

WETLAND DELINEATION REPORT



LENRD North Fork Elkhorn River WFPO - Osmond

JEO PROJECT NUMBER: 201302.00

AUGUST 2024



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Location

Legend

Study Area

Location
 Lat: 42.361210° N
 Long: -97.591738° W

0 0.3 0.6 Miles

W N E S

866th Ave

547th Ave

865th Rd

Prairie St

8th St

McLagan St

McLagan St

Osmond General Hospital

2nd St

Osmond

State St

864th Rd

Highway 20

Pierce County

Nebraska Game & Parks Commission, Sci. Territory, Gamew. SafeGrass, GeoSedimentology, Inc. MET/NASA, USGS, BPA, NPS, US Census Bureau, USDA, USFWS, etc.

JEO Consulting Group, Inc. (JEO) was retained by the Lower Elkhorn Natural Resource District (LENRD) to conduct a wetland delineation and prepare a wetland report for North Fork Elkhorn River WFPO in Pierce County, Nebraska (study area). This document summarizes the findings of the wetland delineation completed on July 9, 2024 in accordance with the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987 Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (Midwest Regional Supplement).

WETLAND DELINEATION

Desktop Review

Prior to the field delineation, a desktop review was conducted using U.S. Geological Survey (USGS) topographic maps, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), Natural Resources Conservation Service (NRCS) Web Soil Survey, Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (DFIRM), USGS National Hydrography Dataset (NHD), as well as current and historic aerial imagery provided through Google Earth to identify potential Waters of the U.S. (WOTUS), including wetlands, and areas historically prone to wetland development. The following is a summary of the desktop review.

USGS 7.5-MINUTE SERIES TOPOGRAPHIC MAP

Topographic maps obtained from the USGS depict the North Fork Elkhorn River as a perennial stream, generally flowing north to south within the study area. The general topographic gradient through the study area is southeast (see *Appendix A, Figure 2*). Elevations in the study area are approximately 1,650 feet to 1,665 feet above mean sea level.

USFWS NWI

The NWI map depictions are as follows (see *Appendix A, Figure 3*).

The study area exhibited:

- 1 – Riverine, lower perennial, unconsolidated bottom, intermittently exposed stream (R2UBG)
- 1 – Palustrine, emergent, persistent, temporary flooded wetland (PEM1A)

No other aquatic resources are mapped within the study area.

NRCS WEB SOIL SURVEY

The Web Soil Survey maps five soil units within the study area which include:

- 3775 – Muir silt loam, 0 to 2 percent slopes, rarely flooded
- 6301 – Aowa silt loam, channeled, 0 to 3 percent slopes, frequently flooded
- 6575 – Trent silt loam, 0 to 2 percent slopes
- 6808 – Moody silty clay loam, 0 to 2 percent slopes
- 6811 – Moody silty clay loam, 2 to 6 percent slopes

All mapped soil units are included in the Nebraska Hydric Soils list and are therefore considered to be hydric (see *Appendix A, Figure 4*).

FEMA DFIRM

The FEMA DFIRM shows the study area on Panel 310395A, effective date 7/3/1986 and Panel 3104660050B, effective date 6/4/1987. The study area is mapped as Zone A (shaded), which are areas of special flood hazard subject to the 100-year flood; and as Zone C (unshaded), which are areas of minimal flood hazard.

USGS NHD

The online NHD mapping tool shows the study area within hydrologic unit code (HUC) 102200020503, within the City of Osmond-North Fork Elkhorn River watershed. The NHD map depicts no aquatic resources within the study area (see *Appendix A, Figure 5*).

AERIAL IMAGERY

A review of both recent and historic aerial imagery (1993 – 2020) in Google Earth depicts the study area on the eastern edge of Osmond, NE with residential housing to the west, row-crop agriculture to the north and east, and Highway 20 to the south. From 2009 to 2010, several small buildings were built near a baseball field near the center of the study area, and from 2009 to 2020, several houses were built on the north side of the study area. No other significant changes to the landscape were observed in any of the aerial images reviewed.

Farmed Wetland Analysis

In accordance with guidance contained in the Midwest Regional Supplement and NRCS National Engineering Handbook, Part 650, Chapter 19, available data from the NRCS Geospatial Data Gateway for Pierce County, Nebraska were utilized to complete a farmed wetland analysis.

A desktop review of five years of color aerial imagery taken during the growing season obtained from the National Agricultural Imagery Program (NAIP), was completed to determine whether wetland hydrology is present within the agricultural fields in the study area. The selected years of imagery reviewed and analyzed for potential wetlands based on hydrologic indicators includes 2009, 2010, 2014, 2016, and 2018 (see Appendix D, Figures 1-5). Precipitation data from the nearest NRCS WETS stations to the study area were analyzed for the three months prior to the date each aerial image was taken. The precipitation data was then given a weighted value to determine wet, dry, or normal conditions (see Appendix D, Antecedent Precipitation Worksheets).

The hydrology analysis process then requires using at least five years of aerial imagery from normal precipitation years to estimate the boundaries of potential wetlands. In accordance with NRCS National Engineering Handbook, Part 650, Chapter 19, five normal years were available to be reviewed and analyzed (2009, 2010, 2014, 2016, and 2018). The specific wetland signatures analyzed during the farmed wetland analysis included:

- Standing water
- Flooded or drowned-out crops

- Crop stress
- Dry areas
- Inclusions of wet areas as “set-aside”

Areas displaying saturated soil signatures that overlapped in at least three years (>50%) of the selected five years of NAIP imagery were identified as potential wetlands and geospatially referenced using GIS (see Appendix D, Figure 6). A site visit was conducted on July 9, 2024, to determine the presence or absence of hydric soils within the identified potential wetlands. Wetland boundaries were updated based on hydric soils and topography. Final wetland boundaries are available in Appendix A, Figure 6.

The area identified in the farmed wetland analysis had hydric soils and was determined to be a wetland. No other potential wetland areas were identified during the farmed wetland analysis.

Delineation Methods

JEO conducted a wetland delineation on July 9, 2024 in accordance with the methods described in the 1987 Manual and the Midwest Regional Supplement using a routine wetland determination method, including the standard multi-parameter approach (vegetation, soils, and hydrology) for wetland identification. An area is considered to be a wetland if hydrophytic vegetation, hydric soils, and wetland hydrology are all present. Sample locations were determined using NWI maps and visual observations that supported a hydrophytic plant community, where applicable, as well as characteristics of hydric soils and wetland hydrology. Definitions and methods for determining each of these three parameters are summarized below:

HYDROPHYTIC VEGETATION

Definition	The prevalence (>50%) of dominant plant species that are adapted to life in saturated soil conditions.
Method	To determine if vegetation was hydrophytic, the scientific name and indicator status of dominant plant species at each wetland were recorded on USACE data sheets. Dominance refers to the spatial extent of a species that is directly observed in the field. The most abundant plant species that individually or collectively account for more than 50 percent of the total coverage of each vegetation stratum and any other individual species comprising 20 percent or more of the total are considered to be dominant species for that stratum. Where 50 percent or more of all dominant species were hydrophytic, the hydrophytic vegetation parameter was met. Absolute percent cover of dominant species within each stratum is listed on data sheets.

