>														
Windmill grass	<i>Chloris truncata</i>														
Wood sorrell	<i>Oxalis regnellii</i>														
Woman's Tobacco	<i>Antennaria plantaginifolia</i>														
Woodland sunflower	<i>Helianthus strumosus</i>														
Yellow Fumewort	<i>Corydalis flavula</i>														
Yellow nut sedge	<i>Carex annexans</i>														
Woody Species															
American beautyberry	<i>Callicarpa americana</i>											1		1	1
American elm	<i>Ulmus americana</i>	1	1			1			1		1	1	1	1	1
American plum	<i>Prunus americana</i>											1			1
Bittersweet vine	<i>Celastrus scandens</i>			1											1
Black cherry	<i>Prunus serotina</i>	1			1			1			1		1	1	1
Black hickory	<i>Carya texana</i>		1	1	1			1							1
Black locust	<i>Robinia pseudoacacia</i>										1				1
Black oak	<i>Quercus velutina</i>			1								1	1	1	1
Black walnut	<i>Juglans nigra</i>						1						1	1	1
Black willow	<i>Salix nigra</i>					1	1			1	1	1			1
Blackjack oak	<i>Quercus marilandica</i>							1							1
Box elder	<i>Acer negundo</i>				1	1				1	1	1	1	1	1
Bur oak	<i>Quercus macrocarpa</i>												1		1
Catalpa	<i>Catalpa speciosa</i>									1					1
Chinkapin oak	<i>Quercus muehlenbergii</i>	1	1	1	1			1			1			1	1
Chittamwood	<i>Bumelia lanuginosa</i>	1		1	1	1		1			1	1	1	1	1
Climbing milkweed	<i>Matelea gonocarpa</i>						1					1			1

Common privet	<i>Ligustrum vulgare</i>							1									1	1	1
Coralberry	<i>Symporicarpus orbiculatus</i>		1	1	1			1	1			1				1	1	1	
Crape myrtle	<i>Lagerstroemia indica</i>									1								1	
Cucumber vine	<i>Cucumis sativus</i>								1									1	
Deciduous holly	<i>Ilex decidua</i>		1					1	1	1								1	
Dewberry	<i>Rubus trivialis</i>		1		1			1	1	1						1	1	1	
Eastern cottonwood	<i>Populus deltoides</i>	1							1	1	1	1	1					1	
Eastern poison ivy	<i>Toxicodendron radicans</i>	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	
Eastern red bud	<i>Cercis canadensis</i>		1	1	1	1				1	1	1	1					1	
Eastern red cedar	<i>Juniperus virginiana</i>	1	1	1	1				1		1						1	1	
Elderberry	<i>Sambucus nigra</i>				1			1	1								1	1	
False indigo	<i>Amorpha fruticosa</i>															1		1	
Field bindweed	<i>Convolvulus arvensis</i>						1		1					1				1	
Green ash	<i>Fraxinus pennsylvanica</i>	1									1	1		1				1	1
Greenbrier	<i>Smilax bona-nox</i>	1		1	1	1											1	1	1
Greenbrier	<i>Smilax rotundifolia</i>		1						1		1						1	1	1
Hackberry	<i>Celtis occidentalis</i>	1							1		1		1					1	
Hawthorn	<i>Crataegus viridis</i>															1		1	
Honey locust	<i>Gleditsia triacanthos</i>															1	1	1	
Japanese honeysuckle	<i>Lonicera japonica</i>										1	1					1		1
Kentucky coffee tree	<i>Gymnocladus dioica</i>	1																1	
Milkweed vine	<i>Matelea reticulata</i>															1		1	
Mimosa	<i>Albizia julibrissin</i>											1						1	
Monseed	<i>Coccus carolinus</i>	1									1	1	1					1	
Morning glory	<i>Ipomea hederacea</i>							1								1		1	
Northern red oak	<i>Quercus rubra</i>		1	1	1			1									1	1	
Passion flower	<i>Passiflora incarnata</i>															1		1	
Pecan	<i>Carya illinoensis</i>					1			1	1		1				1		1	
Persimmon	<i>Diospyros virginiana</i>															1		1	
Pignut hickory	<i>Carya tomentosa</i>		1															1	
Pipevine	<i>Aristolochia macrophylla</i>	1							1		1					1		1	
Pokeweed	<i>Phytolacca americana</i>									1			1				1	1	
Post oak	<i>Quercus stellata</i>		1	1				1										1	
Red mulberry	<i>Morus rubra</i>	1				1	1					1		1	1	1	1	1	
Rose	<i>Rosa multiflora</i>																1	1	
Roughleaf dogwood	<i>Cornus drumondii</i>	1	1	1				1	1		1	1	1	1	1			1	
Rusty blackhawk	<i>Viburnum rufidulum</i>	1	1	1													1	1	
Salt cedar	<i>Tamarix ramossissima</i>						1											1	
Scotch pine	<i>Pinus sylvestris</i>											1						1	
September elm	<i>Ulmus rubra</i>						1	1	1			1						1	
Service berry	<i>Amelanchier arborea</i>		1		1				1									1	
Shumard oak	<i>Quercus shumardii</i>	1								1	1							1	
Silver maple	<i>Acer saccharinum</i>							1			1							1	
Skunkbush sumac	<i>Rhus trilobata</i>		1															1	
Slippery elm	<i>Ulmus rubra</i>	1	1	1					1	1				1		1	1	1	
Smoketree	<i>Cotinus obovatus</i>	1		1					1									1	
Smooth sumac	<i>Rhus glabra</i>	1			1					1				1				1	
Snail seed	<i>Coccus carolinus</i>		1						1	1		1	1	1		1	1	1	
Strawberry bush	<i>Euonymus americanus</i>										1							1	
Sugarberry	<i>Celtis laevigata</i>	1				1				1			1			1	1	1	
Sycamore	<i>Platanus occidentalis</i>							1								1		1	
Trumpet vine	<i>Campsis radicans</i>		1										1	1	1	1	1	1	
Virginia creeper	<i>Parthenocissus quinquefolia</i>									1						1	1	1	
Western Soapberry	<i>Sapindus drumondii</i>	1							1		1	1	1				1	1	
White ash	<i>Fraxinus americana</i>		1	1	1				1									1	
White mulberry	<i>Morus alba</i>					1					1				1			1	
Wild bean	<i>Apis americana</i>							1										1	
Wild grape	<i>Vitis aestivalis</i>		1	1					1	1		1	1		1	1	1	1	
Winged elm	<i>Ulmus alata</i>								1					1			1	1	
Winged sumac	<i>Rhus copallina</i>												1					1	
Yucca	<i>Yucca yucca</i>												1					1	

