

### Wetland and Waterway Investigation

Fair Oaks Ranch Tract 1
Robson Companies
Wagoner County, Oklahoma

Prepared for: KLH Environmental and Geological Consulting 3309 West Gary Street Broken Arrow, Oklahoma 74012

June 2020

Prepared by:

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#### **Assessment Site:**

# Approximately 1,200 Acres Proposed Industrial/Commercial Development Wagoner County, Oklahoma

#### Sections 3 and 4 Township 19 North Range 15 East

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Project# V744

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6/29/2020 Date

#### DISCLAIMER

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#### 1.0 Assessment Area Description

Based on project site information provided by KLH, a wetland/waterway investigation was performed by BEACON Environmental Assistance Corporation (BEACON) personnel for the 1,200-acre (approximate) parcel of land in Wagoner county known as the Fair Oaks Ranch Tract 1. Located in Appendix A are USGS 7.5-minute series topographic map and an aerial map exhibiting the location of the project site area.

The purpose of the investigation was to identify surface water features on the subject property. This investigation was conducted in anticipation that some of the waters identified may be considered jurisdictional under section 404 of the *Clean Water Act (CWA)*, and future projects planned for the surject area may impact those waters. If the identified areas are expected to be disturbed, authorization from the U.S. Army Corps of Engineers (USACE) may be required prior to construction.

Field methodologies were executed by a trained BEACON wetlands specialist in accordance with the 1987 USACE Wetlands Delineation Manual (Manual) and the Midwest Regional Supplement. In addition to the visual assessment, this evaluation was completed based on comprehensive data acquired from the following resources:

- Aerial photographs & topographic maps
- National Wetland Inventory (NWI) maps
- Natural Resources Conservation Service (NRCS) website for Hydric Soil Descriptions
- United States Department of Agriculture (USDA) Web Soil Survey
- EPA Waters GeoViewer Mapper

By definition, wetlands are a subset of "waters of the United States" and thus subject to Section 404 of the CWA. The term "waters of the United States" has a broad meaning and incorporates both deep-water aquatic habitats and special aquatic sites, including wetlands (*Federal Register* 1982), as follows:

a. The territorial seas with respect to the discharge of fill material.

- Coastal and inland waters, lakes, rivers, and streams that are navigable waters
  of the United States, including their adjacent wetlands.
- c. Tributaries to navigable waters of the United States, including adjacent wetlands.
- d. Interstate waters and their tributaries, including adjacent wetlands.
- e. All other waters of the United States not identified above, such as isolated wetlands and lakes, intermittent streams, prairie potholes, and other waters that are not a part of a tributary system to interstate waters or navigable waters of the United States, the degradation or destruction of which could affect interstate commerce.

Potential "waters of the United States" other than wetlands (hereinafter referred to as "waterways") include, but are not limited to, unvegetated ephemeral pools, lakes, and perennial, intermittent, and ephemeral stream channels that consist of navigable waters, tributaries to navigable waters, or waters that the destruction or degradation of which could affect or impact navigable waters.

#### 1.1 Location of Assessed Area

The area assessed is the majority of two (2) sections of land, Sections 3 and 4 Township 19 North Range 15 East in Wagoner County, Oklahoma. This parcel is bordered on the west by East 11<sup>th</sup> Street, on the north by Admiral Avenue, and on the East by Midway Road.

Small portions of Section 4 along the north section line were excluded from this assessment, as they are not contiguous with the rest of the section. These are portions that are on the north side of Admiral Avenue, and the small parcel that is presently occupied by a car scrap yard.

The area would be generally described as located in the northeast quadrant of the Tulsa, Oklahoma metropolitan area. The nearest major intersection would be the intersection of State Highway 412, Interstate 44, and Creek Turnpike. This intersection is near the northwest corner of the assessed area.

#### 1.2 Current Use of Area

No currently in use developments such as homes, barns, buildings, or other structures were noted within the assessed area. Much of the area is used for pasture for housing horses, with what appears to the be about 1/3 of section 3 and the entirety of Section 4 devoted to this purpose. The remaining portion of Section 3 is used for crop production, currently in winter wheat production. Figure 1 depicts the areas of used as described.

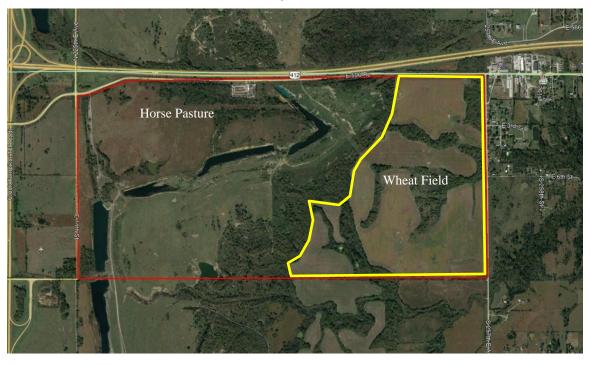


Figure 1.

#### 1.3 Past Use of Area

Based on information from KLH regarding past use of the property, and USGS Topographical maps, at least a portion (approximately 1/3) of the assessed area was once used for mining operations. Reportedly, initially the product mined was coal, then at a later time, limestone. Some of the area used in the mining has been reclaimed, by being leveled out and revegetated. A portion also appears to not have been reclaimed after mining, with large piles of tailings creating ridges, pits, and other unnatural features. These areas are largely confined to the wooded area along the center of the assessed

area. It is unclear to BEACON if mining activities involving excavation occurred in the area where wheat is in production currently.

No current mining activities were observed during BEACON's inspection. No equipment, facilities, or other indications of active mining were noted. No recent excavations were apparent on the property.

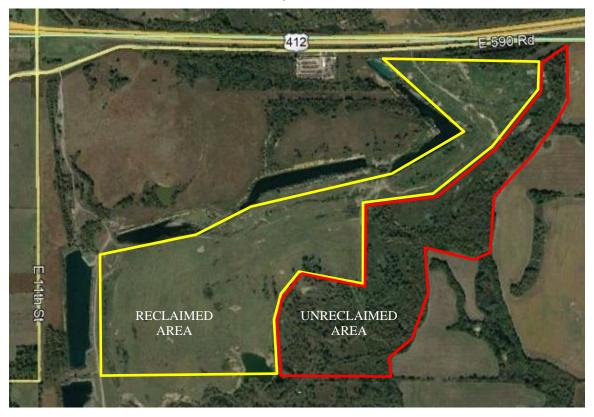
Figure 2 shows the area that was used for mining activities involving extensive soil disturbance, as BEACON understands the extent to have been, more or less.



Figure 2.

Figure 3 shows the mining areas defined as reclaimed an unreclaimed, as referred to throughout this report.

Figure 3.



Within the areas that were once used for mining but reclaimed, it is assumed that the operations involved digging a strip pit, piling the tailings to the sides, and when fully mined, moving the equipment over, excavating, and piling the tailings in the previous excavation. It also assumed that the general method of reclamation was pushing these tailing piles over to level the landscape, and re-vegetated. It is not known to BEACON if fill dirt from other locales was used to reclaim the property; it is assumed that within the mined areas soils are not in a natural occurring condition.

As shown on the maps included in Appendix A, it appears that several large mine pits (four in total) remain on the property, and have filled with water, creating waterbodies. These mine pits are identified separately from the ponds found on the property.

Two (2) electrical transmission lines traverse the property. One crosses the northern half of both Section 3 and 4 in an east/west fashion, while the other runs generally northwest

to southeast across Section 3. These Rights of Way are maintained as clear and free of heavy vegetation.

#### 2.0 Technical Guidance

The following is technical guidance provided within the Manual:

The interaction of hydrology, vegetation, and soil results in the development of characteristics unique to wetlands. Therefore, the following technical guideline for wetlands is based on these three parameters, and diagnostic environmental characteristics used in applying the technical guideline are represented by various indicators of these parameters.

Because wetlands may be bordered by both wetter areas (aquatic habitats) and by drier areas (nonwetlands), guidelines are presented for wetlands, deepwater aquatic habitats, and nonwetlands. However, procedures for applying the technical guidelines for deepwater aquatic habitats and nonwetlands are not included in the Manual.

#### Wetlands

The following definition, diagnostic environmental characteristics, and technical approach comprise a guideline for the identification and delineation of wetlands:

- A. *Definition*. The USACE (Federal Register 1982) and the EPA (Federal Register 1980) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
- B. *Diagnostic environmental characteristics*. Wetlands have the following general diagnostic environmental characteristics:
  - (1) Vegetation. The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in A (Definition) above. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptations), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.

- (2) Soil. Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.
- (3) Hydrology. The area is inundated either permanently or periodically at mean water depths <6.6 ft, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation. The period of inundation or soil saturation varies according to the hydrologic/soil moisture regime and occurs in both tidal and nontidal situations.
- C. Technical approach for the identification and delineation of wetlands. Except in certain situations defined in the Manual, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

#### **Deepwater Aquatic Habitats**

The following definition, diagnostic environmental characteristics, and technical approach comprise a guideline for deepwater aquatic habitats:

- A. *Definition*. Deepwater aquatic habitats are areas that are permanently inundated at mean annual water depths greater than 6.6 ft or permanently inundated areas less than 6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas less than 6.6 ft mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands.
- B. *Diagnostic environmental characteristics*. Deepwater aquatic habitats have the following diagnostic environmental characteristics:
  - (1) *Vegetation*. No rooted-emergent or woody plant species are present inthese permanently inundated areas.
  - (2) Soil. The substrate technically is not defined as a soil if the mean water depth is greater than 6.6 ft. or if it will not support rooted emergent or woody plants.

- (3) *Hydrology*. The area is permanently inundated at mean water depths greater than 6.6 ft.
- C. Technical approach for the identification and delineation of deepwater aquatic habitats. When any one of the diagnostic characteristics identified in **B** above is present, the area is a deepwater aquatic habitat.

#### Nonwetlands

The following definition, diagnostic environmental characteristics, and technical approach comprise a guideline for the identification and delineation of nonwetlands:

- A. Definition. Nonwetlands include uplands and lowland areas that are neither deepwater aquatic habitats, wetlands, nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only brief periods during the growing season, and, if vegetated, they normally support a prevalence of vegetation typically adapted for life only in aerobic soil conditions.
- B. *Diagnostic environmental characteristics*. Nonwetlands have the following general diagnostic environmental characteristics
  - (1) Vegetation. The prevalent vegetation consists of plant species that are typically adapted for life only in aerobic soils. These mesophytic and/or xerophytic macrophytes cannot persist in predominantly anaerobic soil conditions. Some species, due to their broad ecological tolerances, occur in both wetlands and nonwetlands.
  - (2) Soil. Soils, when present, are not classified as hydric, and possess characteristics associated with aerobic conditions.
  - (3) *Hydrology*. Although the soil may be inundated or saturated by surface water or ground water periodically during the growing season of the prevalent vegetation, the average annual duration of inundation or soil

saturation does not preclude the occurrence of plant species typically adapted for life in aerobic soil conditions.

C. Technical approach for the identification and delineation of nonwetlands. When any one of the diagnostic characteristics identified in **B** above is present, the area is a nonwetland.

In addition to distinguishing characteristics of wetlands versus non wetlands obtained from the Manual, jurisdictional determinations of waterways and their boundaries are largely dependent on the following parameters:

- (1) Ordinary High-Water Marks (OHWM). The presence/absence of an OHWM is considered an indication of whether the waterway conveys water for a sufficient duration of the year to have a significant impact to navigable waters of the United States. Section 404 of the CWA defines the landward limit of jurisdiction as the high tide line in tidal waters and the OHWM as the limit in non-tidal waters. When adjacent wetlands are present, the limit of jurisdiction extends to the limit of the wetland.
- (2) Topographic Map Classification. Waterways that are illustrated on topographic maps by the U.S. Geological Survey (USGS) typically signify resources that eventually drain into tributary system to interstate waters or navigable waters of the United States.
- (3) Listing under Federal Register and/or other regulatory publications (i.e., water quality standards). Direct tributaries (non-isolated) of listed aquatic resources should fall under the jurisdiction of USACE and other applicable agencies from the standpoint of maintaining water quality in conformance with the CWA.

2.0 Field Survey Description

Potential project details, extent, or location on the assessed area have not been provided

to BEACON, rather this investigation was to document the surface water features on the

property for evaluation. This investigation was intended to provide a tool for evaluation of

potential areas for development. Once a specific location for the project is chosen further

details of the features may be needed for consultations, depending on the scope and type

of impacts planned.

Prior to mobilizing to the site, BEACON reviewed available National Wetland Inventory

(NWI) maps and hydric soil ratings available from the Natural Resources Conservation

Service (NRCS) Web Soil Survey. Also reviewed were recent and historical (past 20 years)

aerial photography and topographical maps.

BEACON personnel conducted a pedestrian survey of the property to verify the

preliminary information as well as to investigate for waters not indicated by the available

resources.

The NRCS Soil Survey for Wagoner county was compiled in 1976, with fieldwork being

reported as conducted from 1964 to 1971. Due to the reported past history of the property,

BEACON did not regard the hydric soil reports or data as definitive of the actual soils or

conditions to be encountered during field survey due the past use of the property, but they

are reported here for reference to complete the report.

A total of twelve (12) soils were listed for the property and are included in Appendix E. All

soils listed for the property had a hydric rating of 0.

Few potential wetlands were identified on the NWI maps; however, BEACON identified

numerous areas that warranted review for wetlands. NWI maps are only for estimation

purposes; field survey with soil investigations is the most definitive process for determining

wetland conditions.

During the field investigation, coal tailings, at different amounts, were found in many of the

soil investigations. Coal was noted where ground surface was visible in varying amounts,

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June 2020 Wagoner County, OK it was assumed that amounts of coal remnants found in a certain spot or at a certain depth would depend on how the property was reclaimed. None of these observations would have classified coal tailings as the main, or even a significant component of the soils, or as a restrictive layer.

Wetland data points were taken in locations to determine the extent and components of the location in areas that potentially have wetland conditions. The property is within the area of the Midwest Regional Supplement, more specifically, within the subregion Central Feed Grains and Livestock. Copies of the Wetland Determination Data Forms are found in Appendix D.

Aerial photography of the property was used to identify specific locations that need investigation prior to mobilizing for the field survey. Additional features were identified that warranted investigation and documentation during the field survey, and those features are documented in this report.

Features that were identified for investigation were: potential wetlands, impoundments, and waterways.

Available resources such as topographical maps, EPA Waters GeoViewer data, USGS StreamStats data, did not indicate waterways within the property bounds. However, BEACON identified several waterways on the property via aerial photography and during the field investigation.

Data obtained from the EPA Waters GeoViewer online resource showed that the property has two (2) general drainage areas that feed to separate waterbodies. The majority of the property drains generally to the south, towards Salt Creek. A small portion in the northwest quadrant of the property drains via unnamed tributaries to the Verdigris River. The drainages are listed below.

Receiving Water	Receiving Waterbody ID
Salt Creek	OK121500020270_00
Verdigris River	OK121500020260_00

The property is located in the Lower Verdigris River Watershed, Hydrologic Code Unit 11070105.

4.0 **Field Results** 

4.1 Waterways (WW)

The descriptions for all identified areas are described below with their identifier as

illustrated on the detail maps in Appendix A-2.

**WW-1** is identified as an ephemeral, unnamed tributary to Impoundment 1.

WW-1 began to the south of Impoundment 1, and its total length is approximately 300 feet.

An Ordinary High-Water Mark (OHWM) was present, at 4 feet width for most of the length

of the waterbody. WW-1 terminated at Impoundment 1.

Waterway 1 occupies approximately 0.03 acres.

This feature is in the drainage area of the Verdigris River.

WW-2 is identified as a drainage pattern to mine pit 3. This feature begins as shown on

the maps in Appendix A-2, on the south edge of one of the electrical transmission ROWs,

continuing south, ending at mine pit 3. This feature is approximately 1,100 feet in length.

The OWHM of the feature varied along the length, from 5 feet at the north end up to 40

feet at the joining with mine pit.

This feature is identified on the topographical maps as being part of the strip mine activity.

Upon inspection by BEACON, this feature appeared to be an isolated remnant of strip

mining; showing high ridges along the east and west side of the channel, with the channel

being straight. The channel in the feature was approximately 35 feet in width.

This feature appears to be ephemeral in nature, only carrying water in response to rainfall

events.

Waterway 2 occupies approximately 0.88 acres.

This feature is in the drainage area of Salt Creek.

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**WW-3** is an ephemeral swale that feeds into Impoundment 2. No OHWM was observed within this feature. This feature, from its origination to Impoundment 2, is approximately 605 feet in length.

This feature is in the drainage area of Salt Creek.

**WW-4** is an ephemeral drainage from Impoundment 2 that joins with WW-5 to continue to mine pit 1. This feature has an OHWM width of 8 feet. WW-4 is approximately 1,580 feet in length.

This feature is in the drainage area of Salt Creek.

**WW-5** is an ephemeral drainage that originates on the property and joins into WW-4. This feature has an OHWM of 6 feet, and a length of 980 feet.

This feature is in the drainage area of Salt Creek.

**WW-6** is a drainage channel on the property that appears to likely be a former strip mine. No OHWM is present within the feature that is within the assessment area. This feature is along the western boundary of the reclaimed strip mine area, with mining tailings found in exposed areas. Approximately 1,580 linear feet of this feature is on the subject property; it does continue on to Section 9 to the south.

WW-6 flows to the south and contributes water flow to Salt Creek.

**WW-7** is an ephemeral drainage that follows the contours of the former strip mine activities. This feature originates on the property and is approximately 1,675 feet in length.

This feature travels down a slope in the un-reclaimed strip mine area, and encounters areas along the way that create ponded areas within the un-reclaimed strip mine area, shown as impoundments 8 and 9 on the maps. The drainage of WW-7 continues down the slope, terminating at impoundment 5.

WW-7 has an intermittent OHWM, with an average width of 4 feet.

This feature is in the drainage area of Salt Creek.

**WW-8** is a surface water drainage that is the north ditch of an unmaintained roadbed remnant of the mining activities. This feature flows to the southwest, joining into WW-7. WW-8 has an OHWM of approximately 8 feet and is ephemeral in nature. WW-8 is

approximately 1,280 feet in length.

This feature is in the drainage area of Salt Creek.

**WW-9** is a surface water drainage that is the south ditch of an unmaintained roadbed remnant of the mining activities. This feature flows to the southwest, terminating at what is identified on the maps as impoundment 6. WW-8 has an OHWM of approximately 8 feet

and is ephemeral in nature. This feature is approximately 1,000 feet in length.

This feature is in the drainage area of Salt Creek.

**WW-10** is an ephemeral drainage originating on the property, terminating at impoundment 10. This feature has an intermittent OHWM, with a width of 5 feet. WW-10 has a length

of approximately 570 feet.

This feature is in the drainage area of Salt Creek.

**WW-11** is an intermittent waterway originating on the property, on the slope of the unreclaimed strip mine. This feature drains in a generally southeasterly direction and has a

length of approximately 1,700 feet. An OHWM averaging 8 feet was noted.

WW-11 flows into the large wetland mosaic area indicated on the maps, and the wetland

area extends to the boundary of the assessed area.

This feature is in the drainage area of Salt Creek.

**WW-12** is an ephemeral feature that originates off the assessed property, entering onto the assessed property at the eastern boundary, passing under Midway Avenue. WW-12 flows generally south within the assessed property, for a total length of approximately 1,510 linear feet. WW-12 exhibited an OHWM of 4 feet. WW-14 exits the property approximately 745 feet south of where it entered the property along Midway Avenue, flowing to the east.

This feature is in the drainage area of Salt Creek.

**WW-13** is an ephemeral drainage flowing in a generally easterly direction. WW-13 originates at the eastern base of the slope of the un-reclaimed mine area and passes through wetland 2 on the maps. This feature exits the assessed area along the eastern boundary and continues on. WW-13 exhibited an OHWM of approximately 8 feet along its length. WW-13 has a length of approximately 3,960 feet within the property boundary.

This feature is in the drainage area of Salt Creek.

**WW-14 is** an ephemeral feature that originates on the assessed property and fades out on the property. The distinguishable channel is approximately 1,310 linear feet and shows an inconsistent OHWM of 2 feet width.

This feature is in the drainage area of Salt Creek

**WW-15** is an ephemeral drainage flowing in a northeasterly direction. This feature feeds into impoundment 4 and continues on past the impoundment to the eastern boundary of the property. This feature exhibited an OHWM of 6 feet. The total length of WW-15 within the assessed area was approximately 2,305 linear feet.

This feature is in the drainage area of Salt Creek.

4.2 Wetland Data Points and Investigation

A total of nineteen (19) wetland data points were taken in to document the potential

wetlands on the property. These wetland data point locations are depicted on maps in

Appendix A-3.

Locations of wetland data points were chosen based on review of available resources,

mainly aerial photography. NWI map data did not indicate many of the potential wetlands

on the property, but numerous areas indicating inundation/saturation were noted on the

aerials. Some of these areas, particularly in the forested, unreclaimed mine area, were

determined to be ponded areas. Areas noted during the field inspection that warranted

investigation that were not identified by the resource review were also documented.

Wetlands were only found to present at three (3) of the points investigated, Data Points

10, 16, and 19. The remaining data points did not meet all three criteria for being defined

as wetlands.

Detailed Wetland Determination Data Forms are included in Appendix C documenting the

conditions found at each point.

Wetland Data Point #1 concerns a feature located in the reclaimed strip mine area. This

point was for an isolated feature of approximately 0.07 acres.

This feature did not meet the criteria to be defined as a wetland.

Wetland Data Point #2 concerns a feature located in the reclaimed strip mine area. This

point was for an isolated feature of approximately 0.24 acres.

This feature did not meet the criteria to be defined as a wetland.

Wetland Data Point #4 concerns a feature located in the reclaimed strip mine area. This

point was for an isolated feature of approximately 0.15 acres.

This feature did not meet the criteria to be defined as a wetland.

Project V744 21 of 28 June 2020 Fair Oaks Ranch Tract 1 Wagoner County, OK **Wetland Data Point #5** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.36 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #6** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.36 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #7** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.53 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #8** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.04 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #9** concerns a feature located in a forested area in the wheat field. This point was for an isolated feature of approximately 0.35 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #10** concerns a feature located on the slope of the un-reclaimed portion of the strip mine area. This point was for an isolated feature of approximately 0.24 acres.

This feature met the criteria of hydrology, hydrophytic vegetation, and hydrology to constitute a wetland. This feature is identified on the maps as Wetland 1.

Wetland Data Point #11 was taken for the low-lying area along WW-4 between Impoundment 2 and mine pit 1.

This area did not meet the criteria to be defined as a wetland.

**Wetland Data Point #12** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.14 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #12** concerns a feature located in the reclaimed strip mine area. This point was for an isolated feature of approximately 0.14 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #13** was conducted to document the investigation of the low-lying area between mine pits 2 and 3.

This area did not meet the criteria to be defined as a wetland.

**Wetland Data Point #14** was conducted to document the investigation of the low-lying area between mine pits 3 and 4.

This area did not meet the criteria to be defined as a wetland.

**Wetland Data Point #15** concerns a feature located on the slope of the un-reclaimed portion of the strip mine area. This point was for an isolated feature of approximately 0.17 acres.

This feature did not meet the criteria to be defined as a wetland.

**Wetland Data Point #16** concerns a feature located in a forested area in the wheat field, located along the path of WW-13. This point was for a feature of approximately 0.10 acres.

This feature met the criteria of hydrology, hydrophytic vegetation, and hydrology to

constitute a wetland. This feature is identified on the maps as Wetland 2.

Wetland Data Point #17 was taken as a sample point to describe soil conditions in what

appeared to be the least disturbed area within the wheat field portion of the property.

This area did not meet the criteria to be defined as a wetland.

A wetland occupying approximately 15.9 acres of the subject property was identified in the

southwest corner of the assessed property. The assessed area is sloped to drain to this

area.

Wetland Data Points #18 and #19 was taken to describe the soils within the large mosaic

wetland area identified on the maps as mosaic wetland.

The area delineated on the maps is an initial estimation of the wetland. Data points for

precise delineation of the actual bounds of the wetland were not conducted, as it is not

clear if this area is planned for development. The area marked on the maps was estimated

by visual determination of common conditions with the points.

Data point #18 represents the wetland soil conditions, and Data Point #19 represents the

upland border around the wetlands. These wetland areas are fed by WW-11.

The southern boundary of this wetland area on the maps is demarcated by the property

boundary. The wetland may extend beyond that assessment area.

In the event this area is chosen for project activities, additional work delineating the actual

extent of the wetland may be required to satisfy agency consultations; this delineation was

only intended to describe the general conditions of the area.

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#### 4.3 Impoundments

A total of eleven (11) impoundments were identified on the assessed property. Many of these impoundments are remnants of the mining activities, lying within the unreclaimed mine area, and following the contours of the tailing piles.

The large surface water bodies that resulted from the large pit mines are described separately in this report.

The described impoundments are shown on the maps in Appendix A-5.

**Impoundment 1** is fed by WW 1, and occupies approximately 0.21 acres.

This feature is in the drainage area of the Verdigris River.

**Impoundment 2** occupies approximately 2.37 acres. This impoundment outlets via WW 4 to mine pit 1.

This feature is in the drainage area of Salt Creek.

**Impoundment 3** occupies approximately 4.25 acres. This impoundment outlets to Salt Creek.

This feature is in the drainage area of Salt Creek.

**Impoundment 4** occupies approximately 0.67 acres. This feature appears to be a remnant of the mining activities that has been filled with water.

This feature is in the drainage area of Salt Creek.

**Impoundment 5** occupies approximately 0.44 acres. This feature appears to be a remnant of the mining activities that has been filled with water.

This feature is in the drainage area of Salt Creek.

**Impoundment 6** occupies approximately 0.65 acres. This feature is fed by WW 9, the south ditch of the abandoned roadbed.

This feature is in the drainage area of Salt Creek.

**Impoundment 7** occupies approximately 0.21 acres. No definitive inlet or outlet waterway was identified with this feature.

This feature is in the drainage area of Salt Creek.

**Impoundment 8** is located along the flow pattern of WW 7, and is part of the un-reclaimed mine area. This feature occupies approximately 0.53 acres.

This waterbody appears to be a result of the mining activities, the extent of the waterbody follows the mining strips and excavations. A distinct boundary was identified for the waterbody, but it is connected to Impoundment 9 by WW 7.

This feature is in the drainage area of Salt Creek.

**Impoundment 9** is located along the flow pattern of WW-7, and the outlet continues on to Impoundment 5. This feature appears to be a result of the excavations associated with the mining activities.

This feature is in the drainage area of Salt Creek.

**Impoundment 10** is fed by WW 10, and no outlet from Impoundment 10 was found.

This feature appears to be a result of the excavations associated with the mining activities.

This feature is in the drainage area of Salt Creek.

**Impoundment 11** is located along the flow pattern of WW 12. This impoundment occupies approximately 0.50 acres.

The outlet from Impoundment 11 continues on and is identified in this report and on the maps as a continuation of WW 12.

This feature is in the drainage area of Salt Creek.

#### 4.4 Mine Pits

The features described as mine pits on the maps and this report are separated from the impoundments. The sides of these features are near vertical; no areas flat enough to suspect adjacent wetlands were identified. The only identified waterways feeding into the mine pits were WW 2 and WW 4; likewise, no outlets from the mine pits to local waterways were identified. These pits are quite deep, with the surface of the water being estimated to be 30 feet below the surrounding land elevations.

It does not appear that these pits connect to one another, save for times of extreme rainfall, if at all.

#### 5.0 Summary

Numerous waterbodies were identified during the investigation, including wetlands, waterways, and impoundments. Depending on project details, location, etc. the identified features may trigger certain regulatory obligations for permitting of impacts to these features.

This report does not attempt to make a determination of the features for eligibility as jurisdictional waters as defined by the Clean Water Act; that determination is to be made by the relevant USACE office, in this case, the Tulsa USACE Regulatory office.