HYDRIC SOILS

Definition	Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper 12 inches.
Method	Soils from each sample location were characterized using Munsell Soil Color Charts and soil texturing. Soil samples were also compared to the NRCS Web Soil Survey and Nebraska Hydric Soils List. If one or more of the hydric soil indicators on the USACE data sheet were identified, the soil was considered to be hydric.

WETLAND HYDROLOGY

Definition	Fourteen or more consecutive days of flooding, ponding, or water table within 12 inches of the surface during the growing season at a minimum frequency of 5 out of 10 years (50%).
Method	Wetland hydrology was determined by observing the presence of primary and/or secondary indicators listed on the USACE data sheet. If one primary indicator or two secondary indicators were present, the wetland hydrology parameter was met.

Field maps were developed using aerial photography combined with information from the NRCS Web Soil Survey, USFWS NWI, and USGS topographic map. Field-delineated wetland boundaries were determined based on the USACE wetland delineation process by completing paired sample points, where possible, and investigating vegetation, soil, and hydrology parameters. Vegetation was identified to the species level and referenced to the State of Nebraska 2022 Wetland Plant List. Soil and hydrology characteristics were evaluated by using a sharpshooter/tile spade to examine the soil profile. Wetland boundaries were then recorded using Field Maps for ArcGIS in conjunction with a Trimble Catalyst DA2 unit to provide submeter accuracy. Portions of some wetlands may extend beyond the study area; however, only wetland boundaries within the study area were delineated. Site photographs are included in Appendix B and the Midwest Region Wetland Determination Data Forms are included in Appendix C.

WETLAND DELINEATION RESULTS

Data were collected at four locations within the study area to document existing conditions. One WOTUS was present and one area meeting all three criteria for wetland classification was identified during the site visit, as detailed below in Table 1 and Table 2, and overlain on aerial imagery in Appendix A, Figure 6. No other special aquatic sites (e.g., sanctuaries and refuges, riffle and pool complexes) were identified within the study area.

Table 1: Delineated Wetlands

Sample ID	Wetland ID	Figure	Wetland Classification (Cowardin ¹ Nebraska Subclass)	Area (acres)
2	Wetland A	6	PEMA/C Floodplain Depression	0.043
TOTAL				PEM = 0.043

Notes: ¹ PEMA = Palustrine Emergent, Temporarily Flooded; PEMC = Palustrine Emergent, Seasonally Flooded

Table 2: Other Water Resources

Photo ID	Figure	Name	Type ¹
16, 17	6	Unnamed Stream	Ephemeral

Notes: ¹ Other Water Resources are non-wetland resources such as channels, ponds, and canals.

The following provides a brief narrative for each of the identified aquatic resources:

- **Wetland A** – PEMA/C wetland located within a depression near the western boundary of the study area. Dominant vegetation within the wetland consisted of corn (*Zea mays*). See *Appendix B, Photo 8, and Appendix C, Datatsheet 2*.
- **Unnamed Stream** – Ephemeral stream flowing generally west to east through the study area. The channel has an average OHWM ranging in width from 1 foot to 3 feet and an average depth from the top of bank to the OHWM ranging from 0.5 feet to 2 feet. See *Appendix B, Photos 16 and 17*.

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Cowardin, et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. U.S. Department of the Interior, Washington D.C.

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USGS. 2024. 7.5-Minute Series Topographic Map – U.S. Department of the Interior. Available at URL <http://topomaps.usgs.gov/index.html>.

USGS. 2024. National Hydrography Dataset. U.S. Department of the Interior. Available at URL <http://nhd.usgs.gov/index.html>.

X-Rite, Incorporated. 2000. Munsell Soil Color Charts. X-Rite Incorporated, Grand Rapids, Michigan.