Total Observed Species by Sample Site 23 23 24 24 22 15 20 34 11 21 27 26 19 32 40 95

Appendix I

American Burying Beetle Survey Report

AMERICAN BURYING BEETLE SURVEY

**Arkansas River Corridor Project
Keystone Dam to the Wagoner County Line
Tulsa, Tulsa County, Oklahoma**

Prepared for:
Cherokee CRC, LLC
916 West 23rd Street
Tulsa, Oklahoma 74107

Prepared by:

Eagle Environmental Consulting, Inc.
P.O. Box 335
Vinita, Oklahoma 74301
918-272-7656

August 2007

AMERICAN BURYING BEETLE SURVEY

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August 2007

A handwritten signature in black ink, appearing to read "Steven R. Votaw". The signature is fluid and cursive, with some variations in line thickness.

**Steven R. Votaw
President**

Table of Contents

I.	Introduction	1
II.	General Site Descriptions	1
III.	Sampling Methods	2
IV.	Survey Findings	2
V.	Conclusion	3
	References	4

Appendix A – General Location Map

Appendix B – Trap Line Location Maps

Appendix C - Survey Data Forms

AMERICAN BURYING BEETLE SURVEY

Arkansas River Corridor Project Keystone Dam to the Wagoner County Line Tulsa, Tulsa County, Oklahoma

I. Introduction

The subject survey effort was conducted to identify the presence or absence of American Burying Beetles (*Nicrophorus americanus*) (ABB) associated with the Arkansas River Development project near Tulsa, Tulsa County, Oklahoma. Trapping began July 30 and continued until August 1 during which four ABB's were captured. Five trap lines were deployed and maintained for 3 nights. The trap lines were located in Sections 4 of Township 20 North, Range 10 East, Section 7 of Township 19 North, Range 12 East, Sections 1 and 33 of Township 18 North, Range 13 East, and Section 13 of Township 17 North, Range 15 East, Tulsa County, Oklahoma. The general location map is provided at *Appendix A*.

The ABB has been a federally listed endangered species since 1989 and is also recognized as endangered at the State level. Based on the potential for impact to the ABB, surveys were performed in compliance with the Endangered Species Act of 1973 (16 U.S.C. 1539, et seq.) and the U.S. Fish and Wildlife Service Regulations (50 C.F.R. 17.22) under Endangered Species permit number TE043399-0.

II. General Site Description

The general habitat associated with trap line #1 is described predominantly as an old oxbow area associated with the Arkansas River. The trap line was set parallel with the Arkansas River approximately 1 mile east of Keystone Dam on the North side of the river. The dominant plant species consisted of hackberry (*Celtis occidentalis*), American elm (*Ulmus Americana*), cottonwood (*Populus deltoids*), Virginia creeper (*Parthenocissus quinquefolia*), and poison ivy (*Toxicodendron radicans*). The general habitat associated with trap line #2 consisted of sandy river bottom near the town of Sand Springs. Trap line #2 was set parallel with the river running west to east. The dominant plant species included black willow (*Salix nigra*), poison ivy, and Johnson grass (*Sorghum halepense*). Trap line #3 was placed in the eco region known as the cross-timbers region on Turkey Mountain. The trap line was set running south to north in a timbered area associated with a pond west of the Arkansas River.

Dominant plant species included post oak (*Quercus stellata*), black hickory (*Carya texana*), Virginia creeper, and poison ivy. Trap line #4 was set in association with the Anchor sand plant on Delaware Avenue. The trap line was set from North to South in an open pasture on the edge of a tree line. Dominant plant species included Johnson grass, goldenrod (*Solidago canadensis*), and black locust (*Robinia pseudoacacia*). Trap line #5 was positioned in a river bottom east of the river near the city of Bixby. The line was set in a small forested area adjacent to a large hay pasture. Dominant vegetation included Virginia creeper, great ragweed (*Ambrosia trifida*), Annual ragweed (*Ambrosia artemisiifolia*), poison ivy, American elm, and hackberry.

III. Sampling Methods

The ABB is large (1-1.5 inches) and has a shiny black appearance with four orange-red spots on the wing covers (elytra). A large red spot on the pronotum of the beetle is indicative of the species. The habitat requirements for this beetle are not fully known; however, the ABB is considered a habitat generalist and is known to occupy a diverse range of habitats. Habitats associated with the ABB include open grasslands, forests, as well as transitional areas. The beetle is a carrion feeder and utilizes small vertebrate carcasses for food and reproductive purposes.

Trap line placement was selected to ensure appropriate survey coverage of the anticipated area of disturbance. The ABB exploits virtually any possibilities where suitable forage and soil conditions may be found. The project area was sampled using five baited pit-fall trap lines. The trap line locations were obtained using a handheld GPS under NAD 83 coordinates which for trap line #1 were 36.14343 N and 096.24279 W, for trap line #2 36.13967 N and 096.07168 W, trap line #3 36.07019 N and 095.99300 W, trap line #4 35.99698 N and 095.93830 W and for trap line #5 coordinates were 35.95935 N and 095.77405 W. The trap lines are graphically depicted at *Appendix B*.

Trapping methods for the ABB were performed according to the *Survey Methods for the American Burying Beetle in Oklahoma and Arkansas*. Pitfall traps, baited with putrid chicken gizzards, were placed in a total of 8 traps that were spaced approximately 20 meters apart. According to the U.S. Fish and Wildlife Service a minimum of 3 successive trap-nights are required to establish a sampling effort.