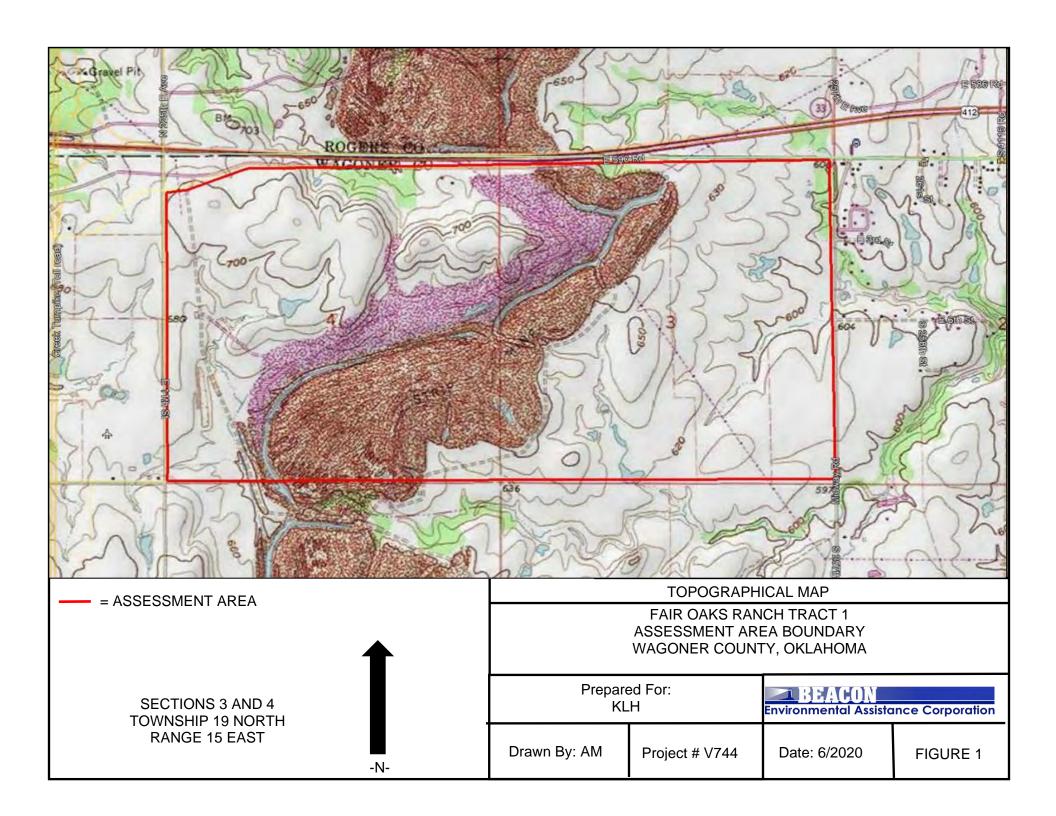
This report is intended to be a resource for initial planning purposes, for identifying potentially jurisdictional waterbodies. Submittal of this data to USACE as part of a jurisdictional determination package would provide definitive guidance as to what features identified would be subject to USACE jurisdiction and permitting for development plans.

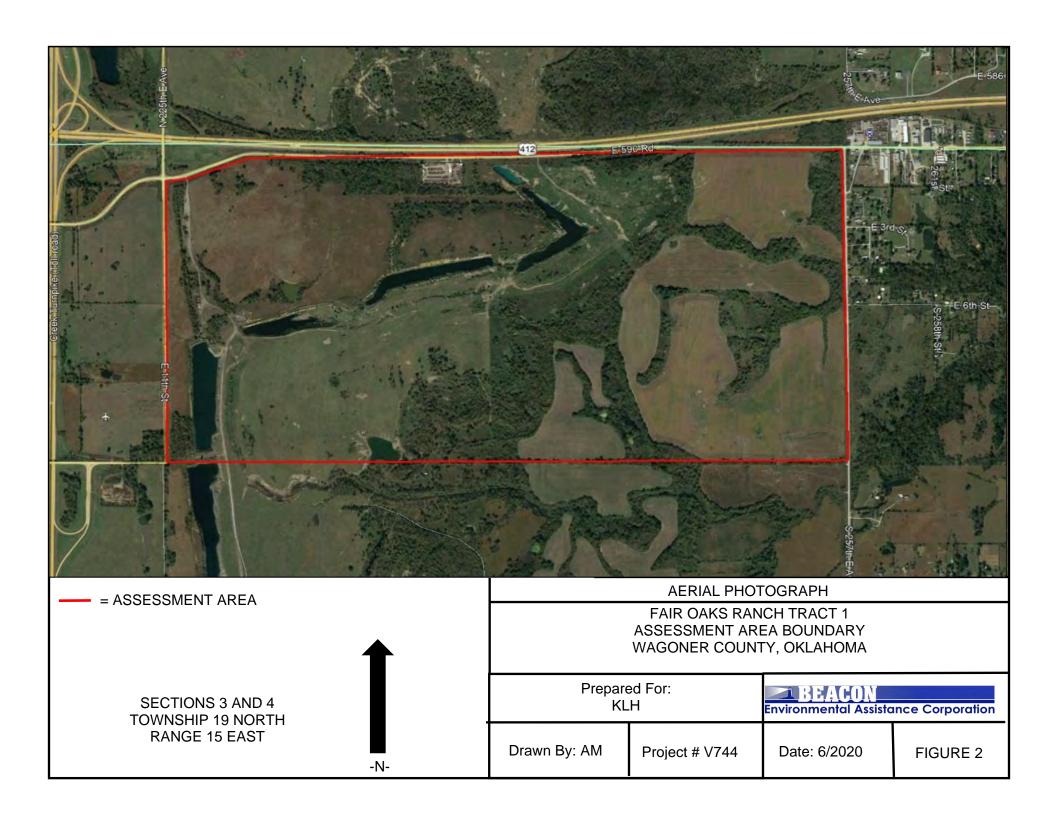
Once project plans are developed, they can be compared to this data, any jurisdictional determinations make by USACE, and needed permits and authorizations can be determined as needed. This report does not provide specific detail data on the waterways regarding area of the waterbody, that data would be calculated once project plans are developed.