Appendix A: Figures

Figure 1: Location Map

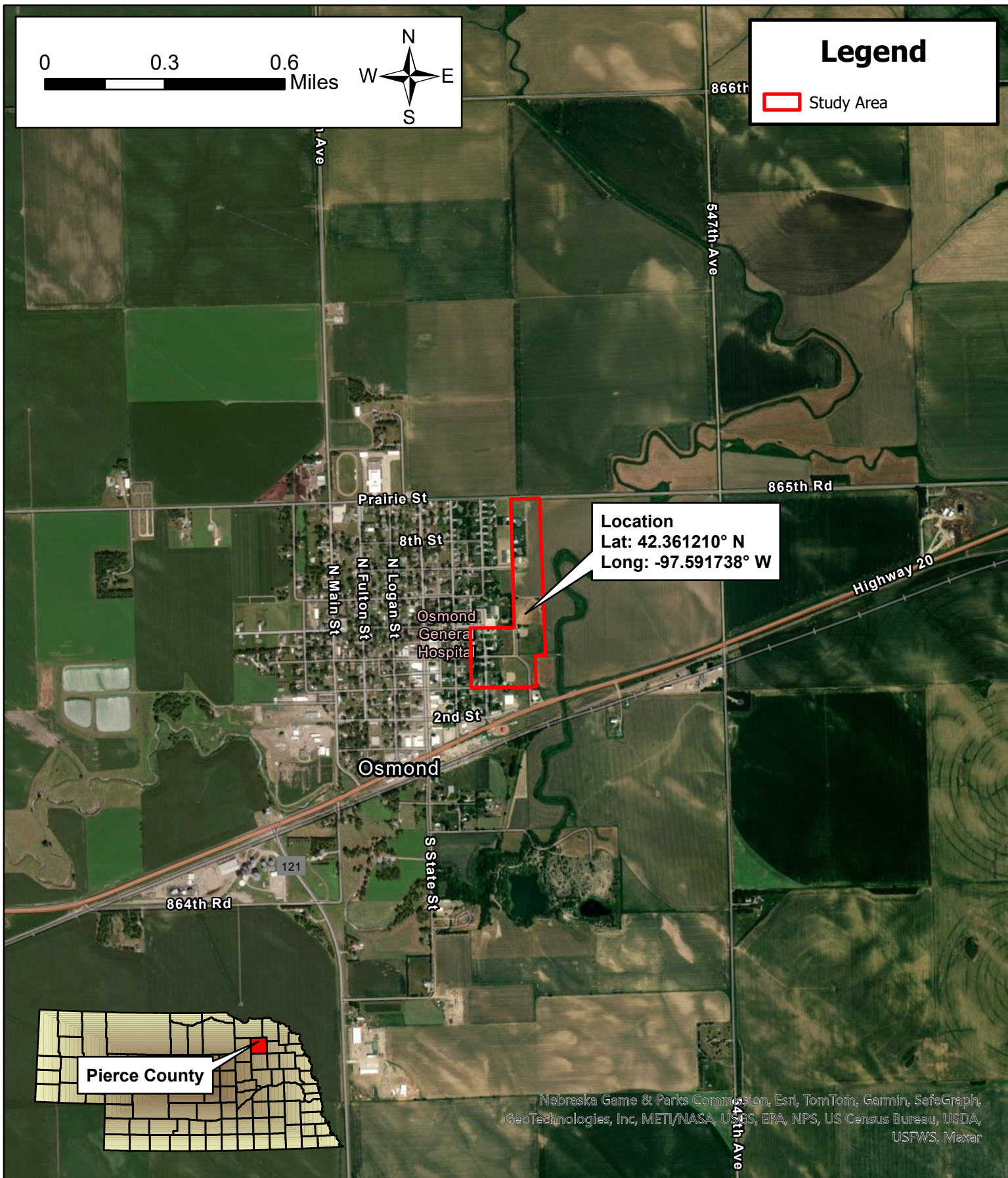
Figure 2: Topographic Map

Figure 3: NWI Map

Figure 4: Soils Map

Figure 5: NHD Map

Figure 6: Delineated Wetlands/WOTUS



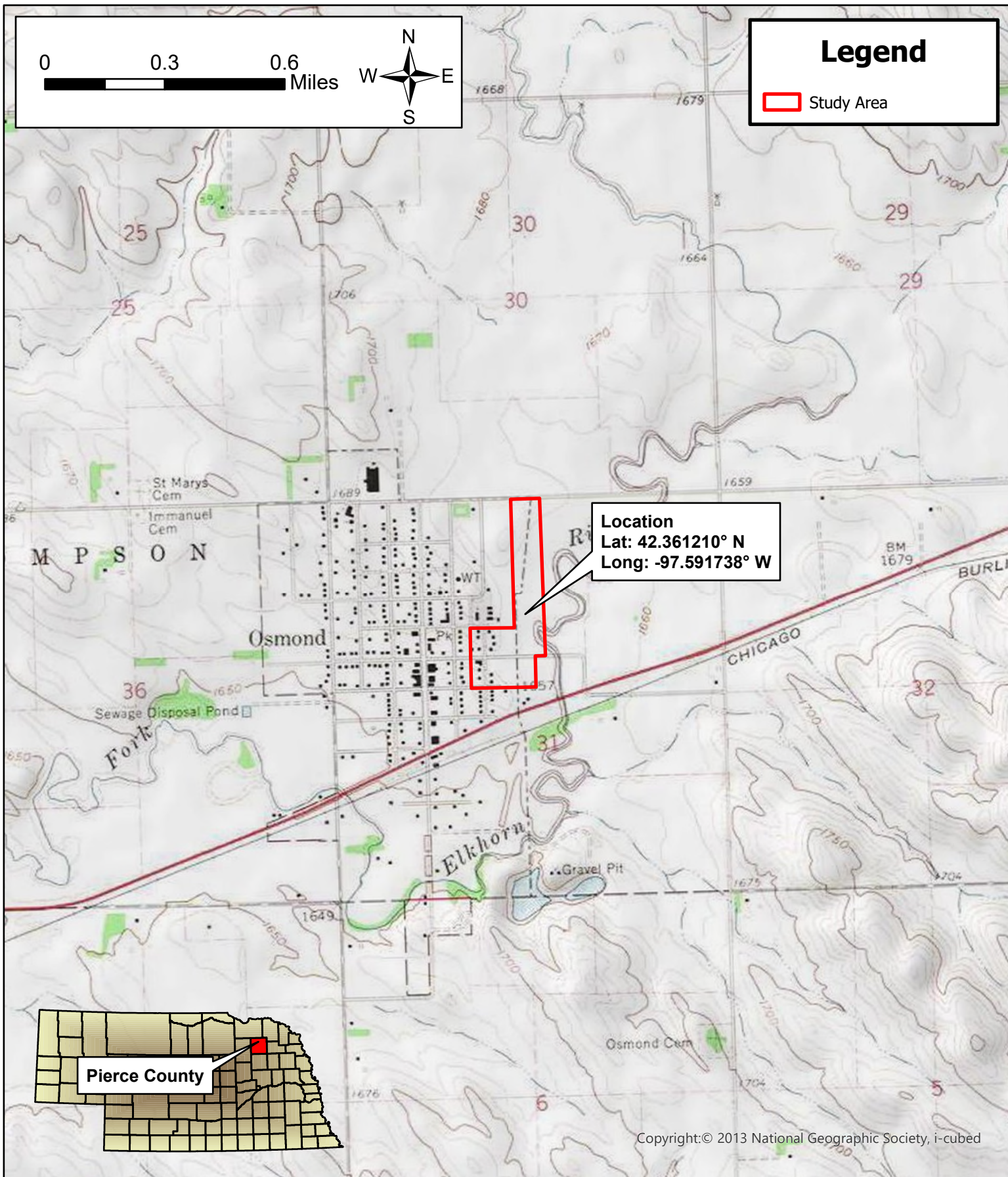
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LENRD North Fork Elkhorn River Osmond

Figure 1 - Project Location Map
Pierce County, Nebraska

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.





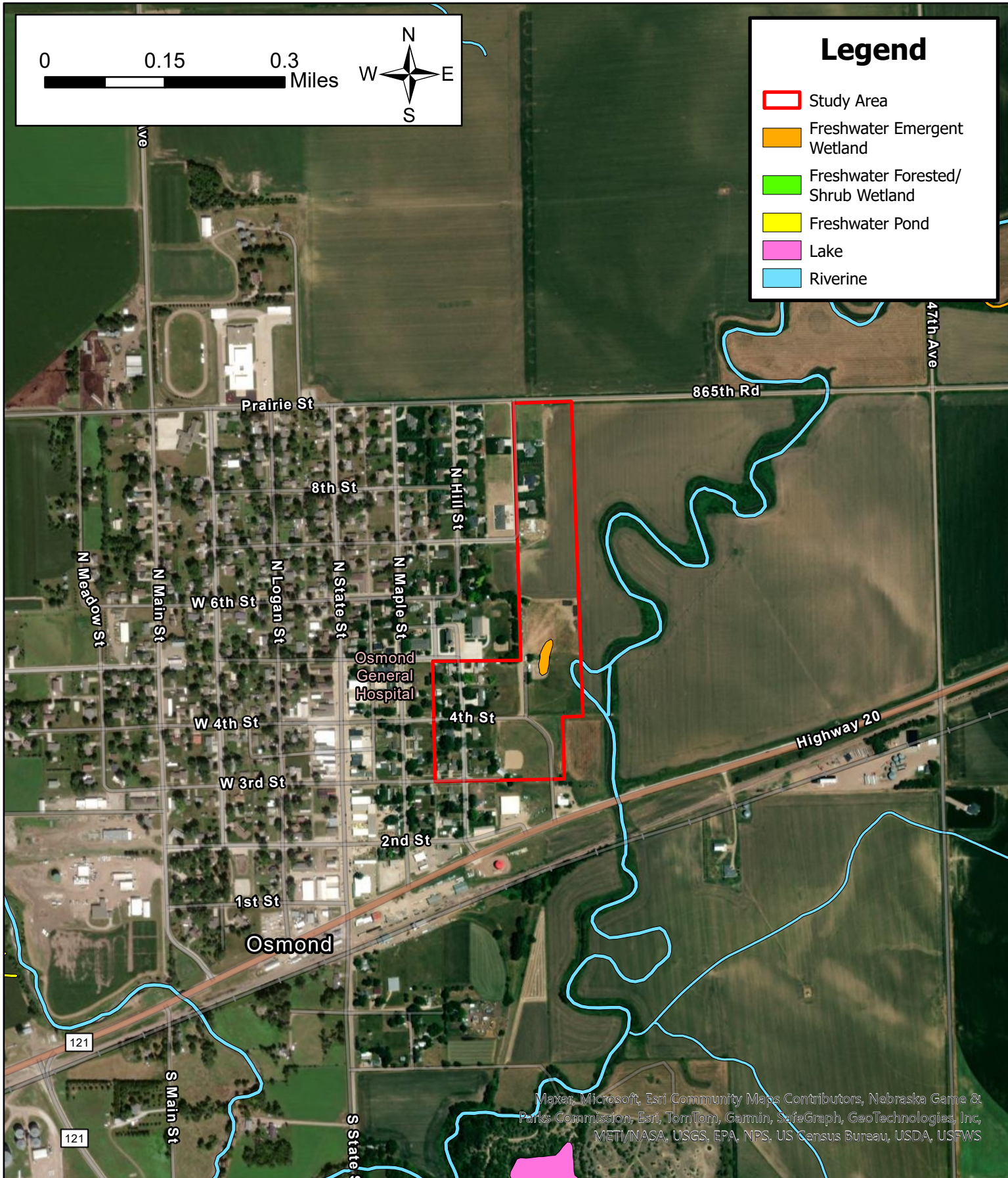
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Figure 2 - Topographic Map
Pierce County, Nebraska