IV. Survey Findings

Atmospheric conditions during the ABB survey were good with normal temperatures and wind velocities ranging from calm to moderate (0 to 20 mph).

Nighttime temperatures were recorded in the lower 70's (°F) while daytime highs reached the lower 90's (°F). The trap lines were deployed near the proposed areas of development to ensure adequate coverage. Surveying for the ABB was complete after three nights of trapping. Several species of beetles (*Coleoptera*), crickets (*Gryllidae*), arachnids, isopods, and various other insects and arthropods were collected. Members of the *Nicrophorus* genus were found including *Nicrophorus orbicollis* and *Nicrophorus americanus*. Four American Burying Beetles were collected. The field survey data forms and survey summary sheet are found at ***Appendix C***.

V. ***Conclusion***

The subject survey was performed in an effort to identify the presence of American Burying Beetles within the survey corridor in which four ABB's were captured. The collection of the ABB as well as several individuals of the *Nicrophorus* genus along with multiple other insects attracted to carrion indicated that trapping efforts and techniques were adequate and functional. Meteorological conditions during the survey were favorable for ABB activity.

References

Creighton, J.C., M.V. Lomolino, and G.D. Schnell, Oklahoma Biological Survey, University of Oklahoma. Survey methods for the American Burying Beetle, *Nicrophorus americanus*, in Oklahoma and Arkansas. May 1993.

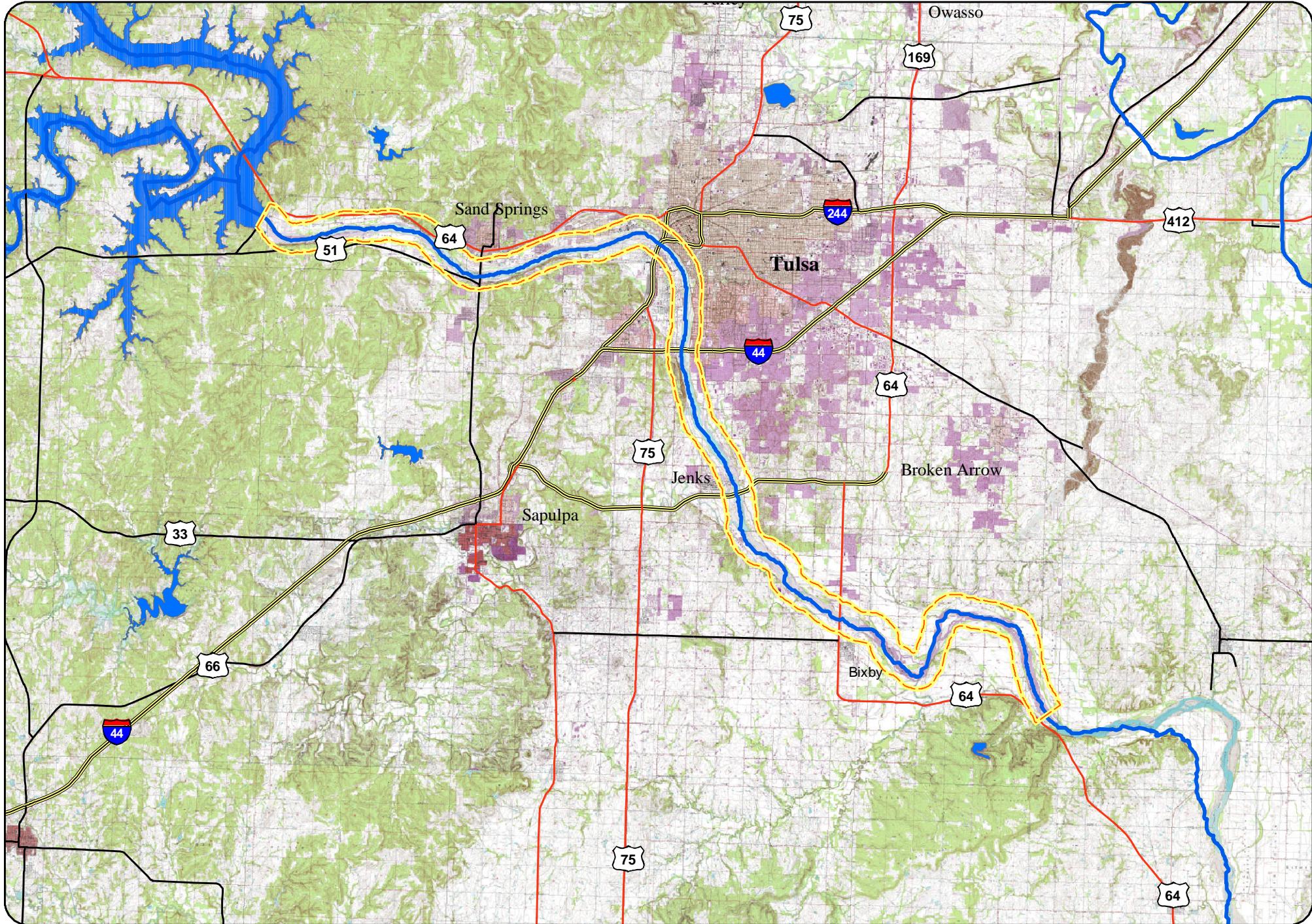
Oklahoma Cooperative Extension Service, Oklahoma State University, Oklahoma Department of Conservation, U.S. Environmental Protection Agency, Oklahoma Department of Agriculture Plant Industries Division, Oklahoma Natural Heritage Inventory Program, U.S. Fish and Wildlife Service. Endangered and Threatened Species of Oklahoma. April 1993.

