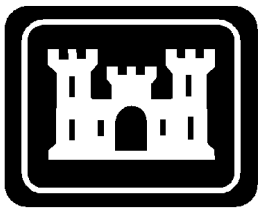
ENVIRONMENTAL ASSESSMENT
12” WATER TRANSMISSION PIPELINE AND STORAGE TANK FACILITY; SANITARY SEWER REPLACEMENT
YUKON, OKLAHOMA

Prepared for:



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DRAFT FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, including guidelines in 33 Code of Federal Regulations, Part 230, and the criteria identified in the implementing regulations for the National Environmental Policy Act (40 CFR 1508.27), the Tulsa District has assessed the environmental effects of construction of 1.35 miles of 12" water transmission pipeline, a water storage tank facility, and the replacement of sanitary sewer lines in the Ranchwood Hills residential community in the City of Yukon, Canadian County, Oklahoma. The project purpose is to improve the existing City of Yukon water supply distribution system to meet current and future demand, and to replace aging infrastructure in a 40-year old residential development. This is a Water Resource Development Authority Section 219 (Environmental Infrastructure) Project, which was authorized in the Consolidated Appropriations Act 2001 in Section 108. The City of Yukon, Oklahoma is the local sponsor for this proposed project.

The water pipeline project begins at the confluence of I-40 and Vandament Avenue, then proceeds northwest through the northeast quadrant of the Frisco Road/Vandament Avenue intersection approximately 0.25 miles, then north approximately 0.25 miles, then west approximately 0.1 miles to the site of a proposed aboveground water storage tower. The pipeline then continues northward along the east side of Frisco Road for about 0.5 miles, and finally extends east along the south side of West Main Street (i.e., US-66) about 0.25 mile. The water pipeline will be installed a minimum of four (4) feet below ground surface through trench excavation techniques. Crossings of jurisdictional waters of the U. S. by the proposed pipeline will be either conventionally bored or utility-type horizontal directionally drilled to avoid impacts.

The associated aboveground water storage tower is to be located on the east side of Frisco Road, approximately 0.5 mile south of US-66 avoiding impacts to delineated wetlands. Proposed sewer line replacement in the Ranchwood Hills residential development will utilize a trenchless pipe bursting methodology minimizing soil surface excavation.

An Environmental Assessment for the proposed project was prepared in accordance with the U. S. Army Corps of Engineers Regulations, Part 230, Policy and Procedures for Implementing the National Environmental Policy Act. It has been determined from the enclosed assessment that the project would have no significant adverse effects on the natural or human environment. Therefore, an environmental impact statement will not be prepared.

_____ _____

Date

Richard A Pratt
Colonel, U.S. Army
District Commander

Enclosure: Environmental Assessment

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CITY OF YUKON, OKLAHOMA
MARCH 2015

1 PURPOSE, NEED, AND SCOPE

1.1 PROJECT PURPOSE, NEED, AND SCOPE

This Environmental Assessment (EA) evaluates the effects of the proposed construction of approximately 1.35 miles of 12" water transmission pipeline and a water storage tank facility for the City of Yukon, Oklahoma. The proposed project also includes replacement of several existing underground sanitary sewer lines in a residential neighborhood utilizing a pipe bursting methodology (i.e., a trenchless technology).

The project purpose and need is to replace aging infrastructure and increase the ability of the current City of Yukon water supply system to meet demand. Yukon is a rapidly-expanding community located approximately twelve (12) miles west of downtown Oklahoma City. The proposed new water pipeline and storage tank will provide a reliable water supply to a portion of the city which currently has no access to public water.

The existing sanitary sewer lines are clay pipe, approximately 40 years old. Clay pipe is prone to cracking, resulting in infiltration of groundwater and storm water into the sanitary sewer system. The new sewer pipe with be high density polyethylene (HDPE) pipe or polyvinyl chloride (PVC) pipe, and will be installed using trenchless technology (pipe bursting).

1.2 BACKGROUND

This is a Water Resource Development Authority Section 219 (Environmental Infrastructure) Project, which was authorized in the Consolidated Appropriations Act 2001 in Section 108. The legislation authorized the United States Army Corps of Engineers (USACE) to provide technical, planning and construction assistance at a Federal expense not to exceed $5,500,000 for a water-related infrastructure project. Thus far, Federal appropriations have been $4,125,000. The project will be cost shared at the rate of 75% Federal and 25% non-Federal. The sponsor (City of Yukon) will contribute a minimum of $1,375,000 from general obligation bonds for a total project cost of $5,500,000. Any project cost that exceeds the

$5,500,000 will be borne entirely by the sponsor. The sponsor will meet its 25% share by providing lands, easements, and rights-of-way, in addition to the actual cost of construction.

The National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190) requires all Federal agencies to address the environmental impacts of any major Federal action on the natural and human environment. Guidance for complying with the NEPA is contained in Title 40 of the Code of Federal Regulations (CFR), Parts 1500 through 1508, and in Engineering Regulation (ER) 200-2-2, *Procedures for Implementing NEPA*. The primary intent of NEPA is to ensure that environmental information is made available to public officials and citizens regarding major actions taken by Federal agencies. This EA was developed to assure that the proposed project complies with the intent of NEPA. **Table 1** lists applicable environmental laws, regulations, and policy considered in preparation of this document.

2 ALTERNATIVES IDENTIFICATION

2.1 NO ACTION ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations implementing the provisions of NEPA require Federal agencies to consider a "no action" alternative. These regulations define the "no action" alternative as the continuation of existing conditions and their effects on the environment, without implementation of, or in lieu of, a proposed action. This alternative represents the existing condition and serves as the baseline against which to compare the effects of the other alternatives. The no action alternative would retain the existing condition and would not result in any project-related environmental impacts or losses of fish and wildlife habitat. However, because the no action alternative would not achieve the project purpose, the no action alternative was not carried forward for the detailed evaluation described in this EA.

2.2 ACTION ALTERNATIVE

The action alternative is construction of approximately 1.35 miles of 12” water transmission pipeline and a water storage tank facility for the City of Yukon, Oklahoma, as well as replacement of several existing underground sanitary sewer lines in a residential neighborhood utilizing a pipe bursting methodology (i.e., a trenchless technology).

3 PROPOSED ACTION

3.1 DESCRIPTION OF ACTION

The proposed action is construction of approximately 1.35 miles of 12" water transmission pipeline and installation of a water storage tank facility for the City of Yukon, Oklahoma. The proposed action also includes replacement of several existing underground sanitary sewer lines in the Ranchwood Hills residential neighborhood utilizing a pipe bursting methodology (i.e., a trenchless technology). **Figure 1** presents the project location.

The water pipeline project begins at the confluence of I-40 and Vandament Avenue, then proceeds northwest through the northeast quadrant of the Frisco Road/Vandament Avenue intersection approximately 0.25 miles, then north approximately 0.25 miles, then west approximately 0.1 miles to the site of a proposed aboveground water storage tower. The pipeline then continues northward along the east side of Frisco Road for about 0.5 miles, and finally extends east along the south side of West Main Street (i.e., US-66) about 0.25 mile. The water pipeline will be installed a minimum of four (4) feet below ground surface through trench excavation techniques. Crossings of jurisdictional waters of the U. S. by the proposed pipeline will be either conventionally bored or utility-type horizontal directionally drilled to avoid impacts.

The location of the proposed aboveground water storage tower is on the east side of Frisco Road, approximately 0.5 mile south of US-66, in the NW/4 NW/4 SW/4 of Section 19, Township 12 North, Range 5 West. The tower and appurtenances will be located upon an approximate one-acre site (approximately 200 feet square). The storage tower will be a concrete pedestal elevated tank design, i.e., a welded steel tank for water containment sitting atop a pedestal concrete support structure. Typical construction sequence includes installation of a foundation footing, then pouring the concrete walls in a series of rings approximately seven (7) feet tall. The welded steel tank is constructed around the concrete pedestal, then lifted to the top of the pedestal and set into position. The tank liner and roof are installed last.

The Ranchwood Hills residential neighborhood is approximately 100 acres in size, located between Main Street and Wagner Road and east of State Highway 4. According to plats obtained through the City of Yukon, the Ranchwood Hills subdivision was established around

1963. Several additions (Ranchwood Hills Addition 2 through Addition 5) were constructed through the years of 1964 to 1971, respectively.

The sanitary sewer lines will be replaced utilizing a trenchless technology called pipe bursting. This process involves installing a new plastic pipe while simultaneously breaking up the old clay pipe with a machine called a bursting head, and requires minimal excavation. Two small access holes are made at each end of the existing sewer line and a heavy cable is fed through the entire length of the old sewer line. The cable is then attached to a cone shaped tool called a bursting head. The bursting head is securely fastened to a brand new length of sewer pipe on the other end. The cable is then pulled by a powerful winch causing the bursting head to break the old pipe into small pieces while pulling the new sewer pipe in behind it. Pipe bursting technology allows sewer line replacement with minimal impacts to nearby buildings, structures, and streets.

4 AFFECTED ENVIRONMENT

4.1 LOCATION AND LAND USE

The project is located in Canadian County and within the Corporate Limits of the City of Yukon (see **Figure 1**). Although the water pipeline Study Area is zoned residential, commercial, and industrial, current land use is residential and undeveloped. Ranchwood Park, a property funded by Land and Water Conservation Fund monies, is located just west of the Ranchwood housing addition at 712 Oak Creek Drive and accessed on the east from Linda Lane.

4.2 CLIMATE

The Study Area has a temperate, sub humid climate, typical of the central part of Oklahoma. Seasonal changes vary in intensity, but the changes between seasons are gradual. Summer is usually the wettest season. Average annual precipitation varies from 23 to 35 inches. Elevation in the project area varies from approximately 1,300 to 1,350 feet above sea level.

4.3 SOCIAL AND ECONOMIC CONDITIONS

The City of Yukon, according to the U. S. Census Bureau, had a year 2010 population of 22,709. The city has shown steady growth, as the 2000 population was 21,043; and the 1990 population was 20,935. Yukon has an actual corporate land area of 25.8 square miles, with a population density of 880 people or 339 households per square mile. The Canadian County 2010 population was 115,541; therefore, the City of Yukon population constitutes approximately 20% of the Canadian County population.

The ethnic makeup of Yukon in the 2010 Census was:

White	85.1%
Black or African American	1.2%
American Indian and Alaska Native	3.5%
Asian	2.0%
Native Hawaiian and Other Pacific Islander	0.1%
Hispanic or Latino	4.9%

The remainder is listed as “two or more races” or “some other race”.

The Census Bureau reported the following 2013 income information for Yukon: The average per capita income for Yukon was $27,825, as compared to $24,208 for the state of Oklahoma and $28,155 for the U.S. The City of Yukon is significantly more affluent than the Oklahoma average.

The Census Bureau in 2013 listed 25.9% of Yukon residents as living below the poverty level. In comparison, the percentages of those living below the poverty level were 25.1% for Oklahoma and 25.9% for the United States as a whole.

The 2010 Census indicates the median age of Yukon was 37.8 years, with 73.9% of the population being 18 years of age or older. The "under five" population was 6.7%.

4.4 NATURAL RESOURCES

The Study Area is underlain by the Permian-aged Duncan Sandstone, and dominant soil types in the Study Area are the Nash-Ironmound complex and Norge silt loam. According to the Natural Resources Conservation Service (NRCS), the following soil types are found within the Study Area: Kingfisher silt loam (KfB) 1-3% slopes, Nash-Ironmound complex (NaD) 3-8% slopes, Nash-Ironmound complex, eroded (NaD2) 3-8% slopes, Norge silt loam (NrB) 1-3% slopes, Norge silt loam (NrC) 3-5% slopes, Pond Creek silt loam (PkA) 0-1% slopes, Port silt loam (Po), occasionally flooded, 0-1% slopes, and Port silty clay loam (Pw), frequently flooded, 0-1% slopes (see **Appendix A**).

Prime farmland is a designation assigned by the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) to those lands that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and are also available for these land uses. According to the NRCS' Soil Survey of Canadian County, several soil types within the water pipeline Study Area are considered potential prime farmland soils, including silt loam soil types KfB, NrB, NrC, PkA, and Po. Correspondence was sent to the NRCS requesting their input on the proposed action, but no response was received.

The proposed project area lies within the Prairie Tableland ecoregion. Natural vegetation in the Prairie Tableland ecoregion is mixed grass prairie. It has greater natural vegetation density, less rainfall variability, less evaporation, and receives more precipitation than neighboring Red Prairie and Red River Tablelands to the west. Soils are not as sandy as other nearby ecoregions and broad, shallow, low gradient channels with silty bottoms are common. Streams often go dry during the late summer and autumn. At other times, turbid water over one meter deep may occur in larger streams. Uncommon, short stream reaches with gravel, cobble, or bedrock substrates support a few darter species, freckled madtoms, and suckermouth minnows. Most wildlife is confined to the borders of stream channels (Woods, et al. 2005).

The project area falls within the Tallgrass Prairie Game Type. This type occupies most of the best of the agricultural soils of Oklahoma and, with the exception of the Arbuckle Mountains and Osage areas is characterized by clean cultivation and low game potentiality. The topography of this type is from flat to gently rolling. However, the pronounced topographic feature of the type is the Arbuckle Mountain area which is fairly rugged. The north portion, characterized by its general flatness, includes Woods, Woodward, Alfalfa, Grant, Kay, Garfield and Blaine counties. Progressing southward and eastward, the land irregularities become more pronounced with a more complex network of drainage. Native vegetation within this type includes the big bluestem subtype, the little bluestem subtype and likely a portion of the eastern edge of the mixed grass ecotone type. For the most part, the natural vegetation consists of a mixture of such species as big bluestem (*Andropogon gerardii),* little bluestem (*Schizachyrium scoparium*), Indian grass (*Sorghastrum nutans*), switch grass (*Panicum virgatum*), and silver beard grass (*Bothriochloa saccharoides*), in the eastern portions of the type with a gradual increase of such species as buffalo grass (*Buchloë dactyloides*), blue grama (*Bouteloua gracilis*) and side oats grama (*Bouteloua curtipendula*). Continued grazing has removed the tallgrass species from the composition of the western portion of the type leaving only the short grasses. The Tallgrass Prairie is the largest Game Type in the state, comprising around 20,500 square miles occupying generally a belt from north to south just east of the Post Oak – Blackjack Game Type. Most of the wildlife of this type is confined to the stream border cover which has, in most cases, been mapped as Bottomland Forest Type. However, the badger, striped skunk, greater prairie chicken and coyote are the principal species utilizing the true tall grass uplands (Duck and Fletcher 1943). Currently deer, rodents, snakes, lizards, frogs and several species of birds are the evident local animals.

It is noted that the non-native bermudagrass and eastern red cedar are currently dominant species present within the water pipeline Study Area.

4.5 THREATENED AND ENDANGERED SPECIES

An official species list was obtained through the United States Fish and Wildlife Service's (USFWS) online Information, Planning, and Conservation (IPaC) decision support system. This system is a conservation planning tool for streamlining the environmental review process. **Table 2** presents the threatened, endangered, and candidate species listed for Canadian County.

4.6 CULTURAL RESOURCES

A cultural resource study of the water pipeline Study Area conducted on September 14, 16, and 24, 2014 identified no cultural resources nor historic properties within the water pipeline Study Area. (See **Appendix B**.)

The sanitary sewer Study Area is a fully-developed residential neighborhood and, due to extensive previous disturbance of the area, no archeological resources are likely. However, some of the homes date back to the early 1960's and could be eligible for historic structure consideration.

4.7 AIR QUALITY

The proposed project is located in Canadian County. Canadian County is in attainment with the National Ambient Air Quality Standards (NAAQS) for the six (6) criteria pollutants carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

4.8 HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE

A hazardous waste study of the water pipeline Study Area was conducted on September 16, 2014 (see **Appendix C**). Based upon the site visit and a review of available environmental records, the only recognized environmental condition noted within the Study Area was miscellaneous household solid waste disposed in the grassland east of Frisco Road.

5 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

5.1 ENVIRONMENTAL IMPACTS EVALUATION PROCEDURES

Information relative to social, economic, and environmental factors was collected for evaluation through a process of agency solicitation, database/records review, and specialist field studies of cultural resources, threatened and endangered species, waters and wetlands, and hazardous waste. The Study Area utilized for evaluation of the water pipeline project encompassed approximately 48 acres, extending east/west along Main Street for approximately 0.5 miles, then north/south along Frisco Road for approximately 0.5 miles, and then along Vandament Avenue for approximately 1,500 feet. The Study Area width was 100 feet south from the Main Street center line, 100 feet east of the Frisco Road centerline, then extended to 660 feet east of Frisco Road for 1,400 feet and slightly narrowing to 555 feet northeast of Vandament Avenue.

The Study Area utilized for evaluation of the sanitary sewer replacement project is the Ranchwood Hills residential addition, as depicted in **Figure 3**.

Based upon this evaluation, the anticipated impacts of the proposed action are summarized in the following sections of text, as well as on **Table 3.**

5.2 SOCIAL AND ECONOMIC IMPACTS

5.2.1 Environmental Justice (Executive Order 12898)

Executive Order 12898 requires each Federal agency to make environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.

Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect serves to heighten agency attention to alternatives (including alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population.

Low-income populations in an affected area are identified with the annual statistical poverty thresholds from the Bureau of the Census Reports on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.

Minorities are comprised of individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority populations are identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority population. A minority population also exists if there is more than one minority group resent and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds.

Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) Whether the health effects, which may be measured in risks and rates, are significant or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and (b) Whether the risk or rate of hazard exposure by a minority population, low–income population, or Indian tribe to an environmental hazard is significant and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and (c)

Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable: (a) Whether there is or will be an impact on the natural or physical environment that significantly and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and (b) Whether environmental impacts are significant and are or may be having an adverse impact on minority populations, low-income populations or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and (c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Based upon the review of U. S. Census data for the City of Yukon, the proposed action is anticipated to have no disproportionately high and adverse human health or environmental effects on minority populations or low-income populations.

5.2.2 Protection of Children (Executive Order 13045)

On April 21, 1997, President Clinton issued Executive Order 13045 (EO 13045), Protection of Children From Environmental Health Risks and Safety Risks, which notes that children often suffer disproportionately from environmental health and safety risks, due in part to a child's size and maturing bodily systems. The executive order defines environmental health and safety risks as risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to). Executive Order 13045 requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that may affect children disproportionately. The Order further requires Federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. Executive Order

13045 is addressed in this NEPA document to examine the effects this action will have on children.

The proposed action poses no disproportionate environmental health and safety risks to children.

5.3 NATURAL RESOURCE IMPACTS

5.3.1 Background

A field survey was conducted on September 16, 2014 (**Appendix C**). Upon site investigation, it was noted that a forested portion of the water pipeline Study Area (immediately north of Vandament Avenue) had been previously disturbed and was currently being disturbed by construction/clearing activities. The current land use within the Study Area was generally characterized as rural with scattered commercial and residential. The area where the proposed water pipeline will be placed is currently dominated by bermudagrass (*Cynodon dactylon*) and/or areas of fallow field. The proposed water tower will be placed in an upland location dominated by eastern red cedar *(Juniperus virginiana*).

5.3.2 Terrestrial Impacts

There is no unique or important wildlife or wildlife habitat, nor rare or unusual vegetation present within the project Study Areas. It is anticipated that any effects of this project to the existing flora and fauna will be negligible. It should be noted that migratory birds are protected under the Migratory Bird Treaty Act – Executive Order 13186. Barn Swallows (*Hirundo rustica*), Cliff Swallows (*Petrochelidon pyrrhonota*), and Bald Eagles (*Haliaeetus leucocephalus*) are protected by this Act. Bald Eagles are also protected under the Bald and Golden Eagle Protection Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. No suitable Bald Eagle habitat or nests were observed within the Study Area during the site visit. Therefore, this project is not expected to impact the Bald Eagle. If Bald Eagles are encountered at any point prior to or during construction, the National Bald Eagle Management Guidelines should be implemented. Barn Swallow and Cliff Swallow species commonly use bridges and culverts in Oklahoma for nesting. A swallow assessment was conducted by visually inspecting all bridge and culvert structures. At the time of survey, no structure within the Study Areas showed evidence of swallow use. Therefore, this project is not expected to impact any swallows.

5.3.3 Aquatic Impacts

No streams within the proposed Study Areas are classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act, Public Law 90-542. Runoff will be minimized through implementation of a Storm Water Pollution Prevention Plan developed in accordance with the Nationwide Storm Water Permit for Construction Activities. It is anticipated that the project will have no effect on aquatic life in any stream, pond, or wetland within the Study Areas.

5.3.4 Invasive Species Impacts

The proposed project will not introduce or promote non-native species in compliance with Executive Order 13112. However, it should be noted that the non-native bermudagrass and eastern red cedar are currently dominant species present within the water pipeline Study Area.

5.3.5 Prime Farmlands Impacts

Correspondence was sent to the NRCS requesting their input on the proposed action, but no response was received. To evaluate the potential for the proposed action to impact potential prime farmland within the Study Area, pertinent criteria from the NRCS CPA 106 form "Farmland Conversion Impact Rating" were considered, including:

- How much within a radius of one-mile of the proposed action is in nonurban use
- How much of the perimeter of the site borders on land in nonurban use
- How much of the site has been farmed within the last 10 years
- How does the site size compare to the average size of farming units in the county
- Will the proposed action result in the remaining land becoming non-farmable, impact improvements on the site, reduce the demand for farm support services in the area, or contribute to conversion of other farmland in the area to nonagricultural use

The only potential prime farmland, located within the water pipeline Study Area, is an approximately 80-acre parcel located in the southeast quadrant of SH-66 and Frisco Road. The parcel is bordered on the north and west by SH-66 and Frisco Road, respectively. An estimated 75% of the land within a one-mile radius of the parcel is currently in some type of farm use, with the remaining 25% consisting of residential neighborhoods. Based upon historical aerial photography, this parcel has been farmed since at least the 1950's. The parcel is significantly smaller than the average size of Canadian County agricultural units in operation, i.e., ~1,000 acres, based upon the 2012 U.S. Department of Agriculture's Census of Agriculture.

The proposed action would require acquisition of strips of right-of-way from this parcel along the east side of Frisco Road and south side of SH-66. The right-of-way acquisition would not impact any improvements on the parcel, would not affect the farmer's ability to continue farming the remainder of the parcel and would not impact any farming support businesses in the area. Based upon this evaluation, the proposed action will have minimal impacts on prime farmlands.

5.4 WETLANDS AND WATER QUALITY PERMITS

A waters and wetlands delineation of the water pipeline Study Area was conducted on September 16, 2014 and identified a total of 795 linear feet and 1.48 acres of potentially jurisdictional waters and wetlands, respectively, within the Study Area. The City of Yukon consulted with the USACE regarding the impacts of this undertaking on jurisdictional waters and wetlands. Because the current design of the proposed water pipeline is for all crossings of jurisdictional waters of the United States to be either conventionally bored or utility-type horizontal directionally drilled, wetlands will not be impacted by the route of the proposed water pipeline. In addition, as indicated in **Figure 4**, the proposed location of the water storage tank is a one-acre parcel located west of and away from all delineated wetlands. Accordingly, the USACE Regulatory Office has indicated the project will require no Section 404 Permit. The water and wetlands summary report and associated agency correspondence are included in **Appendix D**.

The Canadian County Flood Plain Administrator and Oklahoma Water Resources Board requested continued coordination to determine if floodplain permitting for the proposed project is required, which complies with Executive Order 11988 (Floodplain Management).

Water quality impacts will be minimized through implementation of a Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with the Nationwide Storm Water Permit for Construction Activities. The SWPPP will include best management practices (BMPs) to reduce runoff and erosion, as well as the potential for fuel and oil spills related to construction activities.

5.5 THREATENED AND ENDANGERED SPECIES

A biological assessment of threatened and endangered species and their habitat of the water pipeline Study Area was conducted on September 16, 2014. While there is the potential for three (3) endangered, one (1) threatened, one (1) proposed threatened, and one (1)

candidate species to be present in the Study Area, the field investigation indicated that suitable habitat for these species does not occur within the Study Area. Therefore, this project is expected to have no effect on any of the listed species.

According to the USFWS's Online Project Review Process, the finding of "no effect" and no critical habitat present determines that the assessment package does not need to be submitted to the USFWS and no concurrence/response is required. The biological assessment summary report and associated "no-effect" documentation are included in **Appendix A**.

5.6 CULTURAL RESOURCES

A cultural resource study of the water pipeline Study Area conducted on September 14, 16, and 24, 2014 identified no cultural resources (including historic properties) within the Study Area. The USACE has consulted with the Oklahoma State Historic Preservation Office (SHPO), the Oklahoma Archaeological Survey (OAS), and appropriate Native American tribes regarding the impacts of this undertaking on historic properties. In correspondence, the SHPO and OAS concurred with the findings of the cultural resource study. The cultural resource study summary report and associated agency correspondence are included in **Appendix B**.

None of the standing structures or associated appurtenances will be impacted by the sanitary sewer line replacement project, due to the pipe bursting technology to be utilized; therefore, no impact upon potential historic properties is anticipated.

5.7 WATER QUALITY

Impacts upon groundwater or surface water quality are anticipated to be minimal, due to the implementation of BMPs outlined in the site-specific SWPPP to be developed for the construction project.

5.8 AIR QUALITY

Typical air emissions generated from construction activities include:

- particulate matter from soil disturbance and construction equipment and vehicle fuel combustion, and
- oxides of nitrogen from construction equipment and vehicle fuel combustion.

Because the construction activity will be short-term (i. e., estimated time to complete the water pipeline project is one year, and to complete the sanitary sewer replacement project is 6 months) and does not require extensive earth disturbance, the project is not anticipated to have any appreciable effect on air quality.

The project was evaluated for climate change and the generation of greenhouse gases (GHGs). Recent CEQ guidance suggests that projects anticipated to generate 25,000 metric tons of GHGs or less need not undergo quantitative analysis of best management practices to reduce emissions. Using a publicly-available estimator of construction equipment emissions, PE-2 Emission Equipment Estimator and estimated project hours of equipment operation, the potential carbon dioxide (CO2) emissions from the proposed construction projects can be estimated as:

- 2 Cat Graders, each operating 320 hours (i.e., 2 months), emit 23.2 tons of CO2
- 2 Trenchers, each operating 320hours, emit 10.2 tons of CO2
- 2 Cranes, each operating 320 hours, emit 37.4 tons of CO2
- 1 Semi Truck, operating 320hours, emits 12.2 tons of CO2
- 1 Compressor, operating 320hours, emits 5.6 tons of CO2
- 20 Construction PickUp Trucks, each operating 320 hours, emit 101.2 tons of CO2

Based upon this estimation, the total emission of GHGs from this short-term construction project is expected to be less than 200 tons of CO2, and is therefore anticipated to have minimal GHG impacts.

5.9 NOISE

There would be an increase in noise from heavy equipment and trucks during construction of the water pipeline project, but this would be temporary and last only during the construction. No special noise sensitive land uses or activities that may be affected by construction noise are in proximity to the water pipeline project.

The primary noise source associated with the sanitary sewer replacement project will be from the pipe bursting head motor, with an average noise level ranging 80 to 85 dBA (decibels, A-weight). It is anticipated that replacement of each run of sewer line can be completed in one day; therefore, noise impacts to any single residence are expected to be short-term. Further, construction noise associated with the sanitary sewer project will be minimized by implementing time of day restrictions for operations.

5.10 HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE

A hazardous waste study of the water pipeline Study Area was conducted on September 16, 2014. Based upon the site visit and a review of available environmental records, the only recognized environmental condition noted within the Study Area was miscellaneous household solid waste disposed in the grassland east of Frisco Road. The hazardous waste summary report is included in **Appendix C**.

The potential for fuel and oil spills will be minimized through the implementation of BMPs outlined in the site-specific SWPPP to be developed for the construction project. The SWPPP will also include spill response measures to be followed in the event of a release of fuel or oil.

5.11 TRANSPORTATION AND UTILITIES

Traffic signs will be posted as appropriate to warn adjacent roadway traffic of the construction activities and presence of workers near the roadway. One traffic lane may be temporarily blocked during certain phases of the construction, but construction of the proposed project will not require the closure of any local roads.

If any existing aboveground or belowground utility locations are in conflict with the proposed project, the utilities will be relocated. Regardless, all utility services will be continued with no interruption.

5.12 L&WCF PROPERTY IMPACTS

36 Code of Federal Regulations 59 requires the protection of public outdoor recreation areas funded by the Land and Water Conservation Fund (L&WCF). Ranchwood Park, a property funded by the L&WCF, is located just west of the Ranchwood housing addition at 712 Oak Creek Drive and accessed on the east from Linda Lane. The proposed project will not result in any conversion of this facility from its current public outdoor recreational use.

5.13 CUMULATIVE IMPACTS

The land adjacent to the proposed pipeline is currently zoned residential, commercial, and light industrial; therefore, construction of the water pipeline and storage tower is anticipated to aid the planned types of development in the immediate area.

6 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

This environmental assessment (EA) was coordinated with a number of Federal, state, local and Tribal agencies having legislative and administrative responsibilities for environmental protection. Solicitation letters were issued to each of the agencies listed in **Table 4**. Copies of these letters and all responses are included in **Appendix E**.

Agency Response Summary:

- The Canadian County Flood Plain Administrator and Oklahoma Water Resources Board requested continued coordination to determine if floodplain permitting for the proposed project is required.
- The Oklahoma Corporation Commission provided information regarding two (2) plugged and abandoned oil wells located within the Study Area. These locations will be avoided during design, if possible, and noted on construction plans.
- The Oklahoma Department of Wildlife Conservation provided a list of three (3) species of special concern in Canadian County, i.e., Prairie Mole Cricket, Texas Horned Lizard, and the Burrowing Owl. It will be noted on construction plans that it is unlawful at any time to possess or to kill individuals of these species, or to remove any individuals of these species from their natural habitats.
- The Oklahoma Tourism and Recreation Department provided information about a Land and Water Conservation Fund park located in the sanitary sewer replacement Study Area. Mitigation measures relative to this park are described in the Restoration Plan section of this document.
- Both the Oklahoma Natural Heritage Inventory and Environmental Protection Agency Region 6 responded they had no comments or concerns related to the proposed project.

These same agencies will receive a copy of the draft EA document for review and comment. The associated mailing list is also included in **Appendix E.**

7 RESTORATON PLAN

Oklahoma Species of Special Concern Mitigation Measures: The Oklahoma Department of Wildlife Conservation indicated a potential exists for the presence of three (3) species of special concern in the Study Area i.e., Prairie Mole Cricket, Texas Horned Lizard, and the Burrowing Owl. It will be noted on construction plans that it is unlawful at any time to possess or to kill individuals of these species, or to remove any individuals of these species from their natural habitats.

Waters and Wetlands Mitigation Measures: Because the current design of the proposed water pipeline is for all crossings of jurisdictional waters of the United States to be either conventionally bored or utility-type horizontal directionally drilled, wetlands will not be impacted by the route of the proposed water pipeline. Accordingly, the USACE Regulatory Office has indicated the project will require no Section 404 Permit.

Water Quality Mitigation Measures: Water quality impacts will be minimized through compliance with a SWPPP developed in accordance with the Nationwide Storm Water Permit for Construction Activities. At a minimum, the following measures will be implemented to minimize runoff and erosion impacts from excavation and/or boring:

- The water pipeline trench would be excavated, filled with pipeline bedding material per design, and backfilled with native soil. Construction activities would temporarily impact an approximate 65-foot wide strip of terrestrial habitat consisting of grasses and forbs along the length of the corridor. Any trees or forbs on existing statutory right-of-way would be removed. Any trees and forbs within the proposed utility easement would be removed for ease of construction with the landowner being paid for damages. All areas of soil disturbance would be restored with solid slab sod installation.
- All stream channels are to be bored; open trench excavation will not be used to cross the stream channels. Trees along the banks of stream channels will be preserved by continuing to bore a minimum of 15 feet on each side of the channel. Boring will be a minimum of 4 feet below the stream bed, and therefore substantially below the bank.

The SWPPP will also include BMPs to minimize the potential of fuel and oil spills during construction activities.

Hazardous Waste Mitigation Measures: Two (2) plugged and abandoned oil wells are located within the Study Area. These locations will be avoided during design, if possible, and noted on construction plans.

LWCF Property Mitigation Measures: Ranchwood Park, a LWCF Act property, is located just west of the Ranchwood housing addition at 712 Oak Creek Drive and accessed on the east from Linda Lane. Measures to minimize impacts to this park from the proposed sanitary sewer replacement project include ensuring that:

- existing park facilities are not damaged,
- the park entrance is not permanently obstructed, and
- all existing utility rights-of-way will be restored to previous conditions.

Invasive Species Measures: In compliance with Executive Order 13112, the proposed project will not introduce or promote non-native species. It is noted that the non-native bermudagrass and eastern red cedar are currently dominant species present within the Study Area.

8 REFERENCES

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9 LIST OF PREPARERS

The following personnel contributed to the preparation of this EA document:

- Robbie Williams, P. E. – Director of Municipal Engineering, Triad Design Group; City Engineer, City of Yukon, Oklahoma.
- Renee Ellis, Senior Environmental Specialist III, Triad Design Group.
- Chris Cojeen – Principal Investigator, Cojeen Archaeological Services.
- Diane Abernathy, P. E., Senior Environmental Project Manager, Triad Design Group.