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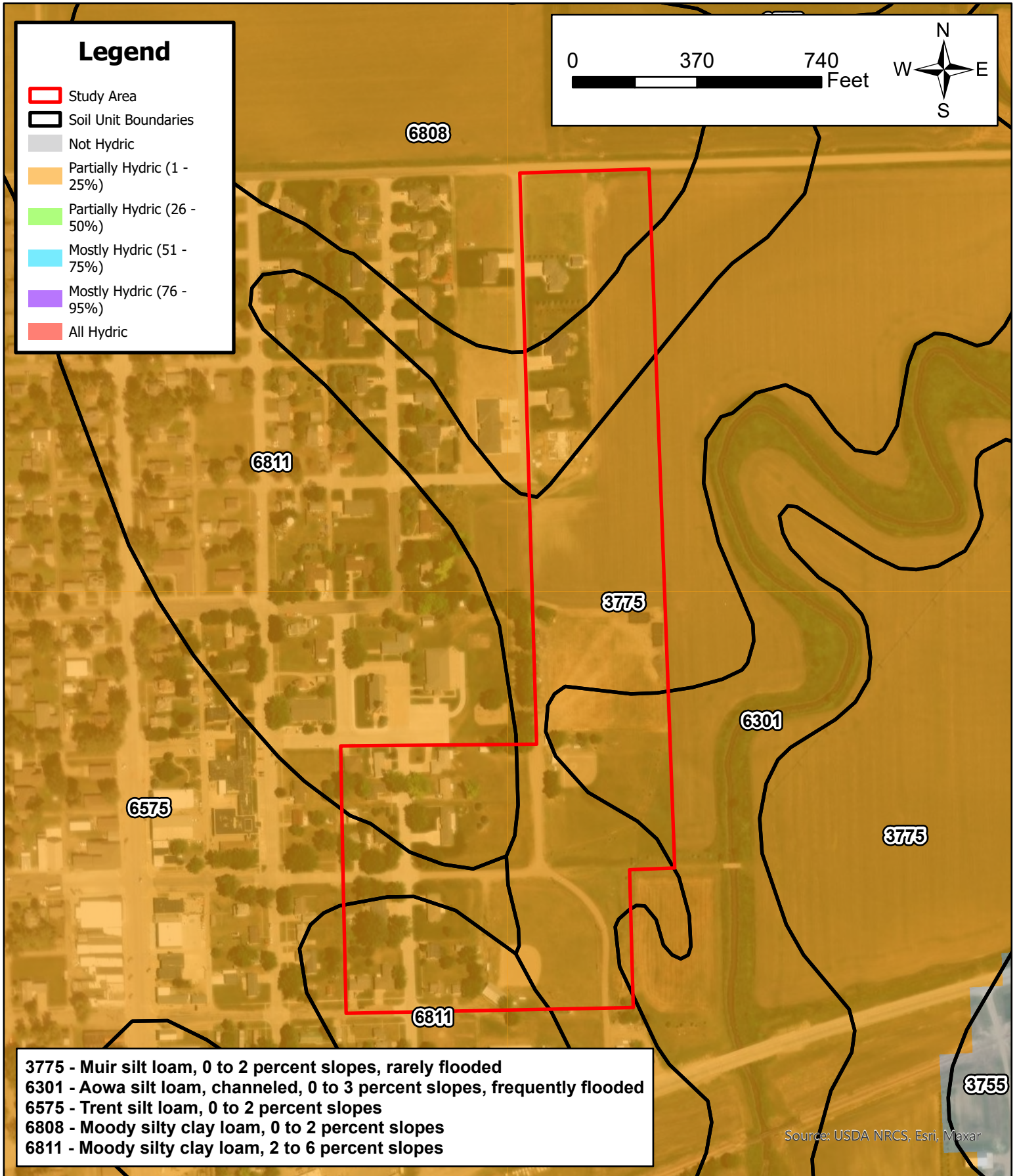
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Figure 3 - NWI Map
Pierce County, Nebraska