USDA. Tulsa County Soil Survey

USGS. 7.5-Minute Topographic Map

Appendix A

General Location Map



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 1.25 2.5 5 Miles

Sheet 07

Legend

	Survey Area		Interstate
	Lakes		US Hwy
	Rivers		State Hwy

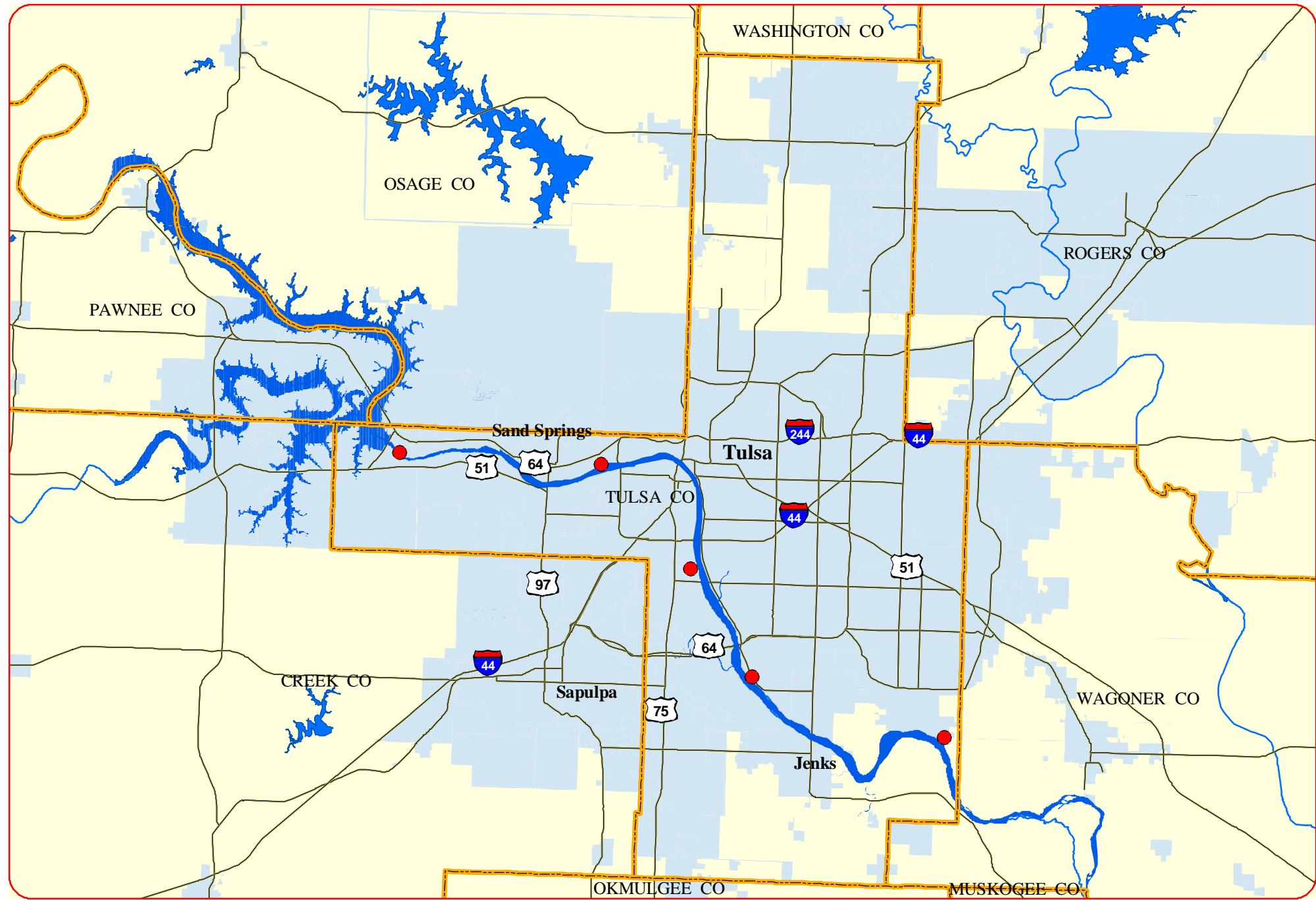


Oklahoma Vicinity Map

Location Map
Arkansas River Corridor Baseline Inventory
Arkansas River, Tulsa County, OK

Appendix B

Trap Line Location Maps



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 2.5 5 10 Miles
Scale 1 in = 6 mi

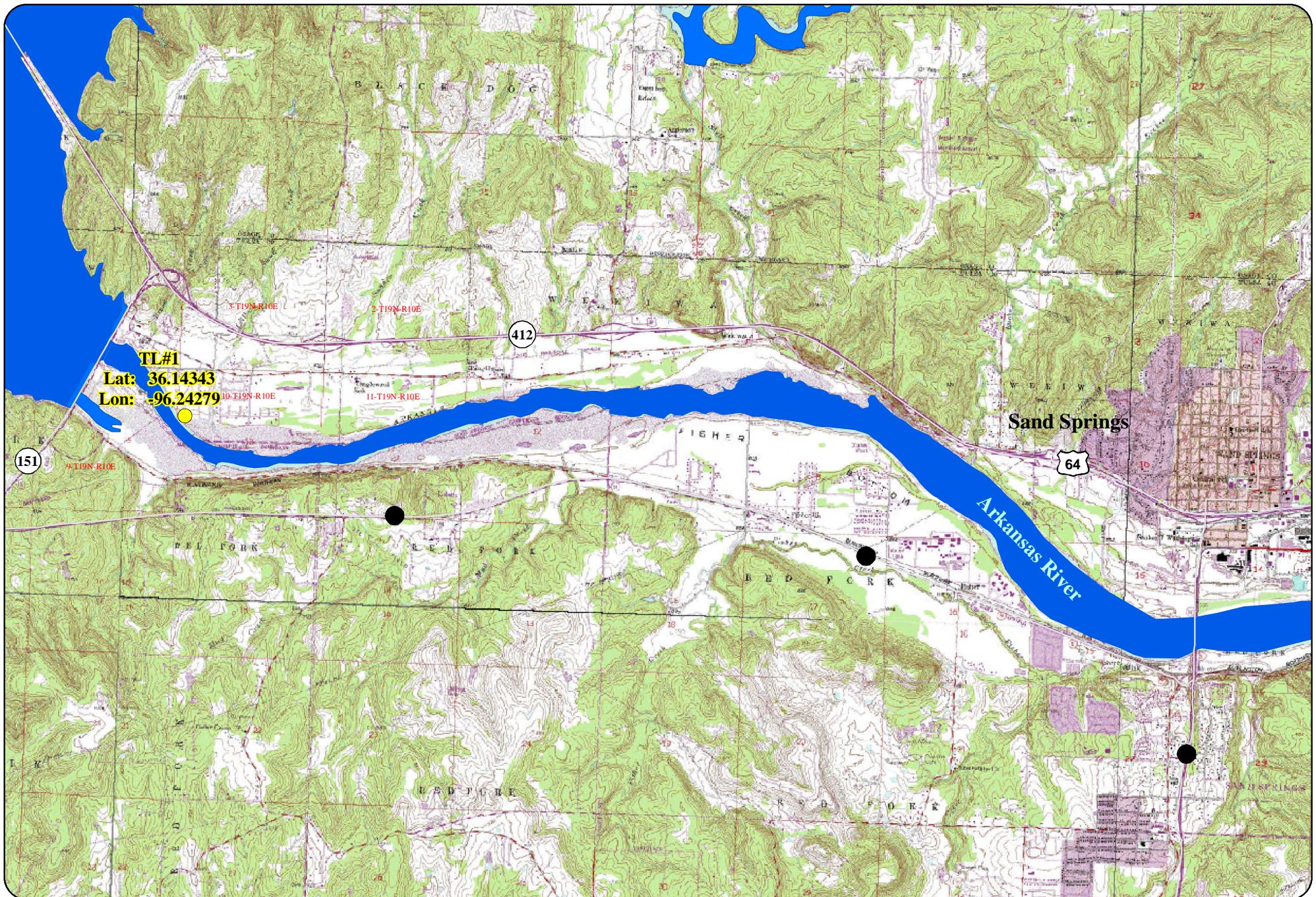
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- ABBTrap Lines
- Highways
- County Rivers
- Populated Areas



Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 1,250 2,500 5,000 7,500 Feet

Sheet 1

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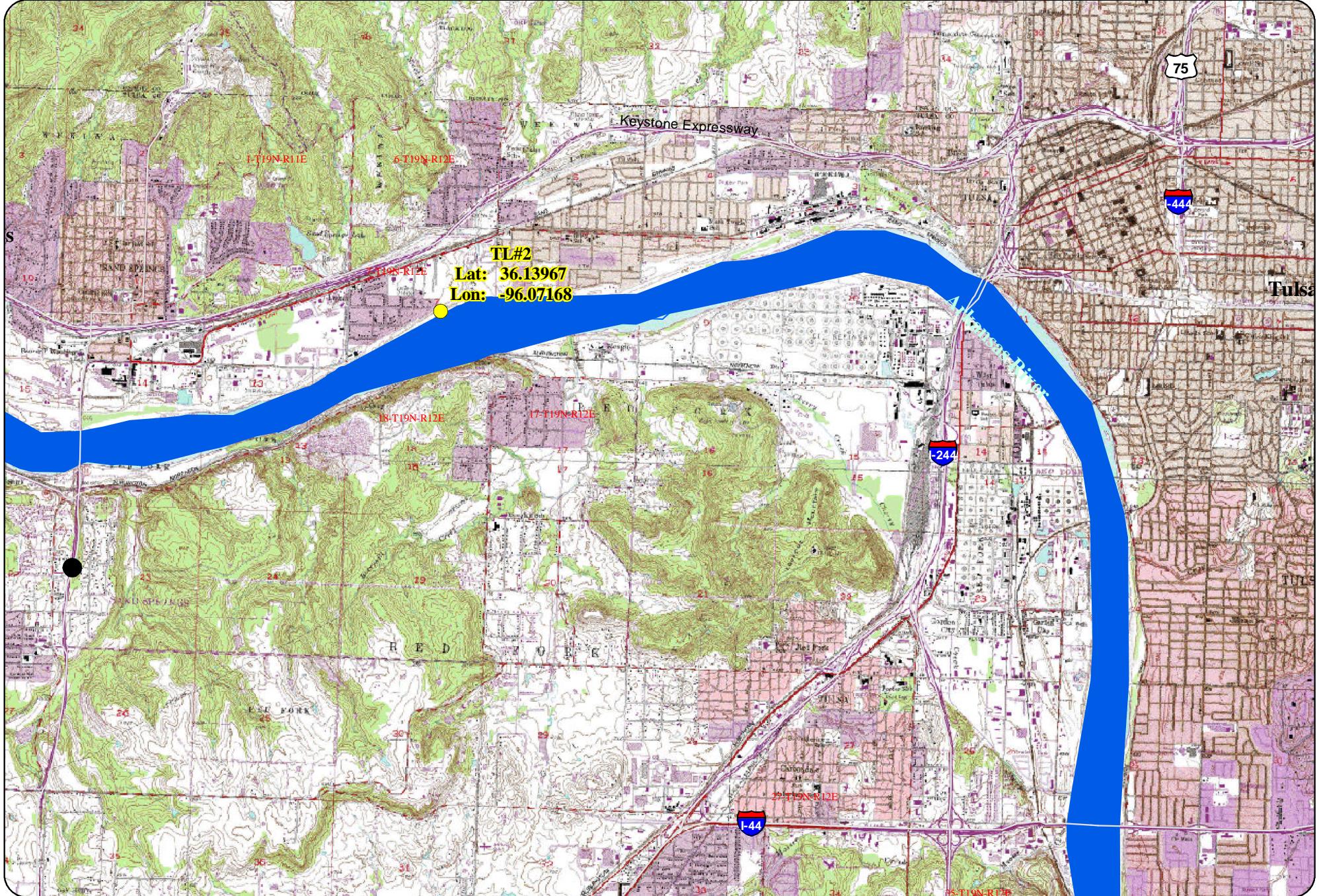
● ABBTrap Lines



Oklahoma Vicinity Map

ABB Trap Line Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK



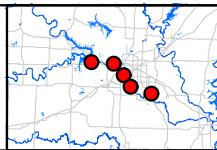
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CONSULTING, Inc.**