## Appendix A Maps

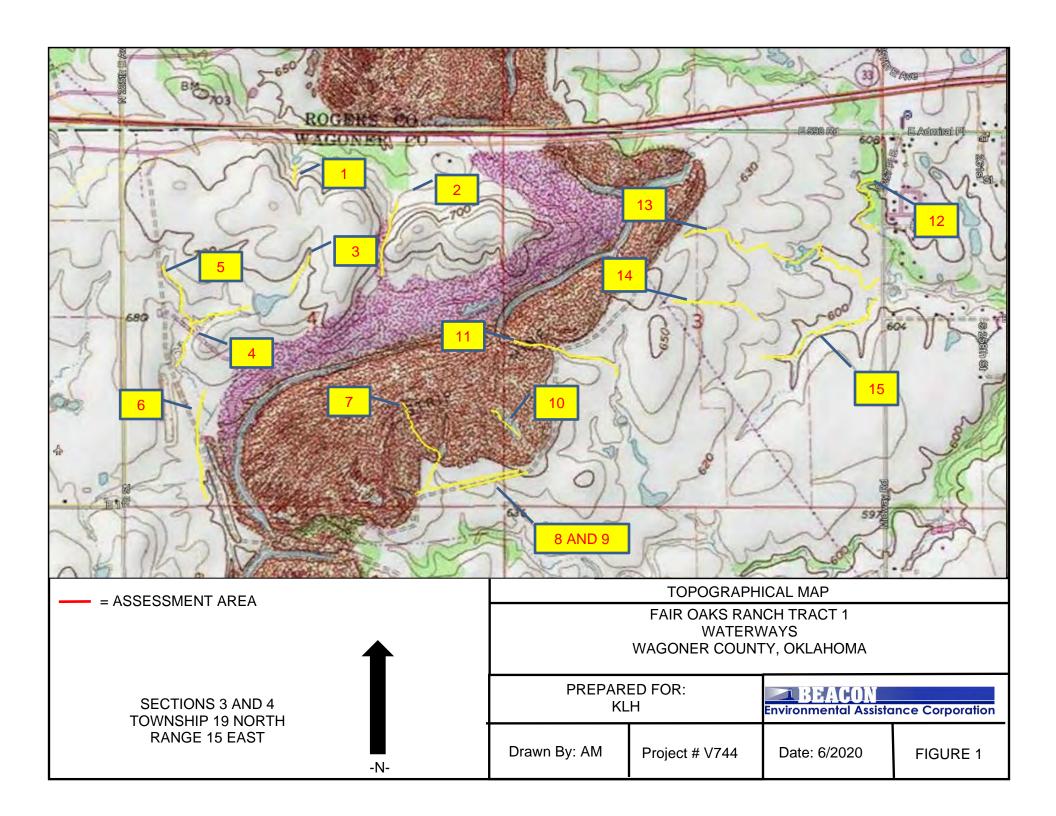
#### Appendix A-1

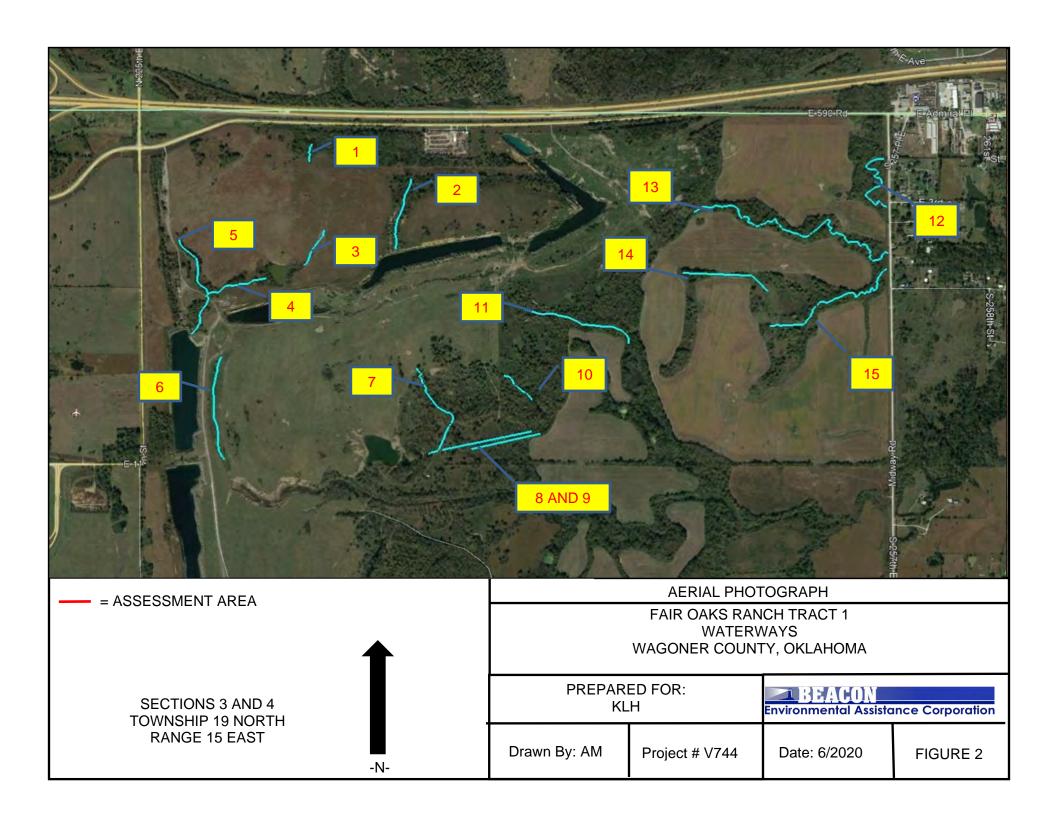
#### **Assessment Area**





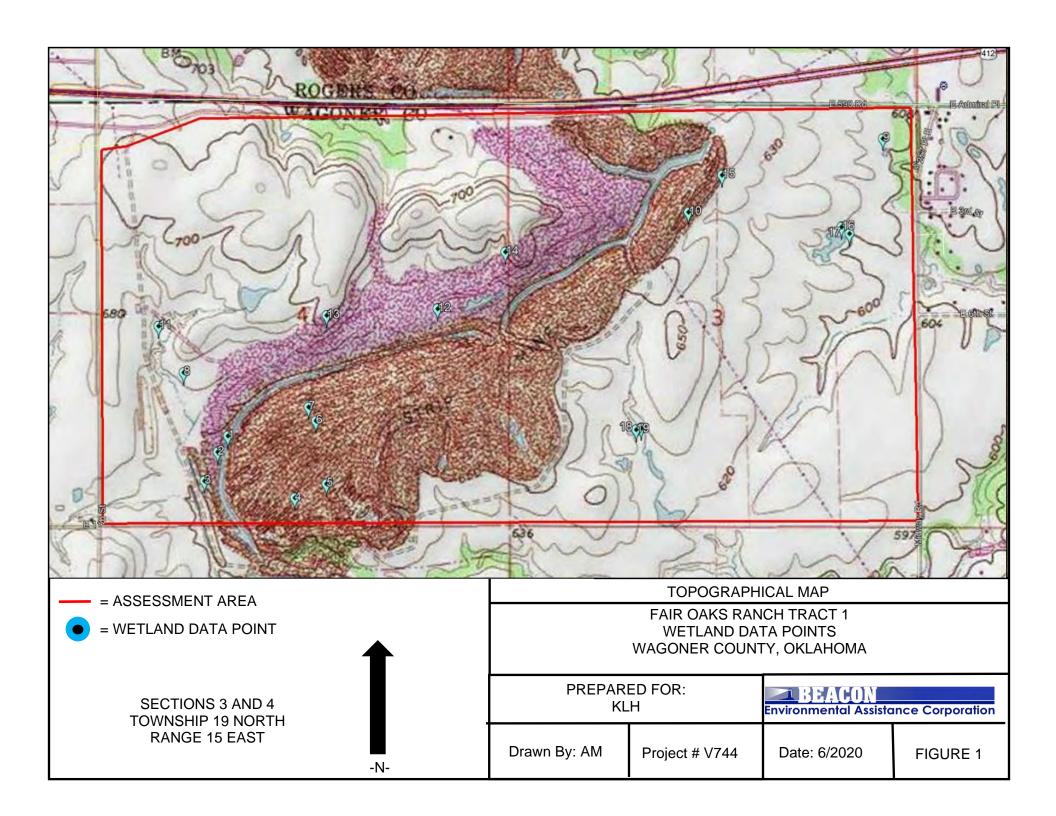
### Appendix A-2 Waterways

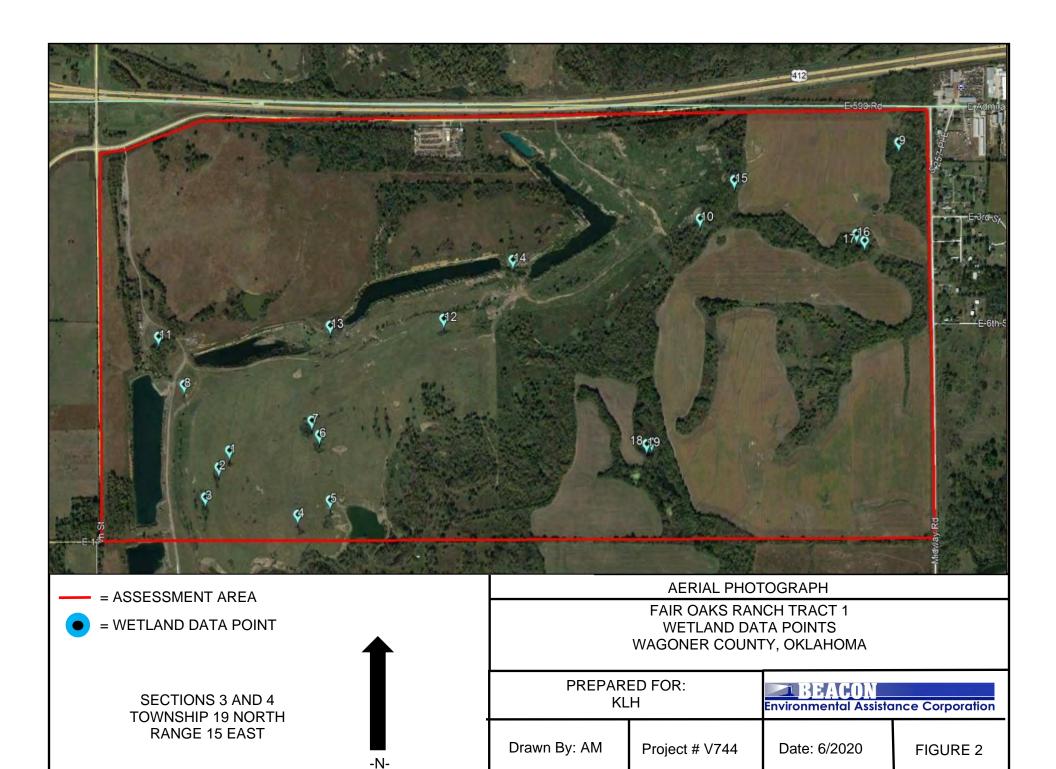




### Appendix A-3

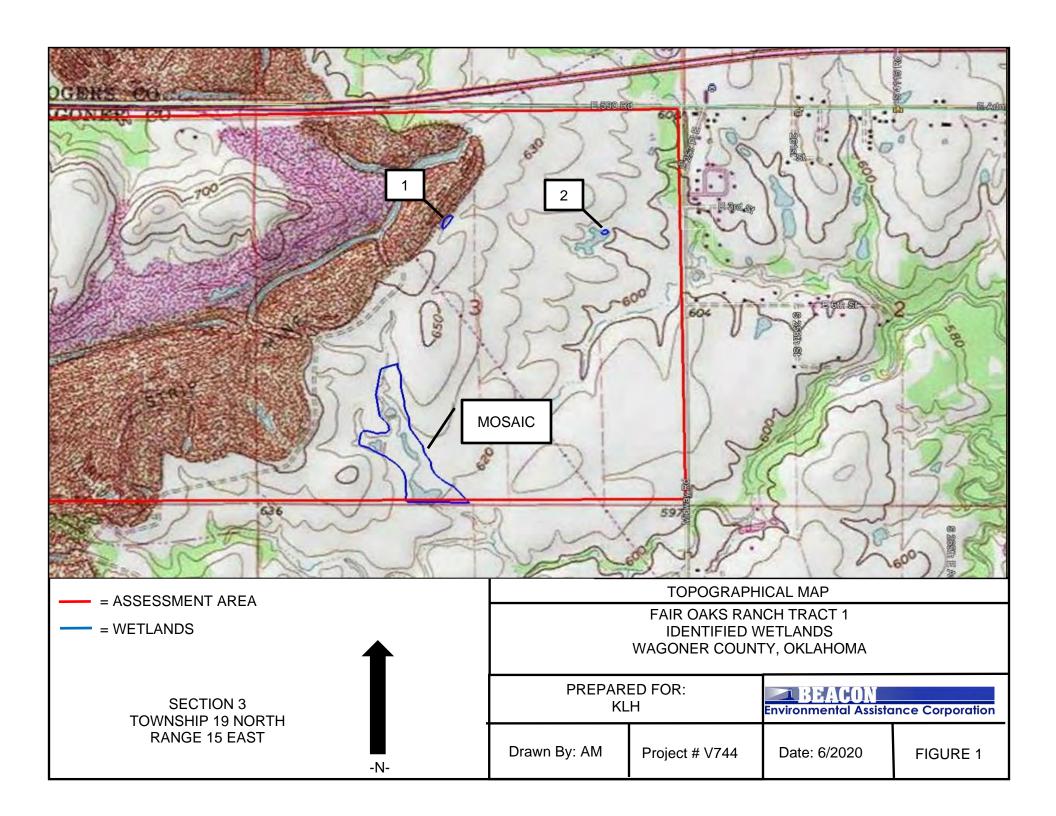
### **Wetland Data Points**

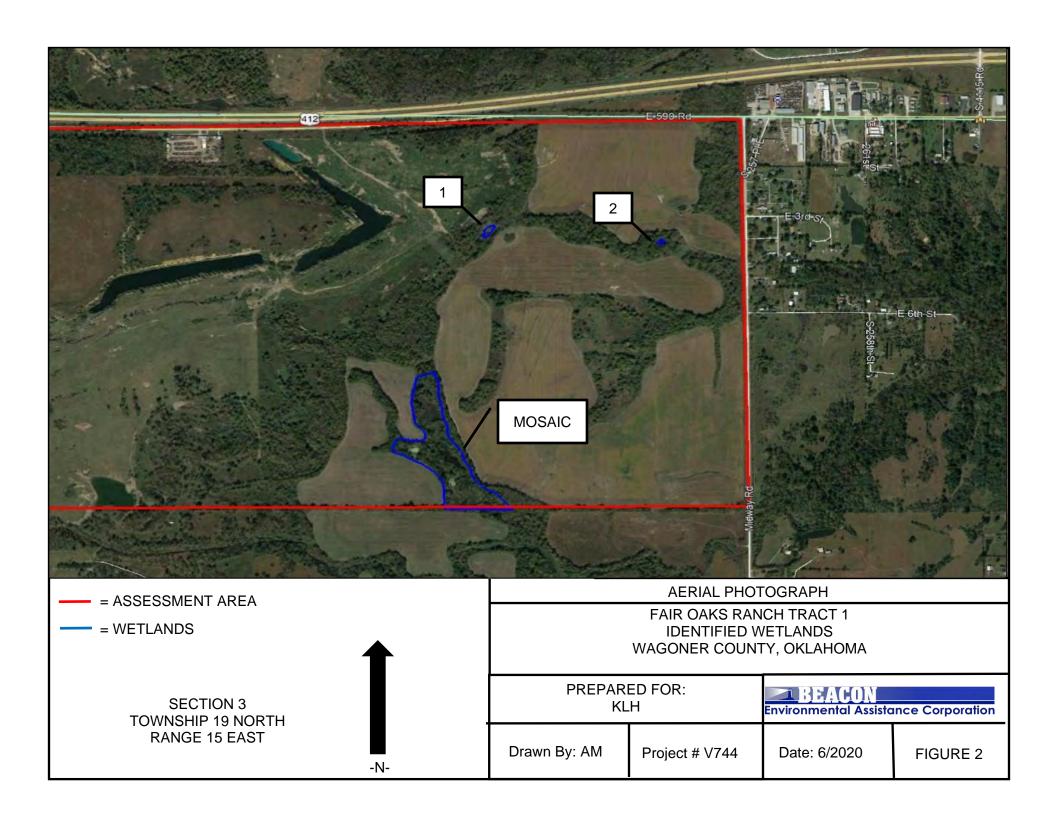




### Appendix A-4

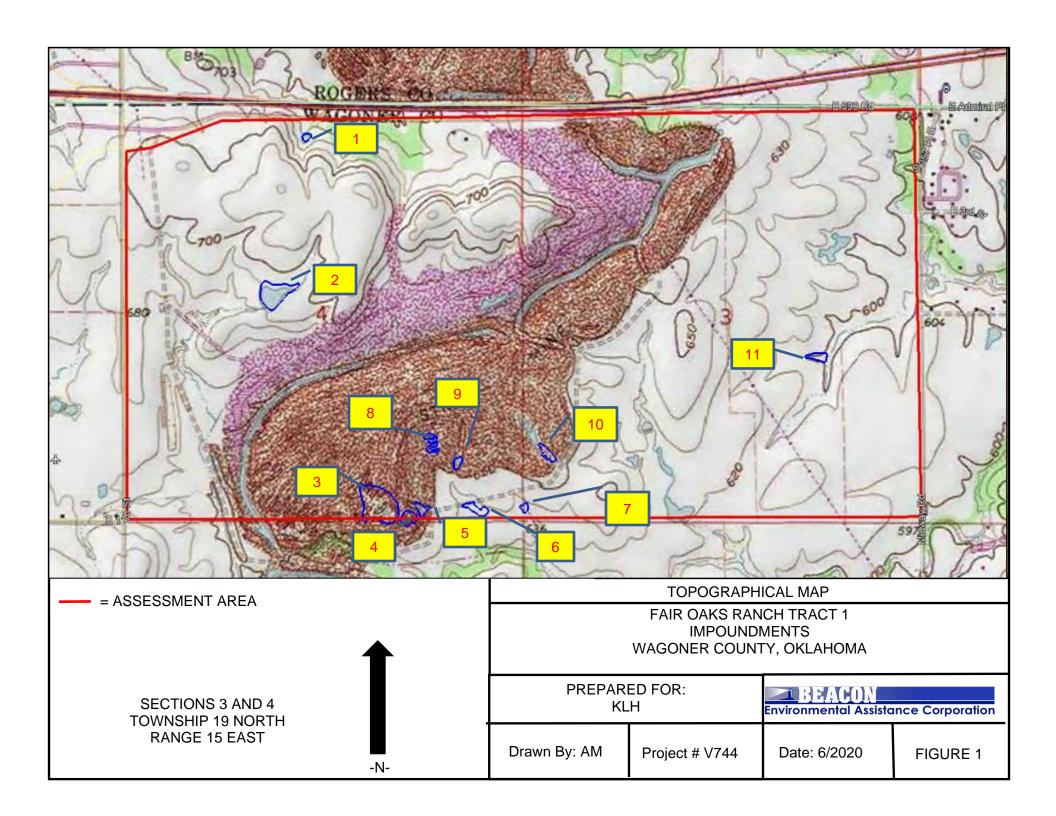
### **Identified Wetlands**

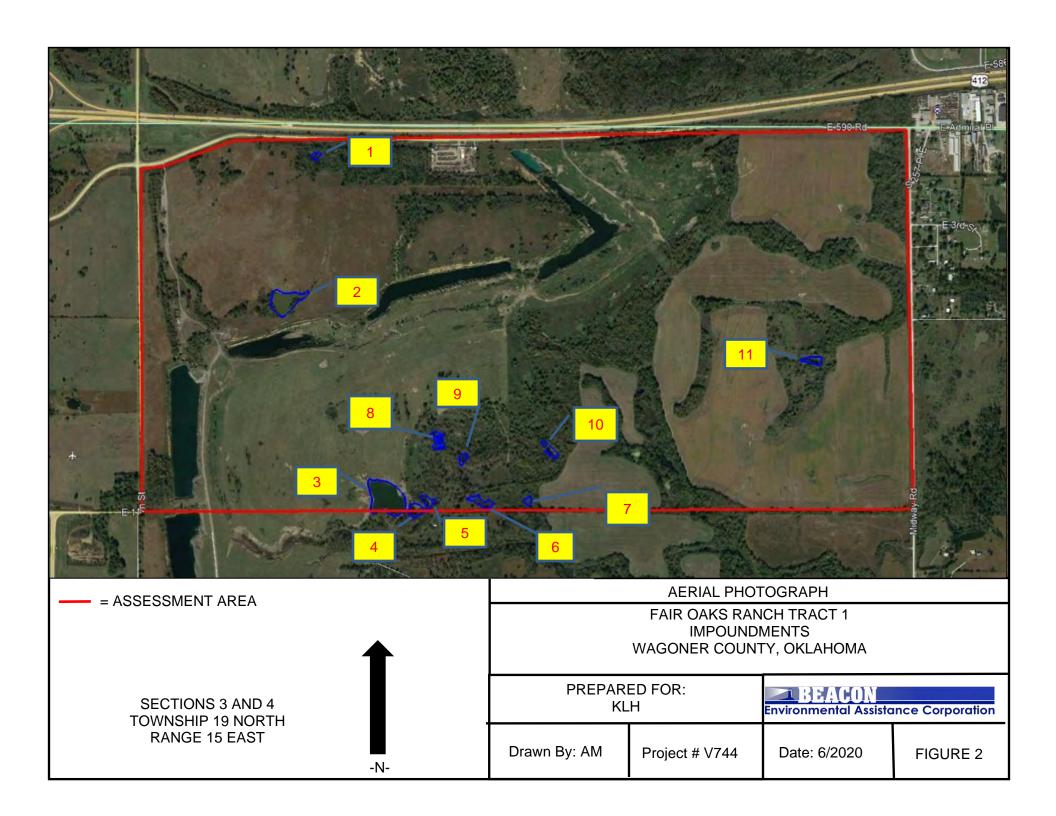




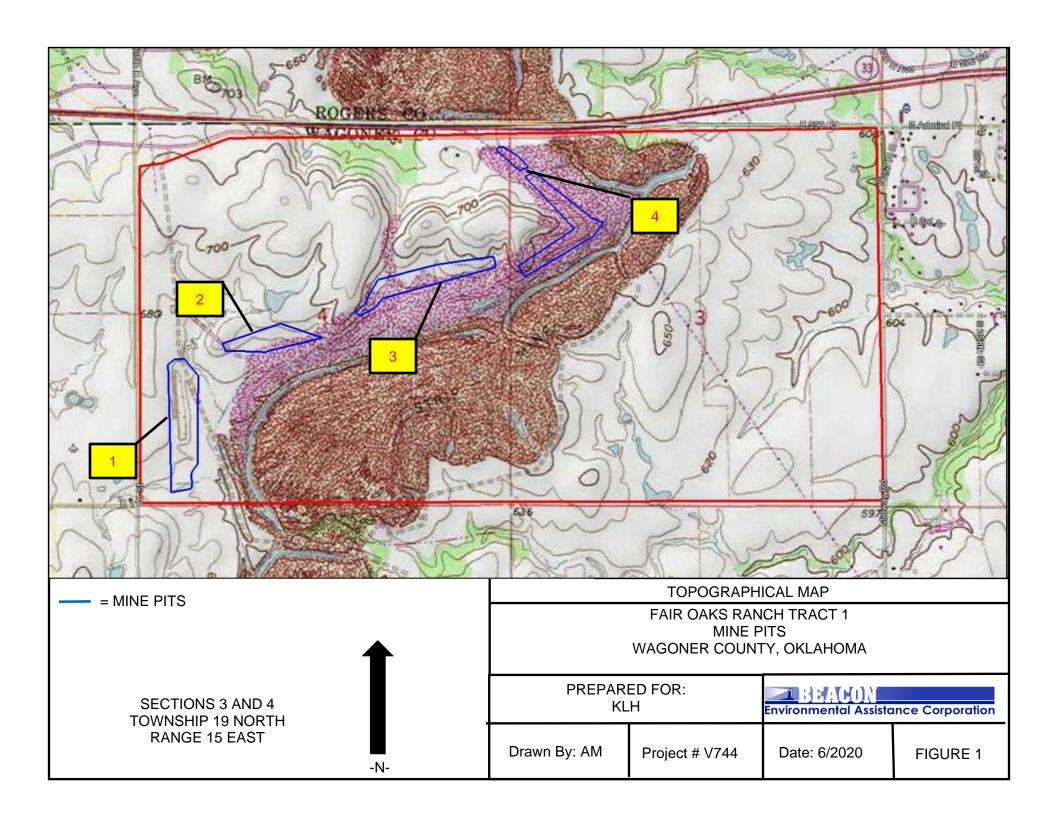
### Appendix A-5

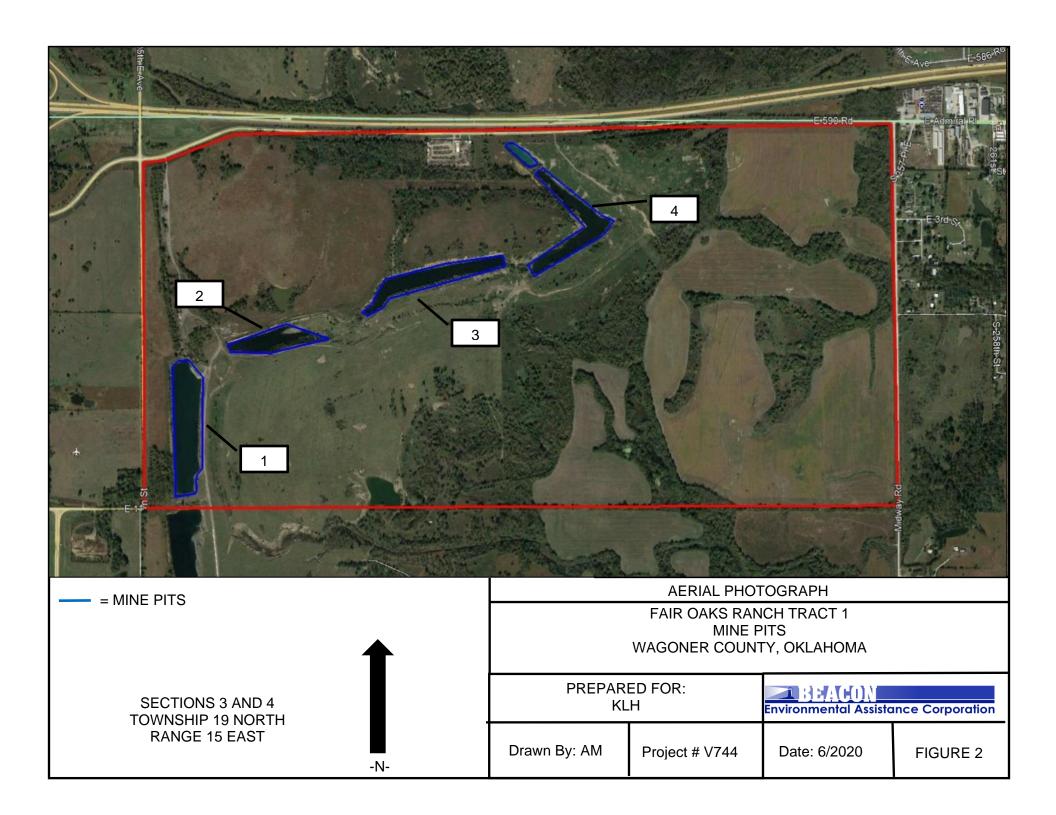
### Impoundments





# Appendix A-6 Mine Pits





### Appendix B

### **Photographic Log**





WW 1 WW 2





WW 3 WW 4 near Impoundment 2.





WW 4 after confluence with WW 5.

WW 5

BEACON Project Number V744 Robson Companies June 2020 Wagoner County, Oklahoma



WW 6 looking south from north end.



WW 7



WW 9



WW 10



WW 11



WW 12



WW 13



WW 14



WW 15



Wetland Data Point 1



Wetland Data Point 2



Wetland Data Point 3



Wetland Data Point 4



Wetland Data Point 5



Wetland Data Point 6



Wetland Data Point 7



Wetland Data Point 8



Wetland Data Point 9



Wetland Data Point 10



Wetland Data Point 11



Wetland Data Point 12



Wetland Data Point 13



Wetland Data Point 14



Wetland Data Point 15



Wetland Data Point 16



Wetland Data Point 17



Wetland Data Point 18



Wetland Data Point 19



Impoundment 1



Impoundment 2



Impoundment 3



Impoundment 4



Impoundment 5



Impoundment 6



Impoundment 7



Impoundment 8



Impoundment 9



Impoundment 10



Impoundment 11

### Appendix C

### **Wetland Data Sheets**

Project/Site: Fair Oaks Ranch	City/County: Wagone	r	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	1
Investigator(s): Andy Middick	Section, Township, Rai	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): hillside	Local relief (c	oncave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.15058	Long: <u>-95.72077</u>		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percent	t slopes	NWI classifi	cation: None	
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes X	No (If no, exp	lain in Remarks.)	<del></del>
Are Vegetation, Soil, or Hydrologysigni	ificantly disturbed? Are "Normal C	ircumstances" present?	Yes X No	
Are Vegetation, Soil, or Hydrologynatu	rally problematic? (If needed, ex	olain any answers in Rei	marks.)	
SUMMARY OF FINDINGS – Attach site map		cations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No 2	X Is the Sampled Ar	ea		
Hydric Soil Present? Yes No			No_X_	
Wetland Hydrology Present? Yes X No				
Remarks:				
This point falls in an area that is a reclaimed strip coal mir	ne.			
<b>VEGETATION</b> – Use scientific names of plants				
	bsolute Dominant Indicator Cover Species? Status	Dominance Test wor	ksheet:	
1		Number of Dominant S		
2.		Are OBL, FACW, or F.	•	0 (A)
3.		Total Number of Domi	nant Species	
4		Across All Strata:		1(B)
5		Percent of Dominant S	•	· (A/D)
Sapling/Shrub Stratum (Plot size: 15 FT )	=Total Cover	Are OBL, FACW, or F.	AC: <u>0.0</u>	0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )  1.	ŀ	Prevalence Index wo	rksheet	
2.		Total % Cover of:		bv:
3.		OBL species 5		5
4.		FACW species 0	x 2 =	0
5.		FAC species 0	x 3 =	0
_	=Total Cover	FACU species 35		40
Herb Stratum (Plot size: 5 FT )	54011	UPL species 0		0(D)
1. Cynodon dactylon	35 Yes FACU	Column Totals: 40	` ′	45 (B)
Eleocharis obtusa     3.	5 No OBL	Prevalence Index =	= B/A = <u>3.63</u>	
	—— ——	Hydrophytic Vegetat	ion Indicators:	
			Hydrophytic Vegeta	ation
6.		2 - Dominance Te		
7.		3 - Prevalence Inc	lex is ≤3.0 <sup>1</sup>	
8.			Adaptations <sup>1</sup> (Provi	
9.			s or on a separate s	-
10			ophytic Vegetation <sup>1</sup>	
	40 =Total Cover	<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 FT )	}	be present, unless dis	turbed or problemat	ic.
1		Hydrophytic		
	=Total Cover	Vegetation Present? Yes	No X	
Pamarka: //naluda nhata numbara hara ar an a caparata			<u> </u>	
Remarks: (Include photo numbers here or on a separate General area bare due to livestock traffic	sneet.)			

Project/Site: Fair Oaks Ranch		City/Cou	nty: Wagon	er	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	10
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	inge: S3 T19N R15E		
Landform (hillside, terrace, etc.): hillside		!	Local relief (d	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.158246		Long: -	95.700674		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Dennis silt loam, 1 to 3 percent s	lopes			NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)	<del></del>
Are Vegetation, Soil, or Hydrology	significantly o	disturbed? A	Are "Normal (	 Circumstances" present?	Yes X No	<u> </u>
Are Vegetation, Soil, or Hydrology	naturally prol	blematic? (	If needed, ex	xplain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site ma	ap showir	ng samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea		
Hydric Soil Present? Yes X No	0		n a Wetland		No	
Wetland Hydrology Present? Yes X No	0					
Remarks:						
VEGETATION – Use scientific names of pla				T		
<u>Tree Stratum</u> (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
1				Number of Dominant		
2.				Are OBL, FACW, or F	•	5 (A)
3.				Total Number of Dom	inant Species	_
4. toxicodendron radicans				Across All Strata:		5 (B)
5		Total Cover		Percent of Dominant S	•	0.00/ /A/R)
Sapling/Shrub Stratum (Plot size: 15 FT	·	=Total Cover		Are OBL, FACW, or F	AC: 10	0.0% (A/B)
1. Ulmus americana	, 5	Yes	FACW	Prevalence Index wo	orksheet:	
Carya illinoinensis	5	Yes	FACW	Total % Cover of		by:
3. Celtis occidentalis	5	Yes	FAC	OBL species 40		40
4.				FACW species 70	0 x 2 = 1	140
5				FAC species 5		15
	15:	=Total Cover		FACU species 0		0
Herb Stratum (Plot size: 5 FT )	20	V-20	E 4 C) 4/	UPL species 0		0 (D)
Spartina pectinata     Typha latifolia	<u>60</u> 40	Yes Yes	FACW OBL	Column Totals: 11  Prevalence Index :	` ′	195 (B)
3.	40	169	UDL	FIEVAIETICE TITUEA	= D/A = 1.70	<del>'</del>
4. eleocharis acicularis				Hydrophytic Vegetat	ion Indicators:	
5					Hydrophytic Veget	ation
6.				X 2 - Dominance Te		
7.	· ·			X 3 - Prevalence Inc		
8.					Adaptations <sup>1</sup> (Prov	
9					s or on a separate	·
10		=		l <del></del>	ophytic Vegetation <sup>1</sup>	` ' '
West Vine Stratum (Diet eizer 20 ET	100	=Total Cover		<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 FT	)			be present, unless dis	turbed or problema	itiC.
1 2.				Hydrophytic		
		=Total Cover		Vegetation Present? Yes	X No	
Remarks: (Include photo numbers here or on a sepa				-		_
General area bare due to livestock traffic	rate sricet.					

Profile Desc	ription: (Describe t	o the depth	needed to doc	ument th	ne indica	tor or c	onfirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-2	10YR 2/1	60	2.5YR 3/6	40	RM	М	Mucky Loam/Clay		
2-8	10YR 4/1	100					Mucky Loam/Clay	· -	
8-18	10YR 5/1	60	10YR 5/3	40	RM	М	Mucky Loam/Clay		
			_						
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix. I	MS=Mas	ked Sand	d Grains	<sup>2</sup> I ocation	n: PL=Pore Lining, M=Matri	X.
Hydric Soil I	•		ioaaooa maan,			2 0 0 0 1 1 0		ors for Problematic Hydric	
Histosol			Sandy Gle	eyed Mat	rix (S4)			ast Prairie Redox (A16)	
Histic Ep	ipedon (A2)		Sandy Re	dox (S5)			Iron	-Manganese Masses (F12)	
Black His	stic (A3)		Stripped N	/latrix (Se	6)		Red	Parent Material (F21)	
Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	y Shallow Dark Surface (F22	2)
Stratified	Layers (A5)		X Loamy Mu	-			Othe	er (Explain in Remarks)	
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	rix (F2)				
	Below Dark Surface	(A11)	X Depleted I				2		
	rk Surface (A12)		Redox Da		` '			ors of hydrophytic vegetation	
	ucky Mineral (S1)		Depleted [					land hydrology must be pres	
	cky Peat or Peat (S3)		Redox De	pression	s (F8)		unle	ess disturbed or problematic	
	_ayer (if observed):								
Type:	-1		_				Uhadala Oali Daasaa	-10 V V	NI-
Depth (in							Hydric Soil Preser	nt? Yes X	No
Remarks:				,			NDOO E' III I' .	(11 1: 0 : 1 )/ : =	0.0045
	m is revised from Mic //www.nrcs.usda.gov/							ers of Hydric Soils, Version 7	.0, 2015
Litata: (mp.)	,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-p2_0011	.00.000	,		
HYDROLO	GY								
Wetland Hvo	drology Indicators:								
_	cators (minimum of or	ne is require	d; check all that	apply)			Seconda	ary Indicators (minimum of to	wo required)
X Surface \		•	Water-Sta		ves (B9)			face Soil Cracks (B6)	•
High Wa	ter Table (A2)		Aquatic Fa	auna (B1	3)		Drai	inage Patterns (B10)	
Saturatio	n (A3)		True Aqua	tic Plant	s (B14)		Dry-	-Season Water Table (C2)	
Water Ma			Hydrogen					yfish Burrows (C8)	
	t Deposits (B2)		Oxidized F			-	· · · —	uration Visible on Aerial Ima	,
	osits (B3)		X Presence					nted or Stressed Plants (D1)	
	t or Crust (B4)		Recent Iro			lled Soil	` '	omorphic Position (D2)	
	osits (B5)	0000 (DZ)	Thin Muck		. ,		FAC	C-Neutral Test (D5)	
	on Visible on Aerial In Vegetated Concave	• • • •	Gauge or Other (Exp		, ,				
Field Observ		Odnace (De	otrici (EX	Janini	.cmarks)		1		
Surface Water		s X	No	Depth (ii	nches).	0			
Water Table			No	Depth (ii	· -	0			
Saturation P			No	Depth (ii	′ –	0	Wetland Hydrolo	ogy Present? Yes X	No
(includes cap				(	_			<u> </u>	
	corded Data (stream	gauge, mon	itoring well, aeria	al photos	, previou	s inspec	tions), if available:		
Remarks:									
Water appea	rs to seep out of hills	ide							

Project/Site: Fair Oaks Ranch		City/County: Wagoner Sampling Date: 6					
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	11	
Investigator(s): Stephanie Rainwater		Section, T	 Γownship, Ra	nge: S4 T19N R15E			
Landform (hillside, terrace, etc.): terrace		!	Local relief (c	concave, convex, none):	Concave		
Slope (%): 0-5 Lat: 36.154338		Long: -	95.723792		Datum: NAD 83 State	Plane OK North	
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 pe	rcent slopes			NWI classif	ication: None		
Are climatic / hydrologic conditions on the site typical f		of year?	Yes x	No (If no, exp	olain in Remarks.)		
Are Vegetation, Soil, or Hydrology						)	
Are Vegetation, Soil, or Hydrology				plain any answers in Re			
SUMMARY OF FINDINGS – Attach site m					,	tures, etc.	
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled A	rea			
	o X		n a Wetland?		No X		
	o X						
Remarks:							
VEGETATION – Use scientific names of pla	ints.						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size: 30 ft )	% Cover	Species?	Status	Dominance Test wor	ksheet:		
Celtis laevigata	65	Yes	FACW	Number of Dominant	•		
2. Celtis occidentalis	15	No	FAC	Are OBL, FACW, or F	AC:	1 (A)	
3. Carya illinoinensis	15	No	FACW	Total Number of Dom	nant Species		
4. toxicodendron radicans				Across All Strata:		2 (B)	
5				Percent of Dominant S	•	(4/5)	
- · · · · · · · · · · · · · · · · · · ·	<u>95</u>	=Total Cover		Are OBL, FACW, or F	AC: 50	0.0% (A/B)	
Sapling/Shrub Stratum (Plot size: 15 FT	)			* 1. Indo			
1.				Prevalence Index wo			
2				Total % Cover of			
3.				OBL species 0		0	
4				FACW species 80 FAC species 20		160	
5		=Total Cover		FAC species 20 FACU species 50		60 200	
Herb Stratum (Plot size: 5 FT )		=Tulai Guvei		UPL species 0		0	
Symphoricarpos orbiculatus	45	Yes	FACU	Column Totals: 15		120 (B)	
Phytolacca americana	5	No	FACU	Prevalence Index :	. ,	`` ′	
Trytolacca americana     Toxicodendron radicans	5	No	FAC	1 TOVAIOTIOO TITAGA	- D/A	<u>,                                      </u>	
4. eleocharis acicularis			17.0	Hydrophytic Vegetat	ion Indicators:		
5					Hydrophytic Veget	ation	
6.				2 - Dominance Te	, , ,	allon	
7.				3 - Prevalence Inc			
8.					Adaptations <sup>1</sup> (Prov	ide supporting	
9.					s or on a separate		
10.				Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)	
	55	=Total Cover		<sup>1</sup> Indicators of hydric so	oil and wetland hyd	rology must	
Woody Vine Stratum (Plot size: 30 FT	)			be present, unless dis			
1.				Hydrophytic			
2.				Vegetation			
		=Total Cover		Present? Yes	No X	_	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)						

	cription: (Describe Matrix	to the de				ator or c	confirm the absence of i	ndicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	x Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
-			Color (moist)		Турс			Nemarks	<u> </u>
0-6	10YR 3/2	100	10)(5,1/2			<del></del>	Loamy/Clayey		
6-18	10YR 3/2	90	10YR 4/6	10	RM	<u>M</u>	Loamy/Clayey		
<sup>1</sup> Type: C=C	oncentration, D=Dep	oletion RM	=Reduced Matrix	MS=Mas	ked San	d Grains	<sup>2</sup> l ocation: F	PL=Pore Lining, M=Ma	atrix
Hydric Soil		Journ, Terv	I-reduced Matrix,	IVIO-IVIAS	nou our	a Oranio		or Problematic Hydr	_
Histosol			Sandy Gle	eved Mat	rix (S4)			rairie Redox (A16)	
	pipedon (A2)		Sandy Re	•	. ,			nganese Masses (F12	2)
	istic (A3)		Stripped N					ent Material (F21)	-/
	en Sulfide (A4)		Dark Surfa		- /			allow Dark Surface (F	<del>-</del> 22)
	d Layers (A5)		Loamy Mu	` '	eral (F1)			Explain in Remarks)	,
	uck (A10)		Loamy Gl	•	, ,			,	
	d Below Dark Surfac	e (A11)	Depleted	-					
	ark Surface (A12)	` ,	Redox Da	•	•		<sup>3</sup> Indicators o	f hydrophytic vegetati	ion and
l <del></del>							hydrology must be pr	esent,	
							unless o	listurbed or problemat	tic.
Restrictive Layer (if observed):									
Type:									
Depth (i	nches):						Hydric Soil Present?	Yes	No X
HYDROLO	OGY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of o	one is requ	ired; check all that	apply)			Secondary I	ndicators (minimum o	f two required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)		Surface	Soil Cracks (B6)	
	ater Table (A2)		Aquatic Fa	,				e Patterns (B10)	
Saturati	` ,		True Aqua		, ,			son Water Table (C2)	)
	Marks (B1)		Hydrogen		,	•	<del></del> ′	Burrows (C8)	(22)
	nt Deposits (B2)		Oxidized F			-		on Visible on Aerial In	
	posits (B3)		Presence			,		or Stressed Plants (D	)1)
	at or Crust (B4) posits (B5)		Recent Iro			ilea Soil		phic Position (D2) utral Test (D5)	
	on Visible on Aerial I	magery (R			` '		1 AO-NE	uliai Test (DS)	
	y Vegetated Concave								
Field Obser		- Curiaco (			tomarko)		1		
		es	No X	Denth (i	nches):				
Water Table		es	No X		nches):				
Saturation F		es	No X	Depth (i	_		Wetland Hydrology	Present? Yes	No X
	pillary fringe)	-	- <u> </u>	-1 (.					
,	ecorded Data (stream	gauge, m	onitoring well, aeria	al photos	, previou	s inspec	tions), if available:		
	· 		<u> </u>				· 		
Remarks:									

Project/Site: Fair Oaks Ranch	City/County: Wagone	ər	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	12
Investigator(s): Stephanie Rainwater	Section, Township, Rai	inge: S4 T19N R15E		
Landform (hillside, terrace, etc.): terrace	Local relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.154928	Long: -95.711618		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percent s	slopes	NWI classif	fication: None	
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes X	No (If no, exp	plain in Remarks.)	
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Normal C	Circumstances" present?	Yes X No	)
Are Vegetation , Soil X , or Hydrology natura		xplain any answers in Re	emarks.)	
SUMMARY OF FINDINGS – Attach site map sh		cations, transects	, important feat	tures, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Ar	rea		
Hydric Soil Present? Yes No X			No X	
Wetland Hydrology Present? Yes X No	_			
Remarks:				
Soil appears to be fill dirt				
			_	
<b>VEGETATION</b> – Use scientific names of plants.				
	solute Dominant Indicator Cover Species? Status	Dominance Test wo	rksheet:	
1	Ovoi Oposios.	Number of Dominant		
2.		Are OBL, FACW, or F		0 (A)
3.		Total Number of Dom	inant Species	
4. toxicodendron radicans		Across All Strata:	· 	1 (B)
5		Percent of Dominant	•	(4 (5)
Continue (Chrish Chrotism (Diot aize) 15 ET	=Total Cover	Are OBL, FACW, or F	AC: <u>0.</u>	.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )  1.	1	Prevalence Index wo	orkehoot:	
1		Total % Cover of		hv:
3.		OBL species 1		10
4.		FACW species 0		0
5.		FAC species 0	) x 3 =	0
_	=Total Cover	FACU species 4		80
Herb Stratum (Plot size: 5 FT )		· -		0(7)
	45 Yes FACU	Column Totals: 5	`` /	90 (B)
	10 No OBL	Prevalence Index	= B/A = <u>3.45</u>	
d. eleocharis acicularis	<u> </u>	Hydrophytic Vegeta	tion Indicators:	
5.	— — —		r Hydrophytic Vegeta	ation
6.	<u> </u>	2 - Dominance Te		AUG.1
7.		3 - Prevalence Inc		
8.			l Adaptations <sup>1</sup> (Provi	
9.			ks or on a separate s	,
10		Problematic Hydr	ophytic Vegetation <sup>1</sup>	(Explain)
	=Total Cover	<sup>1</sup> Indicators of hydric s		
Woody Vine Stratum (Plot size: 30 FT )		be present, unless dis	sturbed or problema	tic.
1		Hydrophytic		
	=Total Cover	Vegetation Present? Yes	No X	
Describes (legisles whote numbers here or on a congrete of		11000111		<u>-                                      </u>
Remarks: (Include photo numbers here or on a separate sh	ieet.)			

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	cription: (Describe	to the dep				ator or o	confirm the absenc	e of indicators	s.)			
Depth (in all as)	Matrix			x Featur		Loc <sup>2</sup>	Taratrana		Damada			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>		Texture		Remarks			
0-12	10YR 4/1	40	10YR 2/1	40	RM	<u>M</u>	Loamy/Clayey	_	appears to be			
12-18	10YR 5/6	50	10YR 5/1	50	RM	<u>M</u>	Loamy/Clayey	Soil appears to be fill dirt				
<u> </u>												
	1											
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix,	MS=Mas	ked San	d Grains	s. <sup>2</sup> Locati	on: PL=Pore Li	ining, M=Mat	rix.		
Hydric Soil	Indicators:						Indicat	tors for Proble	matic Hydric	: Soils³:		
Histosol	(A1)		Sandy Gle	eyed Mat	rix (S4)		Co	ast Prairie Red	ox (A16)			
	pipedon (A2)		Sandy Re	dox (S5)				n-Manganese N		ł		
Black Hi	` ,		Stripped N		5)			ed Parent Mater	` ,			
	n Sulfide (A4)		Dark Surfa	` ,				ry Shallow Dark	,	:2)		
	Layers (A5)		Loamy Mu	-			Oti	her (Explain in I	Remarks)			
2 cm Mu	, ,		Loamy Gl	-								
	Below Dark Surface	e (A11)	Depleted	•	•		3, ,,					
	ark Surface (A12)		Redox Da					tors of hydrophy				
Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Depleted Dark Surface (F7)  Redox Depressions (F8)  wetland hydrology r								•				
								ess disturbed t	or problemati	<del></del>		
Restrictive Layer (if observed):												
Type: Depth (ir	ochos):						Hydric Soil Prese	nnt?	Yes	No X		
Remarks:	<u> </u>						Hydric 3011 Frese	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	163	NoX		
	m is revised from Mi //www.nrcs.usda.gov							·				
HYDROLO	GY											
Wetland Hy	drology Indicators:											
Primary India	cators (minimum of c	ne is requi	ired; check all that	apply)			Second	dary Indicators	(minimum of	two required		
Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Su	ırface Soil Cracl	ks (B6)			
High Wa	ter Table (A2)		Aquatic Fa	,	,			ainage Patterns				
Saturation	` '		True Aqua		, ,			y-Season Wate	, ,			
	arks (B1)		Hydrogen		`	,		ayfish Burrows	` '	(0.0)		
	nt Deposits (B2)		Oxidized F			_	· · · · · · · · · · · · · · · · · · ·	turation Visible				
	oosits (B3)		Presence			` '		unted or Stresse		·)		
	nt or Crust (B4) nosits (B5)		Recent Iro			illeu Soil		eomorphic Posit C-Neutral Test				
	on Visible on Aerial I	magery (B			, ,			O Neutral Test	(D3)			
	Vegetated Concave											
Field Obser					,							
Surface Wat		s	No X	Depth (i	nches):							
Water Table		s	No X		nches):							
Saturation P			No X	Depth (i	_		Wetland Hydro	logy Present?	Yes X	No		
(includes car			<del></del>	. `	´ <del>-</del>			o,				
· ·	corded Data (stream	gauge, m	onitoring well, aeria	al photos	, previou	s inspec	ctions), if available:					
	· 											
Remarks:				_	_	_						

Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	er .	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	13
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): terrace		ı	Local relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.154705		Long: -	95.716478		Datum: NAD 83 Stat	e Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 per	cent slopes				fication: None	
Are climatic / hydrologic conditions on the site typical fo	•	year?	Yes X		plain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly d			Circumstances" present?		lo
Are Vegetation , Soil , or Hydrology n				plain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma						atures, etc.
Hydrophytic Vegetation Present? Yes No	) X	Is the	Sampled Ar	rea		
Hydric Soil Present? Yes No	X		n a Wetland?		No X	
	X					
Remarks:						
VEGETATION – Use scientific names of plan		D officers	1 2			
Tree Stratum (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1	70 0 2 1 1	oper		Number of Dominant		
2.				Are OBL, FACW, or F		1 (A)
3.				Total Number of Dom	inant Species	
4. toxicodendron radicans				Across All Strata:	·	2 (B)
5				Percent of Dominant	•	
O " (Obsert Observer (District) 45 FT	=	=Total Cover		Are OBL, FACW, or F	AC: <u>5</u>	60.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )  1. Celtis occidentalis	5	Yes	FAC	Prevalence Index wo		
	5	169	FAC	Total % Cover of		v hv
2. 3.					x 1 =	0 0
4.				FACW species 0		0
5.					5 x 3 =	15
	5 =	=Total Cover		FACU species 9	5 x 4 =	380
Herb Stratum (Plot size: 5 FT )				UPL species 5	x 5 =	25
Cynodon dactylon	90	Yes	FACU	Column Totals: 10	``	420 (B)
2. Rubus oklahomus	5	No No	FACU	Prevalence Index	= B/A = 4.0	0
3. Solanum elaeagnifolium	5	No	UPL	Under that a Manata	d - Indiana.	
4. eleocharis acicularis 5.				Hydrophytic Vegetat		t-tion
				2 - Dominance Te	r Hydrophytic Vege est is >50%	tation
7.				3 - Prevalence In		
8.					I Adaptations <sup>1</sup> (Prov	vide supporting
9.					ks or on a separate	
10.				Problematic Hydr	ophytic Vegetation	<sup>1</sup> (Explain)
	100 =	=Total Cover		<sup>1</sup> Indicators of hydric s	oil and wetland hyd	drology must
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis	sturbed or problema	atic.
1.				Hydrophytic		
2		Tatal Cover		Vegetation	No. V	
		=Total Cover		Present? Yes	No X	
Remarks: (Include photo numbers here or on a separa	ate sheet.)					