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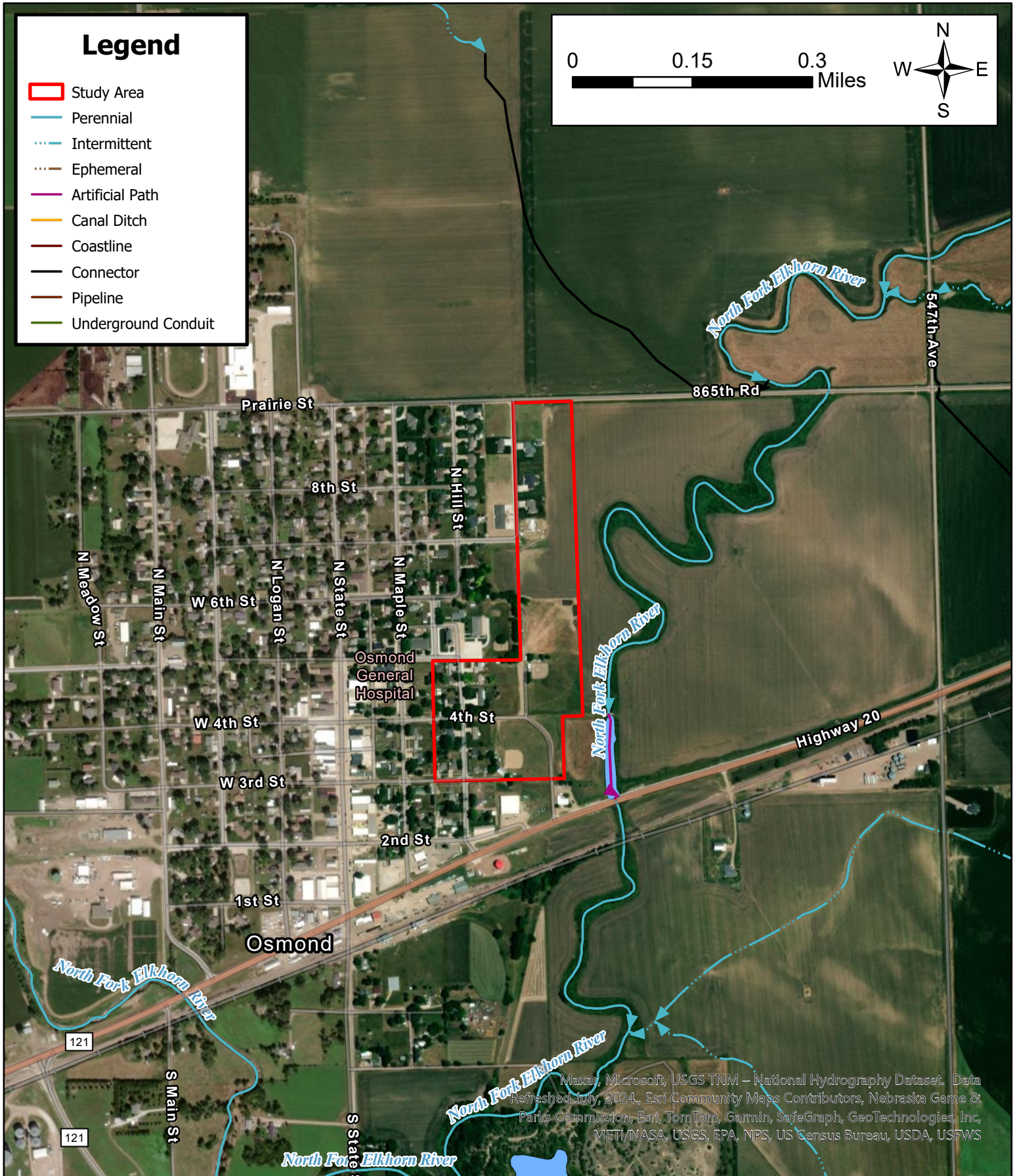
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Figure 4 - Soils Map
Pierce County, Nebraska

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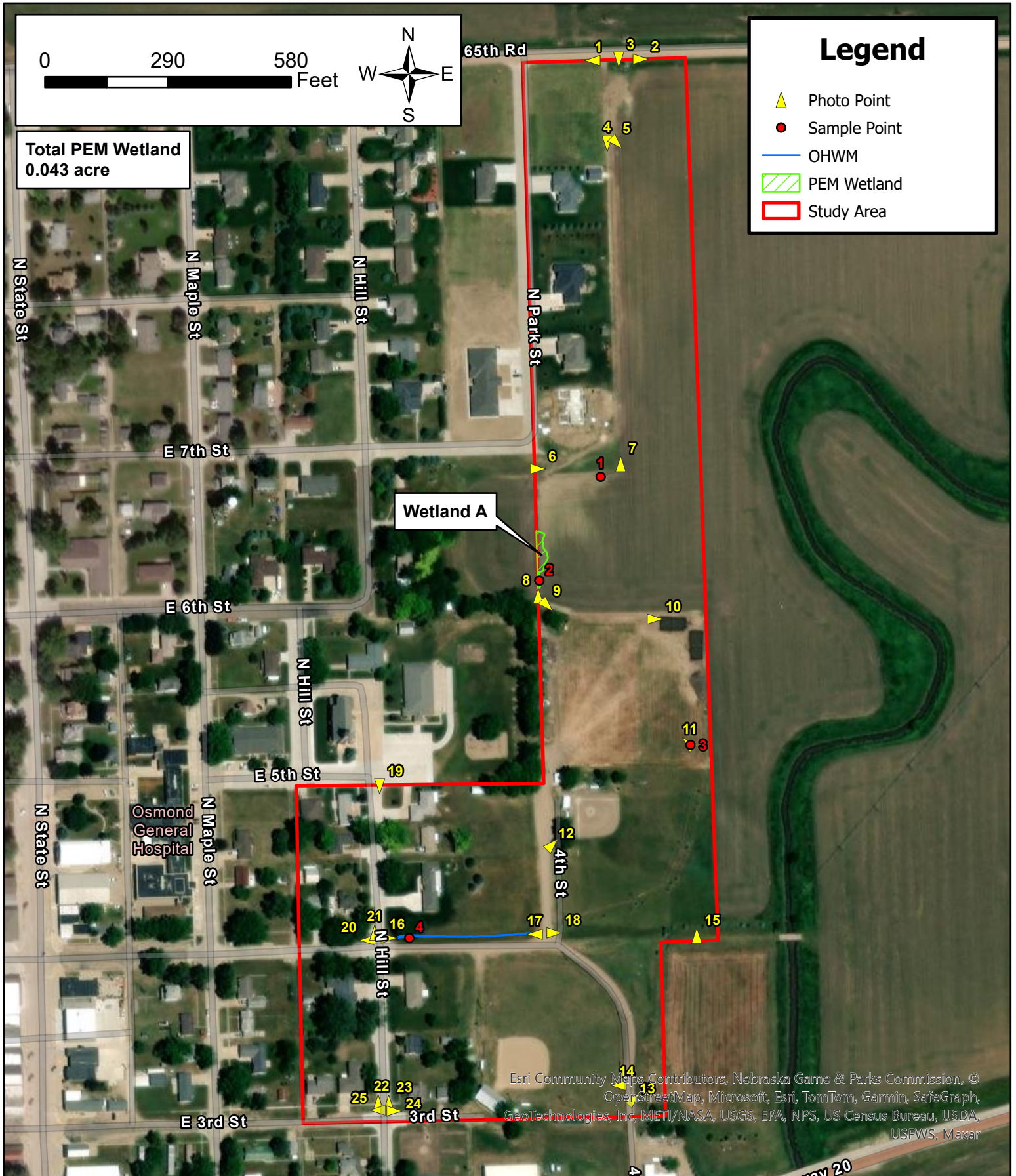
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Figure 5 - NHD Map
Pierce County, Nebraska

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Created By: K. Boden
Date: 7/22/2024
Software: ArcGIS Pro 3.0.3
File: North Fork Elkhorn River WFPO.aprx

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Figure 6 - Delineated Wetlands / WOTUS
Pierce County, Nebraska



Appendix B: Site Photographs



Photo 1 – View looking west along the south side of 865th Road. Photo depicts the roadside ditch.



Photo 2 – View looking east along the south side of 865th Road. Photo depicts the roadside ditch.



Photo 3 – View looking south from the south side of 865th Road. Photo depicts a mowed upland area.



Photo 4 – View looking south near the north end of the study area. Photo depicts a residential area near an agricultural field.



Photo 5 – View looking southeast near the north end of the study area. Photo depicts an agricultural field.



Photo 6 – View looking east near the western boundary of the study area. Photo depicts an open grassed field near an agricultural field.



Photo 7 – View looking north from Sample Point 1. Photo depicts a residential area near an agricultural field. No wetlands were present.



Photo 8 – View looking north toward Sample Point 2. Photo depicts PEM Wetland A within an agricultural field.