0 1,250 2,500 5,000 7,500 Feet

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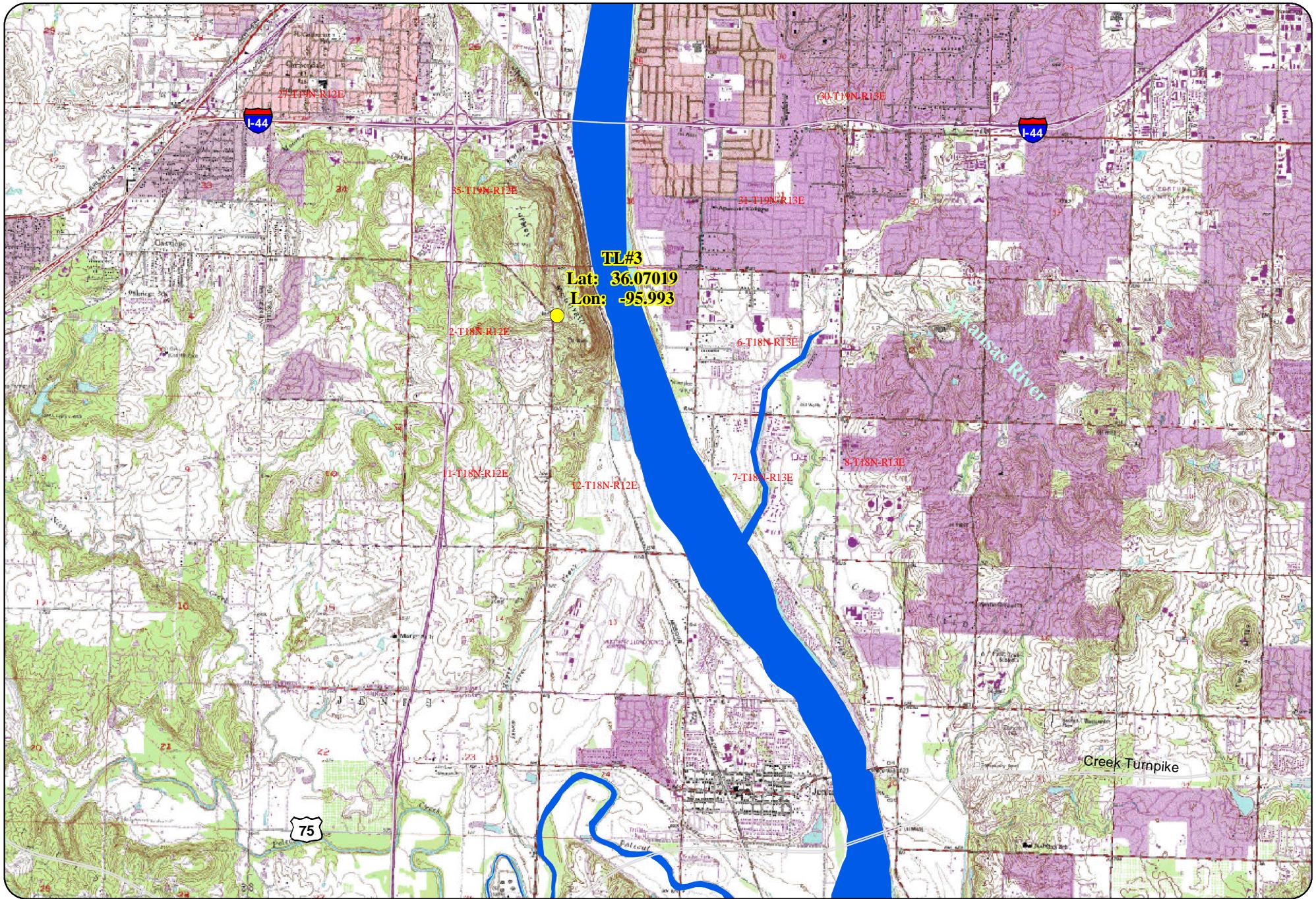
● ABBTrap Lines



Oklahoma Vicinity Map

ABB Trap Line Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 1,250 2,500 5,000 7,500 Feet