TABLES

TABLE 1
APPLICABLE ENVIRONMENTAL LAWS, REGULATIONS, AND POLICY CONSIDERED
ENVIRONMENTAL ASSESSMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

Archaeological and Historic Preservation Act, 1974, as amended	16 USC 469, et. seq.
Clean Air Act, as amended	42 USC 7609, et. seq.
Clean Water Act, 1977, as amended (Federal Water Pollution Control Act)	33 USC 1251, et.seq.
Emergency Wetlands Resources Act of 1986	16 USC 3901-3932
Endangered Species Act, 1973, as amended	16 USC 1531, et. seq.
Farmland Protection Policy Act	7 USC 4201, et. seq.
Federal Land Policy and Management Act of 1976	43 USC 1701-1784
Federal Water Project Recreation Act, as amended	16 USC 460-1-12, et. seq.
Fish and Wildlife Coordination Act, as amended	16 USC 661, et. seq.
Flood Control Act of 1936	
Flood Control Act of 1944, as amended	16 USC 460d
Land and Water Conservation Fund Act, 1965, as amended	16 USC 4601, et. seq.
Migratory Bird Treaty Act	16 USC 701-719c
National Environmental Policy Act, as amended	42 USC 4321, et. seq.
National Historic Preservation Act, 1966, as amended	16 USC 470a, et. seq.
Native American Graves Protection and Repatriation Act, 1990	25 USC 3001-13, et. seq.
Noise Control Act of 1972	PL 92-574
Resource Conservation and Recovery Act (RCRA) of 1976	42 USC 6901-6992k
Rivers and Harbors Act, 1894, as amended and supplemented	33 USC 401, et. seq.
Rivers and Harbors Act, 1899	33 USC 403, Section 10
Water Pollution Control Act Amendments of 1961	PL 87-88
Water Resources Development Act, multiple years	PL 99-662
Watershed Protection and Flood Prevention Act	16 USC 1001, et. seq.
Wild and Scenic Rivers Act, as amended	16 USC 1271, et. seq.
Floodplain Management	EO 11988
Protection of Wetlands	EO 11990
Environmental Justice	EO 12898
Protection of Children	EO 13045
Invasive Species	EO 13112

TABLE 2
LISTED SPECIES POTENTIALLY OCCURRING WITHIN THE STUDY AREA
ENVIRONMENTAL ASSESSMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

Species/Critical Habitat	Federal Status
Black-capped Vireo (*Vireo atricapilla*)	Endangered
Interior Least Tern *(Sterna antillarum)*	Endangered
Whooping Crane (*Grus americana*)	Endangered
Piping Plover *(Charadrius melodus)*	Threatened
Sprague's Pipit *(Anthus spragueii)*	Candidate
Rufa Red Knot *(Calidris canutus rufa)*	Proposed Threatened

TABLE 3
IMPACTS ASSESSMENT MATRIX
ENVIRONMENTAL ASSESSMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

Parameter	Magnitude of Probable Impact						
	Increasing Beneficial Impact				Increasing Adverse Impact		
	Significant	Substantial	Minor	No Appreciable Effect	Minor	Substantial	Significant
1. Noise Levels					x		
2. Aesthetic Values				x			
3. Recreational Opportunities				x			
4. Transportation				x			
5. Public Health and Safety				x			
6. Community Cohesion (Sense of Unity)				x			
7. Community Growth and Development	x						
8. Business and Home Relocations				x			
9. Existing/Potential Land Use		x					
10. Controversy				x			
Economic Impacts							
1. Property Values			x				
2. Tax Revenues			x				
3. Public Facilities and Services	x						
4. Regional Growth		x					
5. Employment				x			
6. Business Activity			x				
7. Farmland/Food Supply				x			
8. Flooding Effects				x			
Natural Resource Impacts							
1. Air Quality				x			
2. Terrestrial Habitat				x			
3. Wetlands				x			
4. Aquatic Habitat				x			
5. Habitat Diversity and Interspersion				x			
6. Biological Productivity				x			
7. Surface Water Quality				x			
8. Water Supply				x			
9. Groundwater				x			
10. Soils				x			
11. Threatened and Endangered Species				x			
Cultural Resource Impacts							
1. Historic Architectural Values				x			
2. Pre-Historic & Historic Archeological Values				x			

TABLE 4
FEDERAL, STATE, LOCAL, AND TRIBAL AGENCY COORDINATION
ENVIRONMENTAL ASSESSMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

U.S. Bureau of Land Management

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

U.S. Geological Service

U.S. Army Corps of Engineers - Tulsa District

Oklahoma Archaeological Survey

Oklahoma Corporation Commission

Oklahoma Biological Survey

Oklahoma Department of Environment Quality

Oklahoma Department of Wildlife Conservation

Oklahoma Geological Survey

Oklahoma Historical Society

Oklahoma Tourism and Recreation Department

Oklahoma Water Resources Board

Canadian County Floodplain Management

Canadian County Board of County Commissioners

Caddo Nation

Cheyanne-Arapahoe Tribes

Delaware Tribe

Muscogee (Creek) Nation

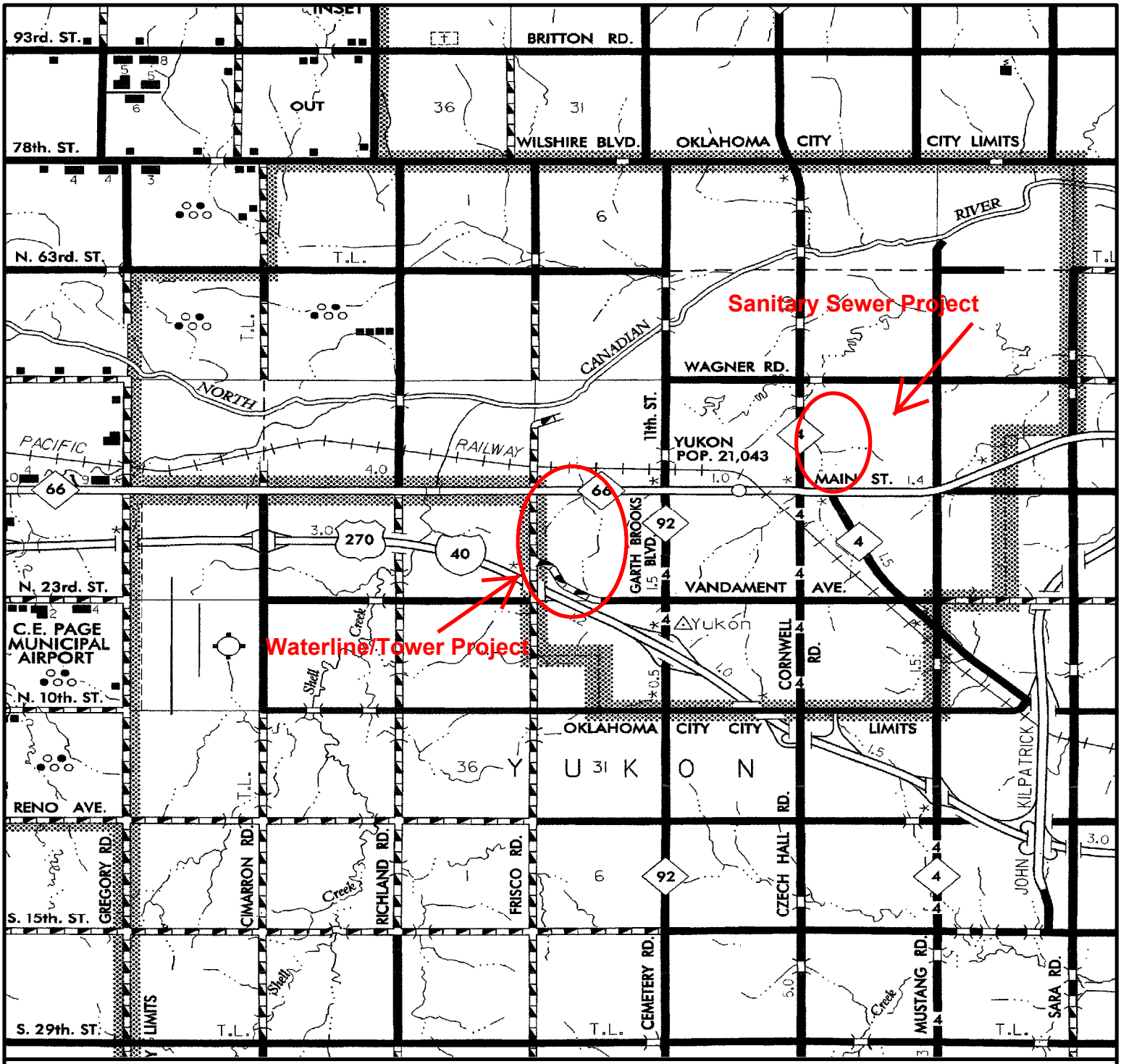
Osage Nation

Quapaw Tribe of Oklahoma

Seminole Nation

Wichita & Affiliated Tribes

FIGURES



TRIAD DESIGN GROUP Architecture • Engineering 3020 N.W. 149th Street Oklahoma City, Oklahoma 73134 Ph. (405) 752-1122 Fax (405) 752-8855	FIGURE TITLE LOCATION MAP, WATERLINE/TOWER AND SANITARY SEWER PROJECTS	DATE	09/19/2014
		SCALE	AS SHOWN
	DOCUMENT TITLE ENVIRONMENTAL ASSESSMENT	DESIGNED BY	TS
		APPROVED BY	RE
	CLIENT CITY OF YUKON	DRAWN BY	RE
		FIGURE NUMBER	
	LOCATION CANADIAN COUNTY, OKLAHOMA	1	

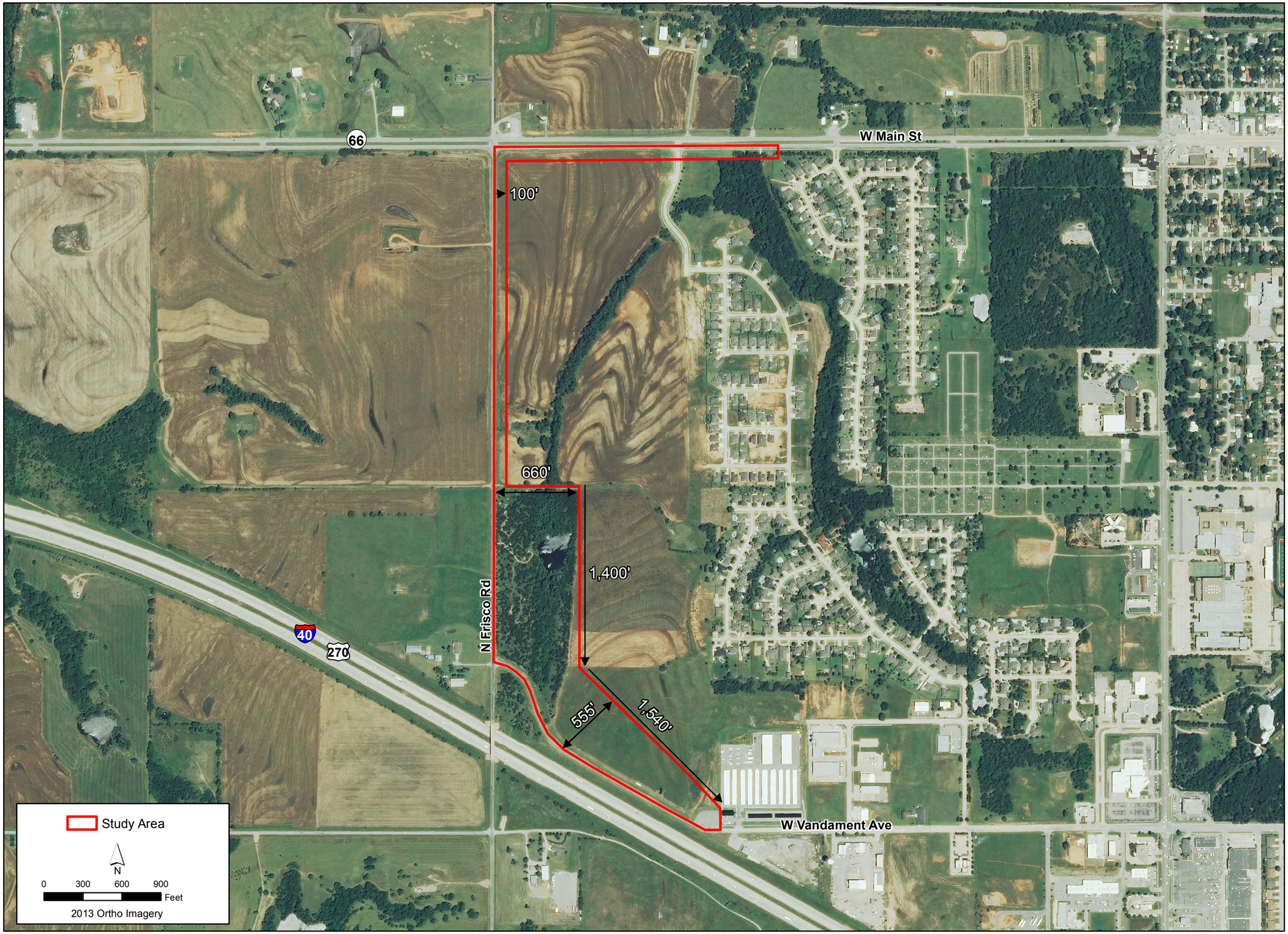


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FIGURE TITLE	**WATER TRANSMISSION LINE/STORAGE TOWER STUDY AREA**
DOCUMENT TITLE	ENVIRONMENTAL ASSESSMENT
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/02/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
2

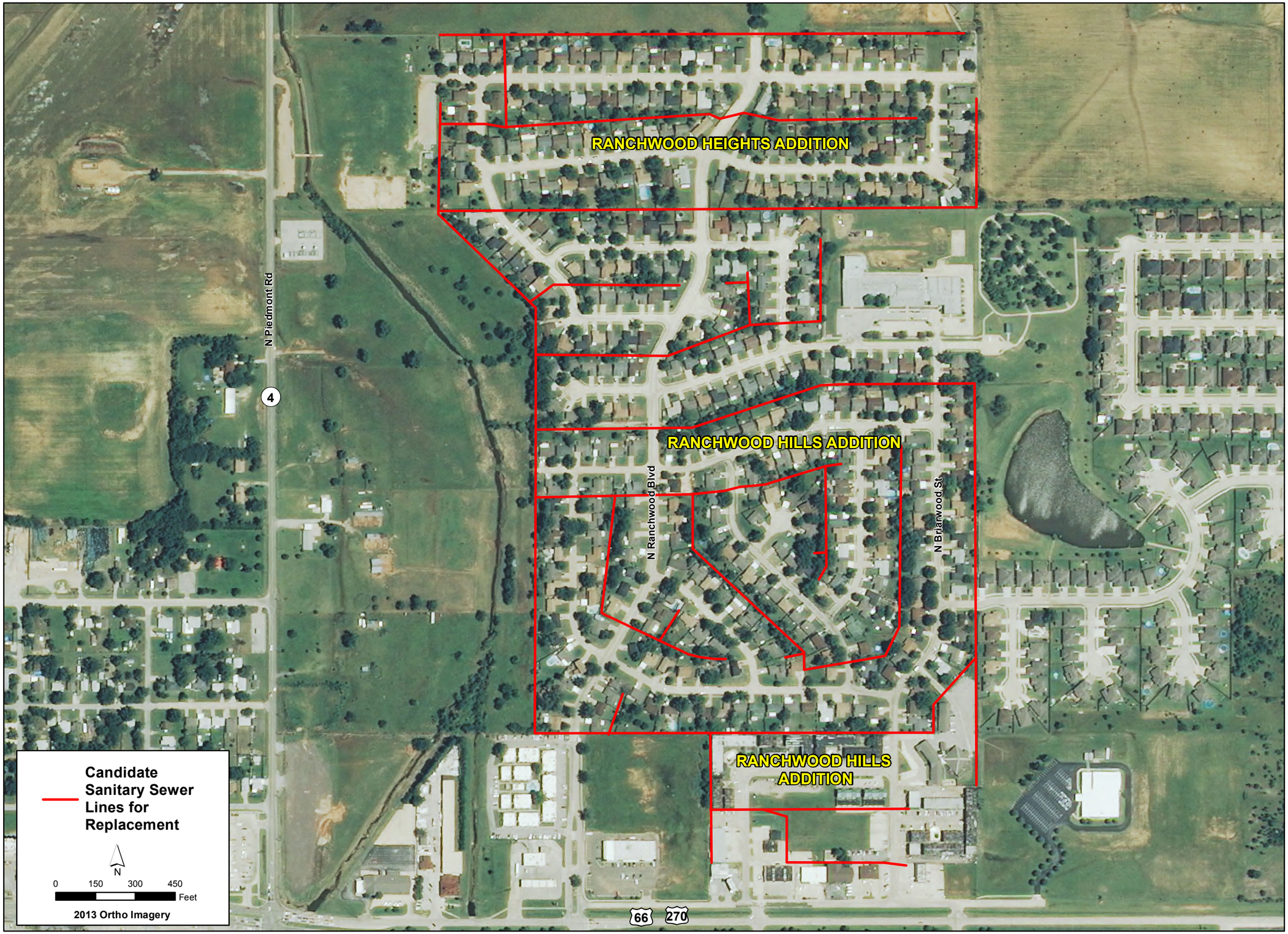

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FIGURE TITLE	SANITARY SEWER LINE REPLACEMENT PROJECT
DOCUMENT TITLE	ENVIRONMENTAL ASSESSMENT
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	11/13/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
3

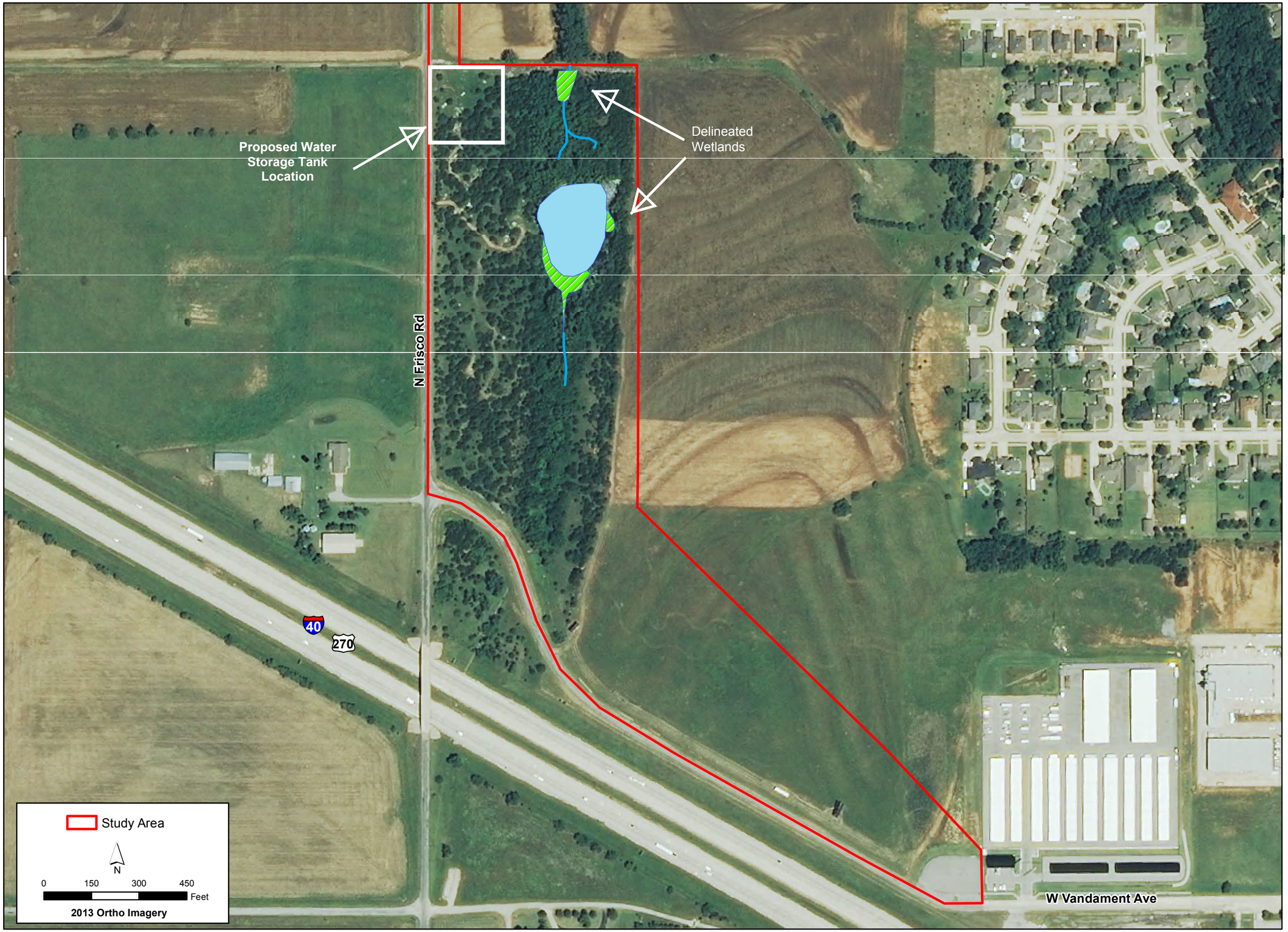

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FIGURE TITLE	**PROPOSED WATER STORAGE TANK LOCATION**
DOCUMENT TITLE	ENVIRONMENTAL ASSESSMENT
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/23/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
4

APPENDICES

Appendix A
Threatened and Endangered Species Study Documentation

Diane Abernathy

From: Diane Abernathy
Sent: Thursday, November 13, 2014 6:20 PM
To: 'okprojectreview@fws.gov'
Cc: 'david_martinez@fws.gov'; Gade, David SWT; Robbie Williams; Renee Ellis
Subject: Request for Review of Biological Assessment, City of Yukon Water Transmission Line Project
Attachments: Yukon_BioAssess Final.pdf

The City of Yukon is proposing to construct a new water transmission line and storage tower in Canadian County, Oklahoma. Triad Design Group, LLC (Triad), acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is performing an Environmental Assessment of the project in accordance with the National Environmental Policy Act (NEPA). As part of the NEPA process, Triad has performed the attached biological assessment of the project study area.

We respectfully request your review and comment upon the assessment. Thank you for your participation in the NEPA process.

Sincerely,

Diane

Diane Abernathy, P. E.

Senior Environmental Project Manager

Triad Design Group

3020 NW 149th Street

Oklahoma City, OK 73134

Mobile: 405-919-0481

dabernathy@triaddesigngroup.com

ENDANGERED, THREATENED, AND CANDIDATE SPECIES, DESIGNATED CRITICAL HABITAT, AND BALD EAGLE & SWALLOW ASSESSMENT

City of Yukon Waterline and Water Storage Tank
Canadian County, Oklahoma

Prepared for:
City of Yukon
P.O. Box 850500
Yukon, Oklahoma 73085

Prepared by:
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134
405-752-1122
405-752-8855 (fax)

Report Date: October 2014

Field Investigation Conducted By: Renee Ellis
Field Investigation Date: September 16, 2014

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CITY OF YUKON
Yukon Waterline / Water Storage Tank
BIOLOGICAL ASSESSMENT
October 2014

1.0 PROJECT OVERVIEW

1.1 FEDERAL NEXUS

This Biological Assessment (BA), prepared for the City of Yukon (City), addresses the installation of approximately 2 miles of water pipeline from SH-66 to I-40 along Frisco Road and the installation of a water storage tank east of Frisco Road, in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that, through consultation with the U.S. Fish & Wildlife Service (Service), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. This BA evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the proposed project on listed species and designated critical habitat.

1.2 PROJECT DESCRIPTION

The City is proposing the installation of approximately 2 miles of water pipeline from SH-66 to I-40 along Frisco Road. The project will also involve the installation of a water storage tank east of Frisco Road.

1.3 PROJECT AREA AND SETTING

The project area is located in the West ½ of Section 19, Township 12 North, Range 5 West in Canadian County, Oklahoma. The coordinates of the project's centroid are 35.499093 N, -97.775597 W (GCS NAD83). The project is located along Main Street (SH-66), Frisco Road, and Vandament Avenue in Yukon, Oklahoma. The study area footprint encompassed approximately 48 acres, extending east/west along Main Street for approximately 0.5 miles, then north/south along Frisco Road for approximately 0.5 miles, and then along Vandament Avenue for approximately 1,500 feet. The study area width was 100' south from the Main Street center line, 100' east of the Frisco Road centerline, then extended to 660' east of Frisco Road for 1,400 feet before widening to 555 feet northeast of Vandament Avenue. (**Figures 1 and 2**).

The proposed project area lies within the Prairie Tableland ecoregion. Natural vegetation in the Prairie Tableland ecoregion is mixed grass prairie. It has greater natural vegetation density, less rainfall variability, less evaporation, and receives more precipitation than neighboring Red Prairie and

Red River Tablelands to the west. Soils are not as sandy as other nearby ecoregions and broad, shallow, low gradient channels with silty bottoms are common. Streams often go dry during the late summer and autumn. At other times, turbid water over one meter deep may occur in larger streams. Uncommon, short stream reaches with gravel, cobble, or bedrock substrates support a few darter species, freckled madtoms, and suckermouth minnows. Most wildlife is confined to the borders of stream (Woods, et al. 2005).

The project area falls within the Tallgrass Prairie Game Type. This type occupies most of the best of the agricultural soils of Oklahoma and, with the exception of the Arbuckle Mountains and Osage areas is characterized by clean cultivation and low game potentiality. The topography of this type is from flat to gently rolling. However, the pronounced topographic feature of the type is the Arbuckle Mountain area which is fairly rugged. The north portion, characterized by its general flatness, includes Woods, Woodward, Alfalfa, Grant, Kay, Garfield and Blaine counties. As one progresses southward and eastward the land irregularities become more pronounced with the more complex network of drainage. On the basis of original vegetation this type includes the big bluestem subtype, the little bluestem subtype and probably a portion of the eastern edge of the mixed grass ecotone type. For the most part, the natural vegetation consists of a mixture of such species as big bluestem (*Andropogon gerardii),* little bluestem (*Schizachyrium scoparium*), Indian grass (*Sorghastrum nutans*), switch grass (*Panicum virgatum*), and silver beard grass (*Bothriochloa saccharoides*), in the eastern portions of the type, with a gradual increase of such species as buffalo grass (*Buchloë dactyloides*), blue grama (*Bouteloua gracilis*) and side oats grama (*Bouteloua curtipendula*). Continued grazing has removed the tallgrass species from the composition of the western portion of the type leaving only the short grasses. The Tallgrass Prairie is the largest Game Type in the state, comprising around 20,500 square miles occupying generally a belt from north to south just east of the Post Oak - Blackjack Game Type. Most of the wildlife of this type is confined to the stream border cover which has, in most cases, been mapped as Bottomland Forest Type. However, the badger, striped skunk, greater prairie chicken and coyote are the principal species utilizing the true tall grass uplands (Duck and Fletcher 1943).

2.0 FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Status of Species within the Action Area

The following table lists the endangered and threatened species as well as designated critical habitat for Canadian County.

Table 1: Federally Listed Endangered and Threatened Species and Designated Critical Habitat Potentially Occurring within the Project Area

Species/Critical Habitat	Federal Status	Habitat Requirements	Status within the Action Area
Black-capped Vireo (*Vireo atricapilla*)	Endangered	Shrublands with small and intermediate sized trees and shrubs and with vegetative cover that extends to ground level.	Canadian County is situated within the probable migratory pathway and contains sites that could provide stopover habitat.
Interior Least Tern *(Sterna antillarum)*	Endangered	Islands or sandbars along large rivers, mostly clear of vegetation for nesting and loafing and with shallow water nearby for fishing.	Canadian County is situated within the probable migratory pathway and contains sites that could provide stopover habitat. Project area does not fall within a Federally-Listed Aquatic Dependent Species Watershed.
Whooping Crane (*Grus americana*)	Endangered	Foraging habitat includes primarily croplands, and roosting habitat includes shallowly-submerged sandbars in large river channels and large palustrine wetlands close to feeding areas.	Canadian County is situated within the probably migratory pathway and contains sites that could provide stopover habitat. Project area does not fall within a Federally-Listed Aquatic Dependent Species Watershed.
Piping Plover *(Charadrius melodus)*	Threatened	Migratory stopover habitat includes sparsely vegetated sand or gravelly shorelines and islands associated with the major river systems, salt flats and mudflats of reservoirs.	Canadian County is situated within the probable migratory pathway and contains sites that could provide stopover habitat.
Sprague's Pipit *(Anthus spragueii)*	Candidate	Breeds and winters in open grasslands. It is closely tied with native prairie habitat and breeds in the north-central United States.	Canadian County is situated within the probable migratory pathway and contains sites that could provide stopover habitat.
Rufa Red Knot *(Calidris canutus rufa)*	Proposed Threatened	Migratory stopover habitat includes sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments and lagoons, and peat banks	Canadian County is situated within the probable migratory pathway and contains sites that could provide stopover habitat.

3.0 ENVIRONMENTAL BASELINE

3.1 ECOLOGICAL PROCESSES AND CONDITIONS

Soils

The Prairie Tableland ecoregion is nearly level, dominated by cropland, and underlain by Permian red shale, soft sandstone, and siltstone (Woods et al. 2005). The soils of the Tallgrass Prairie Game Type, west of the Central Cross Timbers, have their origin from shales and clays of the Permian Red Beds and range from light sandy loams to heavier silt loams and clays (Duck and Fletcher 1943).

Climate

The Tallgrass Prairie Game Type is partially represented in all three of the major climatic provinces of the state, but falls largely in that one characterized as sub-humid, mesothermal and moisture deficiency at all seasons. The average annual precipitation varies from 42 inches on the east to 26 inches on the west, with the bulk of the type falling between 28 inches to 38 inches. An annual snowfall of around 8 inches occurs over the type, with around 14 inches in the northwest. The growing season is from 190 days on the north to 230 days in the Red River Valley in Marshall County (Duck and Fletcher 1943).

Land Use and Land Ownership

The Prairie Tableland ecoregion is located within the wheat belt of Oklahoma. The deep, fertile soils are used to produce winter wheat, grain sorghum, alfalfa, and in the east where rainfall is greatest, soybeans (Woods et al. 2005). As a result of fertile soils, generally sufficient rainfall for small grains, and favorable topography, the Tallgrass Prairie Game Type is essentially an agricultural game condition. With the exception of the mountainous areas, the Tallgrass Prairie Game Type west of the Cross Timbers is approximately 80 percent cultivated. Throughout this portion of the Tallgrass Prairie Game Type, wheat is the principal crop in the north, while cotton ranks first in the south. Corn is a ranking crop in the northeastern portion with hay a close second (Duck and Fletcher 1943).

Vegetation

The field survey was conducted by Triad personnel on September 16, 2014. Upon site investigation, it was noted that a portion of the study area had been previously disturbed and was currently being disturbed by construction/clearing activities. The current land use was generally characterized as rural with scattered commercial and residential. Tree and sapling species observed during the site visit include eastern red cedar *(Juniperus virginiana),* American elm (*Ulmus americana*), sugarberry (*Celtis laevigata*), black willow *(Salix nigra),* cottonwood (*Populus deltoides),* western soapberry (*Sapindus drummondii*), persimmon (*Diospyros virginiana*), black locust *(Robinia pseudoacacia),* green ash (*Fraxinus pennsylvanica*), roughleaf dogwood *(Cornus drummondii),* pecan *(Carya illinoensis),* and red mulberry *(Morus rubra).* Woody shrubs and vines present included Chinese

privet (*Ligustrum sinense*), chickasaw plum (*Prunus angustifolia*), pokeweed (*Phytolacca americana*), poison ivy (*Rhus radicans*), Virginia creeper (*Parthenocissus quinquefolia*), grapevine (*Vitis* sp.), trumpet creeper (*Campsis radicans),* and greenbrier (*Smilax rotundifolia).* The observed herbaceous species included Bermuda grass (*Cynodon dactylon*), Johnson's grass (Sorghum halapense), Canada wildrye (*Elymus canadensis*), little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), sideoats grama (*Bouteloua curtipendula*), oilfield threeawn (*Aristida oligantha*), plains lovegrass (*Eragrostis intermedia*), plains bluestem (*Bothriochloa ischaemum*), goldenrod (*Solidago* spp.), beggar ticks (*Bidens bipinnata*), giant ragweed (*Ambrosia trifida*), western ragweed (*Ambrosia psilostachya),* New York ironweed (*Vernonia noveboracensis*), black-eyed susan *(Rudbeckia hirta),* snow-on-the-mountain *(Euphorbia marginata),* horse nettle (*Solanum carolinense*), *Aster* species, sneezeweed (*Helenium autumnale),* prickly pear cactus *(Opuntia macrorhiza),* dotted smartweed (*Polygonum punctatum*), and *Carex* species.

3.2 SPECIES HABITAT WITHIN THE ACTION AREA

The **Black-capped Vireo** (*Vireo atricapilla*) is a small neotropical migratory passerine indigenous to mixed deciduous and evergreen shrubland in Kansas, Oklahoma, Texas and Mexico. The species currently migrates between wintering sites along the western coast of Mexico to breeding areas in north-central Mexico, central Texas and western Oklahoma. Individuals typically arrive in Oklahoma in mid-April, and generally migrate south in late-August or early September. Historically, the Vireo bred along a corridor from north-central Mexico to south-central Kansas. Currently, known breeding sites in Oklahoma are found only in northwestern Blaine County, central Cleveland County, and the Wichita Mountains in southwestern Comanche County. In breeding season they prefer areas of low, scrubby growth of mostly deciduous (esp. oaks and sumac) shrubs of irregular height distribution. Preferred habitat requires open spaces between clumps of vegetation with foliage that reaches the ground to provide cover. This habitat is rare and localized in gullies, ravines and eroded slopes.

Canadian County is situated within the probable migratory pathway between breeding and winter habitats, and contains sites that could provide stopover habitat during migration. No record of sightings of the Black-capped Vireo in Canadian County is recorded in the Oklahoma Natural Heritage Inventory (ONHI) database. No records of breeding birds or nest sites were recorded in the Oklahoma Breeding Bird Atlas. Habitat that would support the Black-capped Vireo was not observed within the proposed project study area during the site reconnaissance.

The **Interior Least Tern** is a small migratory seabird that currently nests along most of the larger river systems in Oklahoma and at the Salt Plains National Wildlife Refuge. The species also breeds along inland river systems throughout the central Great Plains and winters along the Central American and northern South American coastline (NatureServe 2008). Migrating terns arrive in Oklahoma as early

as late April, and generally occupy breeding sites by early June. The nesting season lasts through August, with most birds gone from Oklahoma by the end of September. Interior Least Terns prefer open habitat with sparsely vegetated bars of sand and gravel on the upper margins of wide, unobstructed river channels (U. S. Fish and Wildlife Service 1990). They avoid narrow or heavily vegetated beaches. Interior Least Terns forage for small fish in shallow water, where low bars of wet sand or gravel associated with large rivers and reservoirs and floodplain wetlands are preferred feeding areas.

The proposed project does not occur within a watershed that supports known populations of nesting Interior Least Terns (according to the Federally-Listed Aquatic Dependent Species Watersheds of Oklahoma, USFWS - Oklahoma Ecological Services Field Office - December 2007). No record of sightings of the Interior Least Tern in Canadian County is recorded in the Oklahoma Natural Heritage Inventory (ONHI) database. No records of breeding birds or nest sites were recorded in the Oklahoma Breeding Bird Atlas. No suitable habitat for the Interior Least Tern was present in the immediate vicinity of the proposed project's environmental study area.

The **Whooping Crane** is a large, omnivorous wading bird which migrates through Oklahoma during the spring and fall. Important migratory stopover sites in Oklahoma include Foss Reservoir, Hackberry Flat Wildlife Management Area, and the Salt Plains National Wildlife Refuge – which has been designated as critical habitat for the species. Whooping Cranes use a wide variety of habitats during migration, feeding primarily on croplands and roosting in shallowly-submerged sandbars in large river channels and large palustrine wetlands close to feeding areas (U. S. Fish and Wildlife Service 2011).

The proposed project does not occur within a watershed that supports known populations of Whooping Cranes (according to the Federally-Listed Aquatic Dependent Species Watersheds of Oklahoma, USFWS - Oklahoma Ecological Services Field Office - December 2007). No record of sightings of the Whooping Crane in Canadian County is recorded in the Oklahoma Natural Heritage Inventory (ONHI) database. The Whooping Crane is not recorded in the Oklahoma Breeding Bird Atlas. Canadian County is situated along the probably migratory pathway and contains suitable migratory stopover habitat. Habitat that would support the Whooping Crane was not observed within the proposed project study area during the site reconnaissance.