Photo 9 – View looking southeast near the western boundary of the study area. Photo depicts an upland area adjacent to PEM Wetland A.



Photo 10 – View looking east near the eastern boundary of the study area. Photo depicts a sand volleyball pit filled with rainwater from a recent rainfall event.



Photo 11 – View looking northwest from Sample Point 3. Photo depicts an upland grassed field.



Photo 12 – View looking northeast from the east side of 4th Street. Photo depicts a public park.



Photo 13 – View looking northeast from the southeast corner of the study area. Photo depicts an upland grassed field.



Photo 14 – View looking west from the southeast corner of the study area. Photo depicts a public park.



Photo 15 – View looking north along the east side of the study area. Photo depicts an upland grassed area.

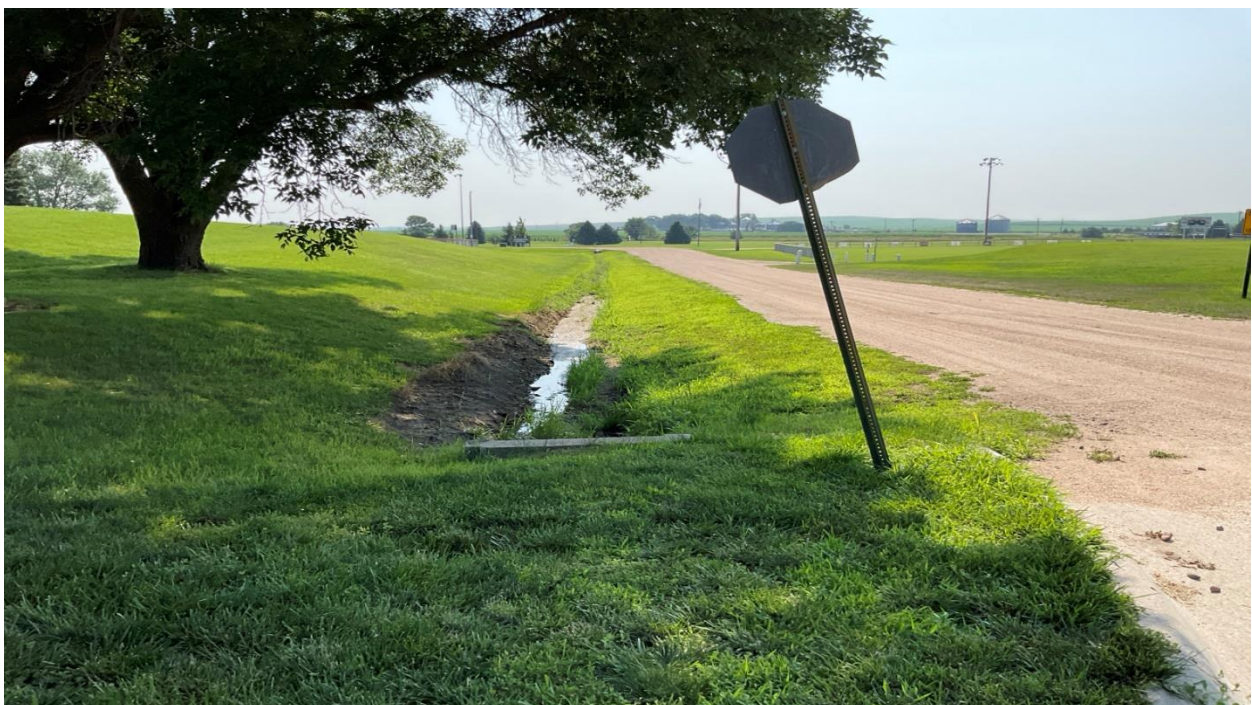


Photo 16 – View looking east from the intersection of N Hill Street and 4th Street. Photo depicts Sample Point 4 along the south bank of an unnamed stream within the roadside ditch.



Photo 17 – View looking west from 4th Street. Photo depicts the OHWM of an unnamed stream.



Photo 18 – View looking east from 4th Street. Photo depicts a culvert structure within the roadside ditch. No wetlands were present.



Photo 19 – View looking south from the intersection of N Hill Street and E 5th Street. Photo depicts the right-of-way.



Photo 20 – View looking west from the intersection of N Hill Street and 4th Street. Photo depicts the right of way.



Photo 21 – View looking north along the west side of N Hill Street. Photo depicts mowed upland vegetation within the roadside ditch.



Photo 22 – View looking north along the west side of N Hill Street. Photo depicts mowed upland vegetation within the roadside ditch.



Photo 23 – View looking north along the east side of N Hill Street. Photo depicts mowed upland vegetation within the roadside ditch.



Photo 24 – View looking east along the north side of E 3rd Street. Photo depicts mowed upland vegetation within the roadside ditch.



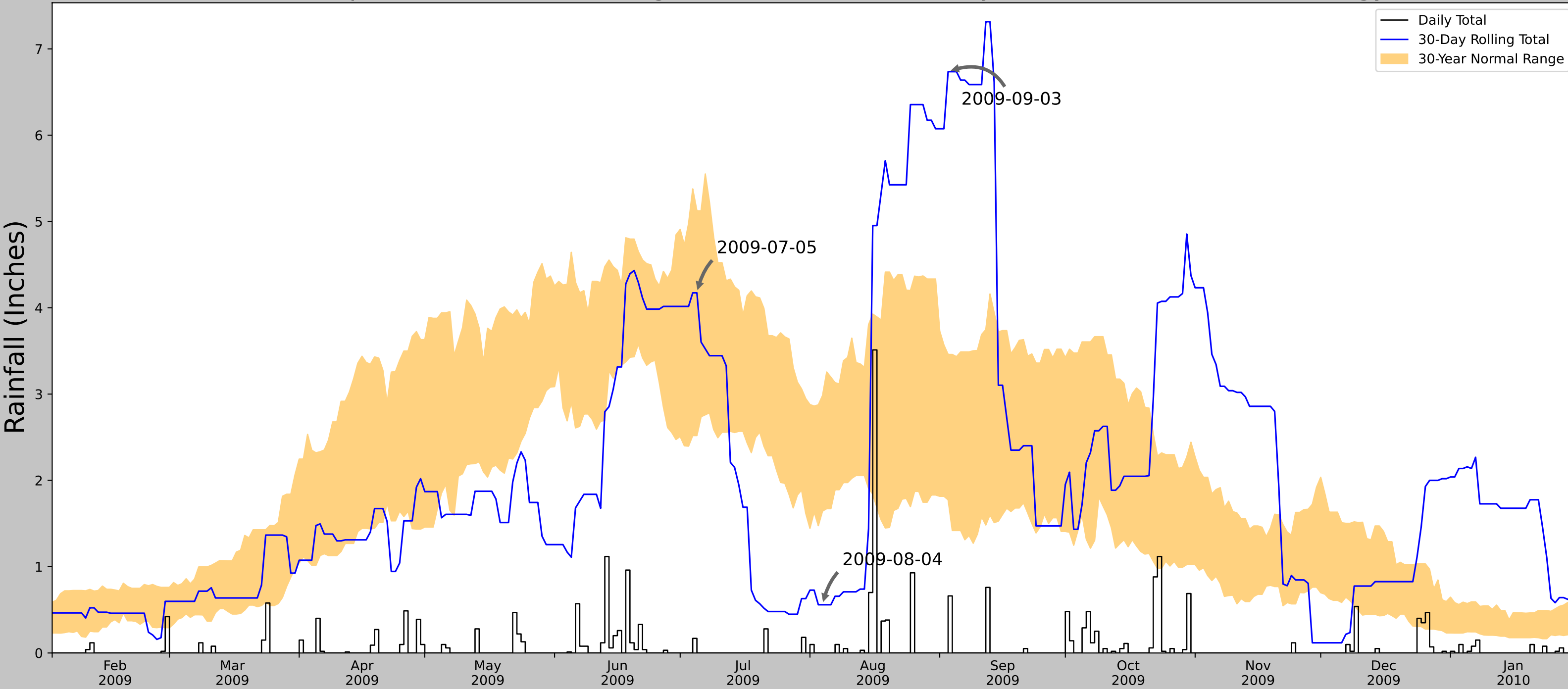
Photo 25 – View looking west along the north side of E 3rd Street. Photo depicts mowed upland vegetation within the roadside ditch.