Sheet 3

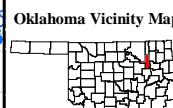
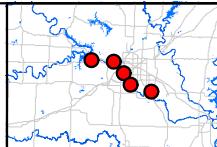
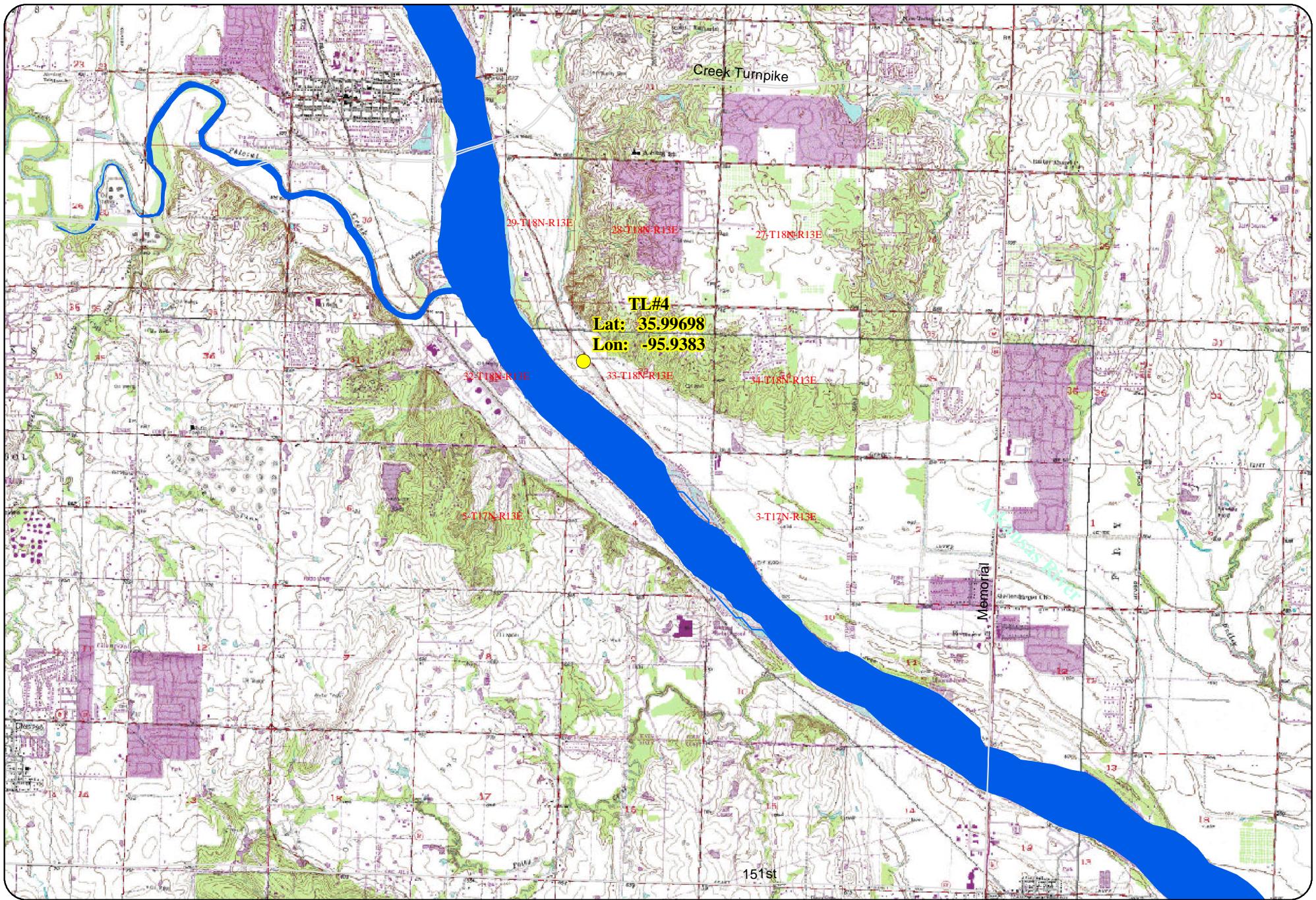


ABB Trap Line Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 1,250 2,500 5,000 7,500 Feet

Sheet 4

Legend

● ABBTrap Lines

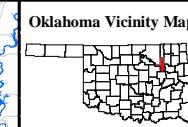
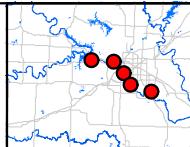
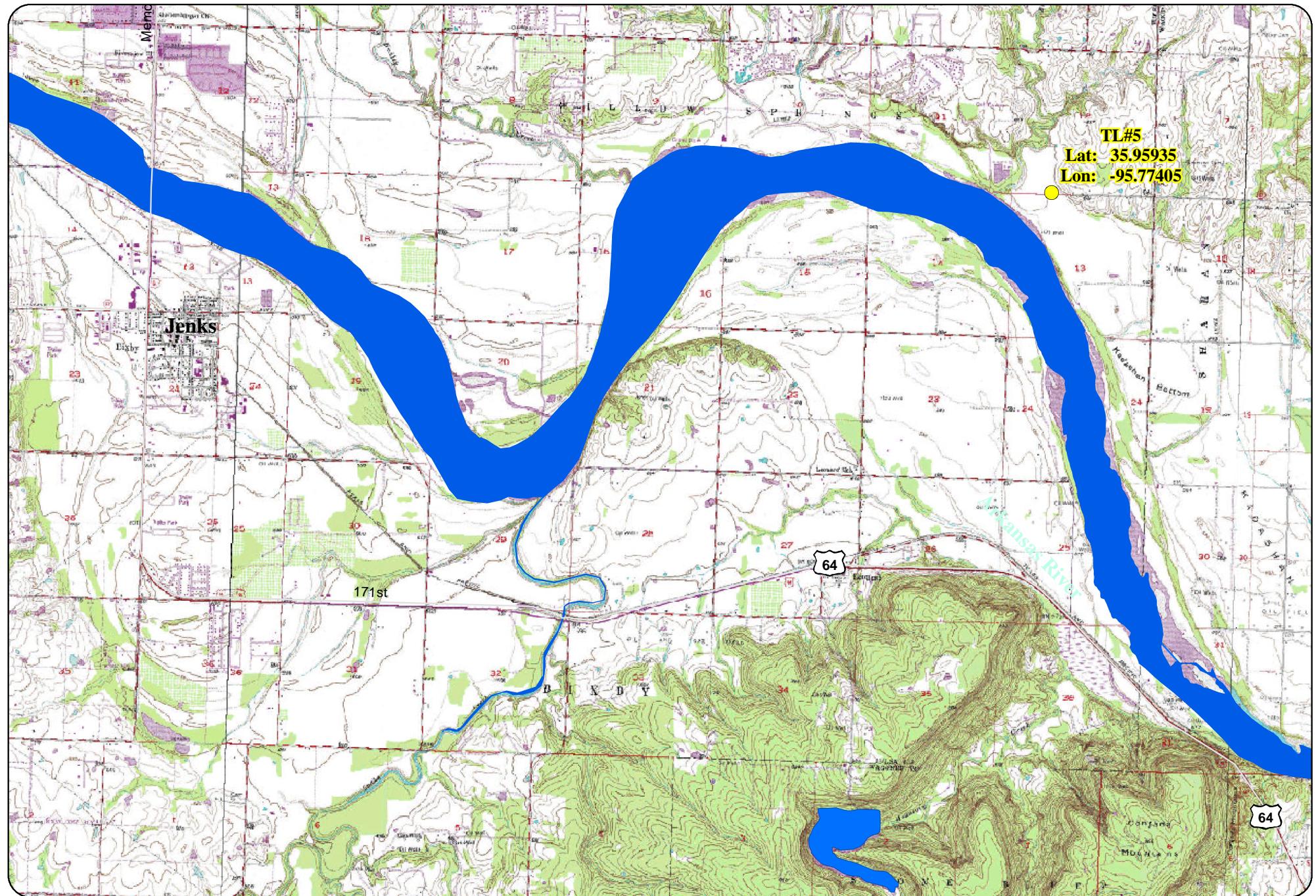