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Profile Desc	cription: (Describe t	o the depth	needed to do	cument th	ne indica	ator or c	confirm the abso	ence of indicators	.)	
Depth	Matrix		Red	ox Featur						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-8	10YR 5/4	97	5YR 3/4	3	C	PL	Loamy/Claye	ey Promine	nt redox conce	entrations
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM=R	Reduced Matrix,	MS=Mas	ked San	d Grains	s. <sup>2</sup> Loo	cation: PL=Pore Li	ning, M=Matri	Х.
Hydric Soil							Indi	icators for Proble	-	Soils <sup>3</sup> :
Histosol	(A1)		Sandy GI	-	rix (S4)			Coast Prairie Red		
Histic Ep	pipedon (A2)		Sandy Re	edox (S5)				Iron-Manganese N	, ,	
Black Hi	stic (A3)		Stripped	Matrix (S6	6)			Red Parent Materi	, ,	
Hydroge	n Sulfide (A4)		Dark Surf	face (S7)				Very Shallow Dark	Surface (F22	2)
Stratified	l Layers (A5)		Loamy M	ucky Mine	eral (F1)			Other (Explain in F	Remarks)	
2 cm Mu			Loamy G	-						
Depleted	d Below Dark Surface	(A11)	Depleted	,	,		_			
Thick Da	ark Surface (A12)		Redox Da		` '		<sup>3</sup> Ind	licators of hydrophy	tic vegetation	and
Sandy M	lucky Mineral (S1)		Depleted	Dark Sur	face (F7)	)		wetland hydrology	must be pres	ent,
5 cm Mu	cky Peat or Peat (S3)	)	Redox De	epression	s (F8)			unless disturbed o	r problematic.	
Restrictive	Layer (if observed):									
Type:	Hardpar	1	_							
Depth (ir	nches):	8	_				Hydric Soil Pr	esent?	Yes	No X
Remarks:										
This data for	m is revised from Mic	lwest Regior	nal Supplement	Version 2	2.0 to inc	lude the	NRCS Field Indi	icators of Hydric So	oils, Version 7	.0, 2015
Errata. (http:	//www.nrcs.usda.gov	Internet/FSI	E_DOCUMENT	S/nrcs142	2p2_0512	293.doc	x)			
HYDROLO										
_	drology Indicators:									
-	cators (minimum of or	ne is require					<u>Sec</u>	condary Indicators (		vo required)
	Water (A1)		Water-Sta		` '			Surface Soil Crack	` ,	
	iter Table (A2)		Aquatic F	,	,			Drainage Patterns		
Saturation	` '		True Aqu					Dry-Season Water	, ,	
	arks (B1)		Hydroger					Crayfish Burrows		( <del>-</del> -)
	nt Deposits (B2)		Oxidized			-	oots (C3)	Saturation Visible		
	oosits (B3)		Presence				- (00)	Stunted or Stresse		
	at or Crust (B4)		Recent Ir			illea Soil	s (C6)	Geomorphic Posit	, ,	
	osits (B5)	(DZ)	Thin Muc		` '			FAC-Neutral Test	(D5)	
	on Visible on Aerial In		Gauge or							
	Vegetated Concave	Surface (B8	Other (Ex	tpiain in R	temarks)					
Field Obser			NI- V	Daniella (	\					
Surface Wat			No X	Depth (in	_					
Water Table			No X	Depth (in	_		Wetlend Use	dreless Dresent?	Vaa	No. V
Saturation P		·—	No X	Depth (i	nches):_		wetiand Hyd	drology Present?	Yes	No X
(includes cap	corded Data (stream	nalide mon	itoring well acri	al photos	nreviou	e inenaa	tions) if available	۵٠		
Describe Re	corucu Dala (Silediii	gauge, mon	noming well, aell	ai piiulus	, previou	o mopet	nionaj, ii avaliabl			
Remarks:										
No hydrolog	y present									

Project/Site: Fair Oaks Ranch		City/County: Wagoner Sampling Date: 6					
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	14	
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	nge: S4 T19N R15E			
Landform (hillside, terrace, etc.): terrace		l	Local relief (c	concave, convex, none):	Concave		
Slope (%): 0-5 Lat: 36.156878		Long:	95.708673		Datum: NAD 83 State	Plane OK North	
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 per	rcent slopes			NWI classif	ication: None		
Are climatic / hydrologic conditions on the site typical for	or this time o	of year?	Yes X	No (If no, exp	olain in Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly (	disturbed? A	re "Normal C	Circumstances" present?	Yes X No	o	
Are Vegetation, Soil, or Hydrology	naturally prol	blematic? (I	If needed, ex	plain any answers in Rei	marks.)		
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, transects	, important fea	tures, etc.	
Hydrophytic Vegetation Present? Yes No	o X	Is the	Sampled Ar	rea			
	o X	withir	n a Wetland?	? Yes	No X		
Wetland Hydrology Present? Yes No	o X						
Remarks:							
<b>VEGETATION</b> – Use scientific names of pla	ınts.						
Tron Stratum (Diat ciza: 30 ft )	Absolute % Cover	Dominant Species?	Indicator	Dominance Test wor	-kahaati		
Tree Stratum (Plot size: 30 ft )  1. Salix nigra	% Cover 10	Species? Yes	Status OBL				
2.		100		Number of Dominant S Are OBL, FACW, or F.	•	1 (A)	
3.				Total Number of Domi		. ,	
4. toxicodendron radicans				Across All Strata:		2 (B)	
5.				Percent of Dominant S	Species That		
	10 :	=Total Cover		Are OBL, FACW, or F.	•	0.0% (A/B)	
Sapling/Shrub Stratum (Plot size: 15 FT	)						
1				Prevalence Index wo			
2				Total % Cover of			
3.				OBL species 10		10	
5.				FACW species 0 FAC species 5		0 15	
5		=Total Cover		FACU species 90		360	
Herb Stratum (Plot size: 5 FT )		-10101 00.0.		UPL species 5		25	
1. Cynodon dactylon	90	Yes	FACU	Column Totals: 11		410 (B)	
Xanthium strumarium	5	No	FAC	Prevalence Index =	` ′	`` ′	
3. Grindelia lanceolata	5	No	UPL				
4. eleocharis acicularis				Hydrophytic Vegetat	ion Indicators:		
5				· ·	Hydrophytic Veget	ation	
6				2 - Dominance Te			
7.				3 - Prevalence Inc			
8.					Adaptations <sup>1</sup> (Prov		
9.					ophytic Vegetation <sup>1</sup>	·	
10	100 :	=Total Cover			. ,	` ' '	
Woody Vine Stratum (Plot size: 30 FT	100	=10(a) 0070.		<sup>1</sup> Indicators of hydric so be present, unless dis			
1	,		Ì	-	turbou or processing	ilio.	
2.				Hydrophytic Vegetation			
		=Total Cover		Present? Yes	No X		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			<u>-</u>		_	
General area bare due to livestock traffic	,						

Depth	Matrix	to the ueb		x Featur		01 6	onfirm the absence	or maicalors.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-18	10YR 4/1	50	10YR 4/2	50			Loamy/Clayey			
0 10	10110 4/1		1011(4/2				Loanly/olayey			
							-			-
								1		
<sup>1</sup> Type: C=Co	oncentration, D=Dep	letion. RM	=Reduced Matrix. I	MS=Mas	ked San	d Grains	. <sup>2</sup> Locatio	n: PL=Pore Linir	ng. M=Matr	ix.
Hydric Soil		· · · · · · · · · · · · · · · · · · ·	•					rs for Problema		
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coa	st Prairie Redox	(A16)	
	ipedon (A2)		Sandy Re					-Manganese Ma		
Black His	stic (A3)		Stripped N	latrix (Se	6)		Red	Parent Material	(F21)	
Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	/ Shallow Dark S	urface (F22	2)
Stratified	Layers (A5)		Loamy Mu	icky Min	eral (F1)		Othe	er (Explain in Re	marks)	
2 cm Mu	ck (A10)		Loamy Gle	eyed Ma	trix (F2)					
Depleted	Below Dark Surface	e (A11)	Depleted I	Matrix (F	3)					
Thick Da	rk Surface (A12)		Redox Da	rk Surfac	ce (F6)		<sup>3</sup> Indicato	ors of hydrophytic	vegetation	ı and
Sandy M	Depleted I	Dark Sur	face (F7)	)	wetl	and hydrology m	ust be pres	ent,		
5 cm Mucky Peat or Peat (S3)Redox Depressions (							unle	ss disturbed or p	oroblematic.	
Restrictive I	Layer (if observed):	:								
Type:										
Depth (in	nches):						Hydric Soil Preser	nt?	Yes	No X
HYDROLO	GY									
Wetland Hyd	drology Indicators:									
Primary India	cators (minimum of c	one is requi	red; check all that	apply)			<u>Seconda</u>	ary Indicators (mi	inimum of t	wo require
	Water (A1)		Water-Sta		, ,			ace Soil Cracks	` '	
<u> </u>	ter Table (A2)		Aquatic Fa	,	,			nage Patterns (E		
Saturation	` '		True Aqua		, ,			Season Water T	, ,	
	arks (B1)		Hydrogen		` '	,		yfish Burrows (C		(00)
	t Deposits (B2)		Oxidized F			_		uration Visible on		
	osits (B3) t or Crust (B4)		Presence Recent Iro			,		nted or Stressed morphic Positior		ł.
	osits (B5)		Thin Muck			ileu Soil		::Neutral Test (D	, ,	
	on Visible on Aerial I	magery (R			` '			-Neutral Test (D	3)	
	Vegetated Concave									
Field Observ		- Carraco (	Otilio! (EX	, , , , , , , , , , , , , , , , , , ,	tomamo)		1			
Surface Water		es	No X	Denth (i	nches):					
Water Table		es	No X		nches):					
Saturation P		es	No X	Depth (i	_		Wetland Hydrolo	oav Present?	Yes	No_X
(includes cap				(-	_			3,		
	corded Data (stream	gauge, m	onitoring well, aeria	l photos	, previou	s inspec	tions), if available:			
	(- · · - <del>- ·</del>	5 5.,	<b>5</b> ,		,	,	,.			
Remarks:										
No hydrology	y present									

Project/Site: Fair Oaks Ranch		City/Cou	nty: Wagon	er	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	15
Investigator(s): Stephanie Rainwater		Section, T	_ ownship, Ra	inge: S3 T19N R15E		
Landform (hillside, terrace, etc.): terrace		!	Local relief (d	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.159518		Long: -	95.699205		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Dennis silt loam, 1 to 3 percent sl	opes			NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	or this time of	f year?	Yes X	No (If no, exp	olain in Remarks.)	<del></del>
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? A	Are "Normal (	Circumstances" present?	Yes X No	)
Are Vegetation , Soil , or Hydrology r	naturally prob	olematic? (	If needed, ex	xplain any answers in Re	marks.)	<del></del>
SUMMARY OF FINDINGS – Attach site ma	ap showir	ng samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled A	rea		
Hydric Soil Present? Yes No	X		n a Wetland		No X	
Wetland Hydrology Present? Yes No	X					
Remarks:						
<b>VEGETATION</b> – Use scientific names of pla	nts.					
Tree Stratum (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	·kshoot:	
1. Celtis occidentalis	50	Yes	FAC			
Ulmus americana	30	Yes	FACW	Number of Dominant : Are OBL, FACW, or F	•	3 (A)
3. Celtis laevigata	15	No	FACW	Total Number of Dom		` '
4.				Across All Strata:		4 (B)
5.				Percent of Dominant S	Species That	
	95 =	=Total Cover		Are OBL, FACW, or F	AC: 75	5.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )	ļ					
1.				Prevalence Index wo		
2				Total % Cover of OBL species 0		
3	-			OBL species 0  FACW species 69		0 130
5.				FAC species 50		150
·	<del></del> ;	=Total Cover		FACU species 25		100
Herb Stratum (Plot size: 5 FT )				UPL species 0	x 5 =	0
Symphoricarpos orbiculatus	25	Yes	FACU	Column Totals: 14	0 (A) 3	380 (B)
2. Chasmanthium latifolium	20	Yes	FACW	Prevalence Index :	= B/A = 2.71	
3						
4. eleocharis acicularis				Hydrophytic Vegetat		
5					Hydrophytic Veget	ation
6 7.				X 2 - Dominance Te		
0					Adaptations <sup>1</sup> (Prov	ide supporting
9.					s or on a separate	
10.				Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)
	45 =	=Total Cover		<sup>1</sup> Indicators of hydric so	oil and wetland hvd	rology must
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis		
1				Hydrophytic		
2				Vegetation		
		=Total Cover		Present? Yes	No	_
Remarks: (Include photo numbers here or on a separ	ate sheet.)					
General area bare due to livestock traffic						

Depth	Matrix		Redo		_ 4	. 2				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	ure	Remarks	
0-18	10YR 4/1	80	10YR 4/4	20			Loamy/C	Clayey		
•										
							(			
Type: C=Co	ncentration, D=Depl	etion, RM=	=Reduced Matrix, I	MS=Masl	ked San	d Grains		<sup>2</sup> Location: PL:	=Pore Lining, M=Ma	trix.
lydric Soil I	ndicators:							Indicators for	Problematic Hydr	ic Soils³:
Histosol (A1)			Sandy Gle	Sandy Gleyed Matrix (S4)			Coast Prairie Redox (A16)			
Histic Epipedon (A2)			Sandy Re				Iron-Manganese Masses (F12)			
Black Histic (A3)			Stripped N		6)		Red Parent Material (F21)			
	Sulfide (A4)		Dark Surfa		,		Very Shallow Dark Surface (F22)			
	Layers (A5)		Loamy Mu		eral (F1)		Other (Explain in Remarks)			
2 cm Muc			Loamy Gle	-			•		,	
	Below Dark Surface	(A11)	Depleted I	-						
	rk Surface (A12)	( ,	Redox Da					<sup>3</sup> Indicators of h	nydrophytic vegetati	on and
	ucky Mineral (S1)		Depleted I		` ,	)				
	cky Peat or Peat (S3)	)	Redox De		•	,	wetland hydrology must be present, unless disturbed or problematic.			
		<u>'</u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- ()					
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Tuna										
Type:	ahaa).						Uvdria Cai	il Dragant?	Vee	No.
Depth (in Remarks: This data forr	ches):  n is revised from Mic/www.nrcs.usda.gov/	_					NRCS Field	il Present? Indicators of H	Yes	
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Depth (in Remarks: This data forr Errata. (http://	n is revised from Mic /www.nrcs.usda.gov/	/Internet/F	SE_DOCUMENTS	S/nrcs142			NRCS Field	Indicators of H		7.0, 2015
Depth (in Remarks: This data form Frrata. (http://www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.communications.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/www.com/ww.com/www.com/www.com/ww.com/ww.com/ww.com/ww.com/ww.com/ww.	m is revised from Mic/www.nrcs.usda.gov/	/Internet/F	SE_DOCUMENTS	S/nrcs142	2p2_051	293.docx	NRCS Field	Indicators of H	lydric Soils, Versior	7.0, 2015
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Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	er	Sampling Date:	6/17/2020	
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	16	
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	ange: S3 T19N R15E			
Landform (hillside, terrace, etc.): Depression		l	Local relief (d	concave, convex, none):	Concave		
Slope (%): 0-5 Lat: 36.157747		Long: -	95.693944		Datum: NAD 83 State	Plane OK North	
Soil Map Unit Name: Dennis-Radley complex, 0 to 15 p	percent slope	es		NWI classif	ication: None		
Are climatic / hydrologic conditions on the site typical for	or this time of	f year?	Yes X	No (If no, exp	olain in Remarks.)		
Are Vegetation, Soil, or Hydrologys	significantly c	disturbed? A	re "Normal (	Circumstances" present?	Yes X No	)	
Are Vegetation, Soil, or Hydrologyr	naturally prob	olematic? (I	If needed, ex	xplain any answers in Re	marks.)	_	
SUMMARY OF FINDINGS – Attach site ma	ap showin	ng samplin	g point lo	cations, transects	, important fea	tures, etc.	
Hydrophytic Vegetation Present? Yes X No	o	Is the	Sampled A	rea			
Hydric Soil Present? Yes X No			n a Wetland?		No X		
Wetland Hydrology Present? Yes No	o X						
Remarks:							
VEGETATION – Use scientific names of pla			1 1	1		1	
<u>Tree Stratum</u> (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
1. Salix nigra	5	Yes	OBL	Number of Dominant			
2.				Are OBL, FACW, or F		2 (A)	
3				Total Number of Domi	inant Species		
4				Across All Strata:		2 (B)	
5	5 =	=Total Cover		Percent of Dominant S	•	0.0% (A/B)	
Sapling/Shrub Stratum (Plot size: 15 FT )	<u> </u>	= Tulai Cuvei		Are OBL, FACW, or F	AC. 100	J.0% (A/D)	
1	,			Prevalence Index wo	orksheet:		
2.				Total % Cover of	: Multiply	by:	
3.				OBL species 10		00	
4				FACW species 0		0	
5		=Total Cover		FAC species 0 FACU species 0		0	
Herb Stratum (Plot size: 5 FT )		=10lai Covei		UPL species 0		0	
Justicia americana	95	Yes	OBL	Column Totals: 10		00 (B)	
2.				Prevalence Index :	= B/A = 1.00		
3.							
4. eleocharis acicularis				Hydrophytic Vegetat			
5.					Hydrophytic Veget	ation	
6 7.	·			X 2 - Dominance Te			
0					Adaptations¹ (Provi	ide supporting	
9.					s or on a separate		
10				Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)	
	95 =	=Total Cover	·——	<sup>1</sup> Indicators of hydric so	oil and wetland hyd	rology must	
Woody Vine Stratum (Plot size: 30 FT )	)			be present, unless dis	turbed or problema	tic.	
1.				Hydrophytic			
2		=Total Cover		Vegetation Present? Yes	Y No		
		= Tutal Cuve		Fresent: 163	No		
Remarks: (Include photo numbers here or on a separ General area bare due to livestock traffic	rate sneet.)						

Depth							confirm the absence of in	,
	Matrix			x Featur		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 2/1	100					Mucky Loam/Clay	
2-6	10YR 3/1	100					Mucky Loam/Clay	
6-18	10YR 4/1	80	10YR 4/6	20	RM	M	Mucky Loam/Clay	
			-		· · · · · · · · · · · · · · · · · · ·			
<sup>1</sup> Type: C=Co	oncentration, D=Dep	letion. RM	=Reduced Matrix. I	MS=Mas	ked Sand	d Grains	. <sup>2</sup> Location: PL	=Pore Lining, M=Matrix.
Hydric Soil		,	,					r Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coast Pra	airie Redox (A16)
Histic Ep	pipedon (A2)		Sandy Re	dox (S5)			Iron-Man	ganese Masses (F12)
Black His	stic (A3)		Stripped N	latrix (Se	6)		Red Pare	ent Material (F21)
Hydroge	n Sulfide (A4)		X Dark Surfa	ace (S7)			Very Sha	llow Dark Surface (F22)
Stratified	I Layers (A5)		X Loamy Mu	icky Mine	eral (F1)		Other (Ex	plain in Remarks)
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	rix (F2)			
Depleted	Below Dark Surface	e (A11)	Depleted I	Matrix (F	3)		_	
Thick Da	rk Surface (A12)		Redox Da	rk Surfac	e (F6)		<sup>3</sup> Indicators of	hydrophytic vegetation and
	lucky Mineral (S1)		Depleted I					hydrology must be present,
5 cm Mu	cky Peat or Peat (S3	3)	Redox De	pression	s (F8)		unless dis	sturbed or problematic.
	Layer (if observed):	:						
Type:								
Depth (in	nches):						Hydric Soil Present?	Yes X No
Remarks:								
This data for	m is revised from Mi							
C								Hydric Soils, Version 7.0, 2015
Errata. (http:/	//www.nrcs.usda.gov							Hydric Soils, Version 7.0, 2015
Errata. (http:/								Hydric Soils, Version 7.0, 2015
	//www.nrcs.usda.gov							Hydric Soils, Version 7.0, 2015
HYDROLO	//www.nrcs.usda.gov	v/Internet/F						Hydric Soils, Version 7.0, 2015
HYDROLO Wetland Hyd	//www.nrcs.usda.gov	v/Internet/F	SE_DOCUMENTS	S/nrcs142			<)	
HYDROLO Wetland Hyd	OGY drology Indicators: cators (minimum of c	v/Internet/F	rSE_DOCUMENTS	apply)	2p2_0512		() Secondary In	dicators (minimum of two required)
HYDROLO  Wetland Hyd  Primary India  Surface	OGY drology Indicators: cators (minimum of c	v/Internet/F	SE_DOCUMENTS  ired; check all that  Water-Sta	S/nrcs142 apply) ined Lea	ves (B9)		Secondary In	dicators (minimum of two required) Soil Cracks (B6)
HYDROLO  Wetland Hyd  Primary India  Surface V  High Wa	OGY drology Indicators: cators (minimum of c Water (A1) ter Table (A2)	v/Internet/F	ired; check all that Water-Sta Aquatic Fa	apply) ined Lea	ves (B9)		Secondary In. Surface S Drainage	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10)
HYDROLO  Wetland Hyd Primary Indic Surface High Wa Saturatio	OGY drology Indicators: cators (minimum of color (A1) ter Table (A2) on (A3)	v/Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua	apply) ined Lea auna (B1 atic Plant	ves (B9) 3) s (B14)	293.doc	Secondary In Surface S Drainage Dry-Seas	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2)
HYDROLO  Wetland Hyde  Primary Indice  Surface V  High Wa  Saturatic  Water M:	OGY drology Indicators: cators (minimum of color (Mater (A1)) ter Table (A2) on (A3) arks (B1)	v/Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 tic Plant Sulfide (	ves (B9) 3) s (B14) Odor (C1)	)	Secondary Inc. Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
HYDROLO  Wetland Hyde  Primary Indice  Surface of High Wa  Saturation  Water Management	OGY drology Indicators: cators (minimum of company) Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	v/Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua	apply) ined Lea auna (B1 sulfide ( Rhizosph	ves (B9) 3) s (B14) Odor (C1) eres on I	) Living Re	Secondary In Surface S Drainage Dry-Seas Crayfish I	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
HYDROLO  Wetland Hyde  Primary India  Surface of High Wa  Saturation  Water Mater	OGY drology Indicators: cators (minimum of color (Mater (A1)) ter Table (A2) on (A3) arks (B1)	v/Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 stitc Plant Sulfide ( Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1) eres on I	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I soots (C3) Saturation Stunted c	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
HYDROLO  Wetland Hyde Primary India Surface of High Wa Saturation Water Models Sediment Drift Dep Algal Ma	drology Indicators: cators (minimum of compared (Ma)) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3)	v/Internet/F	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  X Presence	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
HYDROLO  Wetland Hyde Primary Indic Surface of High Wa Saturation Water Models Sedimen Drift Dep Algal Ma Iron Dep	drology Indicators: cators (minimum of compared (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) at or Crust (B4)	v/Internet/F	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  X Presence  Recent Iro  Thin Muck	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	vves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7)	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) chic Position (D2)
HYDROLO  Wetland Hyde  Primary Indice  Surface V  High Wa  Saturatio  Water Mi  Sedimen  Drift Dep  Algal Ma  Iron Dep  Inundation	drology Indicators: cators (minimum of compared (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5)	v/Internet/F	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  X Presence  Recent Iro  Thin Muck  7)  Gauge or	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduce in Reduce is Surface Well Dat	ves (B9) 3) s (B14) Odor (C1) eres on I ed Iron ( tion in Ti (C7) a (D9)	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) chic Position (D2)
HYDROLO  Wetland Hyde  Primary Indice  Surface V  High Wa  Saturatio  Water Mi  Sedimen  Drift Dep  Algal Ma  Iron Dep  Inundation	drology Indicators: cators (minimum of control (March (Mar	v/Internet/F	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  X Presence  Recent Iro  Thin Muck  7)  Gauge or	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduce in Reduce is Surface Well Dat	ves (B9) 3) s (B14) Odor (C1) eres on I ed Iron ( tion in Ti (C7) a (D9)	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) chic Position (D2)
HYDROLO  Wetland Hyde  Primary India  Surface of High Wa  Saturation  Water Mark Sediment  Drift Dep  Algal Mater Mark Iron Dep  Inundation  Sparsely	drology Indicators: cators (minimum of control (Ma) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) an Visible on Aerial I	v/Internet/F	ired; check all that  Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F X Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduce in Reduce is Surface Well Dat	vves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9)	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) chic Position (D2)
HYDROLO  Wetland Hyde Primary India Surface of High Wa Saturation Water Ming Sedimen Drift Dep Algal Ma Iron Dep Inundation Sparsely  Field Observi	drology Indicators: cators (minimum of control (Ma) arks (B1) at Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) con Visible on Aerial I are Vegetated Concave vations: er Present? Ye Present?	magery (Beses	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  X Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ined Lea auna (B1 aura (B1 stic Plant Sulfide ( Rhizosph of Reduc on Reduc surface Well Dat	ves (B9) 3) s (B14) Odor (C1) eres on I ted Iron ( tion in Ti (C7) a (D9) emarks)	) Living Ro	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) chic Position (D2)
HYDROLO  Wetland Hyde Primary Indice Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely  Field Obsert Surface Water Water Table Saturation Primary Indices Saturation Primary Indices	JOGY  drology Indicators: cators (minimum of compared to the cators (minimum of cators (	magery (Bes Surface (	ired; check all that  Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F X Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Dat Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1) eres on I ted Iron ( tion in Ti (C7) a (D9) emarks)	) Living Ro (C4) Illed Soil:	Secondary In Surface S Drainage Dry-Seas Crayfish I Stunted costs (C3) Stunted costs (C6) X Geomorp	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
HYDROLO  Wetland Hyde Primary Indice Surface V High Wa Saturation Water Management Drift Dep Algal Management Iron Dep Inundation Sparsely Field Observation Surface Water Water Table Saturation Profice (includes cap	drology Indicators: eators (minimum of control of contr	magery (Bess	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  X Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Illed Soil:	Secondary In Surface S Drainage Dry-Seas Crayfish I sots (C3) Saturation Stunted costs (C6) X Geomorp FAC-Neu  Wetland Hydrology P	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)
HYDROLO  Wetland Hyde Primary Indice Surface V High Wa Saturation Water Management Drift Dep Algal Management Iron Dep Inundation Sparsely Field Observation Surface Water Water Table Saturation Per (includes cap	JOGY  drology Indicators: cators (minimum of compared to the cators (minimum of cators (	magery (Bess	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  X Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Illed Soil:	Secondary In Surface S Drainage Dry-Seas Crayfish I sots (C3) Saturation Stunted costs (C6) X Geomorp FAC-Neu  Wetland Hydrology P	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)
HYDROLO  Wetland Hyde Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely  Field Obsert Surface Water Water Table Saturation Pe (includes cap Describe Rea	drology Indicators: eators (minimum of control of contr	magery (Bess	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  X Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Illed Soil:	Secondary In Surface S Drainage Dry-Seas Crayfish I sots (C3) Saturation Stunted costs (C6) X Geomorp FAC-Neu  Wetland Hydrology P	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)
HYDROLO  Wetland Hyde Primary Indice Surface V High Wa Saturation Water Management Drift Dep Algal Management Iron Dep Inundation Sparsely Field Observation Surface Water Water Table Saturation Profice (includes cap	drology Indicators: eators (minimum of control of contr	magery (Bess	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  X Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc on Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro C4) Illed Soil:	Secondary In Surface S Drainage Dry-Seas Crayfish I sots (C3) Saturation Stunted costs (C6) X Geomorp FAC-Neu  Wetland Hydrology P	dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)

Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	er	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	17
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	nge: S3 T19N R15E		
Landform (hillside, terrace, etc.): terrace		l	Local relief (c	concave, convex, none):	Concave	
Slope (%): <u>0-5</u> Lat: <u>36.157521</u>		Long:	95.693594		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Dennis-Radley complex, 0 to 15 p	ercent slope	es		NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical fo	r this time of	f year?	Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly d	disturbed? A	Are "Normal C	Circumstances" present?	Yes X N	o
Are Vegetation , Soil , or Hydrology n	aturally prob	olematic? (I	If needed, ex	plain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site ma	ıp showin	ıg samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes No	X	Is the	Sampled A	rea		
Hydric Soil Present? Yes No	X		n a Wetland?		No X	
Wetland Hydrology Present? Yes No	X					
Remarks:						
<b>VEGETATION</b> – Use scientific names of plan	nts.					
Tree Stratum (Plot size: 30 ft )	Absolute	Dominant Species?	Indicator	Dominance Test wor	·kehoot·	
<u>Tree Stratum</u> (Plot size: <u>30 ft</u> )  1. Carya cordiformis	% Cover 45	Species? Yes	Status FACU			
Celtis occidentalis	25	Yes	FAC	Number of Dominant : Are OBL, FACW, or F	•	2 (A)
3. Ulmus americana	15	No	FACW	Total Number of Dom		(- ',
4.				Across All Strata:	mant opecies	4 (B)
5.				Percent of Dominant S	Species That	
	85 =	=Total Cover		Are OBL, FACW, or F	AC: 50	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )						
1				Prevalence Index wo		
2.				Total % Cover of		
3				OBL species 0 FACW species 39		0 70
5.				FAC species 25		75 75
·		=Total Cover		FACU species 12		500
Herb Stratum (Plot size: 5 FT )				UPL species 0		0
Symphoricarpos orbiculatus	80	Yes	FACU	Column Totals: 18	5 (A)	645 (B)
2. Chasmanthium latifolium	20	Yes	FACW	Prevalence Index :	= B/A = 3.49	)
3						
4. eleocharis acicularis				Hydrophytic Vegetat		
5					Hydrophytic Veget	ation
6.				2 - Dominance Te		
7. 8.				3 - Prevalence Inc	dex is ≤3.0 Adaptations¹ (Prov	ide supporting
					s or on a separate	
10.					ophytic Vegetation	ŕ
	100 =	=Total Cover		<sup>1</sup> Indicators of hydric so	. ,	` ' '
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis		
1				Hydrophytic		
2				Vegetation		
		=Total Cover		Present? Yes	No <u>X</u>	_
Remarks: (Include photo numbers here or on a separa	ate sheet.)					
General area bare due to livestock traffic						

Depth (inches)	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-18	10YR 3/2	100					Loamy/Claye	ey		
								·		
<sup>1</sup> Type: C=Cor	ncentration, D=Dep	letion, RM	l=Reduced Matrix, I	MS=Mas	ked San	d Grains	. <sup>2</sup> Loc	ation: PL=Pore	Lining, M=Mat	rix.
Hydric Soil In	ndicators:						Indi	cators for Prob	lematic Hydri	c Soils <sup>3</sup> :
Histosol (A	<b>A1</b> )		Sandy Gle	eyed Mat	rix (S4)			Coast Prairie Re	edox (A16)	
Histic Epip	pedon (A2)		Sandy Re	dox (S5)				Iron-Manganese	Masses (F12)	
Black Histi	ic (A3)		Stripped N	/latrix (S	6)			Red Parent Mate	erial (F21)	
Hydrogen	Sulfide (A4)		Dark Surfa	ace (S7)				Very Shallow Da	ark Surface (F2	22)
	Layers (A5)		Loamy Mu	-				Other (Explain ir	n Remarks)	
2 cm Muck	` '		Loamy Gle	•	. ,					
	Below Dark Surface	e (A11)	Depleted I				0			
	k Surface (A12)		Redox Da					cators of hydrop	-	
	icky Mineral (S1)		Depleted I		` '	)		wetland hydrolog		
5 cm Muck	ky Peat or Peat (S3	3)	Redox De	pression	s (F8)			unless disturbed	l or problemati	С.
Restrictive La	ayer (if observed):									
Type:										
Depth (inc Remarks: This data form	n is revised from Mi		gional Supplement \ FSE_DOCUMENTS						Yes	No X 7.0, 2015
Depth (inc Remarks: This data form Errata. (http://v	n is revised from Mi www.nrcs.usda.gov						NRCS Field Indi			
Depth (inc Remarks: This data form Errata. (http://v	n is revised from Mi www.nrcs.usda.gov						NRCS Field Indi			
Depth (inc Remarks: This data form Errata. (http://v	n is revised from Mi www.nrcs.usda.gov						NRCS Field Indi			
Depth (inc Remarks: This data form Errata. (http://v	a is revised from Mi www.nrcs.usda.gov GY rology Indicators: ators (minimum of o	//Internet/F	SE_DOCUMENTS	apply)	2p2_0512	293.docx	NRCS Field Indi	cators of Hydric	Soils, Version	7.0, 2015
Depth (inc  Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr  Primary Indica  Surface W	a is revised from Mi www.nrcs.usda.gov GY  rology Indicators: ators (minimum of o	//Internet/F	ired; check all that	apply) ined Lea	2p2_0512	293.docx	NRCS Field Indi	cators of Hydric soundary Indicators Surface Soil Cra	Soils, Version s (minimum of licks (B6)	7.0, 2015
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate	a is revised from Minwww.nrcs.usda.gov  GY  rology Indicators: ators (minimum of orlater (A1) er Table (A2)	//Internet/F	ired; check all that Water-Sta Aquatic Fa	apply) ined Lea	2p2_0512 aves (B9) 3)	293.docx	NRCS Field Indi	cators of Hydric solutions of the control of the co	Soils, Version  s (minimum of licks (B6) ns (B10)	7.0, 2015
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation	a is revised from Mi www.nrcs.usda.gov GY rology Indicators: ators (minimum of or /ater (A1) er Table (A2) n (A3)	//Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua	apply) ined Lea auna (B1	aves (B9) 3) s (B14)	293.docx	NRCS Field Indi	cators of Hydric ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season Wat	Soils, Version  s (minimum of ticks (B6) ns (B10) ter Table (C2)	7.0, 2015
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar	a is revised from Mi www.nrcs.usda.gov GY rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1)	//Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 atic Plant Sulfide (	aves (B9) 3) cs (B14) Odor (C1	293.docx	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Patteri Dry-Season Wat Crayfish Burrow	Soils, Version  s (minimum of ticks (B6) ns (B10) ter Table (C2) s (C8)	7.0, 2015
Depth (inc  Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment	a is revised from Mi www.nrcs.usda.gov GY rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2)	//Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 sulfide ( Rhizosph	aves (B9) 3) cs (B14) Odor (C1 neres on l	293.docx	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season Wat Crayfish Burrows Saturation Visibl	Soils, Version  s (minimum of licks (B6) ns (B10) ter Table (C2) s (C8) le on Aerial Im-	7.0, 2015 two required
Depth (inc  Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos	rology Indicators: ators (minimum of or /ater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) esits (B3)	//Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 Sulfide ( Rhizosph of Reduce	aves (B9) 3) s (B14) Odor (C1) heres on I	) Living Ro	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres	Soils, Version  s (minimum of licks (B6) lins (B10) liter Table (C2) s (C8) lie on Aerial Image Sed Plants (D*	7.0, 2015 two required
Depth (inc  Remarks: This data form Errata. (http://s  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depoi	rology Indicators: ators (minimum of or later (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4)	//Internet/F	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	apply) ined Lea auna (B1 sulfide ( Rhizosph of Reduce	aves (B9) 3) cs (B14) Odor (C1 neres on lection in Ti	) Living Ro	NRCS Field Indi Sec Oots (C3)	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos	ris revised from Minwww.nrcs.usda.gov  GY  rology Indicators: ators (minimum of orlater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) usits (B3) or Crust (B4) sits (B5)	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	aves (B9) 3) cs (B14) Odor (C1 neres on leced Iron (ction in Ties (C7)	) Living Ro	NRCS Field Indi Sec Oots (C3)	ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Iron Depos Inundation	ris revised from Minewww.nrcs.usda.gov  Fology Indicators:  ators (minimum of or  /ater (A1)  Per Table (A2)  A (A3)  rks (B1)  Deposits (B2)  sits (B3)  or Crust (B4)  sits (B5)  n Visible on Aerial In	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduce on Reduce s Surface Well Dat	aves (B9) 3) Codor (C1 neres on I ced Iron ( ction in Ti e (C7) a (D9)	) Living Ro (C4) Iled Soils	NRCS Field Indi Sec Oots (C3)	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely v	rology Indicators: ators (minimum of or /ater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial In /egetated Concave	ne is requ	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduce on Reduce s Surface Well Dat	aves (B9) 3) Codor (C1 neres on I ced Iron ( ction in Ti e (C7) a (D9)	) Living Ro (C4) Iled Soils	NRCS Field Indi Sec Oots (C3)	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely v  Field Observa	ris revised from Minwww.nrcs.usda.gov  GY  rology Indicators: ators (minimum of orlater (A1) er Table (A2) a (A3) arks (B1) Deposits (B2) asits (B3) or Crust (B4) sits (B5) a Visible on Aerial Invegetated Concave ations:	magery (B	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc surface Well Dat blain in F	aves (B9) 3) cs (B14) Odor (C1 neres on lection in Tie (C7) ca (D9) Remarks)	) Living Ro (C4) Illed Soils	NRCS Field Indi Sec Oots (C3)	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc  Remarks: This data form Errata. (http://s  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely w  Field Observa Surface Water	ris revised from Minewww.nrcs.usda.gov  GY  rology Indicators: ators (minimum of or later (A1) ar Table (A2) ar (A3) arks (B1) Deposits (B2) asits (B3) ar Crust (B4) asits (B5) ar Visible on Aerial In late (B4) late (B4) ar Visible on Aerial In late (B4)	magery (B	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence  Recent Iro  Thin Muck  7) Gauge or  B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduce on Reduce Surface Well Dat blain in F	aves (B9) 3) cs (B14) Odor (C1 neres on lection in Tie (C7) ca (D9) Remarks)	) Living Ro (C4) Illed Soils	NRCS Field Indi Sec Oots (C3)	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of ticks (B6) as (B10) ter Table (C2) s (C8) e on Aerial Image and Plants (D2) sition (D2)	7.0, 2015 two required
Depth (inc Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely V  Field Observa Surface Water Water Table P	ris revised from Minewww.nrcs.usda.gov  Fology Indicators:  Stors (minimum of or  Vater (A1)  For Table (A2)  For (A3)  For (A3)  For (B4)  For Crust (B4)  For (B5)  For Visible on Aerial In  Vegetated Concave  Stors  For Present?  Ye  Present?  Ye  Ye  Ye  Ye  Ye  Ye  Ye  Ye  Ye  Y	magery (B	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduce on Reduce on Reduce on Reduce Well Dat blain in F  Depth (i Depth (i	aves (B9) 3) cs (B14) Odor (C1 neres on I ced Iron ( ction in Ti e (C7) ca (D9) Remarks) nches): _ nches): _	) Living Ro (C4) Illed Soils	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Patteri Dry-Season Wat Crayfish Burrow: Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	Soils, Version  s (minimum of licks (B6) ns (B10) ter Table (C2) s (C8) le on Aerial Imised Plants (D2) sition (D2) st (D5)	two required
Depth (inc  Remarks: This data form Errata. (http://s  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely w  Field Observa Surface Water	rology Indicators: ators (minimum of or vater (A1) ar Table (A2) a (A3) arks (B1) Deposits (B2) asits (B3) or Crust (B4) sits (B5) a Visible on Aerial Invegetated Concave ations: ar Present? ar Present?  Yesent?  Yesent?	magery (B	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence  Recent Iro  Thin Muck  7) Gauge or  B8) Other (Exp	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduce on Reduce on Reduce on Reduce Well Dat blain in F  Depth (i Depth (i	aves (B9) 3) cs (B14) Odor (C1 neres on lection in Tie (C7) ca (D9) Remarks)	) Living Ro (C4) Illed Soils	NRCS Field Indi	cators of Hydric sondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrow Saturation Visibl Stunted or Stres Geomorphic Pos	Soils, Version  s (minimum of licks (B6) ns (B10) ter Table (C2) s (C8) le on Aerial Imseed Plants (D2) sition (D2) st (D5)	7.0, 2015 two required
Depth (inc  Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely v  Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators: ators (minimum of or vater (A1) ar Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial II Vegetated Concave ations: ar Present? Present? Yesent? Yesent? Yesent?	magery (B	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 sulfide ( Rhizosph of Reduce on Reduce Sulface Well Dat blain in F Depth (i Depth (i	aves (B9) 3) ss (B14) Odor (C1 neres on lection in Ties (C7) sa (D9) Remarks) nches): nches): nches):	) Living Ro (C4) Illed Soils	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrows Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	Soils, Version  s (minimum of licks (B6) ns (B10) ter Table (C2) s (C8) le on Aerial Imised Plants (D2) sition (D2) st (D5)	two required
Depth (inc  Remarks: This data form Errata. (http://v  HYDROLOG  Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely v  Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators: ators (minimum of or vater (A1) ar Table (A2) a (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial II Vegetated Concave ations: ar Present? Present? Yesent? Yesent? Yesent?	magery (B	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ined Lea auna (B1 sulfide ( Rhizosph of Reduce on Reduce Sulface Well Dat blain in F Depth (i Depth (i	aves (B9) 3) ss (B14) Odor (C1 neres on lection in Ties (C7) sa (D9) Remarks) nches): nches): nches):	) Living Ro (C4) Illed Soils	NRCS Field Indi	ondary Indicators Surface Soil Cra Drainage Pattern Dry-Season War Crayfish Burrows Saturation Visibl Stunted or Stres Geomorphic Pos FAC-Neutral Tes	Soils, Version  s (minimum of licks (B6) ns (B10) ter Table (C2) s (C8) le on Aerial Imised Plants (D2) sition (D2) st (D5)	two required

Project/Site: Fair Oaks Ranch	City/County: Wagone	er	Sampling Date: 6/	/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	18
Investigator(s): Stephanie Rainwater	Section, Township, Rar	nge: S3 T19N R15E		
Landform (hillside, terrace, etc.): terrace	Local relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.150834	Long: <u>-95.702734</u>		Datum: NAD 83 State Plan	ne OK North
Soil Map Unit Name: Dennie-Radley complex, 0 to 15 perc	cent slopes	NWI classif	fication: None	
Are climatic / hydrologic conditions on the site typical for th	his time of year? Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologysign	nificantly disturbed? Are "Normal C	Circumstances" present?	Yes X No	
Are Vegetation, Soil, or Hydrologynatu		plain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling point lo	cations, transects	, important featur	es, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Ar	·ea		
Hydric Soil Present? Yes X No			No	
Wetland Hydrology Present? Yes X No	<u> </u>		<u> </u>	
Remarks:				
VEGETATION – Use scientific names of plants				<del></del>
	Absolute Dominant Indicator 6 Cover Species? Status	Dominance Test wor	rksheet:	
1	<u> </u>	Number of Dominant		
2.		Are OBL, FACW, or F		(A)
3.		Total Number of Domi	inant Species	_
4		Across All Strata:	1	(B)
5	Total Cover	Percent of Dominant S	•	0/ (A/D)
Sapling/Shrub Stratum (Plot size: 15 FT )	=Total Cover	Are OBL, FACW, or F	FAC: 100.09	<u>%</u> (A/B)
1		Prevalence Index wo	orksheet:	
2.		Total % Cover of		:
3.		OBL species 10	00 x 1 = 100	
4.		FACW species 0		
5		FAC species 0		
	=Total Cover	FACU species 0		
Herb Stratum (Plot size: 5 FT )  1. Justicia americana	100 Yes OBL	UPL species 0 Column Totals: 10		(B)
Justicia americana     2.	100 162 ODL	Prevalence Index :	`` /	<sup>(D)</sup>
3.		i iovalonoo maa.	- 5/4	<del></del>
4. eleocharis acicularis	————	Hydrophytic Vegetat	tion Indicators:	
5			Hydrophytic Vegetatio	n
6.		X 2 - Dominance Te	est is >50%	
7.		X 3 - Prevalence Inc		
8			Adaptations <sup>1</sup> (Provide	
9.			s or on a separate she	,
10		<del></del>	ophytic Vegetation <sup>1</sup> (Ex	• ′
Woody Vino Stratum (Plot size: 30 FT )	100 =Total Cover		oil and wetland hydrolo sturbed or problematic.	
Woody Vine Stratum (Plot size: 30 FT )	-	•	turbed or problemanc.	
1		Hydrophytic Vegetation		
	=Total Cover	_	X No	
Remarks: (Include photo numbers here or on a separate	sheet )			
General area bare due to livestock traffic	onoc.,			

		to the dep				ator or o	confirm the absence of ir	ndicators.)
Depth	Matrix	0/		x Featur		Loc <sup>2</sup>	Tavetura	Domanico
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type		Texture	Remarks
0-6	10YR 2/1	95	10YR 4/6	5	RM	<u>M</u>	Mucky Loam/Clay	
6-18	10YR 4/1	95	10YR 4/6	5	RM	<u>M</u>	Mucky Loam/Clay	
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Mas	ked San	d Grains	s. <sup>2</sup> Location: Pl	_=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gle	eyed Mat	trix (S4)		Coast Pr	airie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					ganese Masses (F12)
	stic (A3)		Stripped N		6)			ent Material (F21)
	en Sulfide (A4)		Dark Surfa	` ,				allow Dark Surface (F22)
	d Layers (A5)		X Loamy Mu	-			Other (Ex	xplain in Remarks)
	ıck (A10)	(4.4.)	Loamy Gle					
	d Below Dark Surface	e (A11)	Depleted I	•	•		3	
	ark Surface (A12)		Redox Da					hydrophytic vegetation and
	Mucky Mineral (S1)	.\	Depleted I			)		nydrology must be present,
	ucky Peat or Peat (S3	,	Redox De	pression	is (Fo)	1	uniess ui	sturbed or problematic.
	Layer (if observed):							
Type: Depth (ii	nchos):						Hydric Soil Present?	Yes X No
Remarks:							nyunc son Fresent:	1es
Errata. (http:	://www.nrcs.usda.gov	r/Internet/F	FSE_DOCUMENTS	S/nrcs142	2p2_051:	293.doc	×)	
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of c	ne is requ	ired; check all that	apply)			Secondary In	dicators (minimum of two required)
	Water (A1)		Water-Sta	ined Lea	aves (B9)		Surface S	Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa	,	,			Patterns (B10)
X Saturation			True Aqua		, ,			son Water Table (C2)
	larks (B1)		Hydrogen		`	,	<del></del> ·	Burrows (C8)
	nt Deposits (B2)		Oxidized F Presence			_		n Visible on Aerial Imagery (C9)
	oosits (B3) at or Crust (B4)		Recent Iro			` '		or Stressed Plants (D1) phic Position (D2)
	posits (B5)		Thin Muck			ilica con	· · ·	utral Test (D5)
	on Visible on Aerial I	magery (B						
	/ Vegetated Concave							
Field Obser			<u> </u>		·			
Surface Wat		S	No X	Depth (i	nches):			
Water Table		s X		Depth (i	· -	3		
Saturation P		s X			nches):	0	Wetland Hydrology P	Present? Yes X No
(includes ca	pillary fringe)				_	J		
Describe Re	corded Data (stream	gauge, m	onitoring well, aeria	al photos	, previou	s inspec	ctions), if available:	
_								
Remarks:								

Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	er	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	19
Investigator(s): Stephanie Rainwater		Section, T	ownship, Ra	nge: S3 T19N R15E		
Landform (hillside, terrace, etc.): terrace		L	Local relief (c	concave, convex, none):	Concave	
Slope (%): <u>0-5</u> Lat: <u>36.150782</u>		Long:	95.702952		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Dennie-Radley complex, 0 to 15 p	percent slope	es		NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	or this time of	f year?	Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly c	disturbed? A	\re "Normal C	Circumstances" present?	Yes X No	)
Are Vegetation, Soil, or Hydrologyr	naturally prob	olematic? (I	If needed, ex	plain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site ma	ap showin	ıg samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	)	Is the	Sampled Ar	rea		
Hydric Soil Present? Yes No	X		n a Wetland?		No X	
Wetland Hydrology Present? Yes No	X					
Remarks:						
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
Gleditsia triacanthos	40	Yes	FACU	Number of Dominant		
2. Celtis occidentalis	35	Yes	FAC	Are OBL, FACW, or F	•	3 (A)
3. Carya cordiformis	10	No	FACU	Total Number of Dom		
4.				Across All Strata:		5 (B)
5				Percent of Dominant S	•	
	<u>85</u> =	=Total Cover		Are OBL, FACW, or F	AC: 60	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )	45	V		2 Comme Indament		
1. Cornus drummondii	15	Yes	<u>FAC</u>	Prevalence Index wo		L.,,
2. 3.				Total % Cover of OBL species 0		0
4.				FACW species 5		10
5.				FAC species 50		50
	15 =	=Total Cover		FACU species 65		260
Herb Stratum (Plot size: 5 FT )				UPL species 0	x 5 =	0
Symphoricarpos orbiculatus	15	Yes	FACU	Column Totals: 12	0 (A) Z	120 (B)
2. Chasmanthium latifolium	5	Yes	FACW	Prevalence Index :	= B/A = <u>3.50</u>	<u> </u>
3						
4. eleocharis acicularis				Hydrophytic Vegetat		
5.					Hydrophytic Veget	ation
6 7.				X 2 - Dominance Te		
0					Adaptations <sup>1</sup> (Prov	ide supporting
9.					s or on a separate	
10.				Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)
	20 =	=Total Cover		<sup>1</sup> Indicators of hydric se	oil and wetland hvd	rology must
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis		
1				Hydrophytic		
2				Vegetation		
		=Total Cover		Present? Yes	<u>X</u> No	_
Remarks: (Include photo numbers here or on a separ	ate sheet.)					
General area bare due to livestock traffic						

	% Color (moist)	dox Features  % Type¹  ———————————————————————————————————		Texture my/Clayey	Remarks
0-18 10YR 4/2 1			Loar	my/Clayey	
Hydric Soil Indicators:	n, RM=Reduced Matrix	k, MS=Masked Sand	l Grains.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix.
riyane son malcators:				Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy C	Gleyed Matrix (S4)		Coast Prairie	Redox (A16)
Histic Epipedon (A2)	Sandy F	Redox (S5)		Iron-Mangane	ese Masses (F12)
Black Histic (A3)	Stripped	d Matrix (S6)		Red Parent M	laterial (F21)
Hydrogen Sulfide (A4)	Dark Su	ırface (S7)		Very Shallow	Dark Surface (F22)
Stratified Layers (A5)		Mucky Mineral (F1)		Other (Explain	n in Remarks)
2 cm Muck (A10)		Gleyed Matrix (F2)			
Depleted Below Dark Surface (A		d Matrix (F3)		2	
Thick Dark Surface (A12)		Dark Surface (F6)			ophytic vegetation and
Sandy Mucky Mineral (S1)		d Dark Surface (F7)		•	plogy must be present,
5 cm Mucky Peat or Peat (S3)	Redox D	Depressions (F8)		unless disturb	ed or problematic.
Restrictive Layer (if observed):					
Type:					
Depth (inches):			Hydric	Soil Present?	Yes No_X
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one is					ors (minimum of two required
Surface Water (A1)		Stained Leaves (B9)		Surface Soil C	` '
High Water Table (A2)	<del></del> '	Fauna (B13)		Drainage Patt	
Saturation (A3)		uatic Plants (B14)			Vater Table (C2)
Water Marks (B1)	<u> </u>	en Sulfide Odor (C1)		Crayfish Burro	` '
Sediment Deposits (B2)		d Rhizospheres on L ce of Reduced Iron (	-	·	sible on Aerial Imagery (C9) ressed Plants (D1)
Drift Deposits (B3) Algal Mat or Crust (B4)		Iron Reduction in Til	,	Geomorphic F	, ,
Iron Deposits (B5)		ick Surface (C7)	ied Solis (Co)	FAC-Neutral	, ,
		or Well Data (D9)		1710 11001101	1001 (20)
Inundation Visible on Aerial Imag		Explain in Remarks)			
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur		Explain in Remarks)			
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations:	rface (B8) Other (E	,			
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Yes	rface (B8) Other (B	Depth (inches):			
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Yes Water Table Present? Yes	No X No X	Depth (inches):	Wetl	and Hydrology Prese	ent? Yes No X
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Yes	rface (B8) Other (B	Depth (inches):	Wetl	and Hydrology Prese	ent? Yes No_X
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	No X No X No X	Depth (inches): _ Depth (inches): _ Depth (inches): _			ent? Yes No_X
Inundation Visible on Aerial Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	No X No X No X	Depth (inches): _ Depth (inches): _ Depth (inches): _			ent? YesNo_X