Appendix C: USACE Wetland Determination Data Forms

Copies of forms are available upon request. Please contact Melissa Baier at melissa.baier@usda.gov for copies of the wetland determination data forms.

Appendix D: Farmed Wetland Analysis

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.361223, -97.591870
Observation Date	2009-09-03
Elevation (ft)	1654.642
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2009-09-03	1.775197	3.459055	6.736221	Wet	3	3	9
2009-08-04	1.644095	2.982284	0.559055	Dry	1	2	2
2009-07-05	2.519291	5.123229	4.173228	Normal	2	1	2
Result							Normal Conditions - 13



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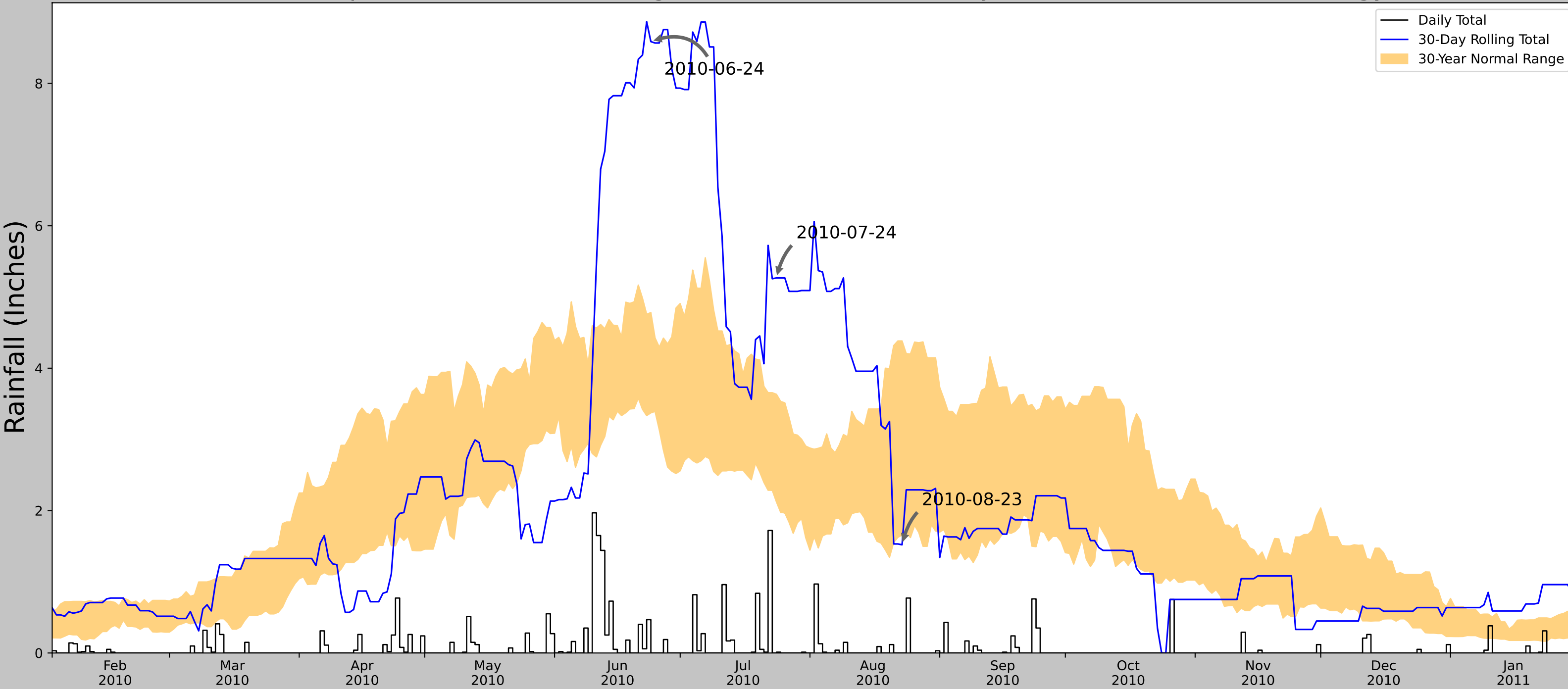
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
RANDOLPH 6 S	42.2944, -97.3647	1774.934	12.489	120.292	7.122	10417	90
RANDOLPH	42.3667, -97.35	1640.092	5.052	134.842	2.955	852	0
PIERCE 2.6 NNE	42.2342, -97.5104	1630.906	8.533	144.028	5.069	1	0
PIERCE	42.1986, -97.5172	1575.131	10.23	199.803	6.647	48	0
OSMOND	42.3569, -97.5969	1649.934	12.623	125.0	7.258	8	0
WINSIDE	42.1764, -97.1758	1589.895	12.643	185.039	8.029	27	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.361223, -97.591870
Observation Date	2010-08-23
Elevation (ft)	1654.642
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2010-08-23	1.657087	4.382677	1.519685	Dry	1	3	3
2010-07-24	2.12126	3.633071	5.267717	Wet	3	2	6
2010-06-24	3.372441	4.781103	8.586614	Wet	3	1	3
Result							Normal Conditions - 12