The **Piping Plover** is a small shorebird which migrates through Oklahoma in the spring and fall. During migration, Piping Plovers may loaf and forage on sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems in Oklahoma (U.S. Fish and Wildlife Service 1985). No record of sightings for the Piping Plover in Canadian County is recorded in the

occurs in late May or early June; most have departed breeding areas by mid-August. Its unique life history depends on suitable habitat, food and weather conditions at far-flung sites across the Western Hemisphere. Knots need to encounter these favorable habitat, food and weather conditions within narrow seasonal windows as the birds hopscotch along migration stopovers between wintering and breeding areas (U.S. Fish and Wildlife Service 2014). The primary prey of the Rufa Red Knot in non-breeding habitats include blue mussel (*Mytilus edulis*) juveniles; *Donax* and *Darina* clams; snails (*Littorina* spp.), and other mollusks, with polycheate worms, insect larvae, and crustaceans also eaten in some locations. Red Knots feed on the eggs of horseshoe crabs, particularly during the key migration stopover within the Delaware Bay of New Jersey and Delaware. Delaware Bay serves as the principal spring migration. Although foraging Red Knots can be found widely distributed in small numbers within suitable habitats during the migration period, birds tend to concentrate in those areas where abundant food resources are consistently available from year to year. Red Knots are restricted to the ocean coasts during winter, and occur primarily along the coasts during migration. However, small numbers of Rufa Red Knots are reported annually across the interior United States (i.e., greater than 25 miles from the Gulf or Atlantic Coasts) during spring and fall migration—these reported sightings are concentrated along the Great Lakes, but multiple reports have been made from nearly every interior state. Habitats used by Red Knots in migration and wintering areas are similar in character, generally coastal marine and estuarine habitats with large areas of exposed intertidal sediments. In North America, Red Knots are commonly found along sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments and lagoons, and peat banks (Federal Register 2013).

Various counties in Oklahoma are listed by the USFWS as having the potential to contain suitable stopover habitat for the Red Knot. No record of sightings for the Red Knot in Canadian County were recorded in the ONHI database. The species is not recorded in the Oklahoma Breeding Bird Atlas. Habitat that would support the Rufa Red Knot was not observed within the proposed project study area during the site reconnaissance.

4.0 ANALYSIS OF EFFECTS

Results from the field investigation and potential impacts from the proposed project are summarized in Table 2 for each listed species. No designated critical habitat occurs in the project area for any species.

Table 2: Potential Impacts to Federally-Listed Species and Effects Determination

Species/Critical Habitat	Results of Field Investigations	Potential Impacts from Proposed Project	Effects Determination
Black-capped Vireo (*Vireo atricapilla*)	No suitable nesting, foraging or migratory habitat occurs within the proposed project study area	No impacts from the proposed project.	No effect
Interior Least Tern *(Sterna antillarum)*	No suitable nesting, foraging or migratory habitat occurs within the proposed project study area	No impacts from the proposed project.	No effect
Whooping Crane (*Grus americana*)	No suitable foraging and/or roosting habitat occurs within the study area.	No impacts from the proposed project.	No effect
Piping Plover *(Charadrius melodus)*	No suitable nesting, foraging or migratory habitat occurs within the proposed project study area	No impacts from the proposed project.	No effect
Sprague's Pipit *(Anthus spragueii)*	No suitable migratory habitat occurs within the proposed project study area	No impacts from the proposed project.	No effect
Rufa Red Knot *(Calidris canutus rufa)*	No suitable migratory habitat occurs within the proposed project study area	No impacts from the proposed project.	No effect

4.1 DIRECT EFFECTS

There are no direct effects to any of the above listed species within the project area.

4.2 INDIRECT EFFECTS

There are no indirect effects to any of the above listed species within the project area.

4.3 INTERRELATED AND INTERDEPENDENT ACTIONS AND ACTIVITIES

This project does not involve capacity expansion and the project will not impact current land use in the area; therefore, no interrelated and interdependent actions are expected.

4.4 CONCLUSIONS

This project is expected to have no effect on the Black-capped Vireo, Interior Least Tern, Whooping Crane, Piping Plover, Sprague's Pipit, or Rufa Red Knot.

ONHI database. No records of breeding birds or nest sites were recorded in the Oklahoma Breeding Bird Atlas. No suitable migratory stopover habitat for the Piping Plover exists within the proposed project's environmental study area.

The **Sprague's Pipit** (*Anthus spragueii)* is a grassland specialist endemic to the mixed-grass prairie in the northern Great Plains of North America. Currently, these passerines are common only in remnant large grassland patches in the northern mixed-grass native prairie of North America. Their breeding range is primarily in north-central and eastern Montana, to North Dakota through to northwestern and north-central South Dakota. They occur casually in northwestern Minnesota and locally in southern South Dakota. Sprague's Pipits are short distance migrants, moving from breeding grounds in the northern prairies of southern Canada and northern United States to the wintering grounds in southern United States and northern México. They construct dome-shaped nests on the ground in which the female lays 4-5 eggs that are then incubated for 11-17 days before hatching. The Sprague's Pipit feeds on insects and seeds. During migration they are often found near water, and have been observed in sunflower fields. While overwintering, they exhibit a strong preference for grasslands, and are most abundant in dense and native grasslands. They have been shown not to be found in the narrow strips of grassland remaining along agricultural field borders. (USFWS 2010b).

In Oklahoma, Sprague's Pipits are uncommon migrants having been documented in the central and western two-thirds of the main body of the state, and in the southern portion of the panhandle. They are undocumented in the eastern third of Oklahoma. Migration and wintering ecology are poorly known. Where pipits have been seen during migration, the habitats used are similar to those documented on the breeding and wintering grounds, including pastures, prairie-dog (*Cynomys* spp.) towns, fallow cropland, and short-, mixed- and heavily grazed tall-grass prairies (Jones, S.L, 2010). Their presence in fallow cropland is rare. Sprague's Pipits exhibit a strong preference for grassland habitat during the winter and an avoidance of areas with too much shrub encroachment (USFWS 2010b). No recent sightings for the Sprague's Pipit in Canadian County were recorded in the ONHI database. Habitat that would support the Sprague's Pipit was not observed within the proposed project study area during the site reconnaissance.

The **Rufa Red Knot** is a migratory shorebird which flies more than 9,300 miles from south to north every spring and repeats the trip in reverse every autumn, making it one of the longest-distance migrants in the animal kingdom. The Rufa Red Knot winters at the tip of South America in Tierra del Fuego, in northern Brazil, throughout the Caribbean, and along the U.S. coasts from Texas to North Carolina. It breeds in the tundra of the central Canadian Arctic from northern Hudson Bay to the southern Queen Elizabeth Islands. Populations migrate in large flocks northward through the contiguous United States mainly March-early June, southward July-August. Arrival in breeding areas

5.0 BALD EAGLE AND SWALLOW ASSESSMENT

5.1 BALD EAGLE ASSESSMENT

The Bald Eagle (*Haliaeetus leucocephalus*) is a large predatory bird protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. "Disturb" means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment.

Suitable Bald Eagle habitat was not observed within the project area. Additionally, no Bald Eagles or Bald Eagle nests were observed during the site visit. Therefore, this project is not expected to impact the Bald Eagle. If Bald Eagles are encountered at any point prior to or during construction, the National Bald Eagle Management Guidelines should be implemented.

5.2 SWALLOW ASSESSMENT

Cliff Swallows (*Petrochelidon pyrrhonota)* and Barn Swallows (*Hirundo rustica*) are small colonial and semi-colonial nesting birds protected by the federal Migratory Bird Treaty Act. Barn swallows use man-made structures for nesting and live in close association with humans. Both species commonly use bridges and culverts in Oklahoma for nesting.

The Swallow assessment was conducted by visually inspecting all bridge and culvert structures for evidence of their use by swallows. At the time of survey, no structure within the study area showed evidence of swallow use. Therefore, this project is not expected to impact any swallows.

6.0 REFERENCES

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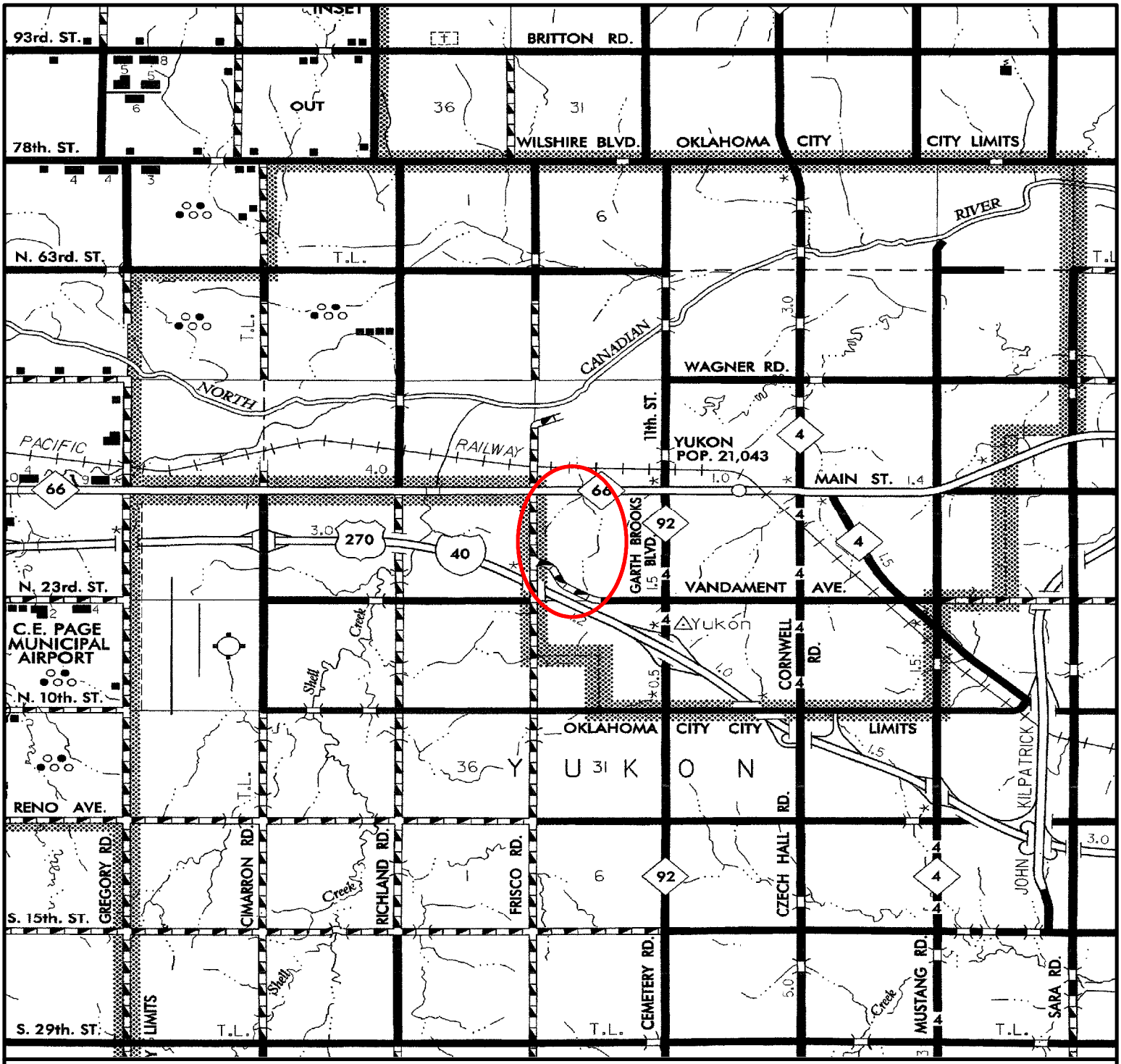
FIGURES



Project Location

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Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

LOCATION MAP

DOCUMENT TITLE

BIOLOGICAL ASSESSMENT FOR YUKON WATERLINE/ TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
1	

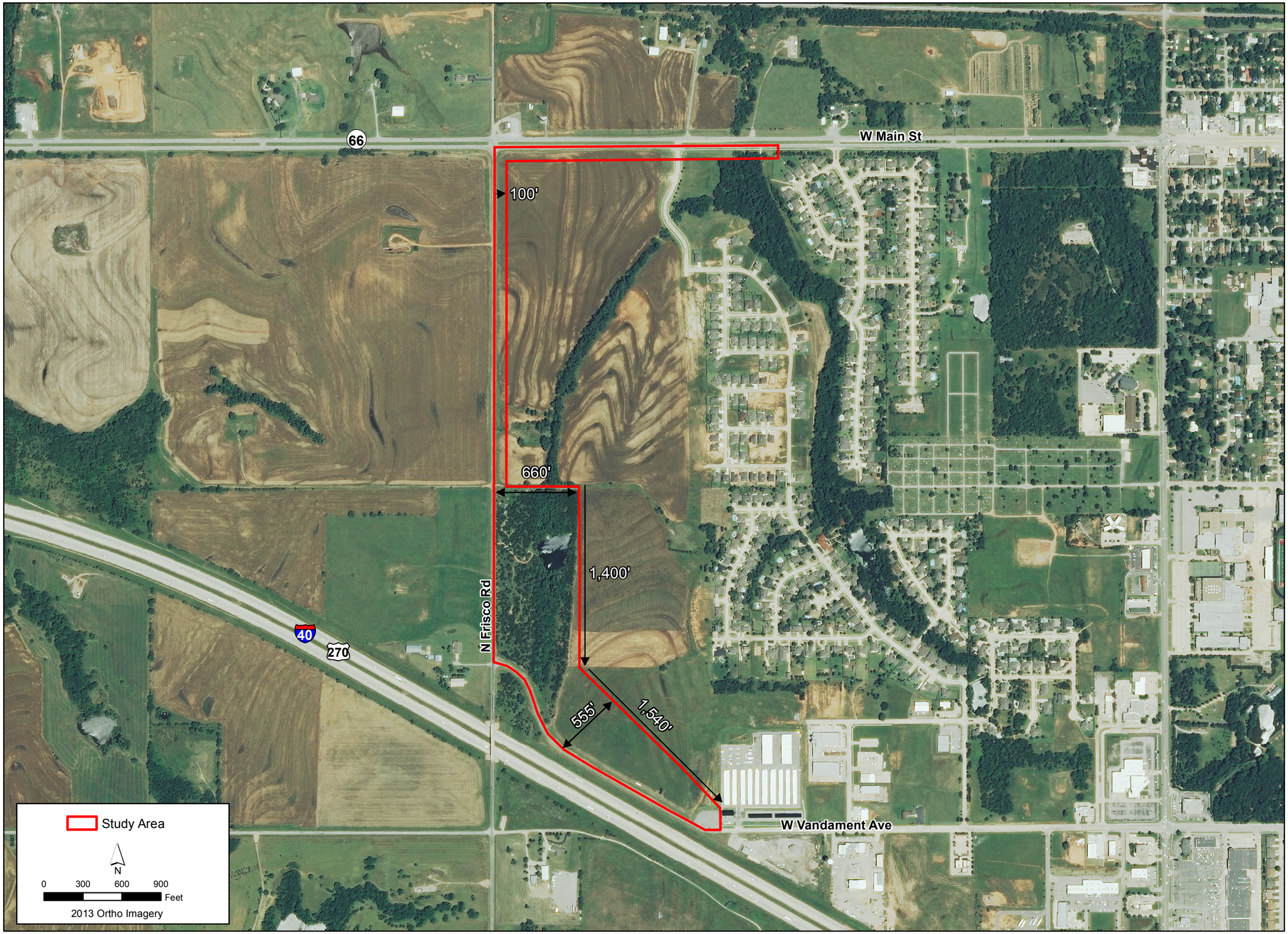

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FIGURE TITLE	**STUDY AREA**
DOCUMENT TITLE	BIOLOGICAL ASSESSMENT FOR YUKON WATERLINE/TOWER
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/02/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
2

Appendix A
Official Species List and Action Area Map from IPaC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 EAST 21ST STREET
TULSA, OK 74129
PHONE: (918)581-7458 FAX: (918)581-7467
URL: www.fws.gov/southwest/es/Oklahoma/

Consultation Tracking Number: 02EKOK00-2014-SLI-1460 September 24, 2014
Project Name: City of Yukon Waterline

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: City of Yukon Waterline

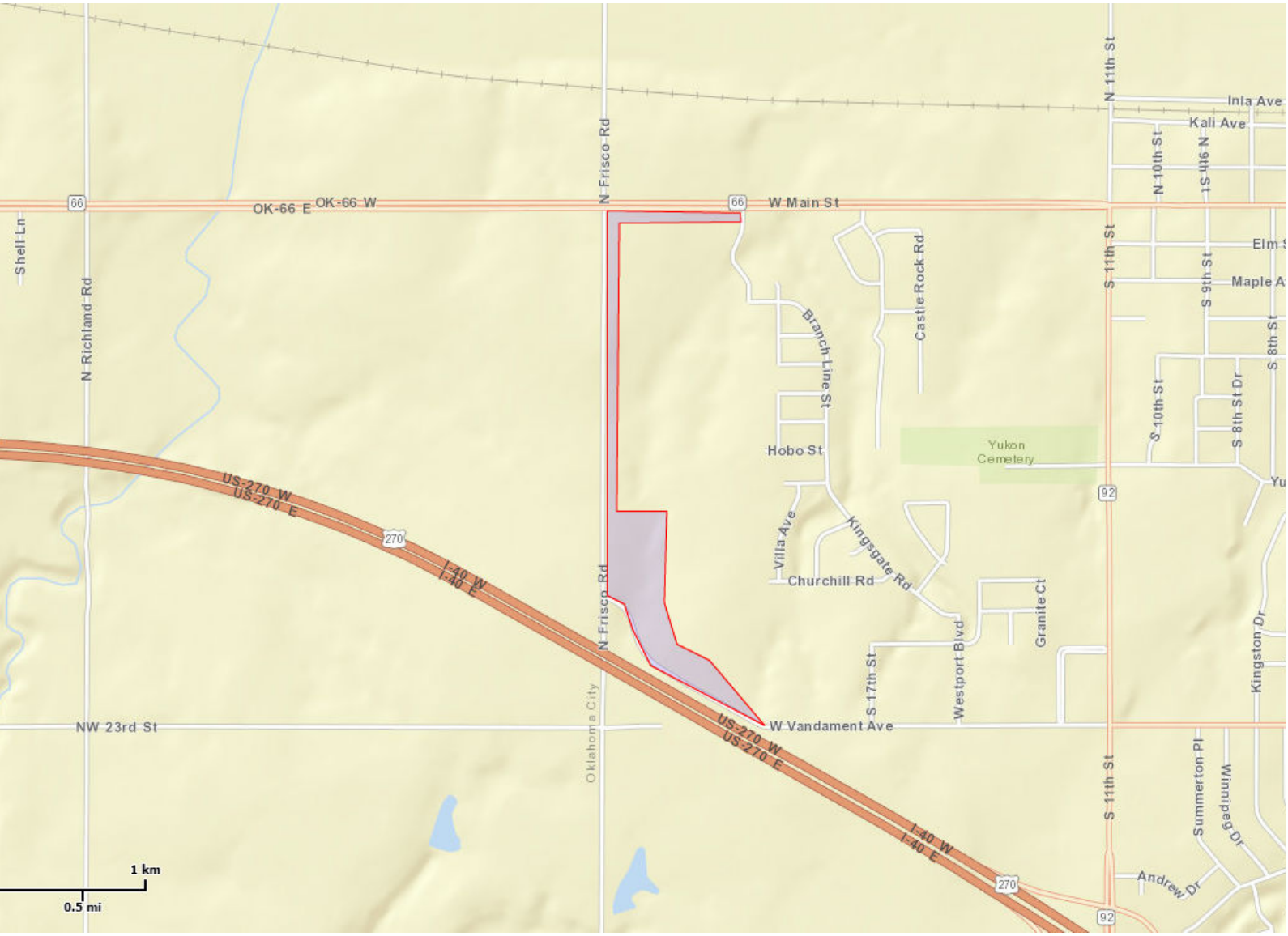
Official Species List

Provided by:

Oklahoma Ecological Services Field Office
9014 EAST 21ST STREET
TULSA, OK 74129
(918) 581-7458
http://www.fws.gov/southwest/es/Oklahoma/

Consultation Tracking Number: 02EKOK00-2014-SLI-1460
Project Type: Water Supply / Delivery
Project Description: The City of Yukon is proposing the installation of approximately 2 miles of water pipeline from US-66 to I-40 along Frisco Road. The project will also involve the installation of a water storage tank east of Frisco Road.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-97.7728252 35.5074537, -97.776988 35.5074188, -97.777076 35.4993834, -97.7753615 35.4993834, -97.7754431 35.4968328, -97.7750182 35.4956798, -97.7739024 35.4952256, -97.7720141 35.4934087, -97.7759194 35.4950859, -97.7765202 35.4960642, -97.7768206 35.4967979, -97.7774172 35.4970425, -97.7774172 35.5077681, -97.7728424 35.5077088, -97.7728252 35.5074537)))

Project Counties: Canadian, OK

United States Department of Interior
Fish and Wildlife Service

Project name: City of Yukon Waterline

Endangered Species Act Species List

There are a total of 6 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Black-Capped Vireo *(Vireo atricapilla)* Population: Entire	Endangered		
Least tern *(Sterna antillarum)* Population: interior pop.	Endangered		
Piping Plover *(Charadrius melodus)* Population: except Great Lakes watershed	Threatened	Final designated	
Red Knot *(Calidris canutus rufa)*	Proposed Threatened		
Sprague's Pipit *(Anthus spragueii)*	Candidate		
Whooping crane *(Grus americana)* Population: except where EXPN	Endangered	Final designated	

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Appendix B
Cultural Resources Study Documentation

TRIBAL HISTORIC PRESERVATION OFFICE

Date: **January 22, 2015** **File: 1415-1136OK-1**

RE: **Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Canadian County**

Fort Worth District, USACE
Eric W. Verwers
P.O. Box 17300
Fort Worth, TX 76102-0300

Dear Mr. Verwers,

The Osage Nation Historic Preservation Office has evaluated your submission regarding the proposed Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Canadian County and determined that the proposed project most likely **will not adversely affect properties of cultural or sacred significance to the Osage Nation. The finding of this NHPA Section 106 review has resulted in a determination of "No Properties."**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969). **The Osage Nation concurs that as a part of the scoping process the U.S. Army Corps of Engineers fulfilled NHPA and NEPA compliance by consulting with the Osage Nation Historic Preservation Office in regard to the proposed project referenced as Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Canadian County .**

The Osage Nation has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, the Native American Graves Protection and Repatriation Act, or Osage law. **If, however, artifacts or human remains are discovered during project construction, we ask that work cease immediately and the Osage Nation Historic Preservation Office be contacted.**

Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Andrea A. Hunter, Ph.D.
Director, Tribal Historic Preservation Officer

John Fox
Archaeologist

627 Grandview, Pawhuska, OK 74056, (918) 287-5328, Fax (918) 287-5376

Oklahoma Historical Society *Founded May 27, 1893*
State Historic Preservation Office
Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917
(405) 521-6249 • Fax (405) 522-0816 • www.okhistory.org/shpo/shpom.htm

December 30, 2014

Mr. Eric W. Verwers
Department of the Army
Fort Worth District, Corps of Engineers
P.O. Box 17300
Fort Worth, TX 76102-0300

RE: File #0474-15; Yukon Proposed Waterline, Storage Tower & Sewer Replacement Project

Dear Mr. Verwers:

We have received and reviewed the documentation concerning the referenced project in Canadian County. Additionally, we have examined the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office. We find that there are no historic properties affected by the referenced project.

Thank you for the opportunity to comment on this project. We look forward to working with you in the future.

If you have any questions, please contact Catharine M. Wood, Historical Archaeologist, at 405/521-6381.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. Thank you.

Sincerely,

Melvena Heisch

Melvena Heisch
Deputy State Historic
Preservation Officer

MH:jr

Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

December 17, 2014

Eric W. Verwers
Fort Worth District Corps of Engineers
PO Box 17i300
Fort Worth, Texas 76102-0300

RE: Proposed waterline, City of Yukon. Legal Description: W ½ Section 19 T12N R5W, Canadian County, Oklahoma.

Dear Mr. Verwers:

A cultural resources report of investigations has been received by this agency on the above referenced project. This agency confirms the recommendations contained in the report. The review was conducted in cooperation with the State Historic Preservation Office, Oklahoma Historical Society.

Please contact this office at (405) 325-7211 if buried archaeological materials such as chipped stone tools, pottery, bone, historic crockery, glass, metal items, or building materials are exposed during construction activities.

In addition to our comment on the cultural resource inventory conducted for this project, under 36CFR Part 800.3 you are reminded of your responsibility to consult with the appropriate Native American tribe/groups for any concerns they may have pertaining to this report.

Sincerely,

Robert L. Brooks
State Archaeologist

:ls

Cc: SHPO

111 E. Chesapeake, Room 102, Norman, Oklahoma 73019-5111 PHONE: (405) 325-7211 FAX: (405) 325-7604
A UNIT OF ARTS AND SCIENCES SERVING THE PEOPLE OF OKLAHOMA

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Dr. Robert L. Brooks
Oklahoma Archaeological Survey
111 E.Chesapeake, Building 134
Norman, Oklahoma 73019-5111

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Dr. Brooks:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

- Construction of a 24" water transmission pipeline, beginning at the confluence of I-40 and Vandament Avenue, extending northwest along the north side of Vandament Avenue for about 0.5 miles, then extending north along the east side of Frisco Road about 0.75 miles, then east along the south side of West Main Street (i.e., US-66), about 0.5 mile.

- Construction of an aboveground water storage tower on a parcel located on the east side of Frisco Road, approximately 0.5 mile south of US-66, in the NW/4 NW/4 SW/4 of Section 19, Township 12 North, Range 5 West.

- Replacement of sanitary sewer lines in the Ranchwood Hills residential addition.

- No historic properties have previously been recorded within the project area.

- A cultural resources survey has been accomplished for this project by Cojeen Archaeological Services LLC and no historic properties were identified (report copy attached).

Given that no historic properties were documented in the past in the project area and our cultural resources survey did not disclose any historic properties within the project area, we determine that this action will not affect any cultural resource properties. Please concur or comment on our determination within 30 days from the date of this letter to allow adequate time for evaluation of your comments.

We sincerely appreciate your cooperation in this matter. For additional information or if you have any questions, please contact Dr. Jay R. Newman, 817-886-1721 or jay.r.newman@us.army.mil

Sincerely

Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Ms. Melvena Heisch
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, Oklahoma 73105-7917

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Ms. Heisch:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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We sincerely appreciate your cooperation in this matter. For additional information or if you have any questions, please contact Dr. Jay R. Newman, 817-886-1721 or jay.r.newman@us.army.mil.

Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Mr. Jason Glidewell
Special Master for the Caddo Nation
516 E. Central Blvd
Anadarko, Oklahoma 73005

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Mr. Glidewell:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Governor Eddie Hamilton
Cheyenne-Arapaho Tribes
100 Red Moon Circle
Concho, Oklahoma 73022

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Governor Hamilton:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Chief Paula Pechonick
Delaware Tribe
170 NE Barbara
Bartlesville, Oklahoma 74006

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Chief Pechonick:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Principal Chief George Tiger
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee, Oklahoma 74447

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Principal Chief Tiger:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Principal Chief Geoffrey Standing Bear
Osage Nation
627 Grandview
Pawhuska, Oklahoma 74056

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Principal Chief Standing Bear:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Chairperson John Berrey
Quapaw Tribe of Oklahoma
P.O. Box 765
Quapaw, Oklahoma 74363

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Chairperson Berrey:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

Chief Leonard Harjo
Seminole Nation
P.O. Box 1498
Wewoka, Oklahoma 74884

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear Chief Harjo:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

December 5, 2014

President Terri Parton
Wichita and Affiliated Tribes
P.O. Box 729
Anadarko, Oklahoma 73005

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, Oklahoma

Dear President Parton:

The U.S. Army Corps of Engineers is soliciting comments on the above-referenced project in Canadian County, Oklahoma. The work associated with this project is contracted to the Triad Design Group for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

Enclosures

Christopher A. Cojeen
Principal Investigator
Cojeen Archaeological Services, LLC

Archaeology
Research
History

Report on the Archeological Survey of the
USACE and City of Yukon Waterline Project
Located in Portions of Section 19 T12N, R5W,
Canadian County, Oklahoma

Land Administration: Private Surface,
City of Yukon and U S Army Corps of Engineers

Project: Yukon Waterline
Client: Triad Design Group
Location: W2 of Section 19 T12N, R5W
USGS Richland, OKLA quadrangle, 7.5-minute series 1972 (revised 1983)
USGS Minco NE, OKLA quadrangle, 7.5-minute series 1966 (revised 1983)

File Search: 9/12/2014
Survey: Christopher Cojeen, Roger Burkhalter, Al Ashley, Parker Melendez and
Aaron Varela, 9/14, 16 and 24/2014
Report: Christopher Cojeen and Roger Burkhalter, 9/30/2014

P.O. Box 1186 | Norman, Oklahoma 73070 | (405) 360-9996 FAX: (405) 366-7020

ABSTRACT

On 9/14, 16 and 24/2014, Cojeen Archaeological Services, LLC (CAS) conducted an archeological study of the City of Yukon in cooperation with the United States Army Corps of Engineers (USACE) proposed Yukon waterline and water storage tower location located in portions of Section 19 T12N, R5W, Canadian County, Oklahoma. The project is located on private lands and involves the crossing of twelve waterways, falling under the review of the U S Army Corps of Engineers (USACE).

According to files at the Oklahoma Archeological Survey (OAS) no previously recorded archeological sites are located within the project study area.

Proposed construction plans include a 100 ft. (30m) wide easement for the waterline placement with an expanded area for a water storage tower location. The proposed pipeline trends east/west along West Main Street (US Highway 66) for approximately 0.5 miles, then trends north/south along West Frisco Road for approximately 0.5 miles before expanding into a larger tract for the proposed water storage tower location. Survey methodology included pedestrian transects augmented by shovel testing within this easement. A total of approximately 46.25 acres of land was studied for this report.

No archeological sites were located in the specific study areas. The project as currently planned will have no effect to significant cultural resources.

DESCRIPTION OF PROJECT

The City of Yukon proposes to construct a new water transmission pipeline, including an elevated water storage tank (Figure 1). Triad Design Group requested CAS to conduct an archeological survey of the project location.

The water pipeline study area begins at an existing line in the NE/NE/NW of Section 19, trends west on the south side of West Main Street to near the intersection with West Frisco Road in the NW/NW/NW of Section 19, then turns to the south along the east side of West Frisco Road, then along a curve along the north side of West Vandament Avenue, ending in the SE/SE/SW of Section 19 T12N, R5W (Figure 1). Survey methodology included pedestrian transects augmented by shovel testing within the easement of the study area. The route was staked prior to CAS survey. All UTM coordinates were recorded in datum NAD83 CONUS, Zone 14S using a WAAS-enabled, Delorme PN-60, offering optimal accuracy of < 3m.

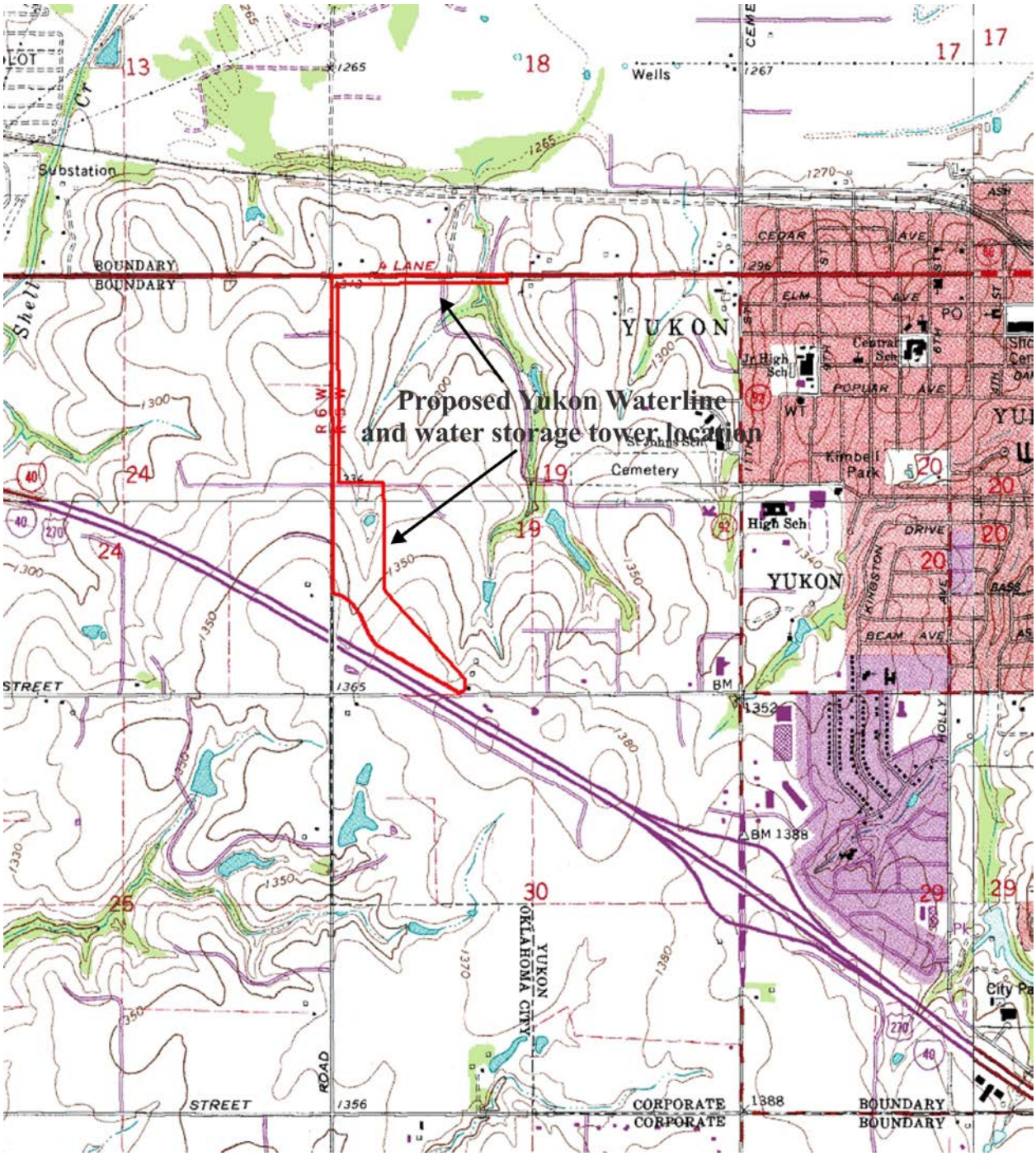

Figure 1. Study area, water crossings indicated by numbers (USGS Richland, OKLA quadrangle, 7.5-minute series 1972 [1983], and USGS Minco NE, OKLA quadrangle, 7.5-minute series 1966 [1983]).