ABB Trap Line Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK



**EAGLE ENVIRONMENTAL
CONSULTING, Inc.**

0 1,250 2,500 5,000 7,500 Feet

Sheet 5

Legend

● ABBTrap Lines



Oklahoma Vicinity Map

ABB Trap Line Location Map

Arkansas River Corridor Base Line Inventory
U.S. Army Corps of Engineers
Arkansas River, Tulsa County, OK

Appendix C

Survey Data Forms

American Burying Beetle Survey Summary Report																									
				Arkansas River Corridor Project Tulsa County, OK																					
state	month	day	year	county	loc	obs	srn	source	efforts	TTN	Tabb	r	male	female	UnkSex	young	Old								
OK	Aug	1	2007	Tulsa	Keystone Dam - Wagoner County Line	Eagle Env. Cons.	Josh Rhine	USACE, Tulsa County	Survey	120	4	0	1	3	0	0	4								
ge	dead	p	ddlat	ddlong	coordsyst	T	R	S	tbd	asa	sm	st	nst	soil	dom sps										
0	0	0	TL#1 36.14343N	096.24279W	NAD 83	20, 19, 18, 17, North	10, 12, 13, 15 East	1, 4, 7,13, 33	8		3	P/A	5	Sandy, Clay, Loam	TL#1										
			TL#2 36.13967N	096.07168W											<i>Celtis occidentalis</i>										
			TL#3 36.07019N	095.99300W											<i>Toxicodendron radicans</i>										
			TL#4 35.99698N	095.93830W											<i>Ulmus americana</i>										
			TL#5 35.95935N	095.77405W											<i>Populus deltoides</i>										
															<i>Parthenocissus quinquefolia</i>										
															TL#2										
															<i>Salix nigra</i>										
ctr	e	ddt	grs	lat	long	s																			
0	0	0	N/A	N/A	N/A	N/A																			

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Project Temp: min 72 (F)
 Location: Tulsa County Oklahoma max 93 (F)
 Surveyor: JTR
 Survey Night: 1 Wind: speed 0-15 (mph)
 Date: July 30, 2007 direction E

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X			X	X	X	X	X
Bait Gone-Trap Intact		X	X					
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #1

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 91 (F)
 Surveyor: JTR
 Survey Night: 2 Wind: speed 0-15 (mph)
 Date: July 31, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present		X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up	X							
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects		X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #1

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 93 (F)
 Surveyor: JTR
 Survey Night: 3 Wind: speed 0-10 (mph)
 Date: August 1, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X		X
Bait Gone-Trap Intact								X
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>				2				
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #1

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Project Temp: min 72 (F)
 Location: Tulsa County Oklahoma max 93 (F)
 Surveyor: JTR
 Survey Night: 1 Wind: speed 0-15 (mph)
 Date: July 30, 2007 direction E

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X		X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up							X	
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X		X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #2

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 91 (F)
 Surveyor: JTR
 Survey Night: 2 Wind: speed 0-15 (mph)
 Date: July 31, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X		X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up			X					
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X		X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #2

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 93 (F)
 Surveyor: JTR
 Night: 3 Wind: speed 0-10 (mph)
 Date: August 1, 2007 direction SE

Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present		X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up	X							
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects		X	X	X	X	X	X	X
Other								

<i>canus:</i>								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #2

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 72 (F)
 Location: Tulsa County Oklahoma max 93 (F)
 Surveyor: JTR
 Survey Night: 1 Wind: speed 0-15 (mph)
 Date: July 30, 2007 direction E

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #3

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 91 (F)
 Surveyor: JTR
 Survey Night: 2 Wind: speed 0-15 (mph)
 Date: July 31, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								1
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #3

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 93 (F)
 Surveyor: JTR
 Survey Night: 3 Wind: speed 0-10 (mph)
 Date: August 1, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>							3	
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #3

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 72 (F)
 Location: Tulsa County Oklahoma max 93 (F)
 Surveyor: JTR
 Survey Night: 1 Wind: speed 0-15 (mph)
 Date: July 30, 2007 direction E

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #4

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 91 (F)
 Surveyor: JTR
 Survey Night: 2 Wind: speed 0-15 (mph)
 Date: July 31, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #4

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 93 (F)
 Surveyor: JTR
 Survey Night: 3 Wind: speed 0-10 (mph)
 Date: August 1, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #4

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 72 (F)
 Location: Tulsa County Oklahoma max 93 (F)
 Surveyor: JTR
 Survey Night: 1 Wind: speed 0-15 (mph)
 Date: July 30, 2007 direction E

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X		X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up						X		
<i>N. americanus</i>								
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female								
Old								
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #5

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 91 (F)
 Surveyor: JTR
 Survey Night: 2 Wind: speed 0-15 (mph)
 Date: July 31, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>		1				2		
<i>N. orbicollis</i>								
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male						X		
Female		X				X		
Old		X				X		
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #5

American Burying Beetle Survey Data Sheet

Project: Arkansas River Project Temp: min 71 (F)
 Location: Tulsa County, OK max 93 (F)
 Surveyor: JTR
 Survey Night: 3 Wind: speed 0-10 (mph)
 Date: August 1, 2007 direction SE

Trap Findings:	Trap Number							
	1	2	3	4	5	6	7	8
Bait Present	X	X	X	X	X	X	X	X
Bait Gone-Trap Intact								
Bait Gone-Trap Dug Up								
<i>N. americanus</i>					1			
<i>N. orbicollis</i>							1	
<i>N. tomentosus</i>								
<i>N. marginatus</i>								
<i>N. pustulatus</i>								
<i>N. carolinus</i>								
<i>N. sayi</i>								
Various Insects	X	X	X	X	X	X	X	X
Other								

Number of <i>N. americanus</i> :								
Male								
Female				X				
Old				X				
New								
Unknown								
Newly Marked Males								
Newly Marked Females								
Recapture								

Comments: Trap-line #5