Depth	Matrix		Redo	ox Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-3	7.5YR 5/3	100					Loamy/Clayey	
3-6	7.5YR 2.5/2	80	10YR 7/8	20			Loamy/Clayey	
6-16	7.5YR 3/2	80	10YR 7/8	20			Loamy/Clayey	
Type: C-C	oncentration, D=Dep	etion RM	-Reduced Matrix 1	MS-Mas	ked San	d Grains	<sup>2</sup> l ocation	n: PL=Pore Lining, M=Matrix.
Hydric Soil		Ottori, ravi		Wie-Wide	nou cun	a Oranio.		rs for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gle	eyed Mat	rix (S4)			st Prairie Redox (A16)
	pipedon (A2)		Sandy Re		(- )			Manganese Masses (F12)
Black His			Stripped N		6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa		,			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	` '	eral (F1)			er (Explain in Remarks)
2 cm Mu			Loamy Gle	•	, ,			
	Below Dark Surface	(A11)	Depleted I	•	. ,			
	ark Surface (A12)	,	Redox Da				<sup>3</sup> Indicato	rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted I		` '	)		and hydrology must be present,
	cky Peat or Peat (S3	)	Redox De		` '	,		ss disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Type: Depth (ir	nches):		<u> </u>				Hydric Soil Presen	t? Yes No_
Depth (ir	nches):int falls within a recla	imed strip	coal mine. Soils a	re assum	ned to no	ot be in th		t? Yes No_
Depth (ir	· ·	imed strip	coal mine. Soils a	ire assum	ned to no	ot be in th		t? Yes No_
Depth (ir	int falls within a recla	imed strip	coal mine. Soils a	ire assum	ned to no	ot be in th		t? Yes No_
Depth (ir Remarks: This data po	int falls within a recla	imed strip	coal mine. Soils a	ire assum	ned to no	ot be in th		t? Yes No _
Depth (in Remarks: This data po	int falls within a recla				ned to no	ot be in th	eir natural state.	rry Indicators (minimum of two requ
Depth (in Remarks: This data po	int falls within a recla			apply)			eir natural state.	
Depth (ir Remarks: This data po IYDROLO Wetland Hy Primary India Surface	int falls within a recla  OGY  drology Indicators: cators (minimum of o		ired; check all that	apply) iined Lea	ves (B9)		eir natural state.  Seconda X Surf	ry Indicators (minimum of two requ
Depth (ir Remarks: This data po IYDROLO Wetland Hy Primary India Surface	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2)		ired; check all that	apply) ained Lea auna (B1:	ves (B9) 3)		eir natural state.  Seconda X Surf Drai	ary Indicators (minimum of two requace Soil Cracks (B6)
Depth (ir Remarks: This data po IYDROLO Wetland Hy Primary India Surface High Wa Saturatio	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2)		ired; check all that Water-Sta Aquatic Fa	apply) nined Lea auna (B1: atic Plants	ves (B9) 3) s (B14)		eir natural state.  Seconda X Surf Drai Dry-	ary Indicators (minimum of two requ ace Soil Cracks (B6) nage Patterns (B10)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M	or (A3)		ired; check all that Water-Sta Aquatic Fa	apply) nined Lea auna (B1: atic Plants Sulfide (	ves (B9) 3) s (B14) Ddor (C1	)	eir natural state.  Seconda X Surf Drai Dry-	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Depth (ir Remarks: This data po IYDROLO  Wetland Hy  Primary India  Surface  High Wa  Saturatio  Water M  Sedimer	int falls within a recla  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	apply) nined Lea auna (B1: atic Plants Sulfide C Rhizosph	ves (B9) 3) s (B14) Odor (C1 eres on	) Living Ro	Seconda   X   Surf   Drai   Dry-   Cray   Ots (C3)   Satu	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rifish Burrows (C8)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep	int falls within a recla  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)		ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) nined Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron	) Living Ro (C4)	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Sature   Sturf   Sturf	ary Indicators (minimum of two requ ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (CS
Depth (ir Remarks: This data po  IYDROLO Wetland Hyder Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)		ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T	) Living Ro (C4)	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rifish Burrows (C8) aration Visible on Aerial Imagery (C9)
Depth (ir Remarks: This data po  IYDROLO Wetland Hye Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4)	ne is requi	ired; check all that water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc c Surface	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T	) Living Ro (C4)	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) aration Visible on Aerial Imagery (Csted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundation	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5)	ne is requi	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc c Surface Well Data	ves (B9) 3) s (B14) Ddor (C1 eres on ted Iron tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) aration Visible on Aerial Imagery (Csted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundation	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial In	ne is requi	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc c Surface Well Data	ves (B9) 3) s (B14) Ddor (C1 eres on ted Iron tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) aration Visible on Aerial Imagery (Csted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  IYDROLO Wetland Hyder Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely	drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) ot Deposits (B2) osits (B3) at or Crust (B4) osits (B5) on Visible on Aerial In r Vegetated Concave	ne is requi magery (B <sup>3</sup> Surface (I	ired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc c Surface Well Data	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) aration Visible on Aerial Imagery (Csted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  IYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely  Field Obser Surface Wat Water Table	drology Indicators: cators (minimum of orwater (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) on Visible on Aerial Investment (B4) vegetated Concave vations: er Present? Ye Present?	ne is requi magery (B Surface (I	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide ( Rhizosph of Reduc on Reduc c Surface Well Data plain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron tion in Ti (C7) a (D9) temarks)	) Living Ro (C4) illed Soils	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) aration Visible on Aerial Imagery (Csted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Water	drology Indicators: cators (minimum of orwater (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) on Visible on Aerial Investment (B4) vegetated Concave vations: er Present? Ye Present?	ne is requi magery (B Surface (I s	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence  Recent Iro  Thin Muck  7) Gauge or  B8) Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc c Surface Well Data plain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron tion in Ti (C7) a (D9) temarks) nches): _nches):	) Living Ro (C4) illed Soils	Seconda   X Surf   Drai   Dry-   Cray   Ots (C3)   Satu   Stur   (C6)   Geo	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C8) atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	int falls within a reclar  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Ir v Vegetated Concave vations: er Present? Ye Present? Ye resent? Ye resent? Ye	ne is requi	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduce Surface Well Data plain in R Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on ced Iron tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C8) atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  IYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Wat Water Table Saturation P (includes cap	int falls within a recla  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Ir vegetated Concave vations: er Present? Ye Present? Ye resent? Ye	ne is requi	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduce Surface Well Data plain in R Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on ced Iron tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C8) atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  IYDROLO Wetland Hyder Primary India Surface High Water M Sedimen Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	int falls within a reclar  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Ir v Vegetated Concave vations: er Present? Ye Present? Ye resent? Ye resent? Ye	ne is requi	ired; check all that  Water-Sta  Aquatic Fa  True Aqua  Hydrogen  Oxidized F  Presence  Recent Iro  Thin Muck  7)  Gauge or  B8)  Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduce Surface Well Data plain in R Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on ced Iron tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C8) atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  IYDROLO Wetland Hyder Primary India Surface High Water M Sedimen Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	int falls within a reclar  OGY  drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial Ir v Vegetated Concave vations: er Present? Ye Present? Ye resent? Ye resent? Ye	magery (B: Surface (I	ired; check all that  Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	apply) ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc c Surface Well Data plain in R  Depth (in Depth (in	ves (B9) 3) s (B14) Ddor (C1 eres on ced Iron tion in Ti (C7) a (D9) emarks) nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C8) atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

US Army Corps of Engineers

Midwest Region – Version 2.0

Project/Site: Fair Oaks Ranch	City/County:	Wagoner	Sampling Date: 6/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point: 2
Investigator(s): Andy Middick	Section, Towns	ship, Range: S4 T19N R15E	
Landform (hillside, terrace, etc.): hillside	Local	I relief (concave, convex, none):	Concave
Slope (%): 0-5 Lat: 36.15003	Long: <u>-95.72</u>	2122	Datum: NAD 83 State Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percel	nt slopes	NWI classi	fication: None
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes	X No (If no, exp	plain in Remarks.)
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed? Are "N	Normal Circumstances" present?	? Yes X No
Are Vegetation, Soil, or Hydrologynat	urally problematic? (If nee	eded, explain any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling po	oint locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sam	npled Area	
Hydric Soil Present? Yes No			No X
Wetland Hydrology Present? Yes X No	<u> </u>		
Remarks:			
This point falls in an area that is a reclaimed strip coal m	ine.		
NECETATION III de la ciontifia de manage et aleut			
VEGETATION – Use scientific names of plants		·	
		icator atus Dominance Test wo	rksheet:
1		Number of Dominant	
2.		Are OBL, FACW, or F	
3		Total Number of Dom	•
4		Across All Strata:	(B)
5	=Total Cover	Percent of Dominant	•
	=10lai Covei	Are OBL, FACW, or F	·AC: 100.0% (A/D)
1.		Prevalence Index wo	orksheet:
2.		Total % Cover of	f: Multiply by:
3.			0 x 1 = 10
4		'	0 x 2 = 0
5		'	5 x 3 = 15
	=Total Cover		$\begin{array}{cccc} 0 & x & 4 & = & 0 \\ 0 & x & 5 & = & 0 \end{array}$
1. Xanthium strumarium	5 Yes F		$\frac{0}{5}$ (A) $\frac{0}{25}$ (B)
2. Eleocharis obtusa		DBL Prevalence Index	<del></del> ```
3.			
4.		Hydrophytic Vegeta	tion Indicators:
5.			r Hydrophytic Vegetation
6		X 2 - Dominance Te	
7		3 - Prevalence In	
8	<del></del>		I Adaptations <sup>1</sup> (Provide supporting ks or on a separate sheet)
9. 10.			rophytic Vegetation <sup>1</sup> (Explain)
10	15 =Total Cover		soil and wetland hydrology must
Woody Vine Stratum (Plot size: 30 FT )			sturbed or problematic.
1		Hydrophytic	·
2.		Vegetation	
_	=Total Cover	Present? Yes	X No
Remarks: (Include photo numbers here or on a separate	e sheet.)		
General area bare due to livestock traffic			

Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 3/4	100					Loamy/Clayey	
4-10	10YR 5/3	90	10YR 7/8	10			Loamy/Clayey	
10-16	10YR 4/1	100					Loamy/Clayey	
1Type: C-C	oncentration, D=Dep	letion RM		MS-Mas	ked San	d Grains	2l ocation	n: PL=Pore Lining, M=Matrix.
Hydric Soil		Cuon, ruivi	-readoca Matrix, 1	vio-ivias	nea oan	a Oramo.		rs for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gle	ved Mat	rix (S4)			st Prairie Redox (A16)
	pipedon (A2)		Sandy Red		` ,			Manganese Masses (F12)
Black Hi			Stripped M		5)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa		,			Shallow Dark Surface (F22)
Stratified	Layers (A5)		Loamy Mu	cky Mine	eral (F1)			er (Explain in Remarks)
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	rix (F2)			
Depleted	d Below Dark Surface	(A11)	Depleted N	Matrix (F	3)			
Thick Da	ark Surface (A12)		Redox Da	rk Surfac	e (F6)		<sup>3</sup> Indicato	rs of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)	)	wetla	and hydrology must be present,
5 cm Mu	cky Peat or Peat (S3	,)	Redox Dep	pression	s (F8)		unle	ss disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (ir	nches):int falls within a recla	imed strip	coal mine. Soils a	re assum	ned to no	ot be in th	Hydric Soil Presen	t? Yes No_
Depth (in Remarks: This data po	int falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		t? Yes No _
Depth (in Remarks: This data po	int falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		t? Yes No_
Depth (in Remarks: This data po	int falls within a recla				ned to no	ot be in th	eir natural state.	
Depth (ir Remarks: This data po HYDROLO Wetland Hy Primary India	ogy drology Indicators: cators (minimum of o		ired; check all that a	apply)			eir natural state.	ary Indicators (minimum of two requi
Depth (in Remarks: This data po	OGY drology Indicators: cators (minimum of o		ired; check all that a	apply) ined Lea	ves (B9)		eir natural state.  Seconda X Surf.	ary Indicators (minimum of two requi ace Soil Cracks (B6)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2)		ired; check all that a Water-Stai Aquatic Fa	apply) ined Lea auna (B1	ves (B9) 3)		eir natural state.  Seconda X Surfi	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturation	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3)		ired; check all that a Water-Stal Aquatic Fa	apply) ined Lea auna (B1 atic Plant	ves (B9) 3) s (B14)		eir natural state.  Seconda X Surf. Drai. Dry-	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M	or (A3) arks (B1)		ired; check all that a Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 ttic Plants Sulfide (	ves (B9) 3) s (B14) Ddor (C1	)	eir natural state.  Seconda X Surfi Draii Dry-	ary Indicators (minimum of two requivace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
Depth (ir Remarks: This data po  HYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer	or (A3) arks (B1) arks (B2)		ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	apply) ined Lea auna (B1 titic Plant: Sulfide ( Rhizosph	ves (B9) 3) s (B14) Odor (C1 eres on	) Living Ro	Seconda   X   Surfi   Drai   Dry-   Cray   Saturn   Cray   Saturn   Cray   Saturn   Saturn	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) uration Visible on Aerial Imagery (CS
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep	drology Indicators: cators (minimum of of Mater (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)		ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence	apply) ined Lea auna (B1 atic Plant Sulfide ( Shizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron	) Living Ro (C4)	Seconda	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma	drology Indicators: cators (minimum of of Owater (A1) tter Table (A2) on (A3) arks (B1) on Deposits (B2) onsits (B3) at or Crust (B4)		ired; check all that a  Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence	apply) ined Lea auna (B1 stic Plants Sulfide ( Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron of	) Living Ro (C4)	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rish Burrows (C8) tration Visible on Aerial Imagery (CS) tted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  HYDROLC Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep	drology Indicators: cators (minimum of of Mater (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)	ne is requi	ired; check all that a Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7)	) Living Ro (C4)	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundation	drology Indicators: cators (minimum of of Water (A1) tter Table (A2) on (A3) arks (B1) at Deposits (B2) bosits (B3) at or Crust (B4) bosits (B5)	ne is requi	ired; check all that a Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V	apply) ined Lea auna (B1 tic Plant: Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Data	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rish Burrows (C8) tration Visible on Aerial Imagery (CS) tted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundation	drology Indicators: cators (minimum of of of the cators (Management of	ne is requi	ired; check all that a Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V	apply) ined Lea auna (B1 tic Plant: Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Data	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rish Burrows (C8) tration Visible on Aerial Imagery (CS) tted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatia X Sparsely	drology Indicators: cators (minimum of of of the cators (Minimum of of the cators (Management of	ne is requi magery (B'	ired; check all that a Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or NB8) Other (Exp	apply) ined Lea auna (B1 tic Plant: Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Data	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rish Burrows (C8) tration Visible on Aerial Imagery (CS) tted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatic X Sparsely Field Obser	drology Indicators: cators (minimum of	ne is requi magery (B' Surface (I	ired; check all that a Water-Star Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 7) Gauge or No X	apply) ined Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc surface Well Data	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron (C7) a (D9) emarks)	) Living Ro (C4) illed Soils	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rish Burrows (C8) tration Visible on Aerial Imagery (CS) tted or Stressed Plants (D1) morphic Position (D2)
Depth (ir Remarks: This data po  HYDROLC Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely Field Obser Surface Water	drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Yee	ne is requi magery (B' Surface (I s	ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized For Recent Iro Thin Muck (7) Gauge or No X No X	apply) ined Lea auna (B1 ttic Plant Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Data blain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron (C7) a (D9) temarks) nches):nches):	) Living Ro (C4) illed Soils	Seconda   X Surf.   Drai   Dry-   Cray   Satu   Stur   Stur   Stur   Cf6   Geo	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) tration Visible on Aerial Imagery (CS) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  HYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatia X Sparsely  Field Obser Surface Water Table	int falls within a reclar  OGY  drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial In v Vegetated Concave vations: er Present? Present? Ye resent? Ye	ne is requi magery (B' Surface (I s	ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized For Recent Iro Thin Muck (7) Gauge or No X No X	apply) ined Lea auna (B1 tic Plant: Sulfide C Rhizosph of Reduc in Reduc is Surface Well Dati Depth (ii Depth (iii	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron (C7) a (D9) temarks) nches):nches):	) Living Ro (C4) illed Soils	eir natural state.  Seconda X Surfi Drai Dry- Cray ots (C3) Satu Stun (C6) Geo FAC	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  HYDROLO  Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatio X Sparsely  Field Obser Surface Wat Water Table Saturation P (includes cap	int falls within a reclar  OGY  drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial In v Vegetated Concave vations: er Present? Present? Ye resent? Ye	magery (B' Surface (I s s	ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized Facent Iro Thin Muck 7) Gauge or No X No X No X	apply) ined Lea auna (B1 titic Plant: Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat: blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron ction in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatic X Sparsely Field Obser Surface Water Table Saturation P (includes cal	int falls within a reclaring falls with falls within a reclaring falls with falls within a reclaring within a reclaring within a reclaring within a reclaring within falls within fall	magery (B' Surface (I s s	ired; check all that a Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized Facent Iro Thin Muck 7) Gauge or No X No X No X	apply) ined Lea auna (B1 titic Plant: Sulfide ( Rhizosph of Reduc on Reduc Surface Well Dat: blain in R Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron ction in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Depth (ir Remarks: This data po  HYDROLO Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep X Algal Ma Iron Dep X Inundatia X Sparsely Field Obser Surface Water Table Saturation P (includes cal Describe Re	int falls within a reclaring falls with falls within a reclaring falls with falls within a reclaring within a reclaring within a reclaring within a reclaring within falls within fall	magery (B' Surface (I s  s  gauge, me	ired; check all that a  Water-Stai Aquatic Fa  True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp  No X No X No X No X  onitoring well, aeria	apply) ined Lea auna (B1 atic Plant: Sulfide ( Rhizosph of Reduc in Reduc is Surface Well Dati Dlain in R Depth (ii Depth (ii Depth (ii	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron ction in Ti (C7) a (D9) emarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Seconda	ary Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (CS atted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	er	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	3
Investigator(s): Andy Middick		Section, T	ownship, Ra	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): hillside		L	_ocal relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.14904		Long: -	95.72179		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 per	cent slopes			NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	or this time of	year?	Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly d	isturbed? A	re "Normal C	 Circumstances" present?	Yes X No	o
Are Vegetation, Soil, or Hydrology				plain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea		
	X		a Wetland?		No X	
Wetland Hydrology Present? Yes X No						
Remarks:		•				
This point falls in an area that is a reclaimed strip coa	l mine.					
VEGETATION – Use scientific names of pla						
<u>Tree Stratum</u> (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
1	70 22 2	<u> </u>		Number of Dominant		
2.				Are OBL, FACW, or F		1 (A)
3.				Total Number of Dom	inant Species	
4				Across All Strata:		1 (B)
5		=		Percent of Dominant S	•	(A /D)
Sapling/Shrub Stratum (Plot size: 15 FT	· ——=	Total Cover		Are OBL, FACW, or F	AC: 10	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )  1.	)			Prevalence Index wo	nrksheet	
2.				Total % Cover of		v bv:
3.				OBL species 80		80
4.				FACW species 0	x 2 =	0
5.				FAC species 0	x 3 =	0
	=	Total Cover		FACU species0		0
Herb Stratum (Plot size: 5 FT )		. ,		UPL species 0		0 (D)
1. Justicia americana	60	Yes	OBL	Column Totals: 80	` ′	80 (B)
Eleocharis obtusa     Carex lupulina	10	No No	OBL OBL	Prevalence Index :	= B/A =1.00	<u> </u>
·		INU	UDL	Hydrophytic Vegetat	rion Indicators:	
5			<del></del>		Hydrophytic Veget	ation
6.				X 2 - Dominance Te		a
7.				3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>	
8.					Adaptations <sup>1</sup> (Prov	
9.					s or on a separate	·
10					ophytic Vegetation <sup>1</sup>	` ' '
	80 =	Total Cover		<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 FT )	)			be present, unless dis	turbed or problema	itic.
1 2.				Hydrophytic		
		Total Cover		Vegetation Present? Yes	X No	
Remarks: (Include photo numbers here or on a separ		-10101 00101		100		
General area bare due to livestock traffic	rate sneet.)					

0-8 8-14			Redox	x Featur				
_	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
8-14	7.5YR 2.5/2	100					Loamy/Clayey	
	7.5YR 4/1	100					Loamy/Clayey	
14-16	7.5YR 5/6	100				·	Loamy/Clayey	
		lation DM	Dadward Matrix A		lead Care		21	DI Dava Linina M Matrix
ydric Soil Ir	ncentration, D=Dep	ellon, Kivi=	=Reduced Mairix, N	/IS=IVIAS	ked Sand	J Grains.		PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
Histosol (			Sandy Gle	teM hav	riv (S4)			Prairie Redox (A16)
	pedon (A2)		Sandy Rec		IIX (O4)			anganese Masses (F12)
Black Hist			Stripped M		3)			arent Material (F21)
	n Sulfide (A4)		Dark Surfa		-,			hallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	` '	eral (F1)			Explain in Remarks)
2 cm Muc			Loamy Gle					
	Below Dark Surface	(A11)	Depleted N	-				
	rk Surface (A12)	,	Redox Dar				<sup>3</sup> Indicators	of hydrophytic vegetation and
 Sandy Μι	ucky Mineral (S1)		Depleted D	ark Sur	face (F7)			d hydrology must be present,
5 cm Muc	cky Peat or Peat (S3	i)	Redox Dep	ression	s (F8)		unless	disturbed or problematic.
estrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						<b>Hydric Soil Present?</b>	Yes No
YDROLO	GY							
Vetland Hyd	Irology Indicators:							
rimary Indica	ators (minimum of o	ne is requir	red; check all that a	apply)			<u>Secondary</u>	Indicators (minimum of two requir
Curfo oo M	Vater (A1)		Water-Stai	ned Lea	ves (B9)		X Surface	e Soil Cracks (B6)
Surface v	er Table (A2)		Aquatic Fa	una (B1	3)			2 00.11 01.00.110 (2-0)
High Wate							Drainag	ge Patterns (B10)
High Wate			True Aqua		s (B14)		Drainao Dry-Se	ge Patterns (B10) ason Water Table (C2)
High Wate Saturation Water Ma	arks (B1)		True Aquat	Sulfide (	s (B14) Odor (C1)		Drainao Dry-Se Crayfis	ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
High Wate Saturation Water Ma Sediment	arks (B1) t Deposits (B2)		True Aquat Hydrogen S Oxidized R	Sulfide ( thizosph	s (B14) Odor (C1) eres on I	_iving Ro	Drainag Dry-Se Crayfis ots (C3) Saturat	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9)
High Water Saturation Water Ma Sediment Drift Depo	arks (B1) t Deposits (B2) osits (B3)		True Aquai Hydrogen S Oxidized R Presence o	Sulfide ( thizosph of Reduc	s (B14) Odor (C1) eres on l ced Iron (	_iving Ro (C4)	Draina@ Dry-Se Crayfis ots (C3) Saturat Stunted	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
High Wate Saturation Water Ma Sediment Drift Depo	arks (B1) t Deposits (B2) posits (B3) or Crust (B4)		True Aquat Hydrogen S Oxidized R Presence of Recent Iron	Sulfide ( thizosph of Reduc n Reduc	s (B14) Odor (C1) eres on l ced Iron ( tion in Ti	_iving Ro (C4)	Drainaç Dry-Se Crayfis ots (C3) Saturat Stuntec (C6) Geomo	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) cion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
High Wate Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo	arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5)	nagery (R7	True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	Sulfide ( thizosph of Reduc n Reduc Surface	s (B14) Odor (C1) eres on I ced Iron ( tion in Ti	_iving Ro (C4)	Drainaç Dry-Se Crayfis ots (C3) Saturat Stuntec (C6) Geomo	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9 d or Stressed Plants (D1)
High Water Saturation Water Ma Sediment Drift Depo K Algal Mat Iron Depo K Inundation	arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir	0 , (	True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V	Sulfide ( thizosph of Reduc n Reduc Surface Well Dat	s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9)	_iving Ro (C4)	Drainaç Dry-Se Crayfis ots (C3) Saturat Stuntec (C6) Geomo	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) cion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2)
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High Water Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo X Inundation X Sparsely Variace Water	arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave vations:	Surface (E	True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	Sulfide ( thizosphof Reduce on Reduce Surface Well Datalain in R	s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks)	Living Ro	Drainaç Dry-Se Crayfis ots (C3) Saturat Stuntec (C6) Geomo	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) cion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
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High Water Saturation Water Ma Sediment Drift Depo X Algal Mat Iron Depo X Inundation X Sparsely Vield Observ urface Water Vater Table Featuration Pre ncludes capi	arks (B1)  It Deposits (B2)  It Deposits (B3)  It or Crust (B4)  I	Surface (Essurface)	True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp  No X No X No X	Sulfide ( thizosph of Reduce n Reduce Surface Well Dat clain in R Depth (ii Depth (ii	s (B14) Odor (C1) eres on I ced Iron ( tion in Ti (C7) a (D9) emarks) enches): _nches): _	Living Ro (C4) Illed Soils  0 0 0	Drainag Dry-Se Crayfis ots (C3) Saturat Stuntec (C6) Geomo FAC-No Wetland Hydrology	ge Patterns (B10) ason Water Table (C2) h Burrows (C8) cion Visible on Aerial Imagery (C9 d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Fair Oaks Ranch	City/County	/: Wagoner	Sampling Date: 6/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point: 4
Investigator(s): Andy Middick	Section, Tov	vnship, Range: S4 T19N R15E	
Landform (hillside, terrace, etc.): pasture	Loc	cal relief (concave, convex, none):	Concave
Slope (%): 0-5 Lat: 36.14846	Long: <u>-95</u>	.71786	Datum: NAD 83 State Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percentage	ent slopes	NWI classit	fication: None
Are climatic / hydrologic conditions on the site typical for	this time of year?	es X No (If no, exp	plain in Remarks.)
Are Vegetation, Soil, or Hydrologysig	nificantly disturbed? Are	"Normal Circumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrologyna	turally problematic? (If r	needed, explain any answers in Re	marks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling	point locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No	X Is the S	ampled Area	
		Wetland? Yes	No X
Wetland Hydrology Present? Yes X No			
Remarks:			
This point falls in an area that is a reclaimed strip coal n	nine.		
NECETATION III and addition and a least	<u> </u>		
VEGETATION – Use scientific names of plant		- 30 - page - T	
		ndicator Status  Dominance Test wo	rksheet:
1		Number of Dominant	Species That
2.		Are OBL, FACW, or F	
3		Total Number of Dom	•
4		Across All Strata:	(B)
5		Percent of Dominant	•
Sapling/Shrub Stratum (Plot size: 15 FT )	=Total Cover	Are OBL, FACW, or F	FAC: <u>50.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )  1.		Prevalence Index wo	orksheet:
2.		Total % Cover of	
3.			$\overline{5}$ $x 1 = 5$
4.			) x 2 = 0
5.			) x 3 = 0
_	=Total Cover		0 x 4 = 40
Herb Stratum (Plot size: 5 FT )			x = 0
1. Cynodon dactylon			5 (A) 45 (B)
Eleocharis obtusa 3.	5 Yes	OBL Prevalence Index	= B/A = <u>3.00</u>
	<del></del>	Hydrophytic Vegeta	tion Indicators
			Hydrophytic Vegetation
6.		2 - Dominance Te	
7.		3 - Prevalence In	dex is ≤3.0 <sup>1</sup>
8.			Adaptations <sup>1</sup> (Provide supporting
9.			ks or on a separate sheet)
10		<del></del>   <del></del>	ophytic Vegetation <sup>1</sup> (Explain)
	15 =Total Cover		oil and wetland hydrology must
Woody Vine Stratum (Plot size: 30 FT )		be present, unless dis	sturbed or problematic.
1		Hydrophytic	
	=Total Cover	Vegetation Present? Yes	No X
Remarks: (Include photo numbers here or on a separat		110001111 100	<u> </u>
General area bare due to livestock traffic	e sneet.)		