PROJECT LOCATION

The proposed City of Yukon proposed waterline is located in the W/2 of Section 19 T12N, R5W (Figure 1). The project area is located on the western side of the City of Yukon, Oklahoma, and follows existing road and utilities easements. The project is located on private lands amid broad, rolling to desiccated uplands and crosses an unnamed minor tributary of the North Canadian River.

ENVIRONMENTAL SETTING

The study area occupies an uplands environment and crosses an unnamed intermittent drainages to the North Canadian River. This tributary represents the closest natural water sources to the proposed pipeline location. The North Canadian River, located approximately 1 mile north of the project location, is the main geographic feature in the project vicinity. Current impacts noted in the project area include cultivated lands, fence lines, utilities and roads.

The study area is located within the Central Red-Bed Plains Geomorphic Province, an area consisting of "Permian red shales and sandstones form gently rolling hills and broad, flat plains." (Curtis Jr., Ham and Johnson 2008). The mean annual temperature in Canadian County is 58° F, with mean seasonal temperatures as high as 78° F to a low of 36° F. Average precipitation in the county is 24-28 inches annually (Johnson 2008). Elevation in the study area varies from 1,220 ft. AMSL in drainages to 1,230 ft. AMSL in the adjoining ridges.

Vegetation in the study area is associated with the Tallgrass Prairie, which occurs "as small remnants…intergrade[ed] with…mixed grass eroded plains" in Western Oklahoma (Hoagland 2008).

PRE-FIELD RECORDS CHECK/ REVIEW OF PREVIOUS RESEARCH

On 9/12/2014, CAS personnel visited the Oklahoma Archeological Survey (OAS), in Norman, to review information on previously recorded cultural resources in the project vicinity. **OAS files indicate that no cultural resources are recorded in the specific study area of this project.**

According to the most recent listings, no National Register of Historic Places (NRHP) listed properties are located in the specific study area. Additionally, no properties determined eligible by the Oklahoma State Historic Preservation Office (SHPO) but not listed on the NRHP are indicated within the study area (Determinations of Eligibility list, Oklahoma SHPO, 2014).

Early and mid-20th century maps as well as mid to late-20th century and current aerial photographs were examined for structures, trails and roads in the study area. General Land Office (GLO) plat maps of the study area were examined including the 1874 (culture study of 1873) Original Survey of T12N, R5W (Bureau of Land Management 2012a). No structures, trails or roads are located in the specific study area.

The 1936 Oklahoma General Highway and Transportation Map of Canadian County was also examined. No structures are located in the specific study area; roads appear as section-line roads.

Aerial photographs at the Oklahoma Geological Survey, Oklahoma Petroleum Information Center (Norman, Oklahoma) were obtained for the study area. An image taken in 1954 shows the area much as it is today, in a rolling pasture setting above tributary streams. No structures or structural remains are discernible in the specific project study area.

Cultural History

Archeological studies within the general region of the project area have focused on quarry operations, oil and gas exploration and production activities, and recreational activities development. For additional information, a recent cultural background is in Drass and McKay (2006). A general cultural history for the central portion of Oklahoma follows.

Paleoindian Period (8,000-12,000 years before present [ybp])

The initial colonization of North and South America has been categorized as Paleoindian, or "old Indian". In the Southern Plains this period is classically characterized by nomadic bands of hunters using lanceolate points to hunt various species of megafauna and other smaller game. The earliest generally accepted culture is the Clovis or Llano complex. Dating between 12,000-11,000 B.P., this complex is usually associated with the kill sites of mammoth or other now extinct mammals. The Clovis point has been found in association with extinct fauna at sites such as Miami (Sellards 1938) and Lubbock Lake (Sellards 1952; Johnson 1986) in the Texas Panhandle, Domebo in Caddo County, Oklahoma (Leonhardy 1961), and Jake Bluff in Harper County, Oklahoma (Bement and Carter 2005).

The Clovis complex is followed by the Folsom complex which differs from the earlier complex in a number of ways. Sites from this period include bison kills, processing stations, and camps. Tools include bifacial knives, spurred endscrapers, flake gouges, and a variety of compound flake tools in addition to various bone tools and possible points (Bement 1999; Holliday 1997; Hofman 1989). Predominant Folsom-aged sites include the Folsom site, New Mexico (Figgins 1927), Blackwater Draw, New Mexico (Boldurian 1991); Bonfire Shelter, Texas (Dibble and Lorrain 1968); Lipscomb, Texas (Todd et al. 1990); Lindenmeier, Colorado (Wilmsen and Roberts 1978); Waugh, Oklahoma (Hill and Hofman 1997); and Cooper, Harper County, Oklahoma (Bement 1999). Many Folsom points have been reported from Custer, Blaine, and Caddo counties (Hofman 1993).

The Folsom complex is succeeded around 10,000 B.P. by what many researchers refer to as Late Paleoindian complexes (Hofman 1989: 38; Thurmond 1990:14-20). Sites from this period include bison kills and camps. The subsistence resources of Late Paleoindian peoples includes now extinct forms of bison, however plant and smaller animal resources increased in importance in their economies. The Late Paleoindian components are typified by a variety of unfluted point styles which exhibit parallel flaking patterns such as Plainview, Scottsbluff and Milnesand which Drass and Turner attribute to the Plano complex (1989:18). Thurmond adds Agate Basin, Angostura, Dalton, Eden, Golondrina, Hell Gap, Meserve and San Patrice point styles to the list of Late Paleoindian

points which have been observed in association with Plainview points at various sites on the Southern Plains (1990:20).

Archaic Period (2,000-8,000ybp)

Archaic Period groups on the Southern Plains are characterized by diffuse foraging economies. Grinding equipment for the processing of vegetal foods, rock-lined hearths and ovens, restricted and scheduled movement patterns, and a variety of notched and stemmed projectile points and knives serve to differentiate the Archaic from the Paleoindian traditions (Hofman 1989). The Archaic period is subdivided into Early Archaic (8000-5000 B.P.), Middle Archaic (5000-3000 B.P.), and Late Archaic (3000-2000 B.P.). Although the Archaic Period spans some 6,000 years, very little is known about Early and Middle Archaic inhabitants on the Southern Plains (Bement and Buehler 2000; Hofman 1989). The Gore Pit site (34CM131) near Lawton is the best documented Early Archaic site near the study area. This site is an open camp with burned rock, shell middens, hearths, and burials with side and corner-notched dart points, grinding basins, gouges, and knives dated to about 4,050 B.C. (Hammatt 1976).

The Middle Archaic is represented by the Calf Creek horizon (Wyckoff, Neal and Duncan 1994; Bartlett 1999). Powell (1995) described a large Calf Creek point collection from Caddo County and a Calf Creek camp has been recorded on a high upland setting also in Caddo County (Duncan 1995).

Late Archaic sites are better represented from western Oklahoma although information on complexes is poorly understood. Numerous camps, shelters, bison kill sites, and lithic quarries or workshops are located in western Oklahoma. Bison appear to be more abundant as a result of improved short grass range conditions brought on by wetter conditions and thus are a more predictable resource during this period.

Plains Woodland (900-2,000ybp)

Vehik (1984) notes the transition from Late Archaic to Plains Woodland is based on a change in food storage technology (pottery) and weaponry (bow and arrow). Settlement and subsistence patterns do not seem to have been drastically altered and technology advances are seen as an addition to the typical Late Archaic toolkit rather than a replacement.

The Plains Woodland sites in west-central Oklahoma are possibly more common that earlier occupations but are poorly documented and difficult to distinguish from Late Archaic sites. Sites have been recorded from this period in Blaine County by Bartlett (1999). Sites from this period tend to be small camps and workshops with little evidence for larger base camps.

Plains Village Tradition (500-900ybp)

An expanding population, increasing numbers of permanent or repeatedly occupied settlements, and the expansion of farming are iconic of the transition from the Plains Woodland Period into the Plains Village Period. Small villages previously established on floodplains of major watercourses become more intensively and more permanently occupied (Wyckoff et al. 1983; Drass and Turner 1989). Though subsidized by gathering wild plants and hunting medium-sized and large game such as deer and bison, horticultural practices became more diverse and associated implements abound in

archeological inventories. Cultigens such as corn, beans, and squash were processed and stored in ceramic containers or mass-stored along with hunting and cultivation equipment and other household item, in ubiquitous, large, subterranean storage pits.

Artifacts generated by Plains Villagers include plain and cord-marked globular pots, chipped and ground stone tools, un-notched and side-notched arrow points, and bone or stone horticultural implements (Brooks 1987; Drass and Moore 1987; Drass et al. 1987; Drass 1988). Interregional exchange continues to expand during the Plains Village Period. A wide range of pottery designs and manufacturing techniques, an increased variation in the chipped stone resources used, as well as the importation of pipestone and turquoise, indicates that Oklahoma Plains Villagers were interacting intensely with groups from the southwest, southeast, and north-central portions of the United States (McKay and Bement 2005:16).

Five archeological complexes are currently recognized in western Oklahoma: Custer phase, Turkey Creek phase, Antelope Creek phase, Odessa phase and Zimms complex (Drass 1998). Of these, the study area falls within the area of the Custer and the younger Turkey Creek phases. These phases have similar artifact assemblages with Turkey Creek sites showing a higher percentage of smoothed ceramics with a larger variety of temper and larger site areas.

Protohistoric Period (200-500ybp)

Until European trade avenues were fully opened, little was documented concerning the indigenous peoples of the Southern Plains. Poorly detailed journals of the Spanish Conquistadors indicate that only three incursions were made into the region prior to 500 B.P. Because of contact with Europeans and the pressures associated with colonial expansion, tremendous alterations in native lifestyles occurred. During the Protohistoric Period in Oklahoma, two indigenous cultural manifestations, coined the Edwards complex and the Wheeler complex, develop along the Washita and Canadian rivers. Artifacts associated with the Edwards complex include plain-surface, sand tempered pottery along with imported wares from the southwestern and southeastern United States. Also, small, triangular, side- and basally-notched and un-notched points, and a predominance of bison bones with a few bison bone tools are evident in archeological assemblages (Hofman 1984; Hofman et al. 1989).

The Wheeler Complex exhibits greater numbers of interregional and European trade goods within artifact inventories than the Edwards complex. Villages are quite large and possess what have been interpreted as defensive earthworks (Drass and Turner 1989). Heavy dependence upon bison hunting is evident in the artifact assemblages, though the significant presence of scapula hoes indicates that horticulture was still an extremely important subsistence strategy (Hofman 1984).

Historic Period (0-200ybp)

The historic period in Oklahoma begins when the region was integrated into the United States after the Louisiana Purchase of 1803. By 200 B.P., the Kiowa, Kiowa-Apache, and Cheyenne are documented moving into the southern Great Plains and slowly integrating with Comanche groups. Along with the Wichita, these groups dominated the Texas panhandle region and western Oklahoma

until the arrival of white buffalo hunters and settlers in the early to mid-1800's (Drass and Turner 1989).

Immediately after the Adams-Onis Treaty of 1819 established the boundary between New Spain and the United States, the area to become Indian Territory was set up. In 1820, the Treaty of Doak's Stand was signed between the United States and the Choctaw, calling for their removal to the west; the 1830 Treaty of Dancing Rabbit Creek ensured the tribe's removal. The Treaty of Doaksville in 1837 established terms for the Chickasaw removal to Indian Territory; and, by 1840, most of the tribe had been relocated west of the Choctaw. Because of the continuing raids by Indians hostile to the Chickasaw, Fort Washita was established in 1842 to protect the new inhabitants from raids by the evicted Wichita and Comanche tribes. In 1867, the Treaty of Medicine Lodge assigned southern Plains tribes (including the Wichita and Caddo Nations) to reservation lands formerly owned by the Choctaws and Chickasaws. In 1869 the Cheyenne and Arapaho Reservation was established.

In 1870 the Cheyenne-Arapaho Agency was established on the North Canadian River, later named the Darlington Agency for the first Indian agent, Brinton Darlington (Hedglen 2007). Conflict between Native Americans and cattlemen led to the opening of Fort Reno in 1874. Canadian County was settled by non-Indian settlers through three land openings which occurred in 1889, 1892, and 1901. The Organic Act of 1890 designated the county as County Four of the Oklahoma Territory. County Four consisted of the eastern half of present day Canadian County (Hedglen 2007). In 1892 the surplus Cheyenne-Arapaho lands were opened to non-Indian settlement, and the western half of Canadian County was appended to County Four at that time. The southwestern portion of the present county was added after the 1901 land lottery (Hedglen 2007).

Canadian County was settled by non-Indian settlers through three land openings which occurred in 1889, 1892, and 1901. After the Land Run of 1889, El Reno was established on the southern bank of the North Canadian River, while Reno City rose on the north shore. The Organic Act of 1890, creating Oklahoma Territory, designated the county as County Four, which consisted of the eastern half of present Canadian County. In 1892 the surplus Cheyenne-Arapaho lands were opened to non-Indian settlement, and the western half of Canadian County was appended at that time. The southwestern portion of the present county was added after the 1901 land lottery. In local elections the first residents chose El Reno, over Reno City, Frisco, and Canadian City, as the county seat, and Canadian, after the Canadian River, was selected for the county name (Hedglen 2007).

The nearest town to the study area is Yukon, founded by A. N. Spencer in 1891 (Shirk 1974). Associated with the Choctaw, Oklahoma and Gulf Railway, Spencer made an agreement with Minnie Taylor and Luther S. Morrison to plat a townsite and lay the train tracks through the town in exchange for half the lots. Taylor and Morrison, who had homesteaded the lands in 1889, deeded the land to Spencer, who then platted it before deeding half of the lots back to Taylor and Morrison. According to the BLM, Native American Tribes/Groups associated with Canadian County include the Apache, Wichita & Affiliated, Creek, Seminole, and Cheyenne & Arapaho (Bureau of Land Management 2012b).

SURVEY METHODS

The purpose of this investigation was to locate any cultural resources along the defined impact area of the project, and to provide sufficient detail for the protection and management of such resources. By strict definition, cultural resources are any evidence of human use or occupation without any age limitations, but for this project, the term was restricted to cultural remains that were at least 45 years in age.

The pedestrian survey was conducted to document the surface expression of any cultural resources located in the proposed pipeline route and water storage tank area. Pedestrian transects of no more than 50 ft. spacing, augmented by shovel tests in areas of low visibility, were utilized as survey methodology. Shovel tests were dug to a depth of 40-50 cmbs, screened through 1/4-inch hardware cloth, and backfilled. A total of 46.25 acres were surveyed by pedestrian means.

The water pipeline route and water storage tower location are located on private lands. The survey area fell adjacent to existing buried and overhead utilities easements and is bounded on one side by existing improved roadways with drainage ditches present. The north end of the proposed waterline crosses the entry to a housing edition and has a maintained lawn west of the unnamed drainage stream. The remaining northern half of the project area is in a hay meadow. The water storage tower location is located in an area formerly overgrown with eastern red-cedar trees, which were actively being removed by the landowner at the time of the original survey. For safety reasons, a second visit to this area was made after tree removal.

CULTURAL RESOURCE FINDINGS AND DETERMINATION OF EFFECT

The study area occupies an uplands environment overlooking an unnamed drainage. Surface visibility was low to moderate (averaging 40% overall), with sparse to dense medium height grasses and an area of moderate wooded growth obscuring the ground surface. Soils ranged from thin and rocky, with abundant sandstone clasts, to moderately deep alluvial soils along drainages. The survey was performed on dry, mostly sunny day with no impediments to survey due to weather conditions.

No cultural resources were located in the study area.

Photo 1. View to the southeast towards the southern end of the project area.

Photo 2. Tree removal in the area of the water storage tower location, view to the north.

Photo 3. View to the west of the northern portion of the study area.

RECOMMENDATIONS

The proposed City of Yukon waterline and water storage tower location project as currently planned will have no effect on cultural resources.

This report is subject to the approval of the State and USACE archeologists.

Christopher Cojeen
Principal Investigator

copies:

Triad Design Group
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Attention: Diane Abernathy

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Appendix C
Hazardous Waste Study Documentation

INITIAL SITE ASSESSMENT
24" WATER TRANSMISSION PIPELINE AND STORAGE TANK FACILITY; SANITARY SEWER REPLACEMENT YUKON, OKLAHOMA

Prepared for:
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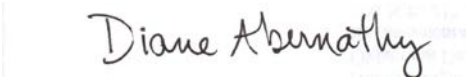

Diane Abernathy, P. E.

December 2014

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24" WATER TRANSMISSION PIPELINE AND STORAGE FACILITY; SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA
DECEMBER 2014

1.0 INVESTIGATIVE SUMMARY

1.1 OVERVIEW

At the request of the City of Yukon, Triad Design Group (Triad) has performed an Initial Site Assessment (ISA) for a utility improvement project. The purpose of the ISA was to identify hazardous and potentially hazardous waste related problems within and adjacent to existing and proposed right-of-way for the project.

1.2 PROJECT DESCRIPTION

The proposed project is the construction of approximately 1.75 miles of 24" water transmission pipeline and a water storage tank facility for the City of Yukon, Oklahoma.

The water pipeline project begins at the confluence of I-40 and Vandament Avenue, extends northwest along the north side of Vandament Avenue for about 0.5 miles, then extends north along the east side of Frisco Road about 0.75 miles, then east along the south side of West Main Street (i.e., US-66), about 0.5 mile. The location of the proposed aboveground water storage tower is on the east side of Frisco Road, approximately 0.5 mile south of US-66, in the NW/4 NW/4 SW/4 of Section 19, Township 12 North, Range 5 West. **Figure 1** presents the water pipeline project location.

The water pipeline project study area is presented in **Figure 2**. The study area is located in the West ½ of Section 19, Township 12 North, Range 5 West, and the coordinates of the study area centroid are 35.499093 N, -97.775597 W (GCS NAD83).

1.3 SUMMARY OF FINDINGS

- Land use within the Study Area includes undeveloped grassland and farmlands along Frisco Road, and residential at the south end of Frisco as well as along Main Street at the eastern end of the Study Area.
- Underground utilities noted within the Study Area include a natural gas pipeline east of Frisco Road, a City of Yukon sanitary sewer and fire hydrants south of Main Street, and overhead electric lines in several locations. Pole-mounted advertising billboards are located along the north side of Vandament Avenue.
- One (1) domestic water well is located within or in close proximity to the Study Area.

- Oil and gas wells in or near the Study Area include an active gas well located approximately 1/8 mile northwest of the Study Area, an inactive oil well approximately ¼ mile southwest of the Study Area, and two (2) plugged and abandoned wells located within the Study Area.
- Miscellaneous household solid waste has been disposed in the grassland east of Frisco Road; however, no liquid containers or other indications of hazardous materials were observed.

1.4 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the Study Area observations and review of information gathered for this ISA, the following recognized environmental conditions were noted within the Study Area:

- Miscellaneous household solid waste has been disposed in the grassland east of Frisco Road; however, no liquid containers or other indications of hazardous materials were observed.

2.0 INVESTIGATION METHODS

2.1 STUDY AREA DESCRIPTION

For the purposes of this ISA, a Study Area was established that encompasses the proposed new interchange and associated improvements. **Figure 2** presents the environmental Study Area. The study area footprint encompassed The Study Area utilized for evaluation of the water pipeline project encompassed approximately 48 acres, extending east/west along Main Street for approximately 0.5 miles, then north/south along Frisco Road for approximately 0.5 miles, and then along Vandament Avenue for approximately 1,500 feet. The Study Area width was 100' south from the Main Street center line, 100' east of the Frisco Road centerline, then extended to 660' east of Frisco Road for 1,400 feet before widening to 555 feet northeast of Vandament Avenue.

2.2 DETAILED SCOPE OF SERVICES

2.2.1 Records Review

The following records were reviewed and are referenced in Section 3 of this report:

- Physical Setting: Records reviewed to determine the Study Area physical setting included United States Geological Survey (USGS) 7.5 Minute Topographic Maps, the USGS Hydrologic Atlas, and the United States Department of Agriculture Soil Survey for Canadian County.
- Environmental Database Records: Environmental Data Resources Inc. (EDR) performed a search of available environmental records for the Study Area, and provided the findings in a report. **Table 1** lists the environmental databases reviewed for the EDR report.
- Historical Uses: Historical aerial photographs from 1970, 1984, 1995, and 2010 were obtained from EDR and used to assess the historical land uses of the Study Area.
- Oil and Gas Well Information: The EDR report was reviewed to assess oil and gas activities in the Study Area.

2.2.2 Site Reconnaissance

A Triad employee conducted the site reconnaissance, which consisted of a site visit to observe the Study Area in order to identify hazardous or potentially hazardous waste related problems. The results of the site reconnaissance activity are presented in Section 3.3 of this report.

2.3 REPORT FORMAT

Section 1.0 of this report is a brief summary of the ISA findings and recommendations, Section 2.0 explains the ISA methods, Section 3.0 provides the detailed ISA findings, and Section 4.0 is a list of references relied upon for this ISA. Tables, Figures, and Appendix materials are placed at the end of the report.

2.4 REPORT LIMITATIONS LANGUAGE

To prepare this ISA, Triad conducted a visit to the Study Area and obtained and reviewed records and record searches provided by commercial vendors and government agencies. Triad has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information.

All sources of information on which Triad has relied in making its conclusions are identified in Section 4.0 of this report. Any information, regardless of source, not listed therein has not been evaluated or relied upon by Triad in the context of this report. The conclusions, therefore, represent Triad's professional opinion based solely and exclusively on visual observations and the sources of information identified in Section 4.0.

Opinions and recommendations presented in this report apply only to site conditions and features as they existed at the time Triad's site visit. The opinions and recommendations presented in this report cannot be applied to conditions and features of which Triad is unaware and has not had the opportunity to evaluate.

This ISA was conducted on behalf of the City of Yukon and is intended for Yukon's sole use. Any other person or entity obtaining, using, or relying on this report hereby acknowledges that they do so at their own risk, and that Triad shall have no responsibility or liability for the consequences thereof. This report is intended to be used in its entirety, taking or using in any way excerpts from this report are not permitted because, when taken out of context, such excerpts run the risk of being misinterpreted and are not representative of its findings; therefore, any party doing so does so at its own risk.

3.0 INVESTIGATIVE NARRATIVE

3.1 STUDY AREA DESCRIPTION

3.1.1 Location and Legal Description

The Study Area, presented in **Figure 2**, is located in the West ½ of Section 19, Township 12 North, Range 5 West, and the coordinates of the study area centroid are 35.499093 N, -97.775597 W (GCS NAD83). The Study Area utilized for evaluation of the water pipeline project encompassed approximately 48 acres, extending east/west along Main Street for approximately 0.5 miles, then north/south along Frisco Road for approximately 0.5 miles, and then along Vandament Avenue for approximately 1,500 feet. The Study Area width was 100' south from the Main Street center line, 100' east of the Frisco Road centerline, then extended to 660' east of Frisco Road for 1,400 feet before widening to 555 feet northeast of Vandament Avenue.

3.1.2 Land Use

The Study Area is located within the city limits of Yukon. Land use within the Study Area includes undeveloped grassland and farmlands along Frisco Road, and residential at the south end of Frisco as well as along Main Street at the eastern end of the Study Area.

3.1.3 Physical Setting Information

The physical setting of the Study Area can be addressed in terms of topography, surface water, groundwater, and geology, as follows:

Topography: Based upon review of the USGS 7.5 Richland and Minco NE Quadrangle Maps and a site visit, the Study Area generally slopes from the southwest to the north east, with elevation changes of 1,350 to 1,300 feet above mean sea level. A small farm pond is located in the center of the Study Area.

Surface Water: General surface water flow is northward toward an unnamed, northerly-draining creek.

Groundwater: According to the Hydrologic Atlas #4, Reconnaissance of the Water Resources of the Oklahoma City Quadrangle, Central Oklahoma, the Study Area is underlain by the Permian-aged Duncan Sandstone. Reported wells in the area range in total depth from 19 to 54 feet, the associated depths to water range from 15 to 34 feet, and yields are less than 25 gallons per minute.

According to Oklahoma Water Resources Board (OWRB) water well records information and the EDR database, one (1) domestic water well was identified within or in close proximity to the Study Area. This well is listed in **Table 2**.

Geology: Dominant soil types in the Study Area are the Nash-Ironmound complex and Norge silt loam.

3.2 RECORDS REVIEW

3.2.1 Environmental Records

EDR conducts reviews of available environmental records for known hazardous waste management sites, aboveground or underground storage tank sites, and similar potentially-impacted sites identified in the Project Study Area. Based on a review of the Federal and State environmental databases listed in **Table 1**, the EDR database report obtained for this project identified no sites reported by those databases within one mile of the Study Area. The EDR database report also noted several orphan sites but, based upon subsequent field reconnaissance, none of these sites are located within the Study Area. A copy of the EDR report is included as **Appendix A**.

3.2.2 Historical Aerial Photographs

Aerial photographs from the years 1954, 1964, 1970, 1981, 1995, 2005, and 2010 were obtained from EDR for review of the Study Area. These photographs were reviewed and compared for changes in the Study Area over time. Comparison of the photographs provides some information about the age of certain features noted within the Study Area:

- The 1954 and 1964 aerial photographs predate the construction of I-40 and Vandament Avenue. The farmstead currently located just southwest of the Study Area is visible in both of these photographs.

- In the 1970 aerial photograph, both I-40 and Vandament Avenue are visible.

- In the 1981, 1995, and 2005 aerial photographs, scattered oil and gas wells are noted. Also, the residential neighborhood northeast of the Study Area appears.

- Conditions in the 2010 aerial photograph are very similar to present conditions.

The aerial photographs for the Study Area are included in **Appendix B**.

3.2.3 Oil and Gas Well Records

Review of the EDR oil and gas well report indicated an active gas well located approximately 1/8 mile northwest of the Study Area, and an inactive oil well approximately ¼ mile southwest of the Study

Area. Additionally, the Oklahoma Corporation Commission reports two (2) plugged and abandoned wells located within the Study Area. These wells are summarized in **Table 2**.

3.3 SITE RECONNAISSANCE

The site reconnaissance was conducted by Diane Abernathy of Triad on 09/16/14, and consisted of a visual inspection, accompanied by notes and photographs. The site photographs are included as **Appendix C**.

Miscellaneous household solid waste has been disposed in the grassland east of Frisco Road; however, no liquid containers or other indications of hazardous materials were observed.

Underground utilities noted within the Study Area include a natural gas pipeline east of Frisco Road, a City of Yukon sanitary sewer and fire hydrants south of Main Street, and overhead electric lines in several locations. Pole-mounted advertising billboards are located along the north side of Vandament Avenue.

Figure 2 indicates the site reconnaissance observations.

3.4 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based upon the site visit and a review of available environmental records, the only recognized environmental condition noted within the Study Area was miscellaneous household solid waste disposed in the grassland east of Frisco Road. However, no indications of hazardous materials were observed in the area.

Table 3 summarizes the recognized environmental conditions.

4.0 REFERENCES

Environmental Data Resources, Inc., Milford, CT. The *EDR Radius Map™ Report with GeoCheck®*. September 12, 2014.

Environmental Data Resources, Inc., Milford, CT. The *EDR Aerial Photo Decade Package®*. December 30, 2014.

Oklahoma Geological Survey, The University of Oklahoma, Norman, Oklahoma. *Hydrologic Atlas #4, Reconnaissance of the Water Resources of the Oklahoma City Quadrangle, Central Oklahoma.* 1991.

Oklahoma Water Resources Board. *Water Well Record Search* searchable database, December 2014. http://www.owrb.state.ok.us.

U.S. Department of Agriculture Soil Conservation Service, 2013, *Soil Survey Geographic Database (SSURGO), Canadian County, Oklahoma,* U.S. Department of Agriculture (USDA).

U.S. Geological Survey, Washington, D.C. *Richland and Minco NE 7.5 Minute Quadrangle*s.

TABLES

TABLE 1
List of Government Records and Databases Searched
Water Transmission Pipeline and Storage Tank Facility, Yukon, Canadian County, Oklahoma

Database (abbreviation)	Database (Detailed Name)
NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA Treatment, Storage, and Disposal
RCRA-LQG	RCRA Large Quantity Generators
RCRA-SQG	RCRA Small Quantity Generators
RCRA CESQG	RCRA Conditionally Exempt Small Quantity Generators
RCRA NonGen / NLR	RCRA – Non Generators
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records of Decision
UMTRA	Uranium Mill Tailings Sites
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/TSCA Tracking System – FIFRA/TSCA
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System

TABLE 1
List of Government Records and Databases Searched
Water Transmission Pipeline and Storage Tank Facility, Yukon, Canadian County, Oklahoma

Database (abbreviation)	Database (Detailed Name)
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US HIST CDL	National Clandestine Laboratory Register
PCB TRANSFORMER	PCB Transformer Registration Database
FEDERAL FACILITY	Federal Facility Site Information Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List
COAL ASH DOE	Steam-Electric Plant Operation Data
FEMA UST	Underground Storage Tank Listing
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
SHWS	The Land Report
SWF/LF	Permitted Solid Waste Disposal & Processing Facilities
UIC	Underground Injection Wells Database Listing
SWRCY	Recycling Facilities
LUST	Leaking Underground Storage Tank List
UST	Underground Storage Tank Listing
HIST UST	Underground Storage Tank List, List II Version
Financial Assurance	Financial Assurance Information Listing
AST	Aboveground Storage Tanks
INST CONTROL	Institutional Control Sites
VCP	Voluntary Cleanup Site Inventory
DRYCLEANERS	Drycleaner Facility Listing
BROWNFIELDS	Brownfield Sites
AIRS	Permitted AIRS Facility Listing
TIER 2	Tier 2 Data Listing
OK COMPLAINT	Oklahoma Complaint System Database
INDIAN RESERV	Indian Reservations
INDIAN ODI	Report of the Status of Open Dumps on Indian Lands
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land

TABLE 1
List of Government Records and Databases Searched
Water Transmission Pipeline and Storage Tank Facility, Yukon, Canadian County, Oklahoma

Database (abbreviation)	Database (Detailed Name)
INDIAN UST	Underground Storage Tanks on Indian Land
INDIAN VCP	Voluntary Cleanup Priority Listing
EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners
RGA HWS	Recovered Government Archive Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

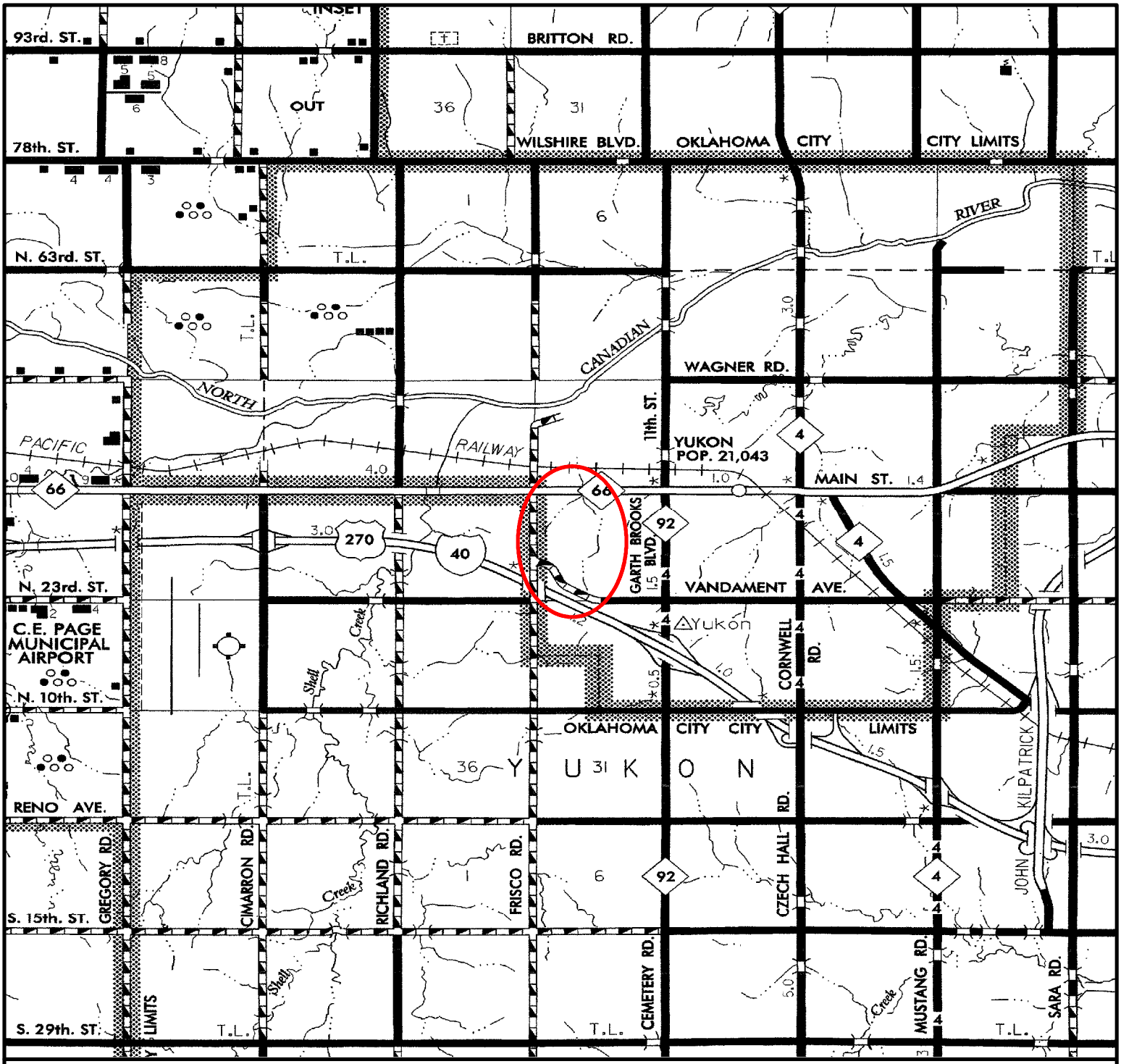
TABLE 2
List of Wells
Water Transmission Pipeline and Storage Tank Facility, Yukon, Canadian County, Oklahoma

Well Owner / Operator / Well Name	Well Type	Well Location	Well Depth (feet)
John Evans	Domestic Water	SWSWNW, 19-12N-5W	120
Mermac Operating Company Inc.	Oil (closed)	NESE, 24-12N-6W	9,490
Prime Operating Company	Gas (open)	NWNENE, 24-12N-6W	Unknown
Mesa 19-1	Oil or Gas (Plugged)	NESWSW, 19-12N-5W	Unknown
Lamb 19-1	Oil or Gas (Plugged)	SWSWSW, 19-12N-5W	Unknown

TABLE 3
List of Recognized Environmental Conditions
Water Transmission Pipeline and Storage Tank Facility, Yukon, Canadian County, Oklahoma

Recognized Environmental Condition	Location
Miscellaneous Disposed Household Waste	Grasslands, East of Frisco Road