Depth	Matrix		Redo	x Featur						
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-6	10YR 5/2	100					Loamy/Clayey			
6-14	10YR 4/3	100					Loamy/Clayey			
14-16	10YR 5/3	100					Loamy/Clayey			
								-		
	tration D Dan	lation DM	Deduced Metric I	4C M	lead Car	d Cusins	21 1:	DI Dave I	ining M Matri	
•	oncentration, D=Dep Indicators:	ellon, Rivi	=Reduced Mainx, i	/IS=IVIAS	keu San	u Grains.			ining, M=Matri ematic Hydric	
Histosol			Sandy Gle	nad Mat	riv (S4)			ast Prairie Red	-	JUIIS .
	pipedon (A2)		Sandy Red					n-Manganese I		
Black His			Stripped M					d Parent Mater		
	n Sulfide (A4)		Dark Surfa		5)				k Surface (F22	'\
	I Layers (A5)		Loamy Mu	` ,	aral (F1)			er (Explain in		.)
2 cm Mu	• , ,		Loamy Gle					lei (Explaiii III	Kemarks)	
	l Below Dark Surface	(//11)	Depleted N	-						
	rk Surface (A12)	; (A11)	Redox Dar				<sup>3</sup> Indicat	ore of hydroph	ytic vegetation	and
	lucky Mineral (S1)		Depleted D		` ,	`		-	must be pres	
	cky Peat or Peat (S3	۵	Redox Dep		` '	,			or problematic.	Citt,
	Layer (if observed):				- ()					
Type:	Layer (ii observeu).									
•	ochoc):						Hydric Soil Bross	nt?	Voc	No
Depth (ir	nches):int falls within a recla	imed strip	coal mine. Soils a	re assur	ned to no	ot be in th	Hydric Soil Prese	nt?	Yes	No
Depth (ir	<u> </u>	imed strip	o coal mine. Soils a	re assun	ned to no	ot be in th		nt?	Yes	No _
Depth (in	int falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		nt?	Yes	No
Depth (in Depth	int falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		nt?	Yes	No
Depth (ir Remarks: This data po	int falls within a recla				ned to no	ot be in th	eir natural state.		Yes	
Depth (ir emarks: his data po YDROLO Vetland Hydrimary India	int falls within a recla			apply)			eir natural state.		(minimum of tv	
Depth (ir  demarks: his data po  YDROLO  Vetland Hy  rimary India  Surface	oGY drology Indicators:		iired; check all that a	apply) ined Lea	ves (B9)		eir natural state.  Second X Su	ary Indicators	(minimum of to	
Depth (ir  demarks: his data po  YDROLO  Vetland Hy  rimary India  Surface	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2)		uired; check all that a	apply) ined Lea auna (B1	ives (B9) 3)		eir natural state.  Second X Su Dra	ary Indicators face Soil Crac	(minimum of to ks (B6) s (B10)	
Depth (ir  Depth (ir  Demarks:  his data po  YDROLO  Yetland Hyerimary India  Surface  High Wa  Saturation	oGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2)		uired; check all that a Water-Stai	apply) ined Lea auna (B1	aves (B9) 3) s (B14)		eir natural state.  Second X Sui Dra	ary Indicators face Soil Crac inage Patterns	(minimum of to ks (B6) s (B10) er Table (C2)	
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Primary India Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep X Inundation X Sparsely Surface Water Table Vater Table	drology Indicators: cators (minimum of of own (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Yee	ne is requ magery (B Surface (	wired; check all that a Water-Stai X Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck (67) Gauge or No X No X	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc surface Well Dat blain in F	aves (B9) 3) s (B14) Odor (C1 teres on ced Iron of the (C7) a (D9) Remarks) nches):nches):	) Living Ro (C4) illed Soils	Second   X Su	ary Indicators face Soil Crace inage Patterns -Season Watee yfish Burrows uration Visible nted or Stress omorphic Posi C-Neutral Test	(minimum of to ks (B6) s (B10) or Table (C2) (C8) on Aerial Imaged Plants (D1) tion (D2) (D5)	vo requi
Primary India Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep X Inundation X Sparsely Field Obser Surface Water Table Saturation P	drology Indicators: cators (minimum of of own (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Yee	ne is requ magery (B Surface (	wired; check all that a Water-Stai X Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck (67) Gauge or No X No X	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc n Reduc Surface Well Dat blain in F	aves (B9) 3) s (B14) Odor (C1 teres on ced Iron of the (C7) a (D9) Remarks) nches):nches):	) Living Ro (C4) illed Soils	Second   X Sur	ary Indicators face Soil Crace inage Patterns -Season Watee yfish Burrows uration Visible nted or Stress omorphic Posi C-Neutral Test	(minimum of to ks (B6) s (B10) or Table (C2) (C8) on Aerial Imaged Plants (D1) tion (D2) (D5)	vo requii
Pepth (ir Remarks: This data poor Perinary India Saturation Water Manager Mana	int falls within a reclar  INGY  drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Ye Present? Ye resent? Ye	magery (B Surface ( s s	wired; check all that a Water-Stai X Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence (Recent Iro Thin Muck G7) Gauge or (B8) Other (Exp No X No X No X	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	oves (B9) 3) s (B14) Ddor (C1 eres on ced Iron ction in Ti e (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Second X Sul Dra Dry Cra ots (C3) Sal Stu (C6) FA	ary Indicators face Soil Crace inage Patterns -Season Watee yfish Burrows uration Visible nted or Stress omorphic Posi C-Neutral Test	(minimum of to ks (B6) s (B10) or Table (C2) (C8) on Aerial Imaged Plants (D1) tion (D2) (D5)	vo requii
Depth (ir emarks: his data po  YDROLO  Yetland Hydrimary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep X Inundatio X Sparsely ield Obser urface Wat Vater Table aturation P ncludes cap	int falls within a reclar  INGY  drology Indicators: cators (minimum of	magery (B Surface ( s s	wired; check all that a Water-Stai X Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence (Recent Iro Thin Muck G7) Gauge or (B8) Other (Exp No X No X No X	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	oves (B9) 3) s (B14) Ddor (C1 eres on ced Iron ction in Ti e (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Second X Sul Dra Dry Cra ots (C3) Sal Stu (C6) FA	ary Indicators face Soil Crace inage Patterns -Season Watee yfish Burrows uration Visible nted or Stress omorphic Posi C-Neutral Test	(minimum of to ks (B6) s (B10) or Table (C2) (C8) on Aerial Imaged Plants (D1) tion (D2) (D5)	vo requii
Depth (ir emarks: his data po    YDROLO   /etland Hydrimary India   Surface   High Wa   Saturatic   Water M   Sedimer   Drift Dep   Algal Ma   Iron Dep   Inundatic   X Sparsely   ield Obser   urface Wat   /ater Table   aturation P   ncludes cap   escribe Re    emarks:	int falls within a reclar  INGY  drology Indicators: cators (minimum of	magery (B Surface ( s  s  gauge, m	wired; check all that a Water-Stai X Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence (Recent Iro Thin Muck G7) Gauge or (B8) Other (Exp No X No X No X	apply) ined Lea auna (B1 titic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	oves (B9) 3) s (B14) Ddor (C1 eres on ced Iron ction in Ti e (C7) a (D9) Remarks) nches): _ nches): _ nches): _	) Living Ro (C4) illed Soils 0 0	Second X Sul Dra Dry Cra ots (C3) Sal Stu (C6) FA	ary Indicators face Soil Crace inage Patterns -Season Watee yfish Burrows uration Visible nted or Stress omorphic Posi C-Neutral Test	(minimum of to ks (B6) s (B10) or Table (C2) (C8) on Aerial Imaged Plants (D1) tion (D2) (D5)	vo requi

Project/Site: Fair Oaks Ranch		City/Coun	nty: Wagone	r	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	5
Investigator(s): Andy Middick		Section, To	ownship, Rar	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): pasture		L	ocal relief (co	oncave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.14894		Long: <u>-</u> 9	95.71648		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 per	cent slopes			NWI classif	cation: None	
Are climatic / hydrologic conditions on the site typical fo	r this time of	year?	Yes X	No (If no, exp	lain in Remarks.)	<del>_</del>
Are Vegetation, Soil, or Hydrologys	ignificantly di	sturbed? A	re "Normal C	ircumstances" present?	Yes X No	D
Are Vegetation, Soil, or Hydrologyn	aturally probl	ematic? (If	f needed, exp	olain any answers in Rei	marks.)	_
SUMMARY OF FINDINGS – Attach site ma	p showing	g samplin	g point lo	cations, transects,	important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled Are	ea		
Hydric Soil Present? Yes No	X		a Wetland?		No X	
Wetland Hydrology Present? Yes X No						
Remarks:						
This point falls in an area that is a reclaimed strip coal	mine.					
VEGETATION – Use scientific names of plar	nts.					
(5)	Absolute	Dominant	Indicator	Description of Tool was	1 1	
<u>Tree Stratum</u> (Plot size: <u>30 ft</u> ) 1.	% Cover	Species?	Status	Dominance Test wor		
2.				Number of Dominant S Are OBL, FACW, or F.	•	2 (A)
3.				Total Number of Domi		. ,
4.				Across All Strata:		2 (B)
5.				Percent of Dominant S	Species That	
	=	Total Cover		Are OBL, FACW, or F	AC: <u>10</u>	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )			-	Danielana Indana		
1				Prevalence Index wo		, h.,,
2. 3.				Total % Cover of OBL species 50		у by: 50
4.				FACW species 0		0
5.				FAC species 0		0
	=	Total Cover		FACU species 0		0
Herb Stratum (Plot size: 5 FT )				UPL species 0	x 5 =	0
Justicia americana	40	Yes	OBL	Column Totals: 50		50 (B)
2. Eleocharis obtusa	10	Yes	OBL	Prevalence Index =	= B/A = <u>1.00</u>	)
3			<b> </b>	The state of the state of		
4				Hydrophytic Vegetat		-tion
5 6.				X 2 - Dominance Te	Hydrophytic Veget	ation
				3 - Prevalence Inc		
7. 8.					Adaptations <sup>1</sup> (Prov	ide supporting
9.					s or on a separate	
10				Problematic Hydro	ophytic Vegetation <sup>1</sup>	(Explain)
	50 =	Total Cover		<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis	turbed or problema	itic.
1.				Hydrophytic		
2		Tatal Cause		Vegetation	V N-	
		Total Cover		Present? Yes_	No	_
Remarks: (Include photo numbers here or on a separa General area bare due to livestock traffic	ate sheet.)					
Solicial area pare due to investoric traine						

		to the dep				ator or co	onfirm the absence o	f indicators.)
Depth	Matrix			x Featur		12	<b>-</b> .	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-5	7.5YR 3/2	100					Loamy/Clayey	
5-10	10YR 2/2	100	_				Loamy/Clayey	
10-16	10YR 6/1	100					Loamy/Clayey	
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, N	/IS=Mas	ked San	d Grains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gle	yed Mat	trix (S4)		Coast	Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Red	dox (S5)			Iron-M	langanese Masses (F12)
Black Hi	stic (A3)		Stripped M	latrix (S	6)		Red P	arent Material (F21)
Hydroge	en Sulfide (A4)		Dark Surfa	ce (S7)			Very S	Shallow Dark Surface (F22)
Stratified	d Layers (A5)		Loamy Mu	cky Min	eral (F1)		Other	(Explain in Remarks)
2 cm Mu	ıck (A10)		Loamy Gle	yed Ma	trix (F2)			
Depleted	d Below Dark Surface	e (A11)	Depleted N					
	ark Surface (A12)		Redox Dar		` '			of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted D			)		nd hydrology must be present,
5 cm Mu	icky Peat or Peat (S3	3)	Redox Dep	oression	ıs (F8)		unless	disturbed or problematic.
	Layer (if observed):							
Type:								
Depth (ir	nches):						Hydric Soil Present?	Yes No X
Remarks:								
This data po	int falls within a recla	imed strip	coal mine. Soils ar	e assur	ned to no	t be in th	eir natural state.	
HYDROLO	OGY							
	drology Indicators:							
_	cators (minimum of o	ne is requir	red; check all that a	apply)			Secondary	/ Indicators (minimum of two required)
X Surface	•	•	Water-Stai		aves (B9)			ce Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	una (B1	3)		 Draina	age Patterns (B10)
Saturation	on (A3)		True Aqua					eason Water Table (C2)
Water M	larks (B1)		Hydrogen :	Sulfide (	Odor (C1	)	Crayfis	sh Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized R	Rhizosph	neres on	Living Ro	ots (C3) Satura	ation Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)		Presence of	of Redu	ced Iron (	(C4)	Stunte	ed or Stressed Plants (D1)
X Algal Ma	at or Crust (B4)		Recent Iron	n Reduc	ction in Ti	lled Soils	(C6) Geom	orphic Position (D2)
	oosits (B5)		Thin Muck	Surface	e (C7)		FAC-N	Neutral Test (D5)
X Inundation	on Visible on Aerial II	magery (B7	')Gauge or \	Nell Dat	ta (D9)			
Sparsely	/ Vegetated Concave	Surface (E	38)Other (Exp	lain in F	Remarks)			
Field Obser								
Surface Wat		s_X_			nches):	3		
Water Table		s			nches):	0		
Saturation P		s	No X	Depth (i	nches):	0	Wetland Hydrology	y Present? Yes X No
,	pillary fringe)		unitania e	ا ما د		_ ta	inna) if a collect t	
Describe Re	corded Data (stream	gauge, mo	onitoring well, aeria	ı pnotos	, previou	s inspect	ions), if available:	
Remarks:								
Mornalks.								

Project/Site: Fair Oaks Ranch	City/County: Wagone	ər	Sampling Date:	6/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	6
Investigator(s): Andy Middick	Section, Township, Rai	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): pasture	Local relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.15110	Long: -95.71693		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percent slope	es	NWI classif	fication: None	
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes X	No (If no, exp	plain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantl	ly disturbed? Are "Normal C	Circumstances" present?	Yes X No	) <u>_</u>
Are Vegetation, Soil, or Hydrologynaturally p		xplain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site map show	ving sampling point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Ar	roa	-	
Hydric Soil Present? Yes No X	within a Wetland?		No X	
Wetland Hydrology Present? Yes X No No				
Remarks:				
This point falls in an area that is a reclaimed strip coal mine.				
VEGETATION – Use scientific names of plants.				
Absolute				
Tree Stratum (Plot size: 30 ft ) % Cove	er Species? Status	Dominance Test wor	rksheet:	
1		Number of Dominant Are OBL, FACW, or F	•	1 (A)
2. 3.			-	1(A)
4.		Total Number of Dom Across All Strata:	•	1 (B)
5.		Percent of Dominant S	Species That	` ` `
	=Total Cover	Are OBL, FACW, or F	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )				
1		Prevalence Index wo		
2		Total % Cover of		
3		OBL species 40 FACW species 0		40 0
5.		FAC species 0		0
<u> </u>	=Total Cover	FACU species 0		0
Herb Stratum (Plot size: 5 FT )				0
1. Justicia americana 40	Yes OBL	Column Totals: 40		40 (B)
2.		Prevalence Index :	= B/A = 1.00	
3				
4		Hydrophytic Vegetat		-
5			r Hydrophytic Vegeta	ation
6		X 2 - Dominance Te		
7			dex is ≤3.0 I Adaptations¹ (Provi	ide sunnartina
			ks or on a separate s	
10.			rophytic Vegetation <sup>1</sup>	,
40	=Total Cover	<sup>1</sup> Indicators of hydric se		` ' '
Woody Vine Stratum (Plot size: 30 FT )	_	be present, unless dis		
1		Hydrophytic		
2		Vegetation		
	=Total Cover	Present? Yes	X No	
Remarks: (Include photo numbers here or on a separate sheet. General area bare due to livestock traffic	.)			

Profile Desc	ription: (Describe	o the depti	n needed to doc	ument t	he indica	tor or o	confirm the	absence of in	dicators.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Tex	ture	Remarks	
0-4	10YR 5/6	100					Loamy/	/Clayey		
4-12	10YR 4/2	100					Loamy/	/Clayey		
12-16	10YR 6/4	100					Loamy/	/Clayey		
										_
1T C. C.	D. Davi		Dadwaad Matrix B		Liad Can			21ti DI	Dana Lining M. Ma	Aut.
	oncentration, D=Depl	etion, Rivi=i	Reduced Matrix, i	vi5=ivias	ked San	Grains	5.		.=Pore Lining, M=Ma r Problematic Hydr	
Hydric Soil			Sandy Cla	vad Mat	riv (C4)					ic Solis":
Histosol	ipedon (A2)		Sandy Gle Sandy Red						airie Redox (A16) ganese Masses (F12	<b>)</b> \
Black His			Stripped M						ent Material (F21)	-)
	n Sulfide (A4)		Dark Surfa	•	5)				llow Dark Surface (F	22)
	Layers (A5)		Loamy Mu		eral (F1)				plain in Remarks)	<i></i>
2 cm Mu			Loamy Gle	-					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Below Dark Surface	(A11)	Depleted N	-						
	rk Surface (A12)	,	Redox Dai					<sup>3</sup> Indicators of	hydrophytic vegetati	on and
Sandy M	ucky Mineral (S1)		Depleted [	Dark Sur	face (F7)				ydrology must be pro	
5 cm Mu	cky Peat or Peat (S3	)	Redox De	oression	s (F8)			unless dis	sturbed or problemat	ic.
Restrictive I	_ayer (if observed):		<u> </u>							
Type:	,									
Depth (in	nches):		_				Hydric S	oil Present?	Yes	No X
Remarks:										
	int falls within a recla	imed strip c	oal mine. Soils a	re assun	ned to no	t be in t	heir natural	state.		
HYDROLO	GY									
Wetland Hyd	drology Indicators:									
Primary India	cators (minimum of o	ne is require	ed; check all that a	apply)				Secondary Inc	dicators (minimum of	two required)
	Water (A1)		Water-Sta		, ,				Soil Cracks (B6)	
	ter Table (A2)		X Aquatic Fa						Patterns (B10)	
Saturation	` ,		True Aqua						on Water Table (C2)	
	arks (B1)		Hydrogen		•		coto (C2)		Burrows (C8)	2000 (CO)
	t Deposits (B2) osits (B3)		Oxidized F Presence			_	00ts (C3)		n Visible on Aerial Im or Stressed Plants (D	
	t or Crust (B4)		Recent Iro			,	s (C6)		hic Position (D2)	1)
	osits (B5)		Thin Muck			1100 0011	3 (00)		tral Test (D5)	
	on Visible on Aerial Ir	nagery (B7)			` '					
	Vegetated Concave	<b>3</b> , ,	<u> </u>		` '					
Field Observ	vations:									
Surface Water		S	No X	Depth (i	nches):	0				
Water Table	Present? Yes	<u></u>		Depth (i	· -	0				
Saturation P		s		Depth (i	_	0	Wetlan	d Hydrology P	resent? Yes X	No
(includes cap	oillary fringe)				_	J				_
Describe Re	corded Data (stream	gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	ctions), if av	ailable:		
Remarks:										

Project/Site: Fair Oaks Ranch	City/County: Wagone	r	Sampling Date: 6	5/17/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	7
Investigator(s): Andy Middick	Section, Township, Rai	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): pasture	Local relief (c	oncave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.15157	Long: <u>-95.71725</u>		Datum: NAD 83 State Pla	ane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 percent s	slopes	NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Normal C	ircumstances" present?	Yes X No_	
Are Vegetation, Soil, or Hydrologynatura	ally problematic? (If needed, ex	olain any answers in Re	marks.)	_
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling point lo	cations, transects	, important featu	res, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Ar	ea		
Hydric Soil Present? Yes No X			No X	
Wetland Hydrology Present? Yes X No				
Remarks:				
This point falls in an area that is a reclaimed strip coal mine				
NECETATION   Here a significant property of plants				
<b>VEGETATION</b> – Use scientific names of plants.	solute Dominant Indicator			
	Cover Species? Status	Dominance Test wor	ksheet:	
1.		Number of Dominant		
2		Are OBL, FACW, or F	AC: <u>1</u>	(A)
3		Total Number of Dom		(5)
4	— — —	Across All Strata:	1	(B)
5	=Total Cover	Percent of Dominant S Are OBL, FACW, or F	•	)% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )		7110 002,		(, , _ ,
1		Prevalence Index wo	orksheet:	
2.		Total % Cover of	: Multiply by	<u>/:</u>
3		OBL species 25		
4		FACW species 0		
5	=Total Cover	FAC species 0		<u> </u>
Herb Stratum (Plot size: 5 FT )	= 10(a) 00/61	UPL species 0		<del></del>
	25 Yes OBL	Column Totals: 25		(B)
2.		Prevalence Index :	` ′	`
3.				
4.		Hydrophytic Vegetat		_
5			Hydrophytic Vegetation	on
6		X 2 - Dominance Te		
7. 8.	— — —	3 - Prevalence Inc	dex is ≤3.0° Adaptations¹ (Provide	eupporting
	— — —		s or on a separate sh	
10.			ophytic Vegetation <sup>1</sup> (E	
	25 =Total Cover	<sup>1</sup> Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 FT )		be present, unless dis		
1		Hydrophytic		
2		Vegetation		
	=Total Cover	Present? Yes	No	
Remarks: (Include photo numbers here or on a separate sl General area bare due to livestock traffic	neet.)			
General area bare due to livestock trainc				

SOIL Sampling Point: \_\_\_\_\_7

Depth	Matrix		R	ledox Featur						
(inches)	Color (moist)	%	Color (moist	:) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-8	10YR 5/4	100					Loamy/Clayey			
8-16	10YR 7/8	100					Loamy/Clayey			
		. ——						_		
								_		
1- 00					. —		2,			
	oncentration, D=Dep	netion, Rivi	=Reduced Mati	ix, MS=Mas	sked San	d Grains.		on: PL=Pore Li		
Hydric Soil I Histosol			Sandy	Gleyed Mat	triv (Q1)			ast Prairie Red	-	3011S .
	ipedon (A2)			Redox (S5)				n-Manganese M		
Black His				ed Matrix (S				d Parent Materi		
	n Sulfide (A4)			Surface (S7)	0)			y Shallow Dark		)
	Layers (A5)			/ Mucky Min	eral (F1)			ner (Explain in F		,
2 cm Mu				/ Gleyed Ma	, ,			ioi (Expiaiii iii i	tomarkoj	
	l Below Dark Surfac	e (A11)		ted Matrix (F						
	rk Surface (A12)	- ()		Dark Surfac	•		<sup>3</sup> Indicat	ors of hydrophy	tic vegetation	and
Sandy M	ucky Mineral (S1)		 Deplet	ted Dark Sur	face (F7	)		tland hydrology	-	
	cky Peat or Peat (S	3)	Redox	Depression	s (F8)	,		ess disturbed o		
Restrictive I	_ayer (if observed)	:								
_	, ,									
Type:										
Depth (in	nches):		<u> </u>				Hydric Soil Prese	nt?	Yes	No _>
Depth (in	int falls within a recl	aimed strip	coal mine. Soi	ils are assur	med to no	ot be in th		nt?	Yes	No
Depth (in	·	aimed strip	coal mine. Soi	ils are assur	med to no	ot be in th		nt?	Yes	No_>
Depth (in	int falls within a recl	aimed strip	coal mine. Soi	ils are assur	med to no	ot be in th		nt?	Yes	No _>
Depth (in Remarks: This data poi	int falls within a recl		coal mine. Soi	ils are assur	med to no	ot be in th		nt?	Yes	No No
Depth (in Remarks: This data poi	int falls within a recl	· · · · · · · · · · · · · · · · · · ·			ned to no	ot be in th	eir natural state.	nt?		
Depth (in Remarks: This data poi	GY drology Indicators eators (minimum of	· · · · · · · · · · · · · · · · · · ·	ired; check all t				eir natural state.		minimum of tv	
Depth (in Remarks: This data point of the Primary Indicate National Pr	GY drology Indicators eators (minimum of Water (A1) ter Table (A2)	· · · · · · · · · · · · · · · · · · ·	iired; check all t Water- Aquati	hat apply) -Stained Lea c Fauna (B1	aves (B9)		eir natural state.  Second Su Dra	lary Indicators ( face Soil Crack iinage Patterns	(minimum of two (B6)	
Depth (in Remarks: This data point of the Primary Indicate National Pr	GY drology Indicators eators (minimum of eators (A1) ter Table (A2) on (A3)	· · · · · · · · · · · · · · · · · · ·	iired; check all t Water- Aquati True A	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant	aves (B9) 3) ts (B14)	)	eir natural state.  Second Su Dra	lary Indicators ( face Soil Crack sinage Patterns r-Season Water	(minimum of two (B6) (B10) (Table (C2)	
Depth (in Remarks: This data point of the Primary Indicated Office of the Primary Indicated of the Primary Indicated of t	GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	· · · · · · · · · · · · · · · · · · ·	iired; check all t Water Aquati True A	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide (	aves (B9) 3) ts (B14) Odor (C1	)	eir natural state.  Second Su Dra Dra Cra	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows (	(minimum of two sets (B6) (B10) (B10) (C2) (C8)	vo require
Depth (in Remarks: This data poi Wetland Hyder Mary Indicate Saturation Water Mary Sedimen	GY drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	· · · · · · · · · · · · · · · · · · ·	iired; check all t — Water- Aquati — True A — Hydroq — Oxidiz	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide (	aves (B9) 13) ts (B14) Odor (C1 neres on	) Living Ro	eir natural state.  Second Su Dra Dra Cra oots (C3) Sa	lary Indicators ( face Soil Crack ninage Patterns r-Season Water nyfish Burrows ( curation Visible	(minimum of two (minimum of two (minimum)) (ss (B6) (B10) (r Table (C2) (C8) on Aerial Imag	vo require
Depth (in Remarks: This data point of the po	drology Indicators eators (minimum of owner (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	· · · · · · · · · · · · · · · · · · ·	uired; check all t Water- Aquati True A Hydrog Oxidiz Preser	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Redu	aves (B9) (3) ts (B14) Odor (C1 neres on ced Iron	) Living Ro (C4)	eir natural state.  Second Su Dra Dra Cra cots (C3) Sa Stu	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse	(minimum of two (ss (B6)) (B10) Table (C2) (C8) on Aerial Imaged Plants (D1)	vo require
Depth (in Remarks: This data point of the po	drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	· · · · · · · · · · · · · · · · · · ·	iired; check all t Water- Aquati True A Hydrog Oxidiz Preser Recen	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Redu it Iron Reduc	aves (B9) 13) ts (B14) Odor (C1 neres on ced Iron ction in T	) Living Ro (C4)	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse omorphic Positi	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo require
Depth (in Remarks: This data point of the po	drology Indicators cators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	: one is requ	nired; check all t Water- Aquati True A Hydro Oxidiz Preser Recen Thin M	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduct t Iron Reduct	aves (B9) 3) ts (B14) Odor (C1 neres on ced Iron ction in T e (C7)	) Living Ro (C4)	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo require
Depth (in Remarks: This data point of the po	GY drology Indicators eators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial	: one is requ Imagery (B	ired; check all t  Water- Aquati  True A  Hydrog Oxidiz  Preser  Recen  Thin M	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduc it Iron Reduc	aves (B9) 3) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9)	) Living Ro (C4) illed Soils	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse omorphic Positi	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo require
Depth (in Remarks: This data point of the po	drology Indicators eators (minimum of awater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav	: one is requ Imagery (B	ired; check all t  Water- Aquati  True A  Hydrog Oxidiz  Preser  Recen  Thin M	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduct t Iron Reduct	aves (B9) 3) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9)	) Living Ro (C4) illed Soils	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse omorphic Positi	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo require
Depth (in Remarks: This data point of the po	drology Indicators cators (minimum of a Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concavivations:	: one is requ Imagery (B e Surface (	wired; check all t  Water- Aquati  True A  Hydrog Oxidiz  Preser  Recen  Thin M  (7) Gauge  (88) Other	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduct I Iron Reduct fuck Surface e or Well Dat (Explain in F	aves (B9) (3) ts (B14) Odor (C1 neres on ced Iron ction in Tie (C7) ta (D9) Remarks)	) Living Ro (C4) illed Soils	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse omorphic Positi	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo requir
Depth (in Remarks: This data point of the po	drology Indicators cators (minimum of avater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concavivations: er Present?	one is requ Imagery (B e Surface (	ired; check all t  Water- Aquati True A  Hydrog Oxidiz Preser Recen Thin M (B8) Other	hat apply) -Stained Leader Fauna (B1) Aquatic Plant gen Sulfide (B1) Ged Rhizosphoce of Reduct Iron Reduct Iron Reduct Surface or Well Date (Explain in Face)	aves (B9) 3) ts (B14) Odor (C1 neres on ced Iron ction in T e (C7) ta (D9) Remarks)	) Living Ro (C4) illed Soils	Second   Su	lary Indicators ( face Soil Crack inage Patterns r-Season Water ayfish Burrows ( curation Visible inted or Stresse omorphic Positi	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo requir
Depth (in Remarks: This data point of the po	GY drology Indicators cators (minimum of all water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) on Visible on Aerial Vegetated Concavivations: er Present? Ye	Imagery (Be Surface (	ired; check all t  Water- Aquati True A  Hydrog Oxidiz Preser Recen Thin M  Gauge (B8) Other	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduct Iron Reduct Iron Reduct Guck Surface e or Well Dat (Explain in F	aves (B9) 3) bs (B14) Odor (C1) neres on ced Iron ction in Tie (C7) ba (D9) Remarks) inches):	) Living Ro (C4) illed Soils	eir natural state.  Second Su Dra Dra Cra ots (C3) Sa Stu CC6) Ge FA	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2) (D5)	vo requir
Depth (in Remarks: This data point of the po	int falls within a reclaration of the falls within a reclaration of the falls within a reclaration of the falls within a falls with the fall of the fa	one is requ Imagery (B e Surface (	ired; check all t  Water- Aquati True A  Hydrog Oxidiz Preser Recen Thin M (B8) Other	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduct Iron Reduct Iron Reduct Guck Surface e or Well Dat (Explain in F	aves (B9) 3) ts (B14) Odor (C1 neres on ced Iron ction in T e (C7) ta (D9) Remarks)	) Living Ro (C4) illed Soils	Second   Su	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (s) (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2)	vo requir
Depth (in Remarks: This data point of the po	int falls within a reclaration of the falls within a reclaration of the falls within a reclaration of the falls within a falls within a fall w	Imagery (Be Surface (	ired; check all t  Water- Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other  No X No X	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduc it Iron Reduc fuck Surface e or Well Dat (Explain in F	aves (B9) 13) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9) Remarks) inches): inches):	) Living Ro (C4) illed Soils	eir natural state.  Second Su Dra Dry Cra ots (C3) Sa Stu Ge FA  Wetland Hydrol	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2) (D5)	vo requir
Depth (in Remarks: This data point of the po	int falls within a reclaration of the falls within a reclaration of the falls within a reclaration of the falls within a falls with the fall of the fa	Imagery (Be Surface (	ired; check all t  Water- Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other  No X No X	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduc it Iron Reduc fuck Surface e or Well Dat (Explain in F	aves (B9) 13) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9) Remarks) inches): inches):	) Living Ro (C4) illed Soils	eir natural state.  Second Su Dra Dry Cra ots (C3) Sa Stu Ge FA  Wetland Hydrol	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2) (D5)	vo requir
Depth (in Remarks: This data point of the po	int falls within a reclaration of the falls within a reclaration of the falls within a reclaration of the falls within a falls within a fall w	Imagery (Be Surface (	ired; check all t  Water- Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other  No X No X	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduc it Iron Reduc fuck Surface e or Well Dat (Explain in F	aves (B9) 13) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9) Remarks) inches): inches):	) Living Ro (C4) illed Soils	eir natural state.  Second Su Dra Dry Cra ots (C3) Sa Stu Ge FA  Wetland Hydrol	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2) (D5)	vo requir
Depth (in Remarks: This data point of the po	int falls within a reclaration of the falls within a reclaration of the falls within a reclaration of the falls within a falls within a fall w	Imagery (Be Surface (	ired; check all t  Water- Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other  No X No X	hat apply) -Stained Lea ic Fauna (B1 Aquatic Plant gen Sulfide ( ed Rhizosph nce of Reduc it Iron Reduc fuck Surface e or Well Dat (Explain in F	aves (B9) 13) ts (B14) Odor (C1 neres on ced Iron ction in Ti e (C7) ta (D9) Remarks) inches): inches):	) Living Ro (C4) illed Soils	eir natural state.  Second Su Dra Dry Cra ots (C3) Sa Stu Ge FA  Wetland Hydrol	lary Indicators ( face Soil Crack ainage Patterns r-Season Water ayfish Burrows ( curation Visible anted or Stresse omorphic Positi C-Neutral Test	(minimum of two (B6) (B10) r Table (C2) (C8) on Aerial Imaged Plants (D1) ion (D2) (D5)	vo requir