FIGURES



Project Location

N

0 3,000 6,000 9,000

Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

LOCATION MAP

DOCUMENT TITLE

INITIAL SITE ASSESSMENT - YUKON WATERLINE/TOWER

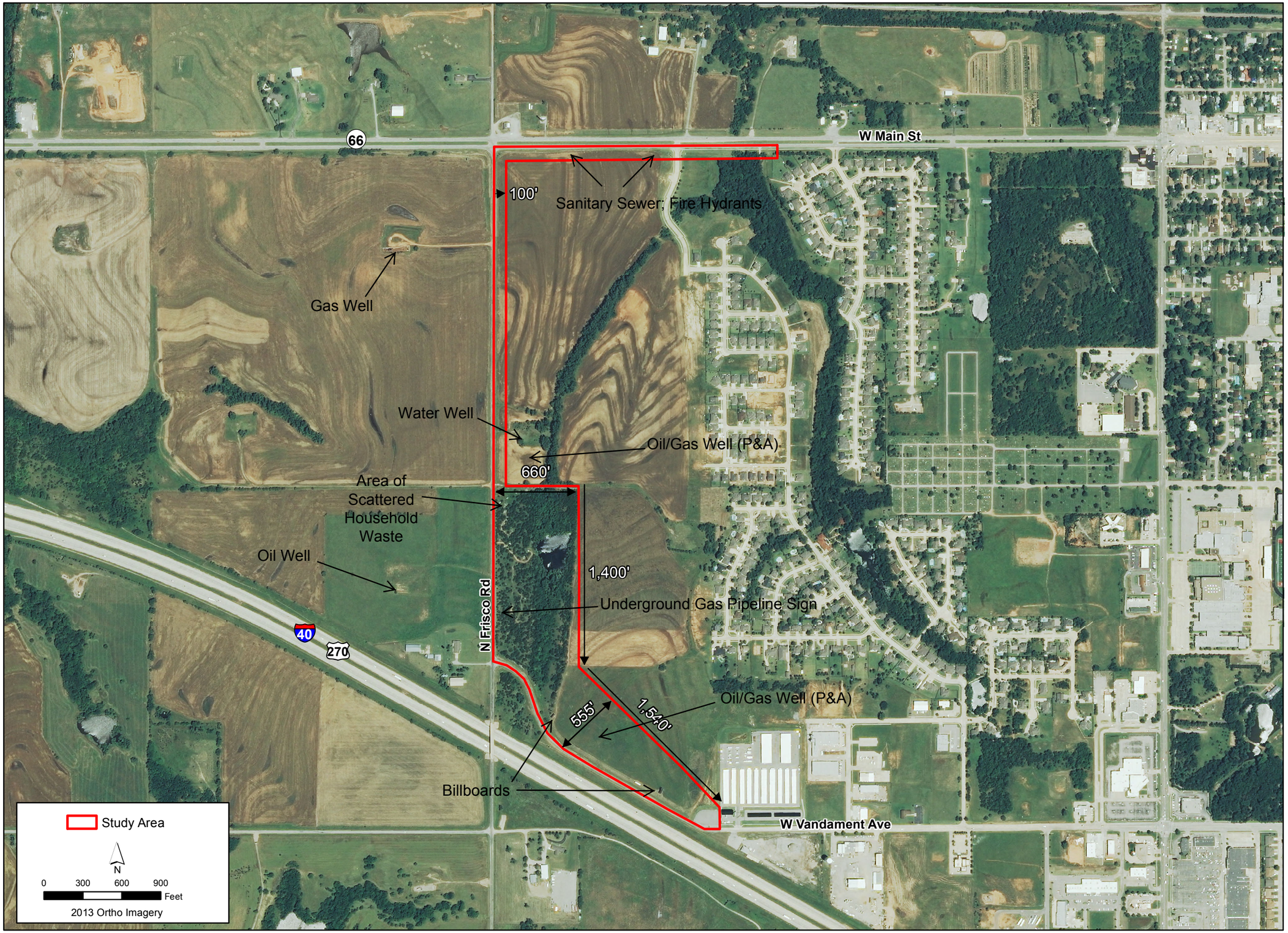
CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
1	



TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE
PROJECT STUDY AREA AND SITE RECONNAISSANCE OBSERVATIONS

DOCUMENT TITLE
INITIAL SITE ASSESSMENT

CLIENT
CITY OF YUKON

LOCATION
CANADIAN COUNTY, OKLAHOMA

DATE	09/02/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
2

APPENDICES

Appendix A

EDR Radius Map™ Report with GeoCheck®, July 11, 2014

Yukon Water Project
Frisco Road
Yukon, OK 73099

Inquiry Number: 4064280.2s
September 12, 2014

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

FRISCO ROAD
YUKON, OK 73099

COORDINATES

Latitude (North):	35.5008000 - 35° 30' 2.88''
Longitude (West):	97.7762000 - 97° 46' 34.32''
Universal Tranverse Mercator:	Zone 14
UTM X (Meters):	610994.5
UTM Y (Meters):	3929071.5
Elevation:	1319 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35097-E7 RICHLAND, OK
Most Recent Revision:	1983
South Map:	35097-D7 MINCO NE, OK
Most Recent Revision:	1983

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20100505
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls
LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS ---------- The Land Report

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Permitted Solid Waste Disposal & Processing Facilities

State and tribal leaking storage tank lists

LUST ---------- Leaking Underground Storage Tank List
LAST ---------- Leaking Aboveground Storage Tanks List
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ---------- Underground Storage Tank Listing

AST ---------- Aboveground Storage Tanks
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Institutional Control Sites

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Site Inventory
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfield Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ---------- Recycling Facilities
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
US HIST CDL ---------- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

HIST UST ---------- Underground Storage Tank List, List II Version

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
OK COMPLAINT ---------- Oklahoma Complaint System Database

Other Ascertainable Records

RCRA NonGen / NLR ---------- RCRA - Non Generators / No Longer Regulated
DOT OPS ---------- Incident and Accident Data
DOD ---------- Department of Defense Sites
FUDS ---------- Formerly Used Defense Sites

EXECUTIVE SUMMARY

CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
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2020 COR ACTION	2020 Corrective Action Program List
LEAD SMELTERS	Lead Smelter Sites
PRP	Potentially Responsible Parties
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
Financial Assurance	Financial Assurance Information Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
EPA WATCH LIST	EPA WATCH LIST

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

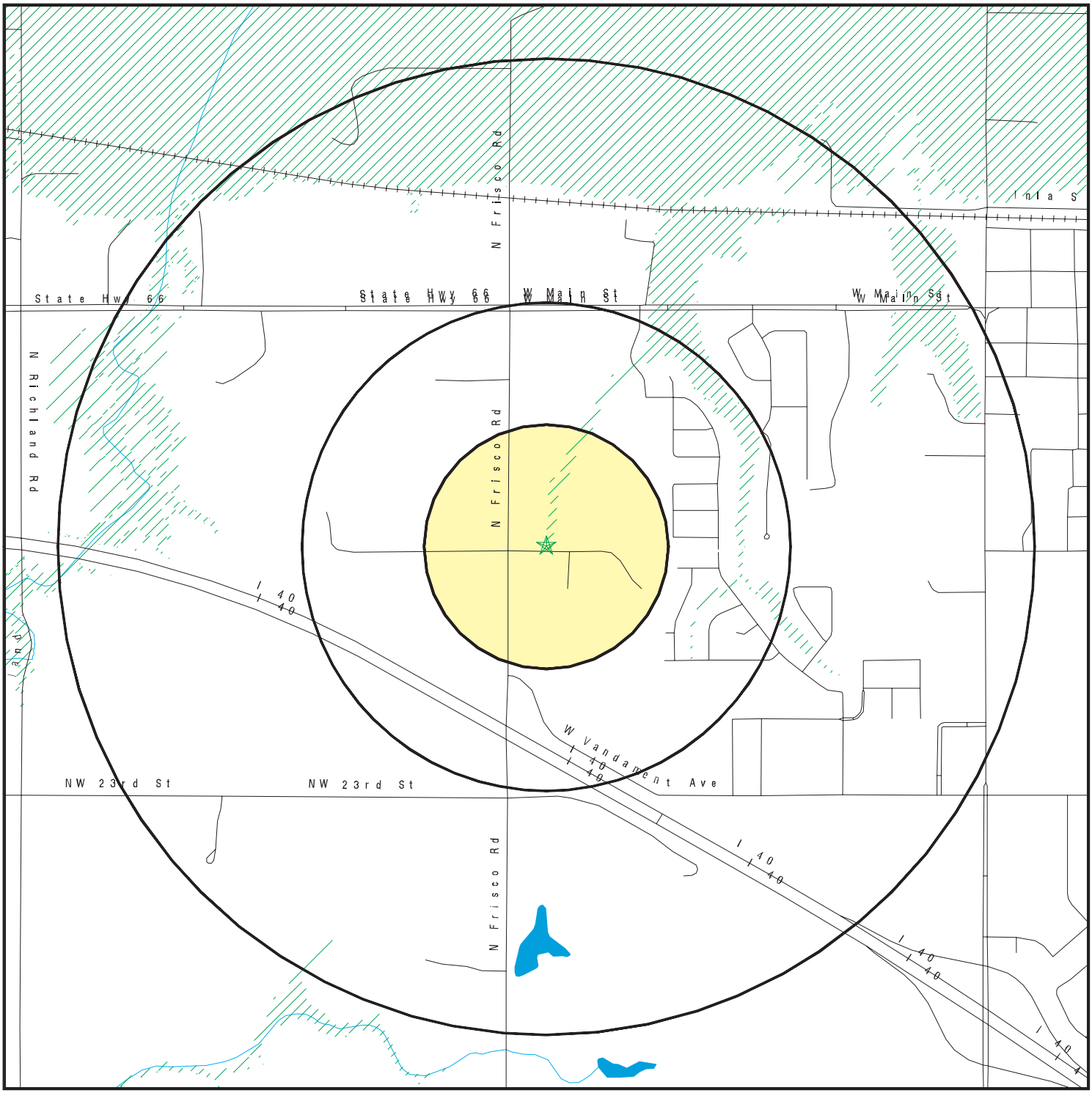
Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
VERIZON WIRELESS/YUKON WT	US AIRS
SPRINT WASTE DISPOSAL COMPANY SLUD	SWF/LF
TOWN OF CALUMET DISPOSAL SITE	SWF/LF
CITY OF YUKON LANDFILL	SWF/LF
CITY OF EL RENO LANDFILL	SWF/LF
OEMA MEDICAL WASTE PROCESSING FACI	SWF/LF
ROBERT BOYD SOLID WASTE DISPOSAL S	SWF/LF
SCHWEITZER LIME SLUDGE DISPOSAL FA	SWF/LF
CITY OF MUSTANG DISPOSAL SITE	SWF/LF
UNION PACIFIC YUKON	VCP
7-ELEVEN #71	UST
SWBT R61961 YUKON R	AST
KERRVILLE/ODOT BRIDGE	RCRA NonGen / NLR
DCP MIDSTREAM LP/YUKON WEST STA	FINDS
DCP MIDSTREAM LP/YUKON BOOSTER	FINDS
PROJECT BPMY-NBIP(392)3B BRIDGES B	FINDS
VERIZON WIRELESS/YUKON WT	FINDS
CIMAREX ENERGY OF COLORADO - OK YU	TIER 2
CIMAREX ENERGY OF COLORADO - OK YU	TIER 2
YUKON WT	AIRS

overview MAP - 4064280.2s

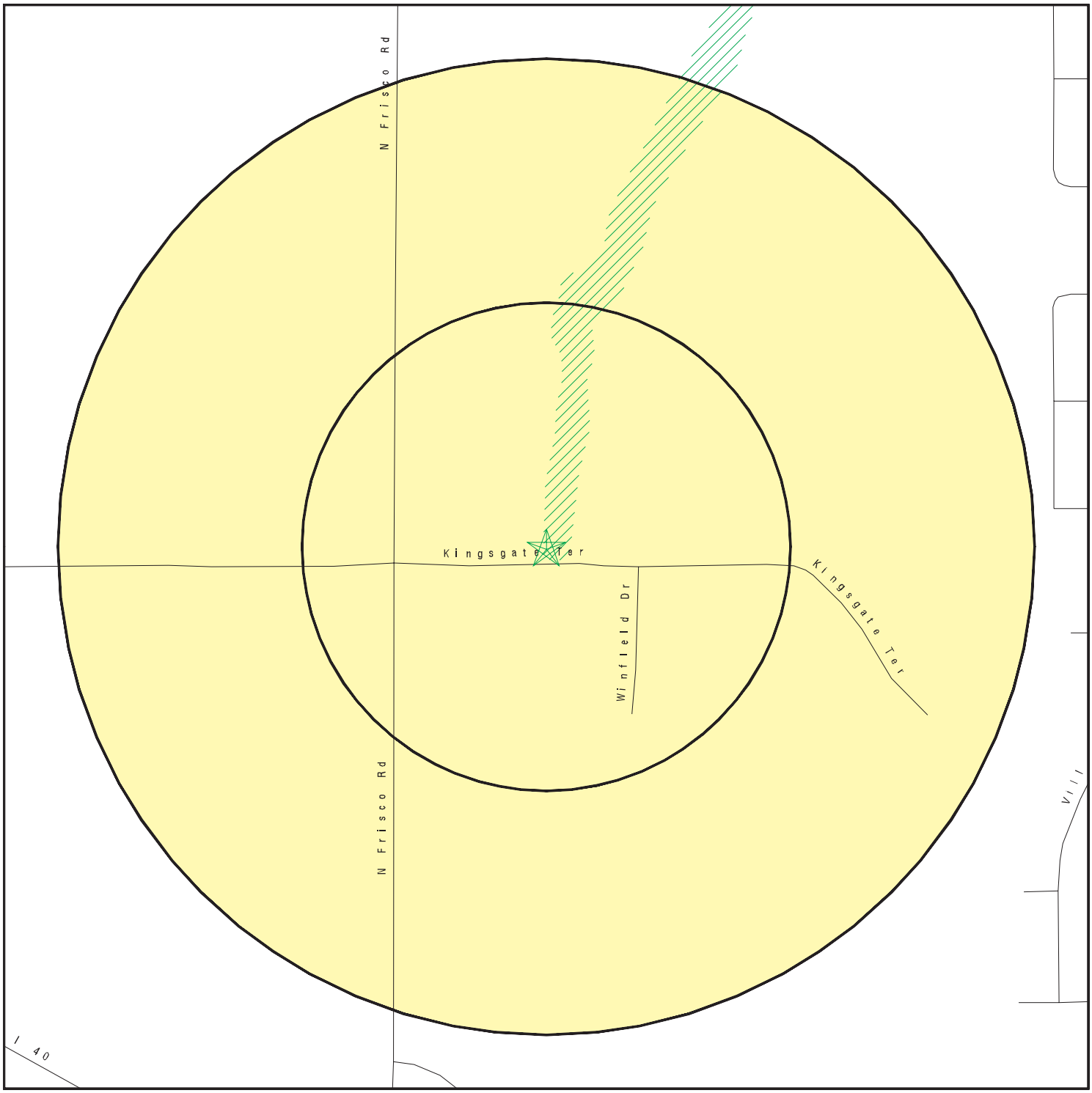


- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Yukon Water Project	CLIENT: Triad Design Group
ADDRESS: Frisco Road Yukon OK 73099	CONTACT: Diane Abernathy
LAT/LONG: 35.5008 / 97.7762	INQUIRY #: 4064280.2s DATE: September 12, 2014 5:14 pm

detail MAP - 4064280.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Yukon Water Project	CLIENT: Triad Design Group
ADDRESS: Frisco Road	CONTACT: Diane Abernathy
Yukon OK 73099	INQUIRY #: 4064280.2s
LAT/LONG: 35.5008 / 97.7762	DATE: September 12, 2014 5:16 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
HIST UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
OK COMPLAINT	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

NO SITES FOUND

Count: 20 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CANADIAN COUNTY	S106496424	SPRINT WASTE DISPOSAL COMPANY SLUD	SW CORNER OF S10 T14N R5W(NE C		SWF/LF
CANADIAN COUNTY	S107030505	TOWN OF CALUMET DISPOSAL SITE	NW CORNER, LOTS 1,2 & 6, & THE		SWF/LF
CANADIAN COUNTY	S106496420	CITY OF YUKON LANDFILL	LOTS 1, 2 & 3 OF SE/4 OF S14 T		SWF/LF
CANADIAN COUNTY	S106496421	CITY OF EL RENO LANDFILL	SW/4 NE/4 OF S4 T12N R7W		SWF/LF
CANADIAN COUNTY	S108666262	OEMA MEDICAL WASTE PROCESSING FACI	NW/4 OF S14, T11N, R7W		SWF/LF
CANADIAN COUNTY	S107030504	ROBERT BOYD SOLID WASTE DISPOSAL S	NE/4 OF S14 T12N R6W		SWF/LF
CANADIAN COUNTY	S106496423	SCHWEITZER LIME SLUDGE DISPOSAL FA	SW/4 S10 T14N R5W(NE CORNER OF		SWF/LF
CANADIAN COUNTY	S106496429	CITY OF MUSTANG DISPOSAL SITE	E/2 SE/4 NW/4 OF S28 T11N R5W		SWF/LF
MUSTANG	U004129767	7-ELEVEN #71	1711 W. HWY 152	73099	UST
YUKON	1006329449	DCP MIDSTREAM LP/YUKON WEST STA	3 MILES N AND 3 MILES W OF	73099	FINDS
YUKON	1016219349	DCP MIDSTREAM LP/YUKON BOOSTER	2 MI N THEN 1.5 MI W OF	73099	FINDS
YUKON	A100389327	SWBT R61961 YUKON R	4.3 MI N/NE OF YUKON	73099	AST
YUKON	1014826031	PROJECT BPMY-NBIP(392)3B BRIDGES B	I-40 OVER RENO AVENUE	73099	FINDS
YUKON	1001489492	KERRVILLE/ODOT BRIDGE	I-40 OVER HWY 4	73099	RCRA NonGen / NLR
YUKON	S113897423	YUKON WT	0.03 MI SE LINN LN/S YUKON PK	73099	AIRS
YUKON	1016415981	VERIZON WIRELESS/YUKON WT	0.03 MI SE LINN LN/S YUKON PK	73099	FINDS
YUKON	1016167417	VERIZON WIRELESS/YUKON WT	0.03 MI SE LINN LN/S YUKON PK	73099	US AIRS
YUKON	S112054587	CIMAREX ENERGY OF COLORADO - OK YU	NW/4 SEC 22 T12N R5W	73099	TIER 2
YUKON	S111207182	CIMAREX ENERGY OF COLORADO - OK YU	NW/4 SEC 22 T12N R5W	73099	TIER 2
YUKON	S108985206	UNION PACIFIC YUKON	UP TRACK 100 YARDS EAST OF RIC		VCP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 07/08/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 18

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 07/14/2014
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Voluntary Cleanup & Superfund Site Status Report

Land restoration projects carried out in several DEQ programs.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 05/28/2010
Date Made Active in Reports: 07/13/2010
Number of Days to Update: 46

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 08/22/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Solid Waste Disposal & Processing Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 11/08/2013
Date Made Active in Reports: 12/27/2013
Number of Days to Update: 49

Source: Department of Environmental Quality
Telephone: 405-702-5184
Last EDR Contact: 09/02/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/29/2014
Date Data Arrived at EDR: 07/31/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 39

Source: Oklahoma Corporation Commission
Telephone: 405-521-3107
Last EDR Contact: 07/14/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

LAST: Leaking Aboveground Storage Tanks List

Leaking aboveground storage tank site locations.

Date of Government Version: 07/29/2014
Date Data Arrived at EDR: 07/31/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 39

Source: Oklahoma Corporation Commission
Telephone: 405-522-4640
Last EDR Contact: 07/14/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 73

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 61
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/20/2014
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Underground Storage Tank Listing
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/16/2014
Number of Days to Update: 17
Source: Oklahoma Corporation Commission
Telephone: 405-521-3107
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

AST: Aboveground Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/16/2014
Number of Days to Update: 17

Source: Oklahoma Corporation Commission
Telephone: 405-521-3107
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Sites

Sites with institutional controls in place.

Date of Government Version: 08/08/2014
Date Data Arrived at EDR: 08/19/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 20

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Site Inventory

Investigations and cleanups by groups or individuals participating in the Voluntary Cleanup Program (VCP).

Date of Government Version: 08/08/2014
Date Data Arrived at EDR: 08/19/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 20

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfield Sites

Brownfields are defined by Oklahoma law as abandoned, idled or under used industrial or commercial facilities or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances. This program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

Date of Government Version: 09/07/2012
Date Data Arrived at EDR: 09/07/2012
Date Made Active in Reports: 10/10/2012
Number of Days to Update: 33

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 08/13/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: No Update Planned

BROWNFIELDS 2: Brownfields Public Record Listing

The Brownfields program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

Date of Government Version: 01/24/2014
Date Data Arrived at EDR: 02/20/2014
Date Made Active in Reports: 04/01/2014
Number of Days to Update: 40

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 08/22/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities
A listing of recycling facility locations.

Date of Government Version: 07/08/2014
Date Data Arrived at EDR: 07/25/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 45
Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 07/21/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Quarterly

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

HIST UST: Underground Storage Tank List, List II Version

This underground storage tank listing includes tank information through March 2003. This listing is no longer updated by the Oklahoma Corporation Commission.

Date of Government Version: 03/21/2003
Date Data Arrived at EDR: 04/28/2003
Date Made Active in Reports: 05/27/2003
Number of Days to Update: 29

Source: Oklahoma Corporation Commission
Telephone: 405-521-3107
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 04/01/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 105

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

OK COMPLAINT: Oklahoma Complaint System Database

Environmental complaints reported to the Oklahoma Corporation Commission.

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 12/19/2013
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 126

Source: Oklahoma Corporation Commission
Telephone: 405-521-2384
Last EDR Contact: 07/07/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 55

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/30/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/04/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/10/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/18/2013
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 13

Source: EPA
Telephone: (214) 665-2200
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/23/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Biennially

UIC: Underground Injection Wells Database Listing
Class I injection wells. CLASS I wells are used to inject liquid hazardous and non-hazardous wastes beneath the lower most Underground Sources of Drinking Water (USDW).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 02/15/2013
Date Made Active in Reports: 04/02/2013
Number of Days to Update: 46

Source: Department of Environmental Quality
Telephone: 405-702-5188
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner Facilities
A listing of drycleaner facility locations.

Date of Government Version: 06/17/2014
Date Data Arrived at EDR: 06/19/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 18

Source: Department of Environmental Quality
Telephone: 405-702-9100
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Varies

AIRS: Permitted AIRS Facility Listing
A listing of permitted AIRS facility locations.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 06/30/2014
Date Made Active in Reports: 07/10/2014
Number of Days to Update: 10

Source: Department of Environmental Quality
Telephone: 405-702-4100
Last EDR Contact: 06/30/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

TIER 2: Tier 2 Data Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/29/2012
Date Made Active in Reports: 08/29/2012
Number of Days to Update: 61

Source: Department of Environmental Quality
Telephone: 405-702-1000
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/10/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 01/24/2014
Number of Days to Update: 43

Source: Department of Environmental Quality
Telephone: 405-702-5100
Last EDR Contact: 07/30/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 03/14/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 47

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information.

Date of Government Version: 01/03/2013
Date Data Arrived at EDR: 01/09/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 37

Source: Department of Environmental Quality
Telephone: 405-702-5105
Last EDR Contact: 07/30/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Oklahoma Corporation Commission in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/27/2013
Number of Days to Update: 179

Source: Oklahoma Corporation Commission
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 06/10/2014
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Day Care Centers
Source: Department of Human Services
Telephone: 405-521-3561

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

YUKON WATER PROJECT
FRISCO ROAD
YUKON, OK 73099

TARGET PROPERTY COORDINATES

Latitude (North):	35.5008 - 35° 30' 2.88''
Longitude (West):	97.7762 - 97° 46' 34.32''
Universal Tranverse Mercator:	Zone 14
UTM X (Meters):	610994.5
UTM Y (Meters):	3929071.5
Elevation:	1319 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	35097-E7 RICHLAND, OK
Most Recent Revision:	1983
South Map:	35097-D7 MINCO NE, OK
Most Recent Revision:	1983

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

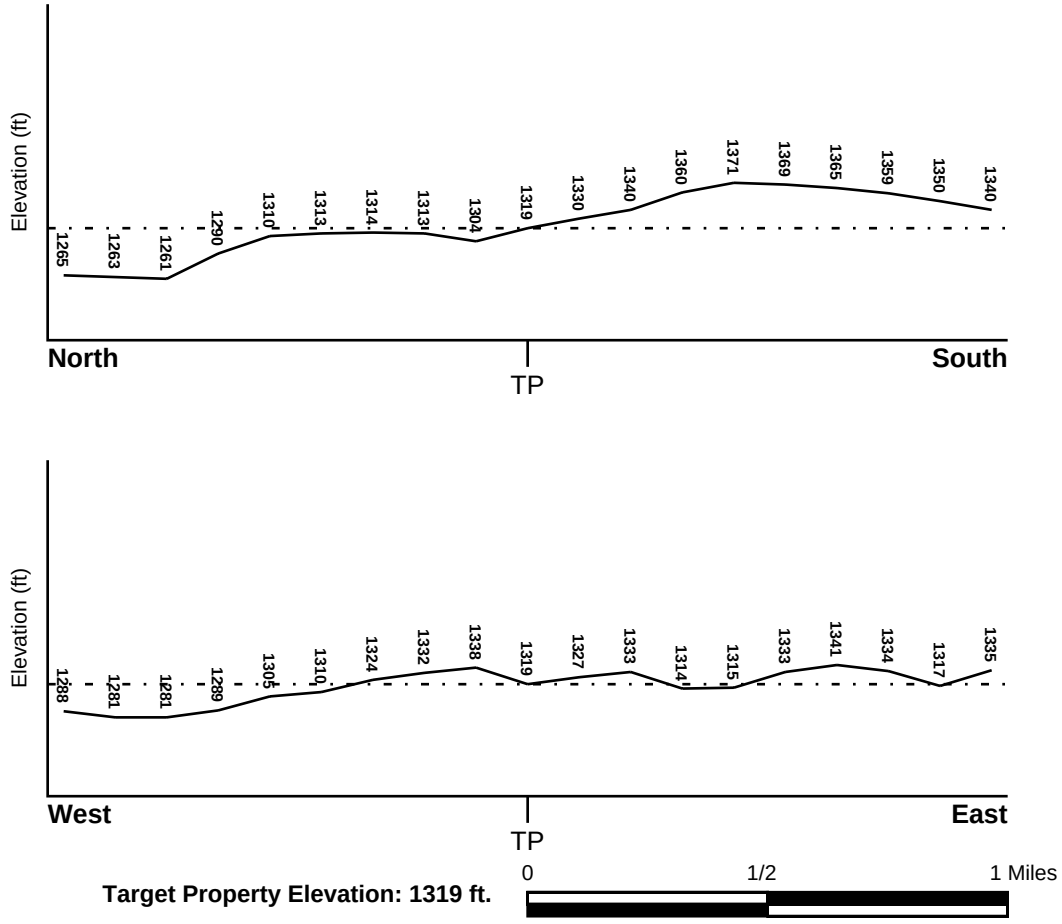
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
CANADIAN, OK	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 40017C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
RICHLAND	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

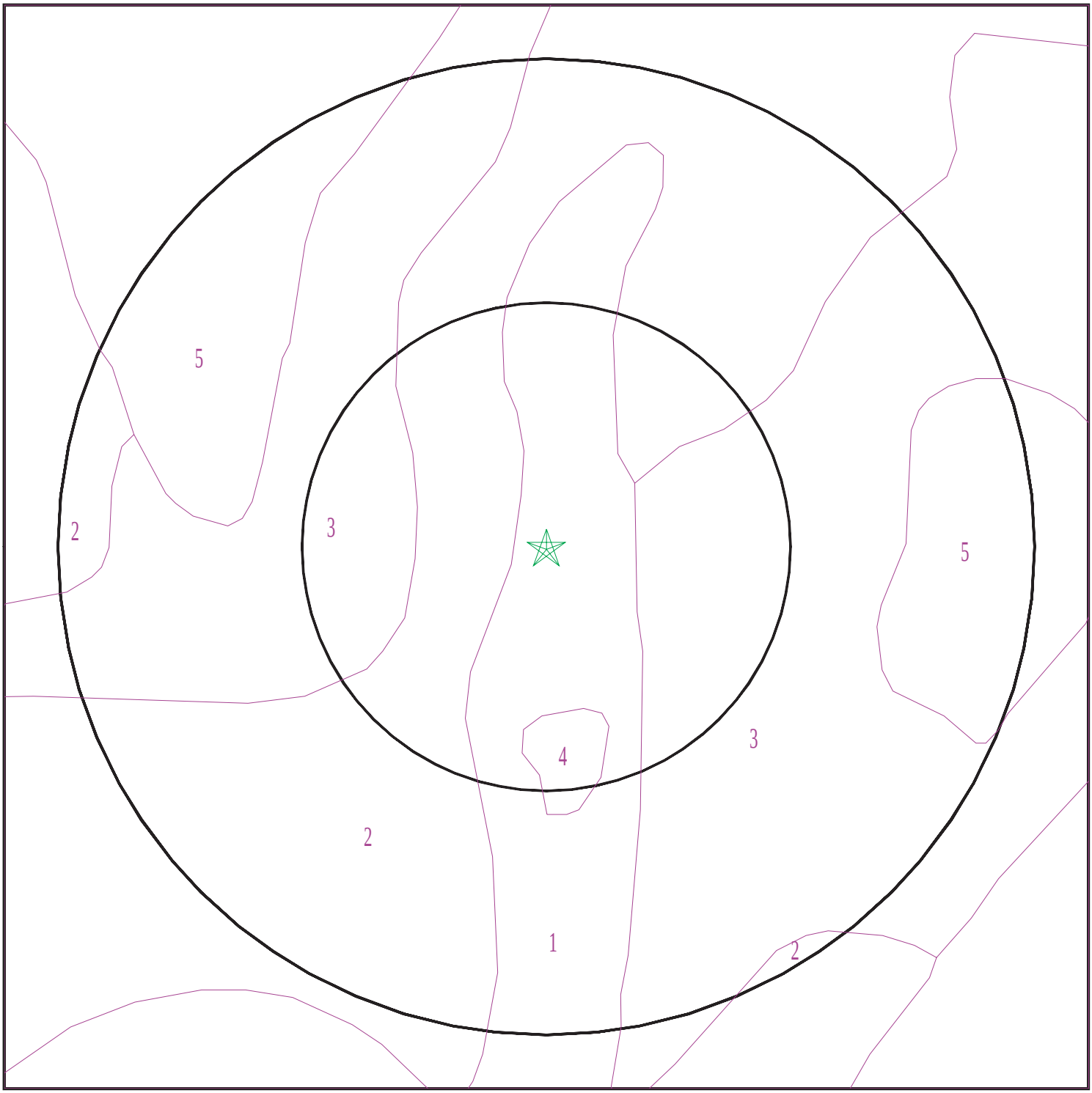
Era:	Paleozoic
System:	Permian
Series:	Lower part of Leonardian Series
Code:	P3a *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4064280.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Yukon Water Project	CLIENT:	Triad Design Group
ADDRESS:	Frisco Road Yukon OK 73099	CONTACT:	Diane Abernathy
LAT/LONG:	35.5008 / 97.7762	INQUIRY #:	4064280.2s
		DATE:	September 12, 2014 5:17 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Nash

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 8.4 Min: 6.1
2	7 inches	25 inches	loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 8.4 Min: 6.1
3	25 inches	29 inches	loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 8.4 Min: 6.1
4	29 inches	40 inches	bedrock	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: Min:

Soil Map ID: 2

Soil Component Name: Norge

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 7.3 Min: 5.6
2	9 inches	14 inches	silty clay loam	Not reported	Not reported	Max: 14.114 Min: 1.4114	Max: 7.3 Min: 5.6
3	14 inches	48 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 7.8 Min: 5.6
4	48 inches	70 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 8.4 Min: 6.1

Soil Map ID: 3

Soil Component Name: Norge

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 7.3 Min: 5.6
2	9 inches	14 inches	silty clay loam	Not reported	Not reported	Max: 14.114 Min: 1.4114	Max: 7.3 Min: 5.6
3	14 inches	48 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 7.8 Min: 5.6
4	48 inches	70 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 8.4 Min: 6.1

Soil Map ID: 4

Soil Component Name: Water

Soil Surface Texture: water

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	79 inches	water	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 5

Soil Component Name: Pond Creek

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 7.3 Min: 5.1
2	14 inches	59 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 7.8 Min: 6.1
3	59 inches	66 inches	silty clay loam	Not reported	Not reported	Max: 4.233 Min: 1.4114	Max: 8.4 Min: 6.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
12	USGS40000970253	1/2 - 1 Mile SSE
18	USGS40000970570	1/2 - 1 Mile North
19	USGS40000970551	1/2 - 1 Mile NNE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
16	OK7005558	1/2 - 1 Mile ENE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

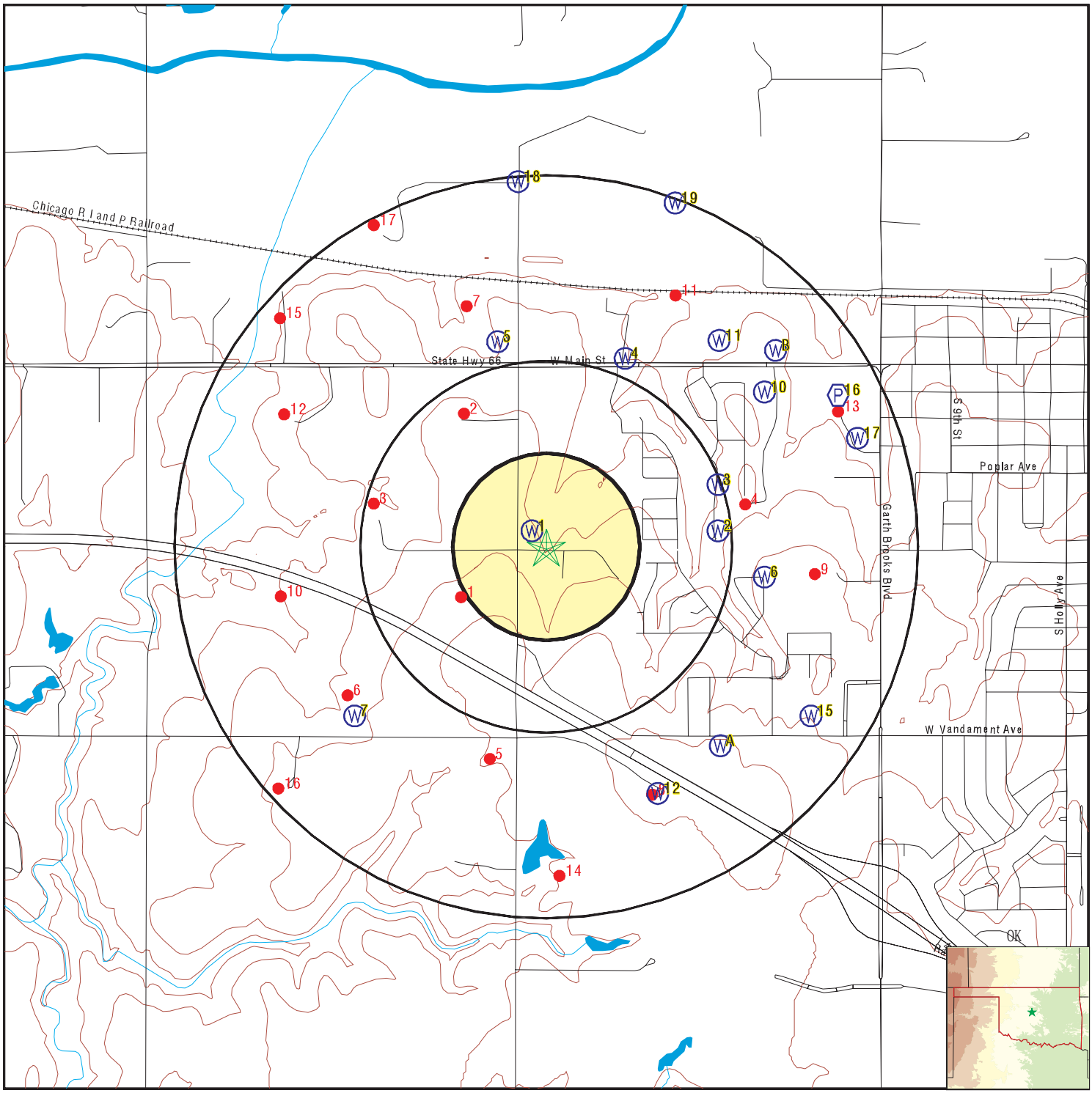
MAP ID	WELL ID	LOCATION FROM TP
1	OK4000000057930	0 - 1/8 Mile NW
2	OK4000000057931	1/4 - 1/2 Mile East
3	OK4000000058092	1/4 - 1/2 Mile ENE
4	OK4000000058560	1/2 - 1 Mile NNE
5	OK4000000058668	1/2 - 1 Mile NNW
6	OK4000000057839	1/2 - 1 Mile East
7	OK4000000057513	1/2 - 1 Mile SW
A8	OK4000000057331	1/2 - 1 Mile SE
A9	OK4000000057332	1/2 - 1 Mile SE
10	OK4000000058361	1/2 - 1 Mile NE
11	OK4000000058673	1/2 - 1 Mile NE
B13	OK4000000058674	1/2 - 1 Mile NE
B14	OK4000000058559	1/2 - 1 Mile NE
15	OK4000000057514	1/2 - 1 Mile ESE
17	OK4000000058205	1/2 - 1 Mile ENE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	OKOG10000024071	1/4 - 1/2 Mile WSW
2	OKOG10000024190	1/4 - 1/2 Mile NNW
3	OKOG10000024189	1/4 - 1/2 Mile WNW
4	OKOG10000024263	1/2 - 1 Mile ENE
5	OKOG10000023944	1/2 - 1 Mile SSW
6	OKOG10000024235	1/2 - 1 Mile SW
7	OKOG10000024308	1/2 - 1 Mile NNW
8	OKOG10000025039	1/2 - 1 Mile SSE
9	OKOG10000024404	1/2 - 1 Mile East
10	OKOG10000024240	1/2 - 1 Mile West
11	OKOG10000024066	1/2 - 1 Mile NNE
12	OKOG10000024414	1/2 - 1 Mile WNW
13	OKOG10000023990	1/2 - 1 Mile ENE
14	OKOG10000024227	1/2 - 1 Mile South
15	OKOG10000024224	1/2 - 1 Mile NW
16	OKOG10000024656	1/2 - 1 Mile SW
17	OKOG10000024767	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 4064280.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Oil, gas or related wells

SITE NAME: Yukon Water Project	CLIENT: Triad Design Group
ADDRESS: Frisco Road	CONTACT: Diane Abernathy
Yukon OK 73099	INQUIRY #: 4064280.2s
LAT/LONG: 35.5008 / 97.7762	DATE: September 12, 2014 5:17 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NW** **0 - 1/8 Mile** **Higher**	**OK WELLS**	**OK4000000057930**

Latitude:	35.501421		
Longitude:	-97.77688		
Well id:	33935	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	John Evans well1	Quarter1:	SW
Quarter2:	SW	Quarter3:	NW
Section :	19	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	120	First wtr:	18
Approx yld:	16	Ll method:	Interpolation from PLSS
Site id:	OK4000000057930	Const date1:	6/25/1994

---

2 **East** **1/4 - 1/2 Mile** **Lower**	**OK WELLS**	**OK4000000057931**

Latitude:	35.501421		
Longitude:	-97.768001		
Well id:	87670	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Kenny Hobbes	Quarter1:	SW
Quarter2:	SW	Quarter3:	NE
Section :	19	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	200	First wtr:	0
Approx yld:	12	Ll method:	Mathematical conversion program
Site id:	OK4000000057931	Const date1:	9/25/2003

---

3 **ENE** **1/4 - 1/2 Mile** **Lower**	**OK WELLS**	**OK4000000058092**

Latitude:	35.503228		
Longitude:	-97.768001		
Well id:	72544	County:	Canadian
Work type:	Geothermal or Heat Pump Well	Permit:	Not Reported
Owner name:	Randy Montgomery	Quarter1:	NW
Quarter2:	SW	Quarter3:	NE
Section :	19	Township:	12N
Range:	05WI	Use class:	Heat Exchange
Total dpth:	200	First wtr:	0
Approx yld:	0	Ll method:	Interpolation from PLSS
Site id:	OK4000000058092	Const date1:	8/21/2002

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
NNE
1/2 - 1 Mile
Lower

OK WELLS **OK4000000058560**

Latitude:	35.50815		
Longitude:	-97.77243		
Well id:	103499	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Don Skoch	Quarter1:	SW
Quarter2:	SE	Quarter3:	SW
Section :	18	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	160	First wtr:	20
Approx yld:	13	Ll method:	Mathematical conversion program
Site id:	OK4000000058560	Const date1:	8/4/2006

5
NNW
1/2 - 1 Mile
Lower

OK WELLS **OK4000000058668**

Latitude:	35.508806		
Longitude:	-97.778513		
Well id:	103366	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Keith McCalister	Quarter1:	SE
Quarter2:	SE	Quarter3:	SE
Section :	13	Township:	12N
Range:	06WI	Use class:	Domestic
Total dpth:	240	First wtr:	0
Approx yld:	0	Ll method:	Mathematical conversion program
Site id:	OK4000000058668	Const date1:	10/17/2005

6
East
1/2 - 1 Mile
Higher

OK WELLS **OK4000000057839**

Latitude:	35.499614		
Longitude:	-97.765781		
Well id:	68358	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	David Bloom	Quarter1:	NE
Quarter2:	NW	Quarter3:	SE
Section :	19	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	120	First wtr:	46
Approx yld:	0	Ll method:	Interpolation from PLSS
Site id:	OK4000000057839	Const date1:	12/4/2001

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

7
SW
1/2 - 1 Mile
Higher

OK WELLS **OK4000000057513**

Latitude:	35.494193		
Longitude:	-97.785342		
Well id:	60339	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Jim Shipman	Quarter1:	SW
Quarter2:	SW	Quarter3:	SE
Section :	24	Township:	12N
Range:	06WI	Use class:	Domestic
Total dpth:	120	First wtr:	12
Approx yld:	15	Ll method:	Interpolation from PLSS
Site id:	OK4000000057513	Const date1:	7/10/2000

A8
SE
1/2 - 1 Mile
Higher

OK WELLS **OK4000000057331**

Latitude:	35.4930278		
Longitude:	-97.7678889		
Well id:	126724	County:	Canadian
Work type:	Geotechnical Boring	Permit:	Not Reported
Owner name:	Exterran	Quarter1:	NW
Quarter2:	NW	Quarter3:	NE
Section :	30	Township:	12N
Range:	05WI	Use class:	Soil Evaluation
Total dpth:	10	First wtr:	0
Approx yld:	0	Ll method:	GPS-uncorrected data
Site id:	OK4000000057331	Const date1:	10/23/2009

A9
SE
1/2 - 1 Mile
Higher

OK WELLS **OK4000000057332**

Latitude:	35.4930278		
Longitude:	-97.7678889		
Well id:	126723	County:	Canadian
Work type:	Geotechnical Boring	Permit:	Not Reported
Owner name:	Exterran	Quarter1:	NW
Quarter2:	NW	Quarter3:	NE
Section :	30	Township:	12N
Range:	05WI	Use class:	Soil Evaluation
Total dpth:	10	First wtr:	0
Approx yld:	0	Ll method:	GPS-uncorrected data
Site id:	OK4000000057332	Const date1:	10/23/2009

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

10
NE
1/2 - 1 Mile
Lower

OK WELLS **OK4000000058361**

Latitude:	35.506843		
Longitude:	-97.765781		
Well id:	33135	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	mark maris	Quarter1:	NE
Quarter2:	NW	Quarter3:	NE
Section :	19	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	160	First wtr:	38
Approx yld:	4.5	Ll method:	Interpolation from PLSS
Site id:	OK4000000058361	Const date1:	12/2/1995

11
NE
1/2 - 1 Mile
Lower

OK WELLS **OK4000000058673**

Latitude:	35.508855		
Longitude:	-97.76795		
Well id:	70499	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	A J Clements	Quarter1:	SW
Quarter2:	SW	Quarter3:	SE
Section :	18	Township:	12N
Range:	05WI	Use class:	Irrigation
Total dpth:	280	First wtr:	105
Approx yld:	4	Ll method:	Interpolation from PLSS
Site id:	OK4000000058673	Const date1:	3/1/2002

12
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000970253**

Org. Identifier:	USGS-OK		
Formal name:	USGS Oklahoma Water Science Center		
Monloc Identifier:	USGS-352928097461401		
Monloc name:	12N-05W-30 BAC 1		
Monloc type:	Well		
Monloc desc:	GEOPHYSICAL LOGS USED FOR STRUCTURE CONTOUR MAPS		
Huc code:	11100301	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	35.4911663
Longitude:	-97.7708776	Sourcemap scale:	24000
Horiz Acc measure:	10	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1389
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Hennessey Shale		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	9210
Welldepth units:	ft	Wellholedepth:	9210
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B13
NE **OK WELLS** **OK4000000058674**
1/2 - 1 Mile
Lower

Latitude:	35.508855		
Longitude:	-97.76573		
Well id:	33133	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	alexander clements	Quarter1:	SE
Quarter2:	SW	Quarter3:	SE
Section :	18	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	160	First wtr:	46
Approx yld:	4.5	Ll method:	Interpolation from PLSS
Site id:	OK4000000058674	Const date1:	12/4/1995

B14
NE **OK WELLS** **OK4000000058559**
1/2 - 1 Mile
Lower

Latitude:	35.50808		
Longitude:	-97.76477		
Well id:	103498	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Ken & Irene McCalister	Quarter1:	SE
Quarter2:	SW	Quarter3:	SE
Section :	18	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	240	First wtr:	60
Approx yld:	5	Ll method:	Mathematical conversion program
Site id:	OK4000000058559	Const date1:	8/3/2006

15
ESE **OK WELLS** **OK4000000057514**
1/2 - 1 Mile
Higher

Latitude:	35.494193		
Longitude:	-97.763561		
Well id:	86467	County:	Canadian
Work type:	Geotechnical Boring	Permit:	Not Reported
Owner name:	Sam Gresham Architects	Quarter1:	SW
Quarter2:	SE	Quarter3:	SE
Section :	19	Township:	12N
Range:	05WI	Use class:	Soil Evaluation
Total dpth:	14.5	First wtr:	0
Approx yld:	0	Ll method:	Mathematical conversion program

Site id: OK4000000057514 Const date1: 5/12/2004

16
ENE **FRDS PWS** **OK7005558**
1/2 - 1 Mile
Lower

PWS ID: OK7005558
Date Initiated: Not Reported Date Deactivated: Not Reported
PWS Name: CHOCTAW CREEK GOLF COURSE
2200 N HIWASSEE
CHOCTAW, OK 73020

Addressee / Facility: Not Reported

Facility Latitude: 35 30 24 Facility Longitude: 097 45 43
City Served: Not Reported
Treatment Class: Untreated Population: 00000026

Violations information not reported.

ENFORCEMENT INFORMATION:

Truedate: 03/31/2009 Pwsid: OK7005558
Pwsname: CHOCTAW CREEK GOLF COURSE
Retpopsrvd: 26 Pwstypecod: NC
Vioid: 105 Contaminant: COLIFORM (TCR)
Viol. Type: Monitoring, Routine Major (TCR)
Complperbe: 7/1/2004 0:00:00
Complperen: 9/30/2004 0:00:00 Enfdate: 11/15/2004 0:00:00
Enf action: State Violation/Reminder Notice
Violmeasur: Not Reported

Truedate: 03/31/2009 Pwsid: OK7005558
Pwsname: CHOCTAW CREEK GOLF COURSE
Retpopsrvd: 26 Pwstypecod: NC
Vioid: 105 Contaminant: COLIFORM (TCR)
Viol. Type: Monitoring, Routine Major (TCR)
Complperbe: 7/1/2004 0:00:00
Complperen: 9/30/2004 0:00:00 Enfdate: 11/15/2004 0:00:00
Enf action: State Public Notif Requested
Violmeasur: Not Reported

Truedate: 03/31/2009 Pwsid: OK7005558
Pwsname: CHOCTAW CREEK GOLF COURSE
Retpopsrvd: 26 Pwstypecod: NC
Vioid: 105 Contaminant: COLIFORM (TCR)
Viol. Type: Monitoring, Routine Major (TCR)
Complperbe: 7/1/2004 0:00:00
Complperen: 9/30/2004 0:00:00 Enfdate: 5/11/2006 0:00:00
Enf action: State Public Notif Received
Violmeasur: Not Reported

Truedate:	03/31/2009	Pwsid:	OK7005558
Pwsname:	CHOCTAW CREEK GOLF COURSE		
Retpopsrvd:	26	Pwstypecod:	NC
Vioid:	105	Contaminant:	COLIFORM (TCR)
Viol. Type:	Monitoring, Routine Major (TCR)		
Complperbe:	7/1/2004 0:00:00		
Complperen:	9/30/2004 0:00:00	Enfdate:	5/11/2006 0:00:00
Enf action:	State Compliance Achieved		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	OK7005558
Pwsname:	CHOCTAW CREEK GOLF COURSE		
Retpopsrvd:	26	Pwstypecod:	NC
Vioid:	206	Contaminant:	COLIFORM (TCR)
Viol. Type:	Monitoring, Routine Major (TCR)		
Complperbe:	7/1/2005 0:00:00		
Complperen:	9/30/2005 0:00:00	Enfdate:	10/28/2005 0:00:00
Enf action:	State Violation/Reminder Notice		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	OK7005558
Pwsname:	CHOCTAW CREEK GOLF COURSE		
Retpopsrvd:	26	Pwstypecod:	NC
Vioid:	206	Contaminant:	COLIFORM (TCR)
Viol. Type:	Monitoring, Routine Major (TCR)		
Complperbe:	7/1/2005 0:00:00		
Complperen:	9/30/2005 0:00:00	Enfdate:	10/28/2005 0:00:00
Enf action:	State Public Notif Requested		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	OK7005558
Pwsname:	CHOCTAW CREEK GOLF COURSE		
Retpopsrvd:	26	Pwstypecod:	NC
Vioid:	206	Contaminant:	COLIFORM (TCR)
Viol. Type:	Monitoring, Routine Major (TCR)		
Complperbe:	7/1/2005 0:00:00		
Complperen:	9/30/2005 0:00:00	Enfdate:	11/1/2005 0:00:00
Enf action:	State Public Notif Received		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	OK7005558
Pwsname:	CHOCTAW CREEK GOLF COURSE		
Retpopsrvd:	26	Pwstypecod:	NC
Vioid:	206	Contaminant:	COLIFORM (TCR)
Viol. Type:	Monitoring, Routine Major (TCR)		
Complperbe:	7/1/2005 0:00:00		
Complperen:	9/30/2005 0:00:00	Enfdate:	11/1/2005 0:00:00
Enf action:	State Compliance Achieved		
Violmeasur:	Not Reported		

System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2004 0:00:00 - 9/30/2004 0:00:00		
Violation ID:	105		
Enforcement Date:	11/15/2004 0:00:00	Enf. Action:	State Public Notif Requested

ENFORCEMENT INFORMATION:

System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2004 0:00:00 - 9/30/2004 0:00:00		
Violation ID:	105		
Enforcement Date:	11/15/2004 0:00:00	Enf. Action:	State Violation/Reminder Notice
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/04 - 09/30/04		
Violation ID:	105		
Enforcement Date:	11/15/04	Enf. Action:	State Public Notif Requested
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/04 - 09/30/04		
Violation ID:	105		
Enforcement Date:	11/15/04	Enf. Action:	State Violation/Reminder Notice
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/04 - 09/30/04		
Violation ID:	105		
Enforcement Date:	05/11/06	Enf. Action:	State Public Notif Received
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2004 0:00:00 - 9/30/2004 0:00:00		
Violation ID:	105		
Enforcement Date:	5/11/2006 0:00:00	Enf. Action:	State Public Notif Received
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/05 - 09/30/05		
Violation ID:	206		
Enforcement Date:	10/28/05	Enf. Action:	State Public Notif Requested
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/05 - 09/30/05		
Violation ID:	206		
Enforcement Date:	10/28/05	Enf. Action:	State Violation/Reminder Notice
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	07/01/05 - 09/30/05		
Violation ID:	206		
Enforcement Date:	11/01/05	Enf. Action:	State Public Notif Received
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2005 0:00:00 - 9/30/2005 0:00:00		
Violation ID:	206		
Enforcement Date:	10/28/2005 0:00:00	Enf. Action:	State Public Notif Requested

ENFORCEMENT INFORMATION:

System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2005 0:00:00 - 9/30/2005 0:00:00		
Violation ID:	206		
Enforcement Date:	10/28/2005 0:00:00	Enf. Action:	State Violation/Reminder Notice
System Name:	CHOCTAW CREEK GOLF COURSE		
Violation Type:	Monitoring, Routine Major (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	7/1/2005 0:00:00 - 9/30/2005 0:00:00		
Violation ID:	206		
Enforcement Date:	11/1/2005 0:00:00	Enf. Action:	State Public Notif Received

CONTACT INFORMATION:

Name:	CHOCTAW CREEK GOLF COURSE	Population:	26
Contact:	CHOCTAW CREEK GOLF COURSE	Phone:	Not Reported
Address:	2200 NORTH HIWASSEE		
Address 2:	CHOCTAW		
	OK, 73 405-7		

17
ENE
1/2 - 1 Mile
Lower

OK WELLS **OK4000000058205**

Latitude:	35.505036		
Longitude:	-97.761341		
Well id:	33936	County:	Canadian
Work type:	Groundwater Well	Permit:	Not Reported
Owner name:	Janice Moss	Quarter1:	SE
Quarter2:	NE	Quarter3:	NE
Section :	19	Township:	12N
Range:	05WI	Use class:	Domestic
Total dpth:	120	First wtr:	15
Approx yld:	19	Ll method:	Interpolation from PLSS
Site id:	OK4000000058205	Const date1:	6/25/1994

18
North
1/2 - 1 Mile
Lower

FED USGS **USGS40000970570**

Org. Identifier:	USGS-OK		
Formal name:	USGS Oklahoma Water Science Center		
Monloc Identifier:	USGS-353054097463801		
Monloc name:	12N-05W-18 CBC 1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	11050002	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	35.5150544
Longitude:	-97.7775447	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1266.55
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Quaternary Alluvium		
Aquifer type:	Not Reported		
Construction date:	19420521	Welldepth:	14.5
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1942-05-21	2.44	

19
NNE **FED USGS** **USGS40000970551**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-OK		
Formal name:	USGS Oklahoma Water Science Center		
Monloc Identifier:	USGS-353051097461101		
Monloc name:	12N-06W-18 AAD 1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	11100301	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	35.5142212
Longitude:	-97.7700445	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1282.78
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Quaternary Alluvium		
Aquifer type:	Not Reported		
Construction date:	19420522	Welldepth:	14.9
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1942-05-22	4.35	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW **OIL_GAS** **OKOG10000024071**
1/4 - 1/2 Mile

Api county:	17		
Api number:	21061		
Well name:	KOUBA		
Well no:	0		
Operator n:	MERMAC OPERATING COMPANY INC		
Oper no:	21069		
Status:	PA	Well class:	OIL
Operstatus:	CLOSED		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	SE4	Quarter2:	Not Reported
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	660		
Direct ns:	N		
Feet ew:	660		
Direct ew:	E		
Latitude :	35.4987777778		
Longitude :	-97.7799444444		
G elevatio:	1346		
D elevatio:	0		
Completion:	19790501000000.000		
Depth:	9490		

2
NNW **OIL_GAS** **OKOG10000024190**
1/4 - 1/2 Mile

Api county:	17		
Api number:	21185		
Well name:	STEJSKAL		
Well no:	0		
Operator n:	PRIME OPERATING COMPANY		
Oper no:	18626		
Status:	PA	Well class:	GAS
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	NE4	Quarter2:	CNE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.5059444444		
Longitude :	-97.7798055556		

G elevatio:	1322
D elevatio:	0
Completion:	19800221000000.000
Depth:	9341

3
WNW **OIL_GAS** **OKOG10000024189**
1/4 - 1/2 Mile

Api county:	17		
Api number:	21184		
Well name:	SKEJSKAL		
Well no:	0		
Operator n:	PRIME OPERATING COMPANY		
Oper no:	18626		
Status:	AC	Well class:	GAS
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	NE4	Quarter2:	SW4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	660		
Direct ns:	S		
Feet ew:	660		
Direct ew:	W		
Latitude :	35.502433		
Longitude :	-97.78411		
G elevatio:	1299		
D elevatio:	0		
Completion:	19800131000000.000		
Depth:	9403		

4
ENE **OIL_GAS** **OKOG10000024263**
1/2 - 1 Mile

Api county:	17		
Api number:	21267		
Well name:	MEINDERS		
Well no:	0		
Operator n:	QUANTUM OIL & GAS CORPORATION		
Oper no:	21571		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	19		
Township:	12N	Ran ge:	5W
Quarter1:	NE4	Quarter2:	CSW4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	660		
Direct ns:	S		
Feet ew:	660		
Direct ew:	W		
Latitude :	35.5024		
Longitude :	-97.76638		

G elevatio:	0
D elevatio:	0
Completion:	19791009000000.000
Depth:	0

5
SSW **OIL_GAS** **OKOG10000023944**
1/2 - 1 Mile

Api county:	17		
Api number:	20927		
Well name:	JUSTIN		
Well no:	1		
Operator n:	HINKLE OIL & GAS INC		
Oper no:	21639		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	25		
Township:	12N	Ran ge:	6W
Quarter1:	NE4	Quarter2:	NE4
Quarter3:	NE4	Quarter4:	Not Reported
Feet ns:	2310		
Direct ns:	S		
Feet ew:	2160		
Direct ew:	W		
Latitude :	35.492461		
Longitude :	-97.77857		
G elevatio:	0		
D elevatio:	0		
Completion:	19780615000000.000		
Depth:	0		

6
SW **OIL_GAS** **OKOG10000024235**
1/2 - 1 Mile

Api county:	17		
Api number:	21234		
Well name:	KOUBA		
Well no:	0		
Operator n:	CHAPARRAL ENERGY LLC		
Oper no:	16896		
Status:	PA	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	SE4	Quarter2:	SW4
Quarter3:	SW4	Quarter4:	N2
Feet ns:	480		
Direct ns:	S		
Feet ew:	330		
Direct ew:	W		
Latitude :	35.4949444444		
Longitude :	-97.7853611111		

G elevatio:	1326
D elevatio:	0
Completion:	19790829000000.000
Depth:	9450

7
NNW **OIL_GAS** **OKOG10000024308**
1/2 - 1 Mile

Api county:	17		
Api number:	21320		
Well name:	MACH		
Well no:	0		
Operator n:	PRIME OPERATING COMPANY		
Oper no:	18626		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	13		
Township:	12N	Ran ge:	6W
Quarter1:	SE4	Quarter2:	SE4
Quarter3:	N2	Quarter4:	S2
Feet ns:	750		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.510139		
Longitude :	-97.77968		
G elevatio:	0		
D elevatio:	0		
Completion:	19790820000000.000		
Depth:	0		

8
SSE **OIL_GAS** **OKOG10000025039**
1/2 - 1 Mile

Api county:	17		
Api number:	22115		
Well name:	MACA		
Well no:	3		
Operator n:	LITTLE QUINTIN COMPANY INC		
Oper no:	16083		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	30		
Township:	12N	Ran ge:	5W
Quarter1:	NW4	Quarter2:	NE4
Quarter3:	S2	Quarter4:	N2
Feet ns:	1840		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.491068		
Longitude :	-97.77082		

G elevatio:	0
D elevatio:	0
Completion:	19811115000000.000
Depth:	0

9
East **OIL_GAS** **OKOG10000024404**
1/2 - 1 Mile

Api county:	17		
Api number:	21422		
Well name:	LAMB		
Well no:	0		
Operator n:	CHESAPEAKE OPERATING INC		
Oper no:	17441		
Status:	PA	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	19		
Township:	12N	Ran ge:	5W
Quarter1:	SE4	Quarter2:	NE4
Quarter3:	CNW4	Quarter4:	Not Reported
Feet ns:	2310		
Direct ns:	S		
Feet ew:	1650		
Direct ew:	W		
Latitude :	35.499681		
Longitude :	-97.76306		
G elevatio:	1347		
D elevatio:	0		
Completion:	19800422000000.000		
Depth:	8972		

10
West **OIL_GAS** **OKOG10000024240**
1/2 - 1 Mile

Api county:	17		
Api number:	21239		
Well name:	HANSKA		
Well no:	1		
Operator n:	GDA INVESTMENTS INC		
Oper no:	19417		
Status:	AC	Well class:	GAS
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	SW4	Quarter2:	NE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.498807		
Longitude :	-97.78855		

G elevatio:	1296
D elevatio:	0
Completion:	20070612000000.000
Depth:	9200

11
NNE **OIL_GAS** **OKOG10000024066**
1/2 - 1 Mile

Api county:	17		
Api number:	21056		
Well name:	GUSTAFSON UNIT		
Well no:	1		
Operator n:	LMS PETROLEUM L C		
Oper no:	20259		
Status:	AC	Well class:	OIL
Operstatus:	CLOSED		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	18		
Township:	12N	Ran ge:	5W
Quarter1:	SW4	Quarter2:	SE4
Quarter3:	NE4	Quarter4:	Not Reported
Feet ns:	990		
Direct ns:	S		
Feet ew:	2310		
Direct ew:	W		
Latitude :	35.510559		
Longitude :	-97.76971		
G elevatio:	1280		
D elevatio:	0		
Completion:	19790306000000.000		
Depth:	0		

12
WNW **OIL_GAS** **OKOG10000024414**
1/2 - 1 Mile

Api county:	17		
Api number:	21432		
Well name:	J L		
Well no:	1		
Operator n:	C & L OIL AND GAS CORPORATION		
Oper no:	11973		
Status:	PA	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	24		
Township:	12N	Ran ge:	6W
Quarter1:	NW4	Quarter2:	CNE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.5059166667		
Longitude :	-97.7883888889		

G elevatio:	0
D elevatio:	0
Completion:	19800123000000.000
Depth:	9189

13
ENE **OIL_GAS** **OKOG10000023990**
1/2 - 1 Mile

Api county:	17		
Api number:	20976		
Well name:	GEORGIA MCCOY		
Well no:	1		
Operator n:	QUANTUM OIL & GAS CORPORATION		
Oper no:	21571		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	19		
Township:	12N	Ran ge:	5W
Quarter1:	NE4	Quarter2:	NE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.506027		
Longitude :	-97.76195		
G elevatio:	0		
D elevatio:	0		
Completion:	19781229000000.000		
Depth:	0		

14
South **OIL_GAS** **OKOG10000024227**
1/2 - 1 Mile

Api county:	17		
Api number:	21226		
Well name:	MACA		
Well no:	0		
Operator n:	LITTLE QUINTIN COMPANY INC		
Oper no:	16083		
Status:	AC	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	30		
Township:	12N	Ran ge:	5W
Quarter1:	NW4	Quarter2:	CSW4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	660		
Direct ns:	S		
Feet ew:	700		
Direct ew:	W		
Latitude :	35.487895		
Longitude :	-97.77525		

G elevatio:	1364
D elevatio:	0
Completion:	19791108000000.000
Depth:	9109

15
NW **OIL_GAS** **OKOG10000024224**
1/2 - 1 Mile

Api county:	17		
Api number:	21223		
Well name:	CUSTER		
Well no:	0		
Operator n:	M G F OIL CORPORATION		
Oper no:	6674		
Status:	PA	Well class:	OIL
Operstatus:	CLOSED		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	13		
Township:	12N	Ran ge:	6W
Quarter1:	SW4	Quarter2:	SE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	660		
Direct ns:	S		
Feet ew:	2055		
Direct ew:	W		
Latitude :	35.5096666667		
Longitude :	-97.7885833333		
G elevatio:	1287		
D elevatio:	0		
Completion:	19790709000000.000		
Depth:	9165		

16
SW **OIL_GAS** **OKOG10000024656**
1/2 - 1 Mile

Api county:	17		
Api number:	21699		
Well name:	LEPAK		
Well no:	2		
Operator n:	CHAPARRAL ENERGY LLC		
Oper no:	16896		
Status:	PA	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	25		
Township:	12N	Ran ge:	6W
Quarter1:	NW4	Quarter2:	CNE4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	1980		
Direct ew:	W		
Latitude :	35.4913055556		
Longitude :	-97.7886666667		

G elevatio:	1342
D elevatio:	0
Completion:	19800907000000.000
Depth:	9225

17
NNW **OIL_GAS** **OKOG10000024767**
1/2 - 1 Mile

Api county:	17		
Api number:	21816		
Well name:	MACH		
Well no:	0		
Operator n:	PRIME OPERATING COMPANY		
Oper no:	18626		
Status:	PA	Well class:	OIL
Operstatus:	OPEN		
County cod:	17		
Meridian:	INDIAN		
Sec tion:	13		
Township:	12N	Ran ge:	6W
Quarter1:	SE4	Quarter2:	CNW4
Quarter3:	Not Reported	Quarter4:	Not Reported
Feet ns:	1980		
Direct ns:	S		
Feet ew:	660		
Direct ew:	W		
Latitude :	35.5133055556		
Longitude :	-97.7841111111		
G elevatio:	0		
D elevatio:	0		
Completion:	19800809000000.000		
Depth:	9075		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: OK Radon

Radon Test Results

Zipcode	Num Tests	# > 4 pCi/L	Maximum	Average
73099	25	0	3.1	1.477

Federal EPA Radon Zone for CANADIAN County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 73099

Number of sites tested: 11

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.273 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Reported Well Locations in Oklahoma
Source: Oklahoma Water Resources Board
Telephone: 405-530-8800

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Oklahoma Corporation Commission
Telephone: 405-521-3636
Oil and gas well locations in the state.

Oil and Gas Well Listing
Source: Osage Nation Environmental and Natural Resources
Telephone: 918-287-5333
Oil and gas well locations.