Project/Site: Fair Oaks Ranch		City/Cour	nty: Wagone	r	Sampling Date:	6/19/2020
Applicant/Owner: Fair Oaks Ranch				State: OK	Sampling Point:	8
Investigator(s): Andy Middick		Section, To	ownship, Rar	nge: S4 T19N R15E		
Landform (hillside, terrace, etc.): pasture		L	_ocal relief (co	oncave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.15275		Long: <u>-</u> 9	95.712272		Datum: NAD 83 State	Plane OK North
Soil Map Unit Name: Foyil and Talala soils, 0 to 12 perc	cent slopes			NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	r this time of	year?	Yes X	No (If no, exp	olain in Remarks.)	<del></del>
Are Vegetation, Soil, or Hydrologysi	ignificantly di	sturbed? A	re "Normal C	ircumstances" present?	Yes X No	) <u> </u>
Are Vegetation, Soil, or Hydrologyn	aturally probl	ematic? (I	f needed, exp	olain any answers in Re	marks.)	_
SUMMARY OF FINDINGS – Attach site ma	p showing	g samplin	g point lo	cations, transects	, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes X No		Is the	Sampled Are	ea		
	X		n a Wetland?		No X	
Wetland Hydrology Present? Yes X No						
Remarks:						
This point falls in an area that is a reclaimed strip coal	mine.					
VECTATION III and a second control of the se	•-					
VEGETATION – Use scientific names of plan		Deminant	la disotor			
<u>Tree Stratum</u> (Plot size: 30 ft )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
1				Number of Dominant		
2.				Are OBL, FACW, or F		2 (A)
3				Total Number of Dom	inant Species	
4				Across All Strata:		2 (B)
5		Total Cover		Percent of Dominant S	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )	=	Total Cover		Are OBL, FACW, or F	AC	0.0% (A/D)
1.				Prevalence Index wo	orksheet:	
2.				Total % Cover of	: Multiply	b <u>y:</u>
3.				OBL species 3	5 x 1 =	35
4				FACW species 0		0
5				FAC species 0		0
Herb Stratum (Plot size: 5 FT )	=	Total Cover		FACU species 0 UPL species 0		0
1. Carex lupulina	10	Yes	OBL	Column Totals: 3		35 (B)
Eleocharis obtusa	25	Yes	OBL	Prevalence Index :	` ′	``
3.						
4.				Hydrophytic Vegetat	ion Indicators:	
5.				1 - Rapid Test for	Hydrophytic Veget	ation
6				X 2 - Dominance Te		
7.				3 - Prevalence Inc		
8.					Adaptations <sup>1</sup> (Prov ss or on a separate	
9. 10.					ophytic Vegetation <sup>1</sup>	·
10	35 =	Total Cover		<sup>1</sup> Indicators of hydric se	-	
Woody Vine Stratum (Plot size: 30 FT )				be present, unless dis		
1.				Hydrophytic	•	
2.				Vegetation		
	=	Total Cover		Present? Yes	X No	_
Remarks: (Include photo numbers here or on a separa General area bare due to livestock traffic	ate sheet.)					

Profile Desc	cription: (Describe	o the depth	needed to doc	ument t	he indica	tor or o	confirm the	absence of i	ndicators.)		
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ture	Rer	marks	
0-7	2.5YR 3/1	100					Loamy/	Clayey			
7-16	2.5Y 4/1	100					Loamy/	Clayey			
			_								
							-				
		<del></del>					-				
1	- D. D. D.	-Car DM F	Name and Manager A	10. 14				21 13 15	N. Dana Linian I	A NA-1-1-	
	oncentration, D=Depl	etion, RIVI=R	reduced Matrix, i	/IS=IVIAS	kea Sand	Grains	S		L=Pore Lining, I or Problematic		
Hydric Soil			Sandy Cla	vad Mat	riv (C4)					-	olis":
Histosol	pipedon (A2)		Sandy Gle Sandy Red						rairie Redox (A1 nganese Masses		
Black Hi			Stripped M						ent Material (F2		
	n Sulfide (A4)		Dark Surfa	,	5)				allow Dark Surfa		
	l Layers (A5)		Loamy Mu		eral (F1)				Explain in Remar		
2 cm Mu			Loamy Gle	-					p.a	,	
	d Below Dark Surface	(A11)	Depleted N	-							
	ark Surface (A12)	,	Redox Dar					<sup>3</sup> Indicators o	f hydrophytic ve	getation a	and
Sandy M	lucky Mineral (S1)		Depleted [	Dark Sur	face (F7)				hydrology must	-	
5 cm Mu	cky Peat or Peat (S3	)	Redox Dep	oression	s (F8)			unless d	listurbed or prob	lematic.	
Restrictive	Layer (if observed):										
Type:	,										
Depth (ir	nches):		_				Hydric So	oil Present?	Yes	5	No X
Remarks:											
	int falls within a recla	imed strip co	oal mine. Soils a	re assur	ned to no	t be in t	heir natural	state.			
HYDROLO	)GY										
Wetland Hy	drology Indicators:										
Primary India	cators (minimum of o	ne is require	d; check all that a	apply)				Secondary In	ndicators (minim	um of two	o required)
Surface	Water (A1)		Water-Stai		, ,			X Surface	Soil Cracks (B6)	)	
·	ter Table (A2)		Aquatic Fa						e Patterns (B10)		
Saturation	` '		True Aqua		, ,				son Water Table	e (C2)	
	arks (B1)		Hydrogen				. (00)		Burrows (C8)		(00)
	nt Deposits (B2)		Oxidized F			_	oots (C3)		on Visible on Ae	-	ery (C9)
	oosits (B3) at or Crust (B4)		Presence of Recent Iro			,	lc (C6)		or Stressed Plan phic Position (Da		
	osits (B5)		Thin Muck			ileu Soli	13 (CO)		utral Test (D5)	۷)	
	on Visible on Aerial Ir	nagery (B7)	Gauge or \		. ,				di.d. 1001 (20)		
	Vegetated Concave				` '						
Field Obser		`	<u> </u>		,						
Surface Wat		s X	No	Depth (i	nches):	0					
Water Table				Depth (i		0					
Saturation P				Depth (i	_	0	Wetland	d Hydrology I	Present? Yes	<b>x</b>	No
(includes cap	oillary fringe)			, ,	· -						
	corded Data (stream	gauge, mon	itoring well, aeria	l photos	, previou	s inspec	ctions), if ava	ailable:			
Remarks:											

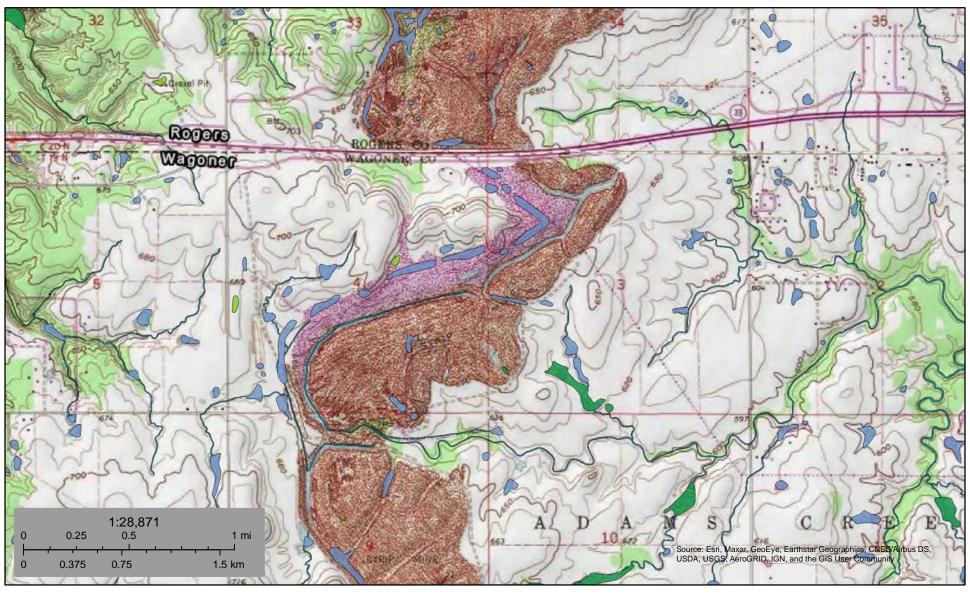
Project/Site: Fair Oaks Ranch	City/County: Wagone	er .	Sampling Date: 6/1	19/2020
Applicant/Owner: Fair Oaks Ranch		State: OK	Sampling Point:	9
Investigator(s): Andy Middick	Section, Township, Rai	nge: S3 T19N R15E		
Landform (hillside, terrace, etc.): woodland	Local relief (c	concave, convex, none):	Concave	
Slope (%): 0-5 Lat: 36.16079	Long: <u>-95.69212</u>		Datum: NAD 83 State Plan	e OK North
Soil Map Unit Name: Dennis-Radley complex, 0 to 15 perc	cent slopes	NWI classifi	ication: None	
Are climatic / hydrologic conditions on the site typical for th	nis time of year? Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologysigni	ificantly disturbed? Are "Normal C	ircumstances" present?	Yes X No	
Are Vegetation, Soil, or Hydrologynatu	ırally problematic? (If needed, ex	plain any answers in Rer	marks.)	_
SUMMARY OF FINDINGS – Attach site map	showing sampling point lo	cations, transects,	important feature	es, etc.
Hydrophytic Vegetation Present? Yes No 2	X Is the Sampled Ar	·ea		
Hydric Soil Present? Yes X No			No X	
Wetland Hydrology Present? Yes X No	<u> </u>			
Remarks:				
This point falls in an area that is a reclaimed strip coal mir	ne.			
Manager of plants				
VEGETATION – Use scientific names of plants				
	bsolute Dominant Indicator Cover Species? Status	Dominance Test wor	ksheet:	
1. Juglans nigra	80 Yes FACU	Number of Dominant S	Species That	
2.		Are OBL, FACW, or FA		(A)
3		Total Number of Domi	•	
4		Across All Strata:	1	(B)
5	80 =Total Cover	Percent of Dominant S	•	(A/B)
Sapling/Shrub Stratum (Plot size: 15 FT )	80 = Folai Covei	Are OBL, FACW, or FA	AC: 0.076	— <sup>(A/D)</sup>
1.		Prevalence Index wo	rksheet:	
2.	<u> </u>	Total % Cover of:		
3.		OBL species 0		_
4.		FACW species 0	x 2 = 0	
5		FAC species 0		
	=Total Cover	FACU species 80		
Herb Stratum (Plot size: 5 FT )		UPL species 0		— <sub>(D)</sub>
1	—— ——	Column Totals: 80 Prevalence Index =	` ′	(B)
	—— ——	Flevalence muez -	= B/A = 4.00	<b>–</b>
	—— ——	Hydrophytic Vegetat	ion Indicators:	
5.			Hydrophytic Vegetation	า
6.		2 - Dominance Te		
7.		3 - Prevalence Inc	dex is ≤3.0 <sup>1</sup>	
8.			Adaptations <sup>1</sup> (Provide s	
9			s or on a separate shee	•
10			ophytic Vegetation <sup>1</sup> (Ex	
	=Total Cover		oil and wetland hydrolog	gy must
Woody Vine Stratum (Plot size: 30 FT )	}	be present, unless dist	turbed or problematic.	
1	—— ——	Hydrophytic		
	=Total Cover	Vegetation Present? Yes	No X	
Remarks: (Include photo numbers here or on a separate			<u> </u>	
General area bare due to livestock traffic	Sileet.)			

Profile Des Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-16	2.5YR 3/1	90	5YR 5/8	10	RM	PL	Loamy/Clayey	/		
	· -									
	oncentration, D=Dep	letion, RM	=Reduced Matrix, N	MS=Mas	ked San	d Grains.		ation: PL=Pore L	-	_
•	Indicators:				. (0.1)			ators for Proble	-	Soils':
Histosol	` '		Sandy Gle	-	rix (S4)			Coast Prairie Red		
	pipedon (A2)		Sandy Red					ron-Manganese		
	istic (A3)		Stripped M		5)			Red Parent Mate		
	en Sulfide (A4)		Dark Surfa	` '				ery Shallow Dai		
	d Layers (A5)		Loamy Mu	•	, ,		<u> </u>	Other (Explain in	Remarks)	
	uck (A10)		Loamy Gle							
	d Below Dark Surface	e (A11)	Depleted N				<b>3.</b>			
	ark Surface (A12)		X Redox Dai		` '			cators of hydroph	-	
	Mucky Mineral (S1)		Depleted [			)		vetland hydrolog		ent,
	ucky Peat or Peat (S3		Redox Dep	pression	s (F8)	1	ι	ınless disturbed	or problematic.	
	Layer (if observed):									
Type:										
Depth (i Remarks:							Hydric Soil Pre	sent?	Yes X	No
Depth (i	nches):  bint falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		sent?	Yes X	No
Depth (i Remarks:		imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		sent?	Yes X	No
Depth (i	oint falls within a recla	imed strip	coal mine. Soils a	re assun	ned to no	ot be in th		sent?	Yes X	No
Depth (i Remarks: This data po	oint falls within a recla	nimed strip	coal mine. Soils a	re assun	ned to no	ot be in th		sent?	Yes X	No
Depth (i Remarks: This data po	oint falls within a recla				ned to no	ot be in th	eir natural state.	sent?		
Depth (i Remarks: This data po  HYDROLO Wetland Hy Primary Indi	oint falls within a recla			apply)			eir natural state.		(minimum of tw	
Depth (i Remarks: This data po  HYDROLO Wetland Hy Primary Indi Surface	DGY rdrology Indicators: cators (minimum of c		ired; check all that a	apply) ined Lea	ves (B9)		eir natural state.  Seco	ndary Indicators	(minimum of tw ks (B6)	
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Depth (i Remarks: This data po  HYDROLO Wetland Hy Primary Indi Surface High Wa Saturati	OGY  rdrology Indicators: cators (minimum of compater (A1) ater Table (A2)		ired; check all that a Water-Stai Aquatic Fa	apply) ined Lea auna (B1 ttic Plant	ves (B9) 3) s (B14)		eir natural state.  Seco	ndary Indicators Surface Soil Crac Drainage Pattern	(minimum of twocks (B6) s (B10) er Table (C2)	
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Depth (i Remarks: This data po  HYDROLO Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimer Drift De Algal Ma Iron Dep Inundati	oint falls within a reclar OGY  Idrology Indicators: cators (minimum of	ne is requi	ired; check all that a Water-Stal Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V	apply) ined Lea auna (B1 tic Plant Sulfide ( Rhizosph of Reduc n Reduc Surface Well Dat	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7) a (D9)	) Living Ro (C4) illed Soils	Second   X   Second   X   Second   X   Second   X   Second   Second   X   Second	ndary Indicators Surface Soil Crac Drainage Pattern Dry-Season Wate Crayfish Burrows Saturation Visible Stunted or Stress Geomorphic Posi	(minimum of two ks (B6) s (B10) er Table (C2) (C8) e on Aerial Imaged Plants (D1) tion (D2)	o require
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# Appendix D NWI Maps

# U.S. Fish and Wildlife Service National Wetlands Inventory

# Fair Oaks Ranch Tract 1



June 30, 2020

#### Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# U.S. Fish and Wildlife Service **National Wetlands Inventory**

# Fair Oaks Ranch Tract 1



June 30, 2020

#### Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

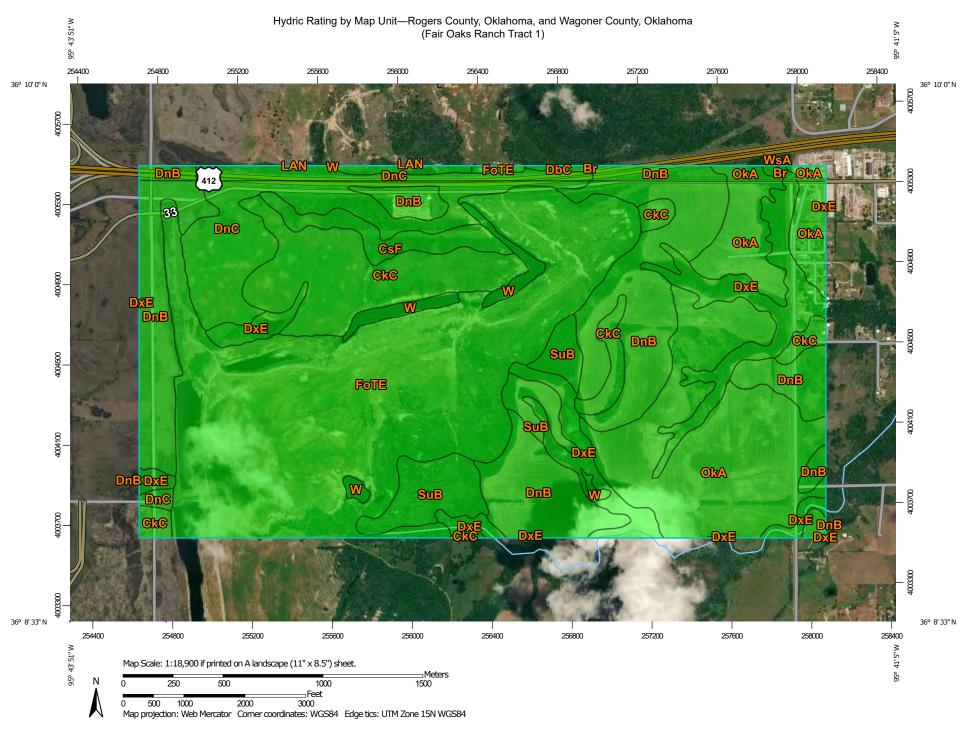
Lake

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# Appendix E NRCS Hydric Soil Report



#### MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) Transportation 1:24.000. Area of Interest (AOI) Rails Please rely on the bar scale on each map sheet for map Soils Interstate Highways measurements. Soil Rating Polygons US Routes Hydric (100%) Source of Map: Natural Resources Conservation Service Major Roads Web Soil Survey URL: Hydric (66 to 99%) Coordinate System: Web Mercator (EPSG:3857) Local Roads $\sim$ Hydric (33 to 65%) Maps from the Web Soil Survey are based on the Web Mercator Background projection, which preserves direction and shape but distorts Hydric (1 to 32%) Aerial Photography distance and area. A projection that preserves area, such as the Not Hydric (0%) Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. Not rated or not available This product is generated from the USDA-NRCS certified data as Soil Rating Lines of the version date(s) listed below. Hydric (100%) Soil Survey Area: Rogers County, Oklahoma Hydric (66 to 99%) Survey Area Data: Version 14, Sep 16, 2019 Hydric (33 to 65%) Soil Survey Area: Wagoner County, Oklahoma Survey Area Data: Version 15, Sep 16, 2019 Hydric (1 to 32%) Your area of interest (AOI) includes more than one soil survey Not Hydric (0%) area. These survey areas may have been mapped at different Not rated or not available scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil **Soil Rating Points** properties, and interpretations that do not completely agree Hydric (100%) across soil survey area boundaries. Hydric (66 to 99%) Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Hydric (33 to 65%) Date(s) aerial images were photographed: Apr 9, 2015—Apr 8, Hydric (1 to 32%) 2019 Not Hydric (0%) The orthophoto or other base map on which the soil lines were Not rated or not available compiled and digitized probably differs from the background

**Water Features** 

Streams and Canals

imagery displayed on these maps. As a result, some minor

shifting of map unit boundaries may be evident.

# **Hydric Rating by Map Unit**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI		
Br	Eram-Verdigris complex, 0 to 12 percent slopes	0	2.4	0.2%		
DbC	Dennis-Bates complex, 3 to 5 percent slopes	0	2.0	0.1%		
DnB	Dennis silt loam, 1 to 3 percent slopes	0	17.3	1.1%		
DnC	Dennis silt loam, 3 to 5 percent slopes	0	25.6	1.6%		
FoTE	Foyil and Talala soils, 0 to 12 percent slopes	0	2.3	0.1%		
LAN	Landfill	0	6.7	0.4%		
OkA	Okemah silty clay loam, 0 to 1 percent slopes	0	8.1	0.5%		
W	Water	0	0.1	0.0%		
WsA	Woodson and Apperson soils, 0 to 1 percent slopes	0	0.0	0.0%		
Subtotals for Soil Survey Area			64.6	4.1%		
Totals for Area of Inter	rest	1,582.4	100.0%			

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI		
CkC	Coweta-Bates complex, 3 to 5 percent slopes	0	141.0	8.9%		
CsF	Coweta stony fine sandy loam, 5 to 30 percent slopes	0	30.5	1.9%		
DnB	Dennis silt loam, 1 to 3 percent slopes	0	283.1	17.9%		
DnC	Dennis silt loam, 3 to 5 percent slopes	0	103.8	6.6%		
DxE	Dennis-Radley complex, 0 to 15 percent slopes	0	125.2	7.9%		
FoTE	Foyil and Talala soils, 0 to 12 percent slopes	0	492.9	31.1%		
OkA	Okemah silt loam, 0 to 1 percent slopes	0	253.2	16.0%		
SuB	Summit silty clay loam, 1 to 3 percent slopes	0	65.2	4.1%		
W	Water	0	22.9	1.4%		
Subtotals for Soil Surv	vey Area	1,517.8	95.9%			
Totals for Area of Inter	rest	1,582.4	100.0%			

## **Description**

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

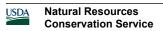
The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

#### References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.



Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

## **Rating Options**

Aggregation Method: Percent Present

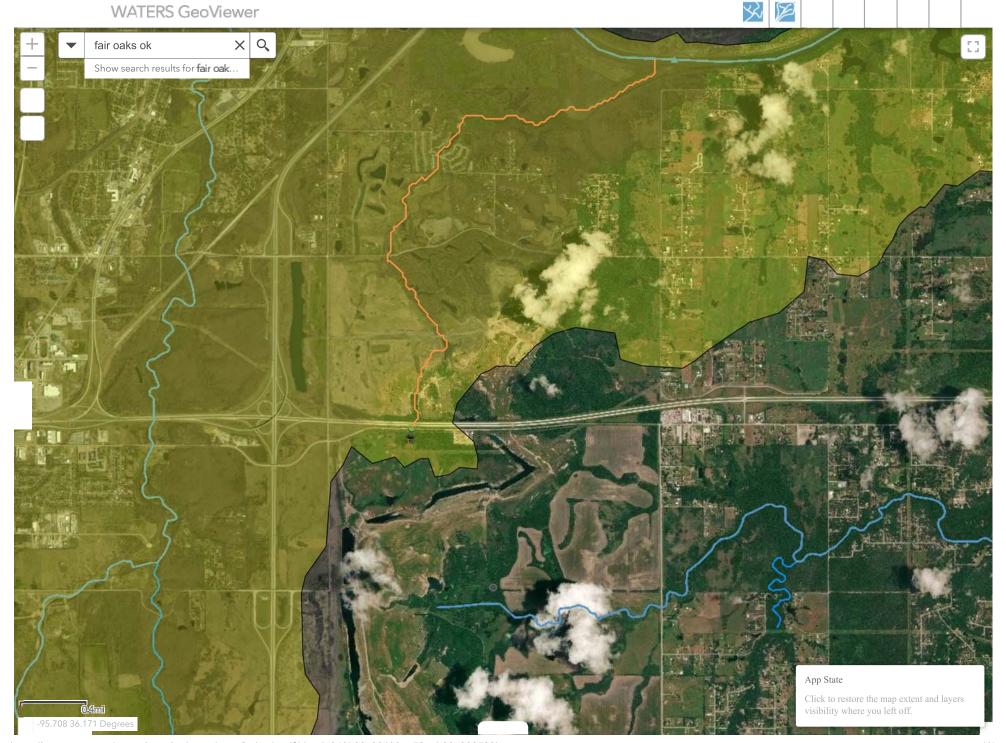
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

# Appendix F

# **EPA Waters GeoViewer Drainage Maps**

6/29/2020 WATERS GeoViewer



6/29/2020 WATERS GeoViewer