RADON

State Database: OK Radon
Source: Department of Environmental Quality
Telephone: 405-702-5100
Radon Information

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

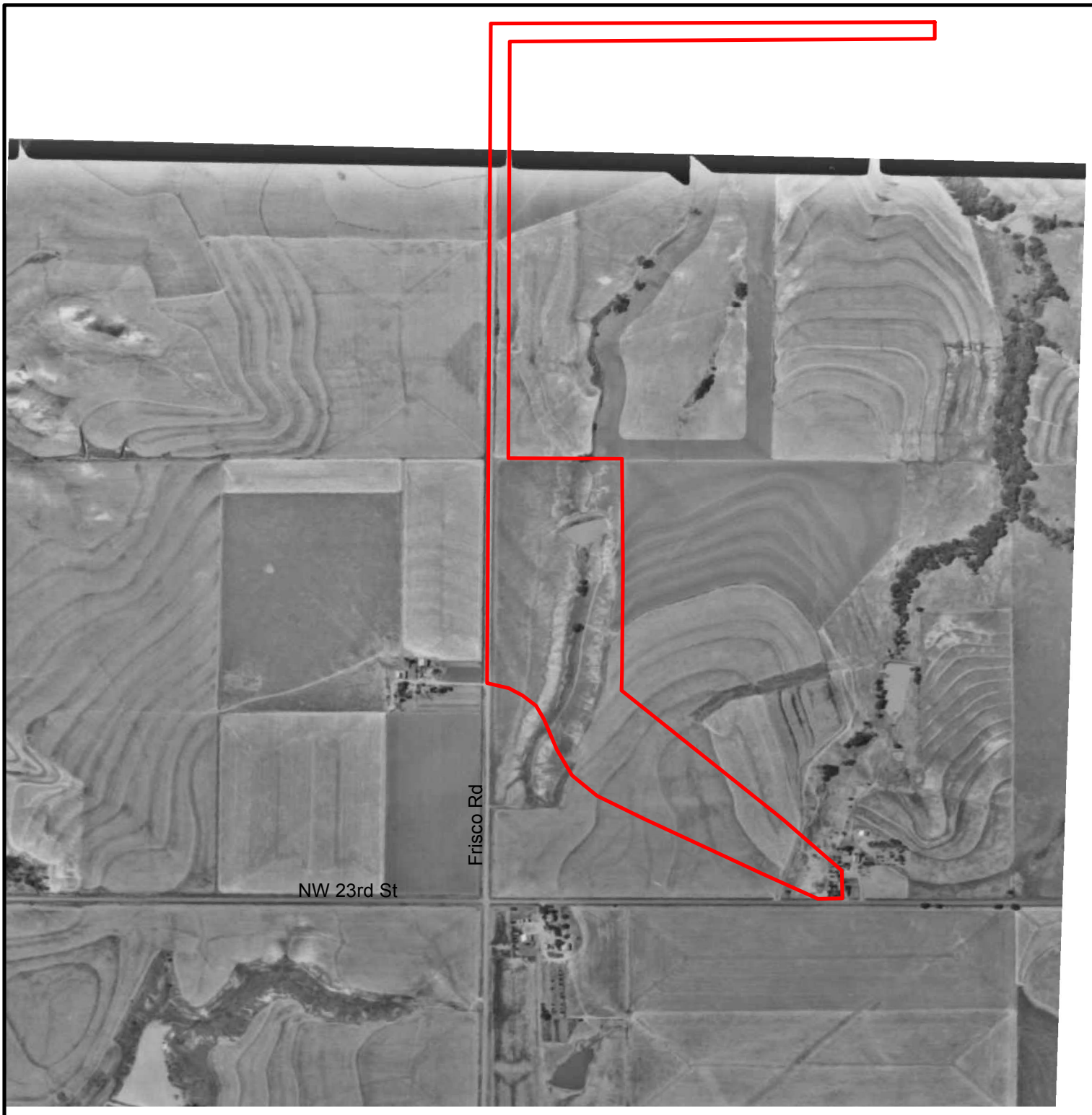
Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

Appendix B

Historical Aerial Photographs, Years 1954, 1964, 1970, 1981, 1995, 2005, and 2010



Study Area

1954 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 1954

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

n/a

Study Area

1964 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 1964

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
n/a	

Study Area

1970 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 1970

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
	n/a

Study Area

1981 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 1981

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

n/a

Study Area

1995 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 1995

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

n/a

Study Area

2005 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 2005

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

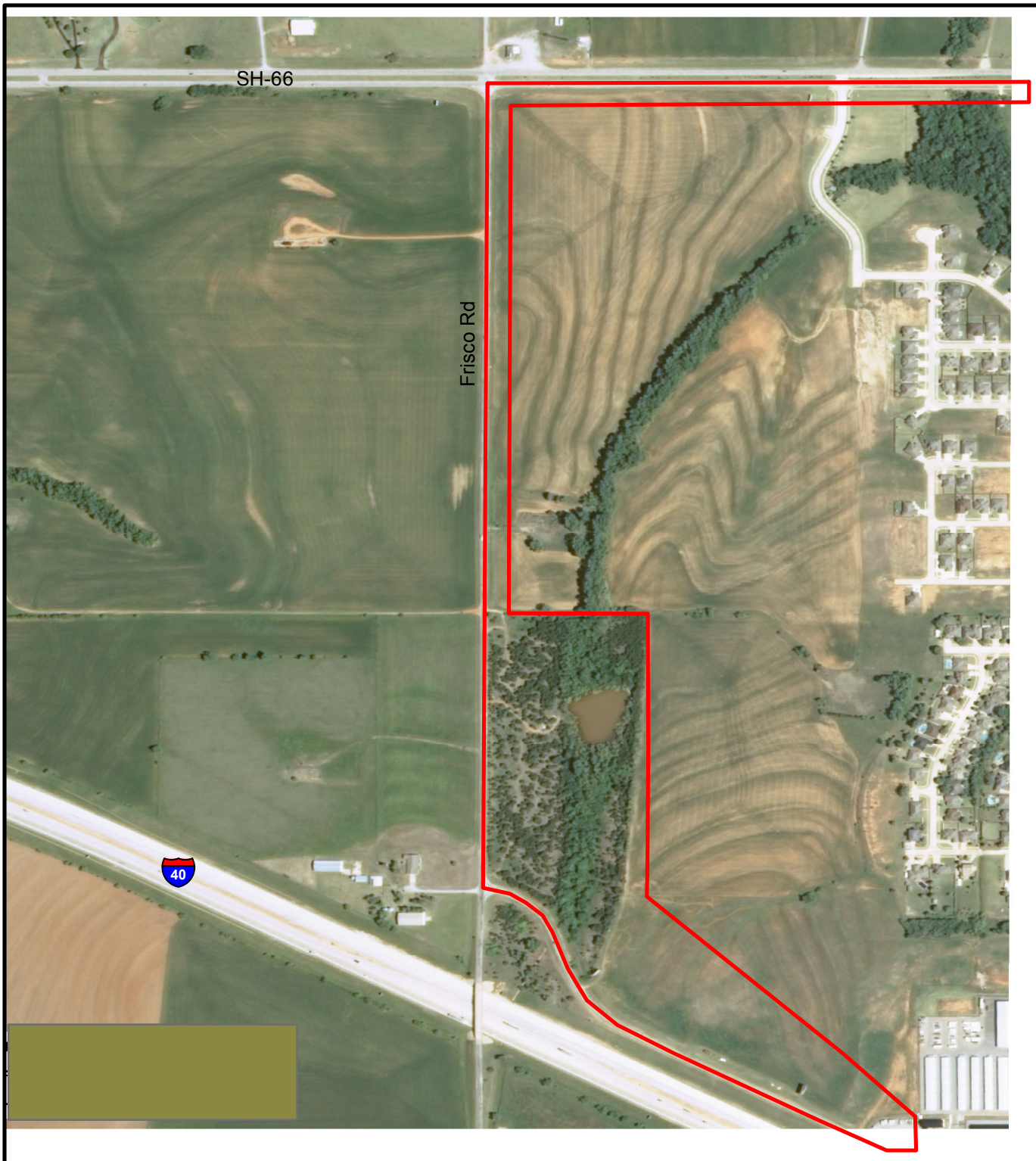
LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

n/a



Study Area

2010 Aerial Imagery

N

0 500 1,000 1,500 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

HISTORIC AERIAL MAP - 2010

DOCUMENT TITLE

YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	12/31/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

n/a

Appendix C

Photographs

Photo 1: Scattered Solid Waste Dumping

Photo 2: Discarded Boat

Appendix D
Waters and Wetlands Study Documentation

Diane Abernathy

From: Hartsfield, J T (Timothy) SWT <Timothy.Hartsfield@usace.army.mil>
Sent: Thursday, November 20, 2014 9:08 AM
To: Diane Abernathy
Cc: Commer, Andrew SWT; Gade, David SWT; Ware, Michael SWT; Hartsfield, J T (Timothy) SWT
Subject: SWT-2014-814_NPR_YukonWtrPL_Triad_UnTNCR_CanCoOk (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO//Regulatory Office (CESWT-RO) No Permit Required

Foncon this date with Ms. Abernathy indicates that the current design of the proposed water pipeline is that all crossings of all jurisdictional waters of the United States will be either conventionally bored or utility-type horizontal directionally drilled.

Although delineated and reported, wetlands will not be impacted by the route of the proposed water pipeline.

For these reasons no Regulatory Permit is required.

Ms. Abernathy says that she will document on her end and provide same into her NEPA documentation and for that reason does not require a No Permit Required letter response from the Regulatory Office at this time.

Regulatory Office File Tracking and Project Identification Number is "2014-814".

Advise if I may assist.

/s/Timothy Hartsfield

##

-----Original Message-----
From: Hartsfield, J T (Timothy) SWT
Sent: Tuesday, November 18, 2014 1:46 PM
To: 'DAbernathy@TriadDesigngroup.Com'
Cc: Commer, Andrew SWT; Gade, David SWT; Roberts, Karla SWT; Ware, Michael SWT; Hartsfield, J T (Timothy) SWT
Subject: City of Yukon Water Pipeline Frisco Road Btwn SH-66 and I-40 (UNCLASSIFIED)
Importance: High

Classification: UNCLASSIFIED
Caveats: FOUO//Regulatory Office (CESWT-RO) PreDecisional PreApplication Coordination

Dear Ms. Abernathy:

I have entered the subject project into our Regulatory Office database as follows:

DA Number:

SWT-2014-00814-TH (City of Yukon, Canadian County, Oklahoma, 2-mile Water Pipeline)

Applicant:

No Applicant Found (Agent: Ms. Diane Abernathy (Triad Design Group))

Please contact me that may discuss the particulars and how we can best assist you through the Regulatory process.

I would like to clarify that the pipeline probably will not impact the entire investigative area(s) as outlined in the "Yukon_Waters Final.pdf" file I have reviewed.

Secondly, I will need additional specific details pertaining to the precise points where the proposed water pipeline will cross jurisdictional waters of the United States (WOUS) and the associated temporary and permanent impacts to the aquatic environment.

I hope you will consider designing into the project the use of utility-type horizontal directional drilling (UHDD) as one portion of your schema toward avoidance of impacts to forested wetlands and WOUS. To your additional benefit, use of UHDD will typically remove the requirement for Regulatory Permitting. Please refer to a PDF of the text of the Nationwide Permit for Utility Line Activities, attached.

Please contact me soonest that we may discuss these points such that we can work together toward meeting established schedules.

/s/ Timothy Hartsfield PE &c

Regulatory Project Manager

----------Contact Information----------

Telephone: 918-669-7237 (Direct, with Voxmail)

Electronic Mail (no quotes):

"Timothy.Hartsfield@USACE.Army.Mil"

Telefax: 918-669-4306

----------Mailing Address----------

Mr. Timothy Hartsfield

Regulatory Project Manager

Routing Code CESWT-RO-TH

Regulatory Office

Tulsa District

U. S. Army Corps of Engineers

1645 South 101st East Avenue

Tulsa, Oklahoma 74128

WATERS AND WETLANDS EVALUATION REPORT

For City of Yukon Waterline and Water Storage Tank

County	Canadian	JP Number	-	Project Number	-
Road Number	-	Water Body Name		Unnamed tributary to North Canadian River	
ROW Date	-	Let Date	-	Project Length	Apx. 2 miles
Project General Location		SH-66 to I-40 along Frisco Road in Yukon, Oklahoma.			
Project Statement		The City of Yukon is proposing the installation of approximately 2 miles of water pipeline from SH-66 to I-40 along Frisco Road. The project will also involve the installation of a water storage tank east of Frisco Road.			

Prepared for:
City of Yukon
P.O. Box 850500
Yukon, Oklahoma 73085

Prepared by:
Renee' Ellis, Biologist
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134

October 2014

PROJECT OVERVIEW

Project Type	Check √
Bridge and Approaches	
Grade, Drain, Surface and Bridge	
Grade, Drain and Surface	
Asphalt Overlay	
Widen and Resurface existing lanes	
Pavement Reconstruction & rehabilitation	
Bridge Rehabilitation	
Safety Improvements (Cable Barrier, Guardrail, signage)	
Intersection Modifications	
Safe Routes to School (Describe)	
Enhancements (Sidewalks)	
Other (Describe) Installation of Waterline and Water Storage Tank	X

Description of **proposed** improvements **SPECIFIC TO THIS PROJECT**

The City is proposing the installation of approximately 2 miles of pipeline from SH-66 to I-40 along Frisco Road and the installation of a water storage tank east of Frisco Road.

Project Environmental Study Footprint

Project Location **Section Range & Township**	**Lat/Long (NAD 83)**	**Environmental Study Footprint** **Dimensions**	**Acreage**
West ½ of Section 19, Township 12 North, Range 5 West	35.499093 N, -97.775597 W	100' south of Main St (SH-66); 100' east of Frisco Rd and extending to 660' east of Frisco for 1,400'; extending 555' northeast of Vandament Ave for 1,540'.	48.43 acres

Environmental Study Footprint Soils (NRCS Soil Survey Map)

Map Unit Name	**Percent Slope**	**Drainage Class**	**Hydric Rating**		**Description**
			YES	**NO**	
Kingfisher silt loam, (KfB)	1-3%	Well Drained		x	
Nash-Ironmound complex (NaD)	3-8%	Well Drained		x	
Nash-Ironmound complex, eroded (NaD2)	3-8%	Well drained		x	
Norge silt loam, (NrB)	1-3%	Well Drained		x	
Norge silt loam, (NrC)	3-5%	Well Drained		x	
Pond Creek silt loam, (PkA)	0-1%	Well Drained		x	
Port silt loam, occasionally flooded (Po)	0-1%	Well Drained	x		2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that: A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or B. Show evidence that the soil meets the definition of a hydric soil; AND/OR

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description
			YES	NO	
Port silt loam, occasionally flooded (Po)	0-1%	Well Drained	x		3. Soils that are frequently ponded for long or very long duration during the growing season that: A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or B. Show evidence that the soil meets the definition of a hydric soil
Port silty clay loam, frequently flooded (Pw)	0-1%	Well Drained	x		Same as above

Environmental Study Footprint General Description and Vegetation Present

Upon site investigation on September 16, 2014, it was noted that the site had been previously disturbed and was currently being disturbed by construction/clearing activities. The current land use was generally characterized as rural with scattered commercial and residential. Tree and sapling species observed during the site visit include eastern red cedar *(Juniperus virginiana),* American elm (*Ulmus americana*), sugarberry (*Celtis laevigata*), black willow *(Salix nigra),* cottonwood (*Populus deltoides),* western soapberry (*Sapindus drummondii*), persimmon (*Diospyros virginiana*), black locust *(Robinia pseudoacacia),* green ash (*Fraxinus pennsylvanica*), roughleaf dogwood *(Cornus drummondii),* pecan *(Carya illinoensis),* and red mulberry *(Morus rubra).* Woody shrubs and vines present included Chinese privet (*Ligustrum sinense*), chickasaw plum (*Prunus angustifolia*), pokeweed (*Phytolacca americana*), poison ivy (*Rhus radicans*), Virginia creeper (*Parthenocissus quinquefolia*), grapevine (*Vitis* sp.), trumpet creeper (*Campsis radicans),* and greenbrier (*Smilax rotundifolia).* The observed herbaceous species included Bermuda grass (*Cynodon dactylon*), Johnson's grass (Sorghum halapense), Canada wildrye (*Elymus canadensis*), little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), sideoats grama (*Bouteloua curtipendula*), oilfield threeawn (*Aristida oligantha*), plains lovegrass (*Eragrostis intermedia*), plains bluestem (*Bothriochloa ischaemum*), goldenrod (*Solidago* spp.), beggar ticks (*Bidens bipinnata*), giant ragweed (*Ambrosia trifida*), western ragweed (*Ambrosia psilostachya),* New York ironweed (*Vernonia noveboracensis*), black-eyed

susan *(Rudbeckia hirta),* snow-on-the-mountain *(Euphorbia marginata),* horse nettle (*Solanum carolinense*), *Aster* species, sneezeweed (*Helenium autumnale),* prickly pear cactus *(Opuntia macrorhiza),* dotted smartweed (*Polygonum punctatum*), and *Carex* species.

WATERS AND WETLANDS EVALUATION

Data Sources Reviewed (list)

USGS 7.5 minute Quads	NWI Map	USACE Wetland Regional Supplement	Additional Resources Reviewed
Richland & Minco NE, OK	US Fish & Wildlife Service: "CONUS_wet_poly" vector digital data	-Great Plains Region - Central Great Plains subregion (LRR H)	National List of Plant Species that Occur in Wetlands: - Region 6: South Plains

Streams and Drainages Summary Table

Field Site	Stream Name	USGS Mapped Status	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
1	Ephemeral Drainage	Not Mapped	Jurisdictional	0.02	163
5	Ephemeral Drainage	Not Mapped	Jurisdictional	0.01	198
6	Ephemeral Drainage	Not Mapped	Jurisdictional	0.01	123
8	Intermittent Creek	Intermittent	Jurisdictional	0.03	106
9	Ephemeral Drainage	Not Mapped	Jurisdictional	0.01	205

Wetlands and Ponds Summary Table

Field Site	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
2	Forested Wetland	PFO1Ch	Jurisdictional	0.20
3	Open Water	PUBFh	Jurisdictional	1.14
4	Forested Wetland	PFO1Ch	Jurisdictional	0.03
7	Forested/Emergent Wetland	PFO1E/PEM1E	Jurisdictional	0.11

For Each Field Site

Streams and other linear aquatic features

All of the field sites listed below are likely to be considered jurisdictional by the US Army Corps of Engineers unless otherwise noted in the field site description.

Field Site 1: Ephemeral Drainage

This drainage begins immediately south of the forested wetland (FS-2) and open water (FS-3) areas. The drainage flows northward until its convergence with the forested wetland noted as FS-2. Based upon observations made during the September 16 site visit, this drainage has been previously impacted by some type of construction activity and likely would have started further to the south. This site is displayed in the site photographs and identified on the site map as FS-1 (**Appendix A and Figure 5-1**). The portions of the drainage that exhibited canopy cover included western soapberry, American elm, sugarberry, black willow and roughleaf dogwood trees and saplings. The estimated ordinary high water marks ranged from approximately 2 to 6 feet wide. Approximately 568 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.02 acre. The drainage is not mapped on the US Geological Survey (USGS) 7.5-Minute Topographic Map (**Figure 2**).

Field Site 5: Ephemeral Drainage

This drainage begins north of the open water area noted as FS-3. It flows northward until its convergence with the wetland noted as FS-7 and then exits the project area north of FS-7. This site is displayed in the site photographs and identified on the site map as FS-5 (**Appendix A and Figure 5-1**). The canopy consisted of American elm, sugarberry, and cottonwood trees and saplings. The estimated ordinary high water marks were approximately 3 feet wide. Approximately 198 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.01 acre. The drainage is not mapped on the US Geological Survey (USGS) 7.5-Minute Topographic Map (**Figure 2**).

Field Site 6: Ephemeral Drainage

This drainage begins north of the open water area noted as FS-3 and flows westward until its confluence with the drainage noted as FS-5. This site is displayed in the site photographs and identified on the site map as FS-6 (**Appendix A and Figure 5-1**). The canopy consisted of red cedar, American elm, roughleaf dogwood, and cottonwood trees and saplings. The estimated ordinary high water marks were approximately 2 to 4 feet wide. Approximately 123 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.01 acre. The drainage is not mapped on the US Geological Survey (USGS) 7.5-Minute Topographic Map (**Figure 2**).

Field Site 8: Intermittent Creek

This unnamed creek enters the study area south of Main Street and flows northward until it exits the study area. The canopy surrounding the area included American elm, green ash, and black willow trees and saplings. The estimated ordinary high water marks ranged from 12 to 15 feet wide. Approximately 106 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.03 acres. Site photographs are included in **Appendix A**. The creek is mapped as an intermittent drainage on the US Geological Survey (USGS) 7.5-Minute Topographic Map and Site Map (**Figures 2 and 5-2**).

Field Site 9: Ephemeral Drainage

This drainage is located south of Main Street. It begins east of the intermittent creek noted as FS-8 and flows westward until its confluence with FS-8. This site is displayed in the site photographs and identified on the site map as FS-9 (**Appendix A and Figure 5-2**). The canopy consisted of American elm trees. The estimated ordinary high water marks were approximately 2 to 3 feet wide. Approximately 205 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.01 acre. The drainage is not mapped on the US Geological Survey (USGS) 7.5-Minute Topographic Map (**Figure 2**).

Wetlands and Ponds

The field site listed below is likely to be considered jurisdictional by the US Army Corps of Engineers unless otherwise noted in the field site description.

Field Site 2: Forested Wetland

(0.20 acre) This forested wetland is located east of Frisco Rd. and adjacent to and on the southern edge of the open water area noted as FS-3. Based upon observations made during the September 16 site visit, this wetland has been previously impacted by clearing activities and likely would have continued around the open water area and connected to FS-4. This site is displayed in the site photographs and identified on the site map as FS-2 (**Appendix A and Figure 5-1**). It is noted on the NWI Mapping as "*PFO1Ch*" (**Figure 4**). The dominant species included black willow trees. The soil was mapped as Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2). Hydric soils were confirmed by the matrix coloration of 5YR 4/2 with concentrations of 5YR 4/4 from 1 to 4 inches and 7.5YR 4/3 with concentrations of 7.5YR 4/6 from 4 to 8+ inches. The soils were classified as loamy clay and sandy clay. Hydric soil indicator TF2 – Red Parent Material was used for this region. The soil profile meets this indicator as evidence of hydric soil as well as F3 – Depleted Matrix. Wetland hydrology is evidenced by water marks, drift deposits, and water-stained leaves, sparsely vegetated concave surface, and FAC-neutral test. This wetland is classified as PFO1Ch (palustrine, forested, broad-leaved deciduous, seasonally flooded, diked/impounded), following the Cowardin classification system. Functions of this wetland likely include surface water retention or detention and wildlife habitat.

Field Site 3: Open Water

(1.14 acres) This pond is located east of Frisco Rd. This site is displayed in the site photographs and identified on the site map as FS-3 (**Appendix A and Figure 5-1**). It is noted on the topographic map (**Figure 2**) as well as the NWI Mapping as "*PUBFh*" (**Figure 4**). Observed dominant species surrounding the pond consisted of black willow, roughleaf dogwood, and red cedar trees. The soil was mapped as water (W). The area is classified as PUBFh (palustrine, unconsolidated bottom, semi-permanently flooded, diked/impounded), following the Cowardin classification system. Functions of this open water area likely include surface water retention or detention, ground-water recharge, water quality improvement, and wildlife habitat.

Field Site 4: Forested Wetland

(0.03 acre) This forested wetland is located east of Frisco Rd. and adjacent to and on the eastern edge of the open water area noted as FS-3. Based upon observations made during the September 16 site visit, this wetland has been previously impacted by clearing activities and likely would have continued around the open water area and connected to FS-2. This site is displayed in the site photographs and identified on the site map as FS-4 (**Appendix A and Figure 5-1**). It is noted on the NWI Mapping as "*PFO1Ch*" (**Figure 4**). The dominant species included black willow trees. The soil was mapped as Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2). Hydric soils were confirmed by the matrix coloration of 5YR 4/2 with concentrations of 5YR 4/4 from 1 to 4 inches and 7.5YR 4/3 with concentrations of 7.5YR 4/6 from 4 to 8+ inches. The soils were classified as loamy clay and sandy clay. Hydric soil indicator TF2 – Red Parent Material was used for this region. The soil profile meets this indicator as evidence of hydric soil as well as F3 – Depleted Matrix. Wetland hydrology is evidenced by water marks, drift deposits, and water-stained leaves, sparsely vegetated concave surface, and FAC-neutral test. This wetland is classified as PFO1Ch (palustrine, forested, broad-leaved deciduous, seasonally flooded, diked/impounded), following the Cowardin classification system. Functions of this wetland likely include surface water retention or detention and wildlife habitat.

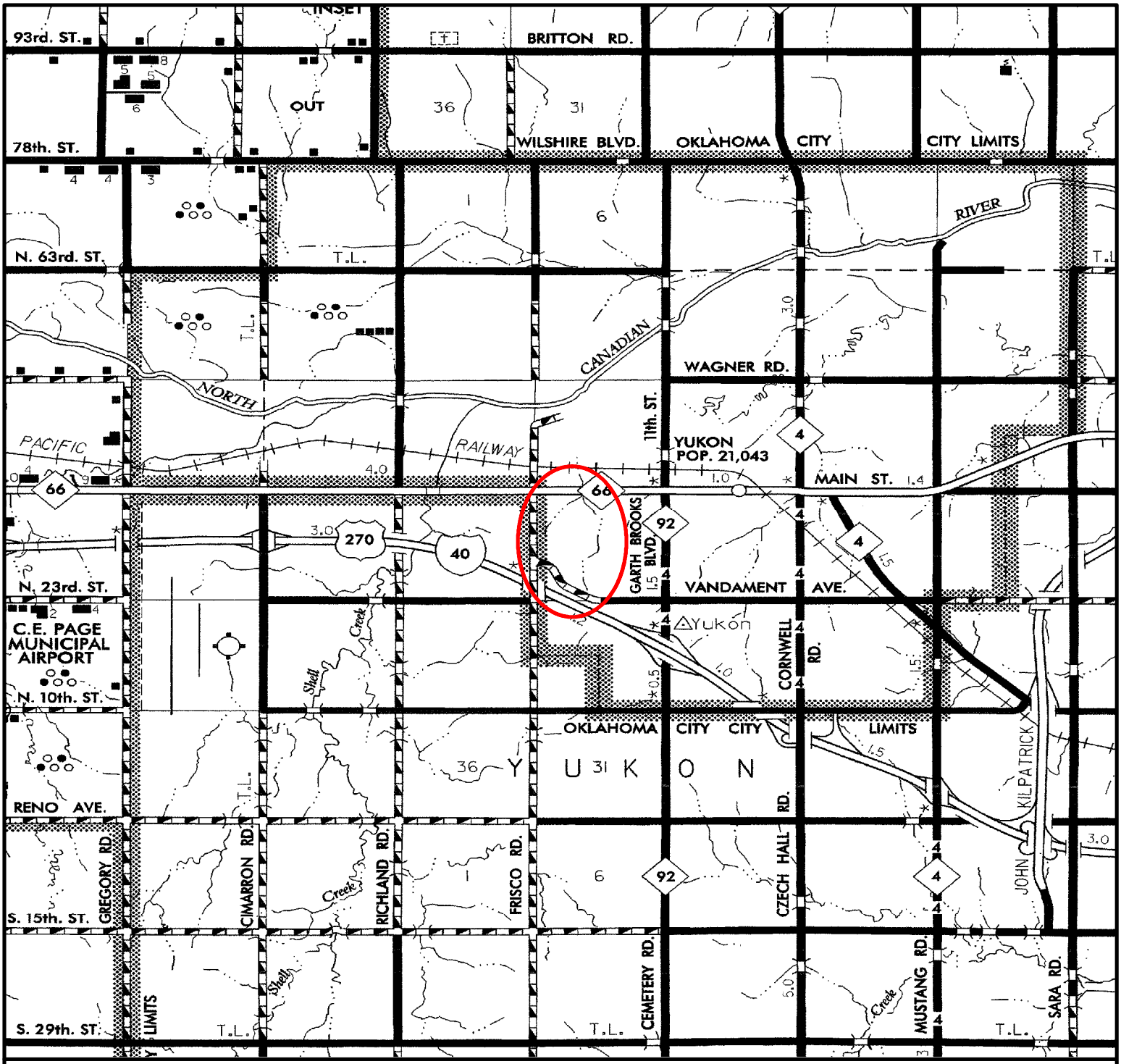
Field Site 7: Forested/Emergent Wetland

(0.11 acre) This wetland is located east of Frisco Rd in a depression adjacent to an access road. It is hydrologically connected to the ephemeral drainage noted as FS-5. This site is displayed in the site photographs and identified on the site map as FS-7 (**Appendix A and Figure 5-1**). The dominant species included Caric sedge, dotted smartweed, poison ivy, sugarberry, black willow, and cottonwood trees. The soil was mapped as Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2). Hydric soils were confirmed by the matrix coloration of 7.5YR 4/2 with concentrations of 7.5YR 4/4 from 2 to 6 inches. The soils were classified as clay loam. Hydric soil indicator TF2 – Red Parent Material was used for this region. The soil profile meets this indicator as evidence of hydric soil as well as F3 – Depleted Matrix. Wetland hydrology is evidenced by drift deposits and FAC-neutral test. This wetland is classified as PFO1E/PEM1E (palustrine, forested/emergent, broad-leaved deciduous/persistent, seasonally flooded/saturated),

following the Cowardin classification system. Functions of this wetland likely include surface water retention or detention and wildlife habitat.

FIGURES

APPENDICES



Project Location

N

0 3,000 6,000 9,000 Feet

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Ph. (405) 752-1122
Fax (405) 752-8855

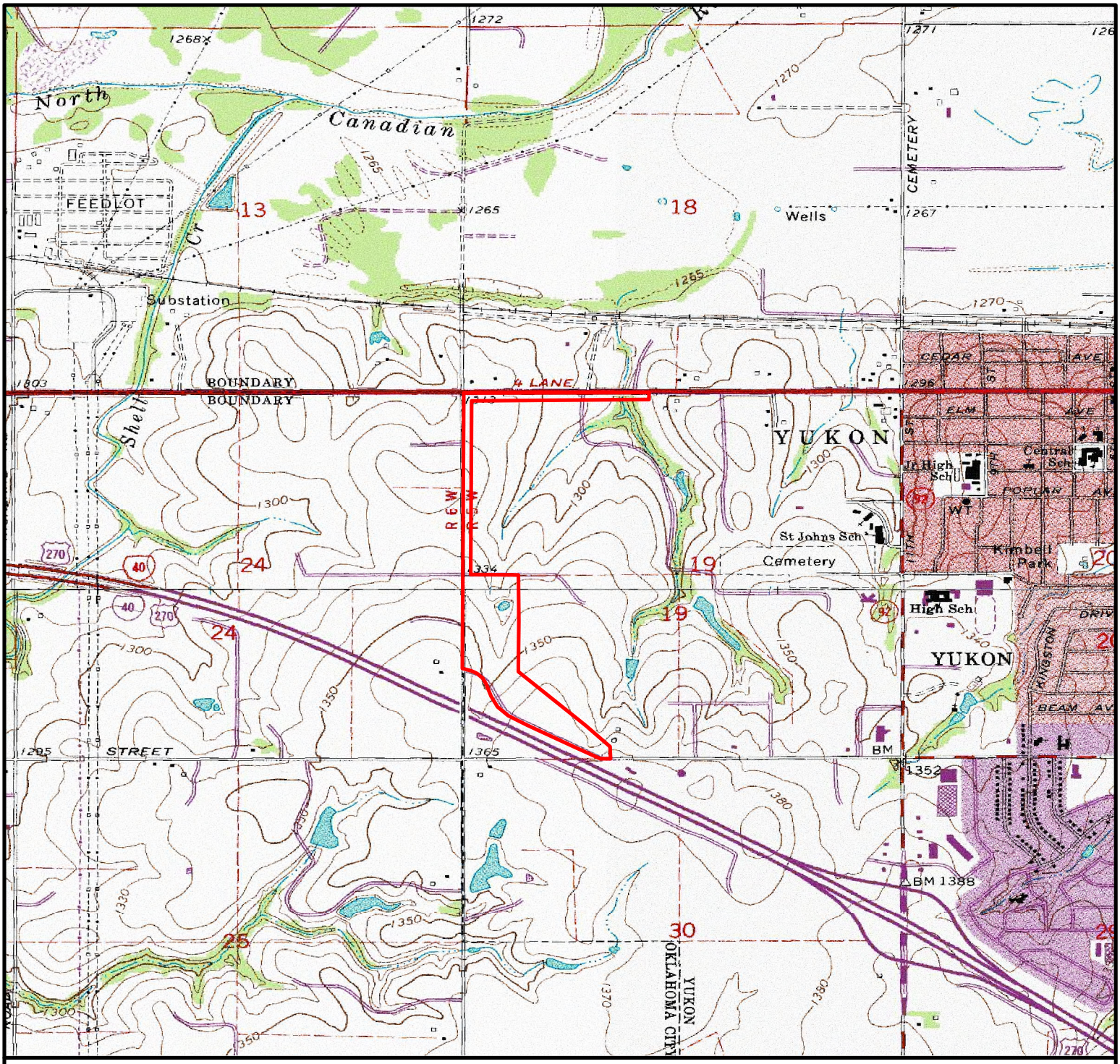
FIGURE TITLE
LOCATION MAP

DOCUMENT TITLE
WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER

CLIENT
CITY OF YUKON

LOCATION
CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
	1



Study Area

USGS 7.5 Minute Quadrangles at 1:24,000 scale
Richland & Minco NE, Oklahoma

N

0 1,000 2,000 3,000 Feet

TRIAD DESIGN GROUP
Architecture • Engineering

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Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

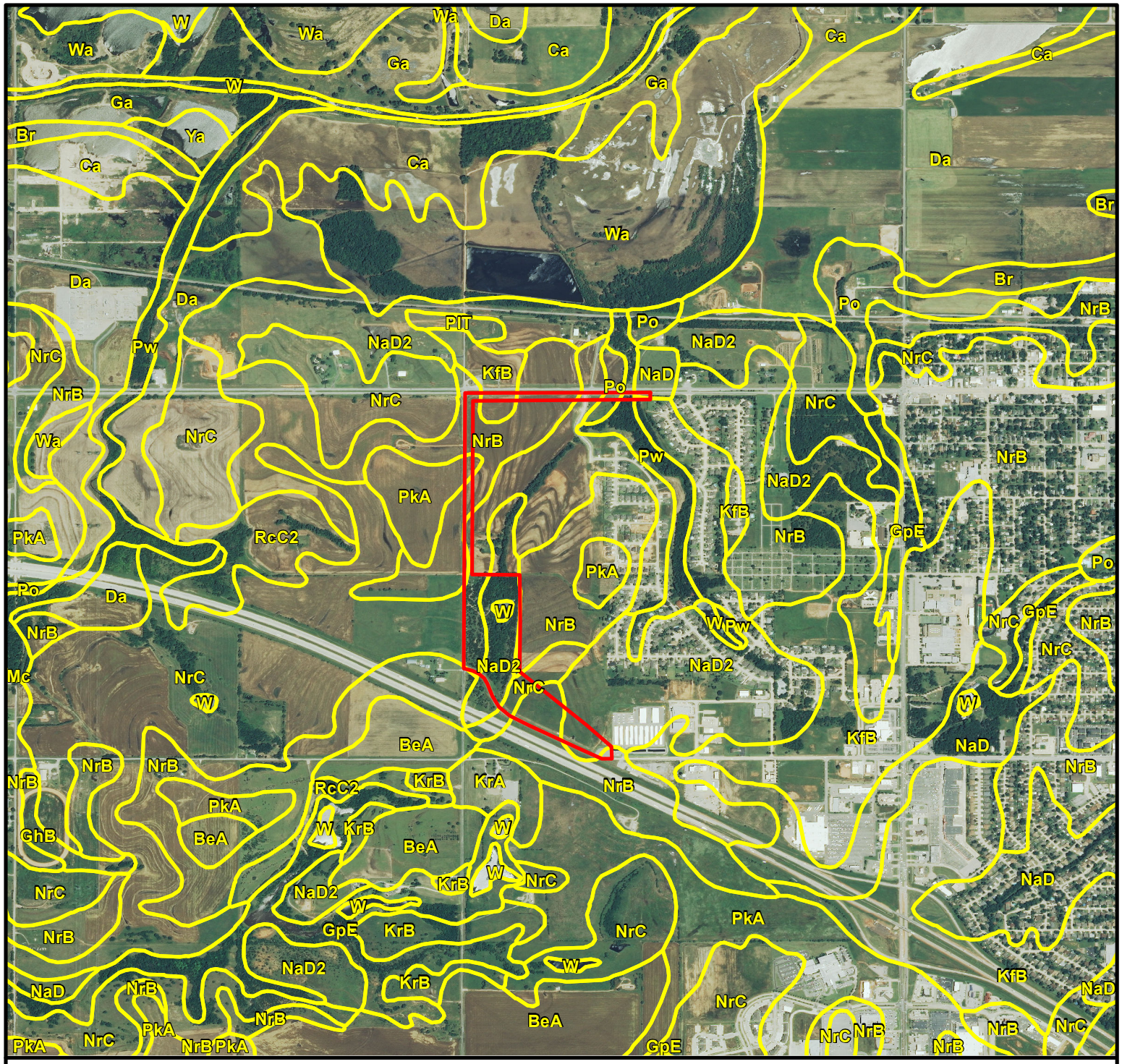
FIGURE TITLE
TOPOGRAPHIC MAP

DOCUMENT TITLE
WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER

CLIENT
CITY OF YUKON

LOCATION
CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	
	2



USDA NRCS 2013 Soil Survey Geographic (SSURGO)
Database for Canadian County, Oklahoma

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Architecture • Engineering

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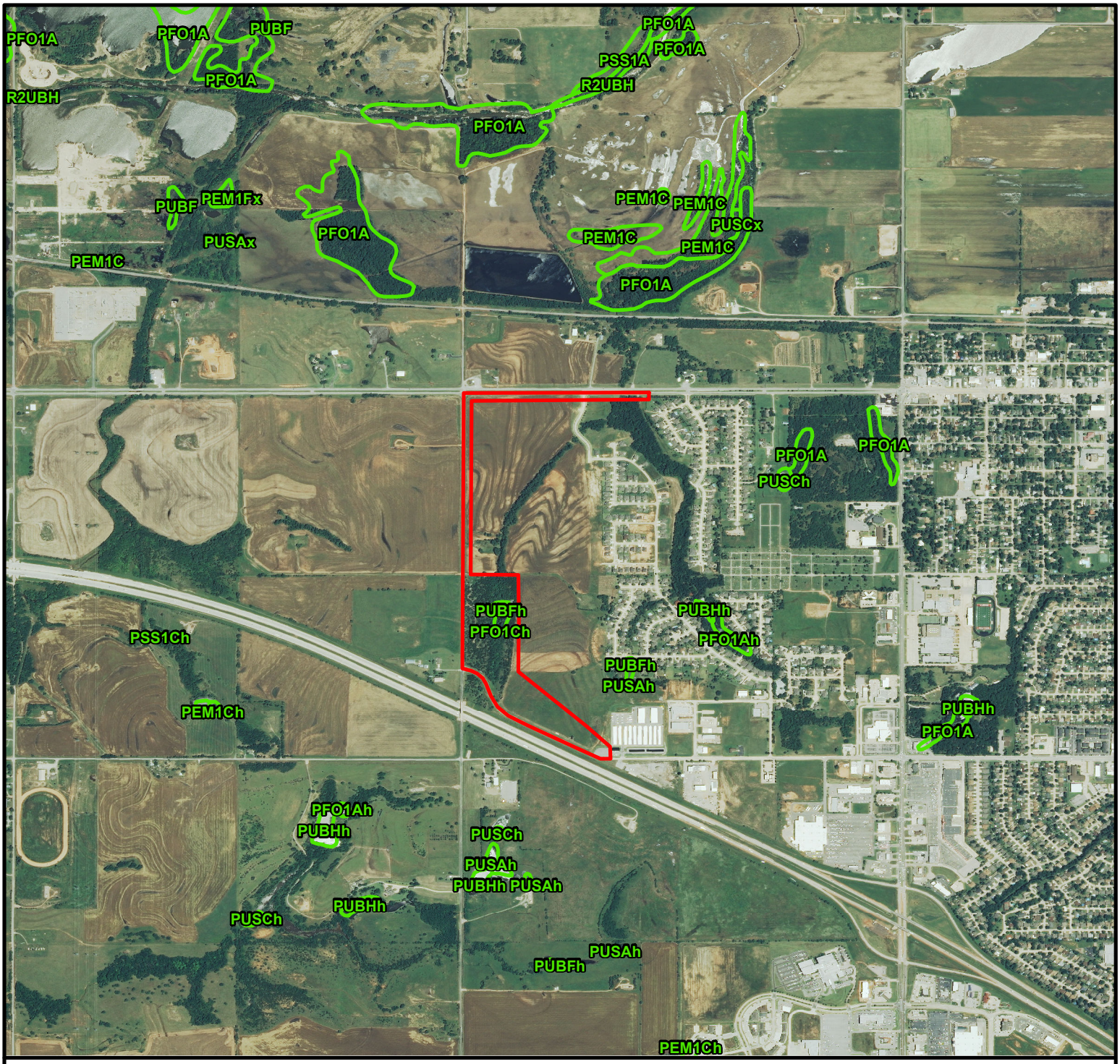
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE	**NRCS SOILS MAP**
DOCUMENT TITLE	WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
FIGURE NUMBER	3



NWI Wetlands

Study Area

USFWS National Wetland Inventory Map
CONUS Wetland Polygons

N

0 1,000 2,000 3,000

Feet

TRIAD DESIGN GROUP
Architecture • Engineering

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE

NATIONAL WETLANDS INVENTORY (NWI) MAP

DOCUMENT TITLE

WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER

CLIENT

CITY OF YUKON

LOCATION

CANADIAN COUNTY, OKLAHOMA

DATE	09/19/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

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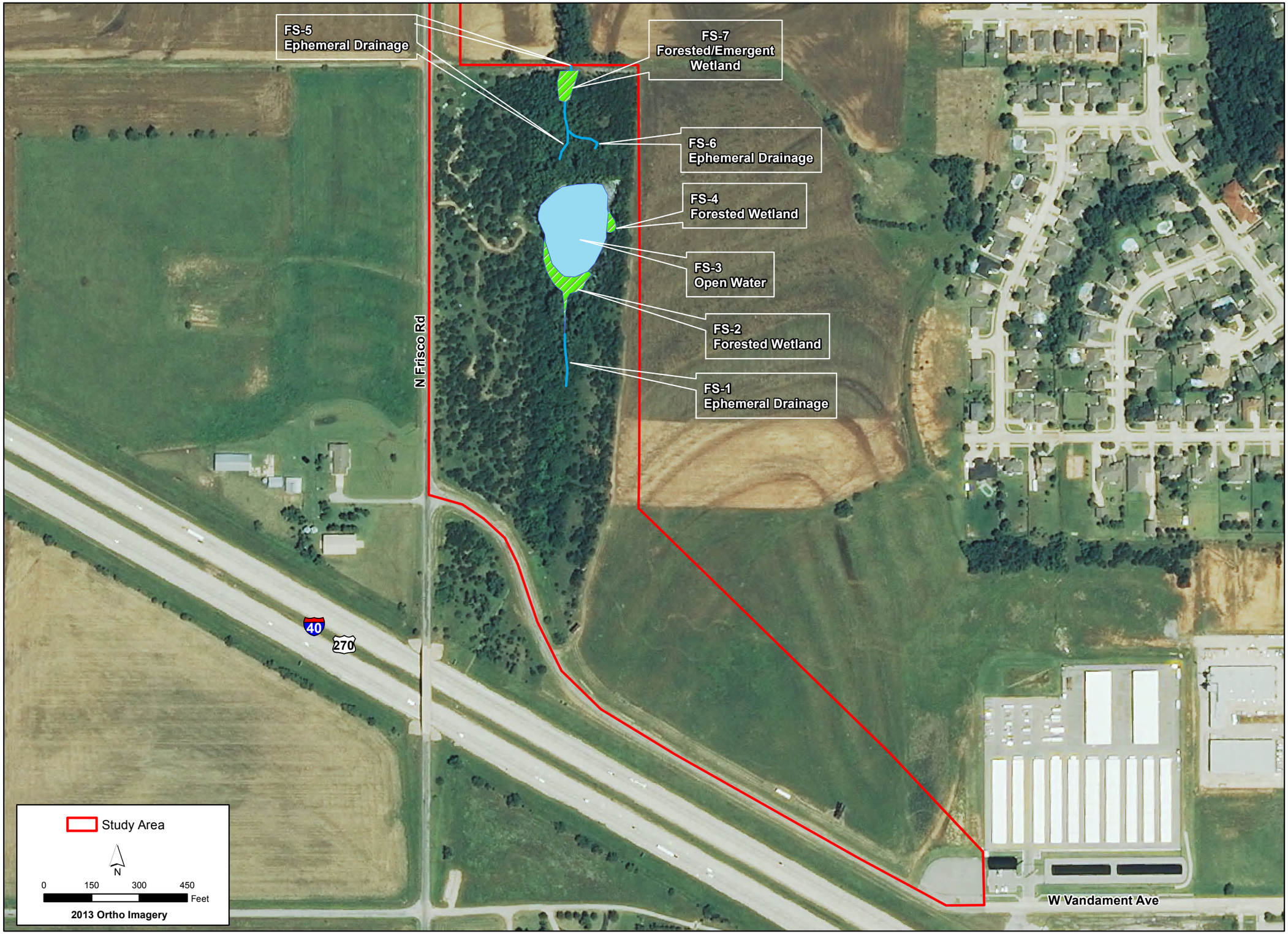

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FIGURE TITLE	**SITE MAP**
DOCUMENT TITLE	WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/23/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
5-1

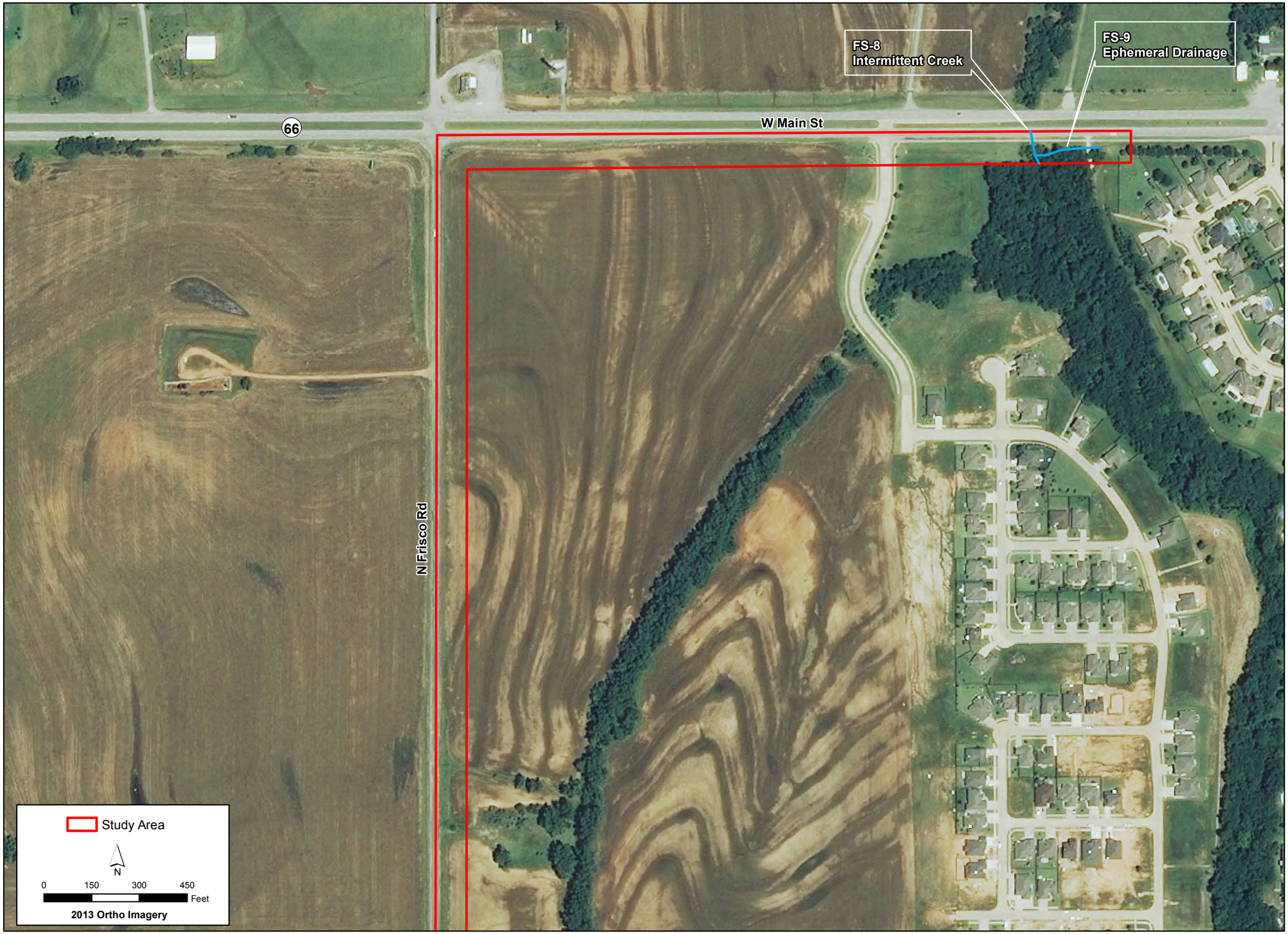

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FIGURE TITLE	**SITE MAP**
DOCUMENT TITLE	WATERS & WETLANDS EVALUATION - YUKON WATERLINE/TOWER
CLIENT	CITY OF YUKON
LOCATION	CANADIAN COUNTY, OKLAHOMA

DATE	09/23/2014
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
5-2

FS-1: Ephemeral Drainage. View facing northwest.

Area depicting previous clearing activities where FS-1 may have previously began.

FS-2: Forested Wetland. View facing west.

FS-3: Open Water. View facing northeast.

FS-4: Forested Wetland (Shown in top left of photo). View facing north.
Foreground of photo depicting the area to east of open water (FS-3) – previously cleared.

FS-5: Ephemeral Drainage. View facing south from FS-7.

FS-6: Ephemeral Drainage. View facing northwest.

FS-7: Forested/Emergent Wetland. View facing south.

FS-8: Intermittent Creek. View facing south.

FS-9: Ephemeral Drainage. View facing west.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Yukon Waterline / Water Tower City/County: Canadian County Sampling Date: 9/16/2014

Applicant/Owner: City of Yukon State: OK Sampling Point: FS-2

Investigator(s): R. Ellis / Triad Section, Township, Range: 19, T12N, R5W

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): LRR H Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2) NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x No _____	**Is the Sampled Area within a Wetland?** Yes x No _____
Hydric Soil Present?	Yes x No _____	
Wetland Hydrology Present?	Yes x No _____	

Remarks:

Area is currently in moderate drought (US Drought Monitor Report for September 2014)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	50	Y	FACW
2.			
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No _____

Remarks:

SOIL

Sampling Point: FS-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1								Organic Material
1-4	5YR 4/2	80	5YR 4/4	20	C	M	loamy clay	
4-8+	7.5YR 4/3	98	5YR 4/6	2	C	M	sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- 1 cm Muck (A9) (**LRR I, J**)
- Coast Prairie Redox (A16) (**LRR F, G, H**)
- Dark Surface (S7) (**LRR G**)
- High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- Reduced Vertic (F18)
- X Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes____ No X____ Depth (inches): _____

Water Table Present? Yes____ No X____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes____ No X____ Depth (inches): _____

Wetland Hydrology Present? Yes X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Yukon Waterline / Water Tower City/County: Canadian County Sampling Date: 9/16/2014

Applicant/Owner: City of Yukon State: OK Sampling Point: FS-4

Investigator(s): R. Ellis / Triad Section, Township, Range: 19, T12N, R5W

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): LRR H Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2) NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x No _____	
Wetland Hydrology Present?	Yes x No _____	

Remarks:

Area is currently in moderate drought (US Drought Monitor Report for September 2014)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	50	Y	FACW
2.			
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x _____ **No** _____

Remarks:

SOIL

Sampling Point: FS-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1								Organic Material
1-4	5YR 4/2	80	5YR 4/4	20	C	M	loamy clay	
4-8+	7.5YR 4/3	98	5YR 4/6	2	C	M	sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- 1 cm Muck (A9) (**LRR I, J**)
- Coast Prairie Redox (A16) (**LRR F, G, H**)
- Dark Surface (S7) (**LRR G**)
- High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- Reduced Vertic (F18)
- X Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes____ No X____ Depth (inches): _____

Water Table Present? Yes____ No X____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes____ No X____ Depth (inches): _____

Wetland Hydrology Present? Yes X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Yukon Waterline / Water Tower City/County: Canadian County Sampling Date: 9/16/2014

Applicant/Owner: Oklahoma Department of Transportation State: OK Sampling Point: FS-7

Investigator(s): R. Ellis / Triad Section, Township, Range: 19, T12N, R5W

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): LRR H Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Nash-Ironmound complex-eroded, 3-8% slopes, well drained (NaD2) NWI classification: PFO/EM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation x, Soil x, or Hydrology x significantly disturbed? Are "Normal Circumstances" present? Yes x No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x No _____	
Wetland Hydrology Present?	Yes x No _____	

Remarks:

Area is currently in moderate drought (US Drought Monitor Report for September 2014).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	40	Y	FAC
2. Salix nigra	25	Y	FACW
3. Populus deltoides	15	Y	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Polygonum punctatum	20	Y	FACW+
2. Carex sp.	20	Y	FAC
3. Rhus radicans	20	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** _____

Remarks:

SOIL

Sampling Point: FS-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/1	100					loam	
2-6+	7.5YR 4/2	80	7.5YR 4/4	20	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- 1 cm Muck (A9) (**LRR I, J**)
- Coast Prairie Redox (A16) (**LRR F, G, H**)
- Dark Surface (S7) (**LRR G**)
- High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- Reduced Vertic (F18)
- X Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X ___ Depth (inches): _____

Water Table Present? Yes ___ No X ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X ___ Depth (inches): _____

Wetland Hydrology Present? Yes X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This site is hydrologically connected to the drainage noted as FS-5. The drainage crosses an access road at this location. The outlet (culvert) for the drainage is set several inches higher than the ground resulting in this area forming a wetland.

Appendix E
Agency Coordination Correspondence

AGENCY MAILING LIST, DRAFT EA REVIEW AND COMMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

Mr. Richard Fields, Assistant Field Office Mgr
Multi Resources Oklahoma Field Office
Bureau of Land Management
7906 E. 33rd Street, Suite 101
Tulsa, Oklahoma 74145-1352

Dr. Sharon Osowski
NEPA Transportation Coordinator
USA EPA – Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Ms. Dixie Porter
Field Supervisor (ES)
U.S. Fish & Wildlife Service
9014 East 21st Street
Tulsa, Oklahoma 74129-1428

Regional Director (ES)
Ecological Services Regional Office
U.S. Fish & Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

Mr. Jason Lewis, Acting Director
Oklahoma Water Science Center, USGS, South Central Area
202 NW 66th, Building 7
Oklahoma City, Oklahoma 73116

Ms. Lori Wrotenbery, Director
Oil & Gas Conservation Division
Oklahoma Corporation Commission
Jim Thorpe Building, 2101 N.Lincoln Blvd.
Oklahoma City, Oklahoma 73105

Environmental Review Coordinator
DEQ Customer Assistance Program
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Ms. Melvena Heisch
Deputy Historic Preservation Officer
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, Oklahoma 73105-7917

Dr. Robert L. Brooks
Oklahoma Archaeological Survey
111 E.Chesapeake, Building 134
Norman, Oklahoma 73019-5111

Mr. Richard Hatcher, Director
Department of Wildlife Conservation
1801 North Lincoln Blvd., P.O. Box 53465
Oklahoma City, Oklahoma 73152-8804

Mr. J.D. Strong
Oklahoma Water Resources Board
3800 North Classen
Oklahoma City, Oklahoma 73118

Dr. G. Randy Keller, Director
Oklahoma Geological Survey
100 East Boyd, Room N-131
Norman, Oklahoma 73019-0628

Ms. Kristina S. Marek, Director
Research & Development Division
Oklahoma Tourism & Recreation Department
First Ntl. Ctr., 120 N. Robinson Ave., Ste. 600
Oklahoma City, Oklahoma 73102

Mr. Bruce Hoagland, Coordinator
Oklahoma Natural Heritage Inventory
Oklahoma Biological Survey
111 E. Chesapeake Street
Norman, Oklahoma 73019-0575

Ms. Jennifer Ramey
Canadian County Floodplain Administrator
Canadian County Floodplain Management
200 North Choctaw Avenue
El Reno, Oklahoma 73036

Mr. Jason Glidewell Attorney at Law
Special Master for the Caddo Nation
516 E. Central Blvd
Anadarko, Oklahoma 73005

Governor Eddie Hamilton
Cheyenne-Arapaho Tribes
100 Red Moon Circle
Concho, Oklahoma 73022

Chief Paula Pechonick
Delaware Tribe
170 NE Barbara
Bartlesville, Oklahoma 74006

Principal Chief George Tiger
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee, Oklahoma 74447

Principal Chief Geoffrey Standing Bear
Osage Nation
627 Grandview
Pawhuska, Oklahoma 74056

Chairperson John Berrey
Quapaw Tribe of Oklahoma
P.O. Box 765
Quapaw, Oklahoma 74363

Chief Leonard Harjo
Seminole Nation
P.O. Box 1498
Wewoka, Oklahoma 74884

President Terri Parton
Wichita and Affiliated Tribes
P.O. Box 729
Anadarko, Oklahoma 73005

Senator James M. Inhofe
United States Senate
205 Russell – Senate Office Building
Washington, DC 20510

Senator James M. Inhofe
302 N Independence, #104
Enid, OK 73701

Senator James Lankford
United State Senate
B40-C Dirksen Senate Office Building
Washington, DC 20510

Senator James Lankford
1015 North Broadway Avenue
Suite 310
Oklahoma City, OK 73102

AGENCY MAILING LIST, DRAFT EA REVIEW AND COMMENT
WATER PIPELINE/STORAGE TANK AND SANITARY SEWER REPLACEMENT
CITY OF YUKON, OKLAHOMA

Representative Frank D. Lucas
U.S. House of Representatives
2405 Rayburn House Office Building
Washington, DC 20515-0001

Representative Frank D. Lucas
10952 NW Expressway, Suite B
Yukon, OK 73099

Senator Ron Justice
State Senate
2300 North Lincoln Boulevard
State House, Room 526
Oklahoma City, OK 73105

Senator Ron Justice
2209 County Street 2880
Chickasha, OK 73018

Representative John Paul Jordan
State Representative
2300 North Lincoln Boulevard
State House, Room 328B
Oklahoma City, OK 73105

Chairman Board of County Commissioners
Canadian County
201 North Choctaw
El Reno, Oklahoma 73036

Mr. Marc Hader, District 1
Canadian County Commissioner
201 North Choctaw
El Reno, Oklahoma 73036

Mr. Dave Anderson, District 2
Canadian County Commissioner
201 North Choctaw
El Reno, Oklahoma 73036

Mr. Jack Stewart, District 3
Canadian County Commissioner
201 North Choctaw
El Reno, Oklahoma 73036

Diane Abernathy

From: Eve Atkinson <Eve.Atkinson@travelok.com>
Sent: Tuesday, December 16, 2014 2:11 PM
To: Diane Abernathy
Subject: water transmission line, storage tower and sanitary sewer replacement, Yukon

Ms. Abernathy,

There is a Land and Water Conservation Fund park west of Ranchwood Heights Addition , accessed from SH 4 and on the east by Linda Lane, which is accessed by N. Ranchwood Blvd. There is no problem with construction of a sewer line if existing utility right of way is restored to previous conditions (underground utilities do not disturb recreational use of a park). The park property is west of the housing addition.

Any construction must not damage existing park facilities or obstruct the entrance on a permanent basis. Beyond the maintenance of the City of Yukon, we inspect the parks every 5 years to investigate the condition and compliance with respect to the LWCF regulations.

Regarding the project along Frisco Road, on the east side of Frisco Road and the north side of I-40, there are no federally funded (LWCF) or state parks in the area. If you have further questions I may be contacted using the information below.

Eve Atkinson
Planning Coordinator II
Oklahoma State Parks
Grants Office
Oklahoma Tourism and Recreation Department
120 North Robinson – Suite 600
Oklahoma City, OK 73102

Off: 405.230.8483
Fax: 405.230.8683
Eve.Atkinson@travelok.com

OKLAHOMA

MARY FALLIN, GOVERNOR
RICHARD T. HATCHER, DIRECTOR
wildlifedepartment.com

DEPARTMENT OF WILDLIFE CONSERVATION

P.O. Box 53465 Oklahoma City, OK 73152 PH. (405) 521-3851

December 15, 2014

Diane Abernathy
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement
Yukon, Oklahoma

Dear Ms. Abernathy,

This letter is written in response to your request for information regarding the presence of endangered species and other elements of biological concern at the Yukon Oklahoma, Canadian County Site. We have reviewed the information currently in the Oklahoma Natural Heritage Inventory (ONHI) database and have found no records of elements of concern at the Yukon Oklahoma site.

Because the ONHI database is only as complete as the information that has been collected, we cannot say with certainty whether or not a given site harbors rare species or ecological communities. Please understand that due to time and personnel constraints, the ODWC has not performed an actual field survey of the proposed site location. The information sent to this office regarding the proposed project has been reviewed and compared against our current records for endangered and threatened species. For this reason, if you are concerned about species of federal interest, we urge you to consult with the Tulsa office of the U.S. Fish and Wildlife Service (918-581-7458), as they may have additional information of which we are unaware. The Oklahoma Department of Wildlife Conservation (ODWC) is not the US Fish and Wildlife Service and we have no authority over federal listed threatened or endangered species.

However, based upon the currently available information, it could be likely that threatened or endangered species could occur in the vicinity of the project site. The species occurring in Canadian County are as listed in a table on the following page. The information provided via the table was found on the Oklahoma Natural Heritage Inventory Database, for a more comprehensive report consult the U.S. Fish and Wildlife Service Tulsa Office. This information is just a county list of organisms of concern that occur within Canadian County.

If you have any questions, please contact me at ODWC (405-325-7288). Another helpful contact you may consider is the Oklahoma Natural Heritage Inventory, 111 E. Chesapeake Street, Norman, Ok. 73019; (405)325-4034.

Sincerely,

Clayton Porter
Fisheries Research Biologist

CANADIAN COUNTY

Species	Federal Status	State Status	Scientific Name	Common Name
INSECTS		SS2	GRYLLOTALPA MAJOR	PRAIRIE MOLE CRICKET
REPTILES		CS SS2	PHRYNOSOMA CORNUTUM	TEXAS HORNED LIZARD
BIRDS	E	E	STERNA ANTILLARUM	LEAST TERN
		SS2	ATHENE CUNICULARIA	BURROWING OWL
	E	E	VIREO ATRICAPILLUS	BLACK-CAPPED VIREO

OKLAHOMA
Corporation Commission

P.O. BOX 1107
Kingfisher, OK 73750-1107

Telephone: (405)375-5570
FAX: (405)375-5576

OIL & GAS CONSERVATION DIVISION

Brad Ice, Manager, District II

12 December 2014

Ms.Diane Abernathy
Trisad Design Group
3020 Northwest 149th Street
Oklahoma City, OK. 73134

Re: Water Transmission Line/ Storage Tower and Sanitary Sewer Replacement, Yukon , OK.

Ms. Abernathy:

The area for the water transmission line/storage tower construction has one oil and gas well that has been plugged in the area north of I 40 and east of N. Frico Rd. and one well that is a little outside of the area of concern in the NW 1/4. There is a map attached showing location of old wells.

1. Mesa 19-1 S2, NE, SW, SW, 19-12N-05W Canadian Co. Well plugged 01/10/1992 and casing cut off approx. 4' below ground level.

2. Lamb 19-2 SW, SW, NW, 19-12N-05W Canadian Co. Well was plugged 12/08/2004 and casing cut off approx. 4' below ground level.

There are no wells located in the area for the sanitary sewer replacement in the Ranchwood Hills residential addition.

If you need any additional help please call me at 405-375-5570 or by email at b.ice@occemail.com.

Sincerely,

Brad Ice
District Manager
Distr. 2
OCC

Enclosure: Maps of Oil & Gas wells


I40
024-12N-06W
Frisco
Villa
Chateau
Churchill
Kingsgate
17th
Commerce
Hamlet
Westport
First Place
Kingsgate
Rock Creek
Castle Rock

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

December 4, 2014

Ms. Diane Abernathy
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134

SUBJECT: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Ms. Abernathy:

In accordance with your letter dated November 18, 2014, the U.S. Environmental Protection Agency, the Region 6 NEPA office, has no comments to offer on the proposed project based on the information submitted.

We appreciate the opportunity to examine your request for comments. Thank you for your coordination and don't hesitate to contact me at 214-665-7505 or weeks.craig@epa.gov, if you have questions or concerns regarding this letter.

Sincerely,

Craig Weeks
Acting, Chief, Office of Planning and Coordination

CANADIAN COUNTY FLOODPLAIN MANAGEMENT
EMERGENCY MANAGEMENT DIVISION
El Reno, OK

PUBLIC NOTICE REVIEW

___ We have no comments to offer. _X_ We offer the following comments.

WE RECOMMEND THAT YOU CONTACT THE LOCAL FLOODPLAIN ADMINISTRATOR FOR POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. THE OWRB WEB SITE, www.owrb.ok.gov, contains a directory of floodplain administrators and is located under forms/floodplain management/floodplain administrators, listed alphabetically by name of community. **If this development would fall on STATE OWNED or operated property, a floodplain development permit is required from OWRB.** The Chapter 55 Rules and permit application for this requirement can be found on the OWRB web site listed above. If this project is proposed in a non-participating community, try to ensure that this project is completed so that it is reasonably safe from flooding and so that it does not flood adjacent property if at all possible.

Reviewer: _Jennifer Mitchell, CFM_____ **Date:** _12/03/2014_

Project Name: Proposed Construction of Water Line/Storage Tower & Replace Sanitary Sewer for City of Yukon, Located in Section 19, T12N, R5WIM. This portion of Canadian County, OK is within Yukon City limits and is therefore a Yukon project. I only handle unincorporated Canadian County.

FIRM Name: Triad Design Group, Diane Abernathy, P.E.
CC: Mitchell Hort, Yukon FPA
Cathy Poage, OWRB CFM

* Yukon and Canadian County both participate in the NFIP and have floodplain development permitting systems. Please see paragraph above.

J. D. STRONG
EXECUTIVE DIRECTOR

MARY FALLIN
GOVERNOR

STATE OF OKLAHOMA
WATER RESOURCES BOARD
www.owrb.ok.gov

OKLAHOMA WATER RESOURCES BOARD
Planning & Management Division
Oklahoma City, OK

PUBLIC NOTICE REVIEW

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Reviewer: Cathy Poage, CFM **Date:** 12/02/2014

Project Name: Proposed Construction of Water Line/Storage Tower & Replace Sanitary Sewer for City of Yukon, Located in Section 19, T12N, R5WIM, Canadian County, OK

FIRM Name: Triad Design Group, Diane Abernathy, P.E.
CC: Mitchell Hort, Yukon FPA
Jennifer Ramey, CFM, Canadian County FPA

* Yukon and Canadian County both participate in the NFIP and have floodplain development permitting systems. Please see paragraph above.

OBS Ref. 2014-688-BUS-TDG

Dear Ms. Abernathy, Nov. 20, 2014

We have reviewed occurrence information on federal and state threatened, endangered or candidate species, as well as non-regulatory rare species and ecological systems of importance currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec.16 and 19-T12N-R5W, Canadian County

We found no occurrence(s) of relevant species within five miles of the project location as described. However, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email, or call us at the number given below.

Although not specific to your project, you may find the following links helpful.

ONHI guide to ranking codes for endangered and threatened species:
http://vmpincel.ou.edu/heritage/ranking_guide.html

Information regarding the Oklahoma Natural Areas Registry:
http://www.oknaturalheritage.ou.edu/registry_faq.htm

Todd Fagin

Oklahoma Natural Heritage Inventory/
Department of Geography and Environmental Sustainability

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. Richard Fields
Bureau of Land Management
7906 E. 33rd Street, Suite 101
Tulsa, Oklahoma 74145-1352

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Fields:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

- Construction of a 24" water transmission pipeline, beginning at the confluence of I-40 and Vandament Avenue, extending northwest along the north side of Vandament Avenue for about 0.5 miles, then extending north along the east side of Frisco Road about 0.75 miles, then east along the south side of West Main Street (i.e., US-66), about 0.5 mile

- Construction of an aboveground water storage tower on a parcel located on the east side of Frisco Road, approximately 0.5 mile south of US-66, in the NW/4 NW/4 SW/4 of Section 19, Township 12 North, Range 5 West.

- Replacement of sanitary sewer lines in the Ranchwood Hills residential addition.

To allow adequate time for evaluation of your comments, we would appreciate receiving a response within 15 days from the date of this letter. Your written comments should be directed to:

Ms. Diane Abernathy
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134

We sincerely appreciate your cooperation in this matter. For additional information or if you have any questions, please contact me at 405-919-0481 or by email at dabernathy@triaddesigngroup.com.

Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Dr. Sharon Osowski
USA EPA – Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Dr. Osowski:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. Jontie Aldrich
U.S. Fish & Wildlife Service
9014 East 21st Street
Tulsa, Oklahoma 74129-1428

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Aldrich:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manage

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Regional Director (ES)
U.S. Fish & Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Sir or Madam:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manage

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. Jason Lewis
Oklahoma Water Science Center, USGS, South Central Area
202 NW 66th, Building 7
Oklahoma City, Oklahoma 73116

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Lewis:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Ms. Lori Wrotenbery
Oklahoma Corporation Commission
Jim Thorpe Building, 2101 N.Lincoln Blvd.
Oklahoma City, Oklahoma 73105

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Ms. Wrotenbery:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

DEQ Customer Assistance Program
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

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Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. Richard Hatcher
Department of Wildlife Conservation
1801 North Lincoln Blvd., P.O. Box 53465
Oklahoma City, Oklahoma 73152-8804

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Hatcher:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. J.D. Strong
Oklahoma Water Resources Board
3800 North Classen
Oklahoma City, Oklahoma 73118

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Strong:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Dr. G. Randy Keller
Oklahoma Geological Survey
100 East Boyd, Room N-131
Norman, Oklahoma 73019-0628

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Dr. Keller:

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Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Ms. Kristina S. Marek
Oklahoma Tourism & Recreation Department
First Ntl. Ctr., 120 N. Robinson Ave., Ste. 600
Oklahoma City, Oklahoma 73102

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Ms. Marek:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

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Diane Abernathy

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Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Mr. Bruce Hoagland
Oklahoma Natural Heritage Inventory, Oklahoma Biological Survey
111 E. Chesapeake Street
Norman, Oklahoma 73019-0575

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Mr. Hoagland:

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Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Ms. Jennifer Ramey
Canadian County Floodplain Management
200 North Choctaw Avenue
El Reno, Oklahoma 73036

Re: Water Transmission Line/Storage Tower Construction and Sanitary Sewer Replacement, Yukon, OK

Dear Ms. Ramey:

Triad Design Group, acting as an agent for the City of Yukon, Oklahoma and in cooperation with the United States Army Corps of Engineers, is soliciting comments on the above-referenced project in Canadian County, Oklahoma. Please see the enclosed figures which depict the study areas associated with the project. The project will include the following:

- Construction of a 24" water transmission pipeline, beginning at the confluence of I-40 and Vandament Avenue, extending northwest along the north side of Vandament Avenue for about 0.5 miles, then extending north along the east side of Frisco Road about 0.75 miles, then east along the south side of West Main Street (i.e., US-66), about 0.5 mile

- Construction of an aboveground water storage tower on a parcel located on the east side of Frisco Road, approximately 0.5 mile south of US-66, in the NW/4 NW/4 SW/4 of Section 19, Township 12 North, Range 5 West.

- Replacement of sanitary sewer lines in the Ranchwood Hills residential addition.

To allow adequate time for evaluation of your comments, we would appreciate receiving a response within 15 days from the date of this letter. Your written comments should be directed to:

Ms. Diane Abernathy
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134

We sincerely appreciate your cooperation in this matter. For additional information or if you have any questions, please contact me at 405-919-0481 or by email at dabernathy@triaddesigngroup.com.

Sincerely,

Diane Abernathy

Diane Abernathy, P. E.
Senior Environmental Project Manager

Enclosures

TRIAD DESIGN GROUP
Architecture • Engineering

November 18, 2014

Chairman
Canadian County
201 North Choctaw
El Reno, Oklahoma 73036

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Enclosures

Appendix F
Newspaper Public Notice (final EA only)

Appendix G
Public Comments (final EA only)