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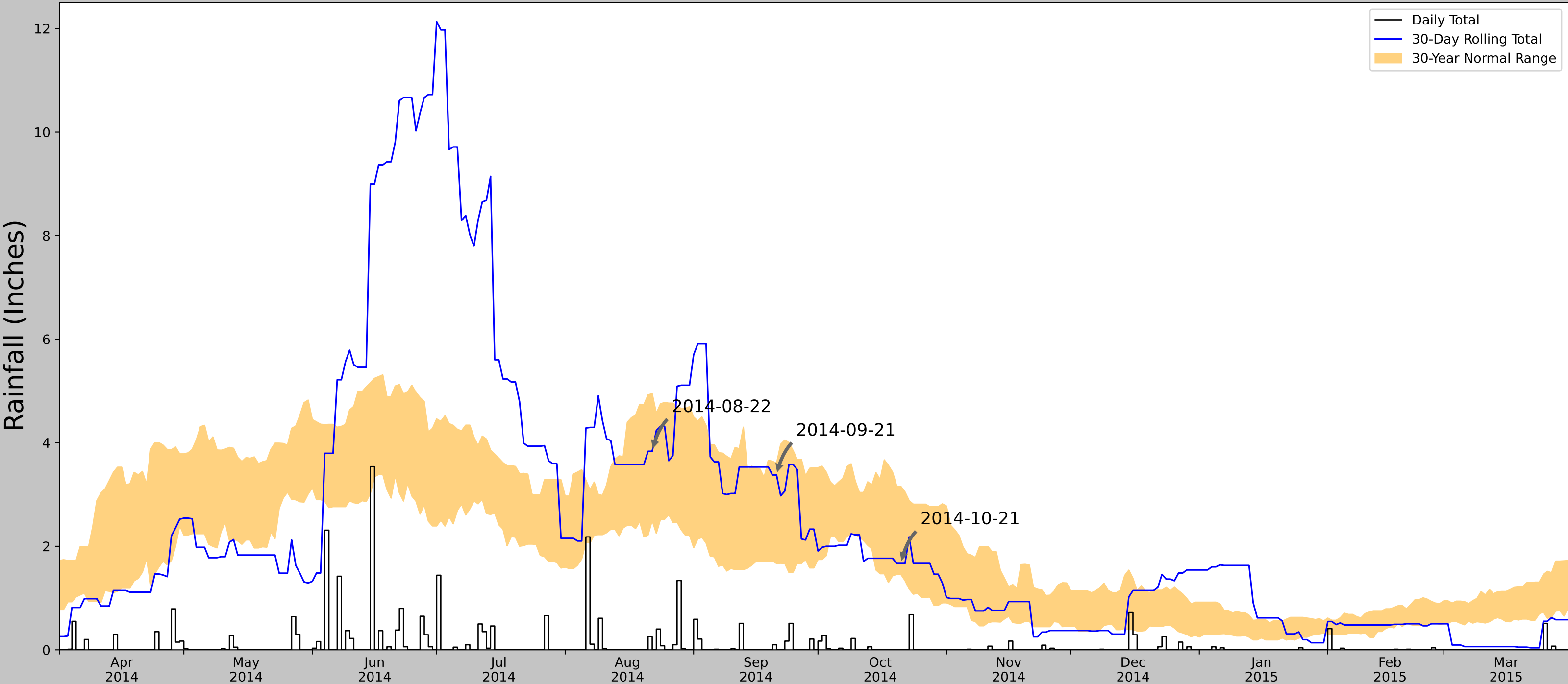
Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
RANDOLPH 6 S	42.2944, -97.3647	1774.934	12.489	120.292	7.122	10782	90
RANDOLPH	42.3667, -97.35	1640.092	5.052	134.842	2.955	487	0
PIERCE 2.6 NNE	42.2342, -97.5104	1630.906	8.533	144.028	5.069	1	0
PIERCE	42.1986, -97.5172	1575.131	10.23	199.803	6.647	48	0
OSMOND	42.3569, -97.5969	1649.934	12.623	125.0	7.258	8	0
WINSIDE	42.1764, -97.1758	1589.895	12.643	185.039	8.029	27	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.361223, -97.591870
Observation Date	2014-10-21
Elevation (ft)	1654.642
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2014-10-21	1.45748	3.156299	1.669291	Normal	2	3	6
2014-09-21	1.668898	3.604331	3.377953	Normal	2	2	4
2014-08-22	2.497638	4.946851	3.834646	Normal	2	1	2
Result							Normal Conditions - 12



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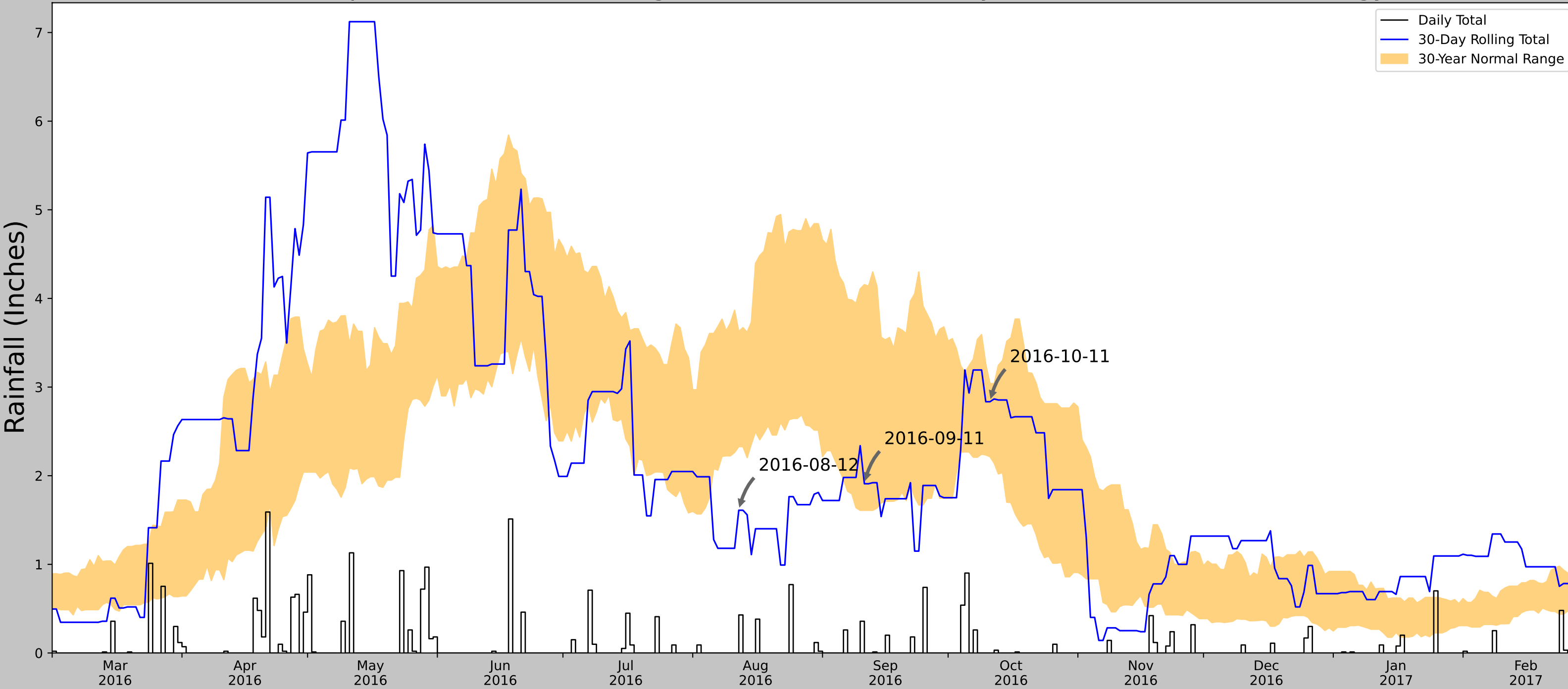
Developed by:
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Development Center



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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PIERCE	42.1986, -97.5172	1575.131	11.867	79.511	6.284	8066	90
PIERCE 2.6 NNE	42.2342, -97.5104	1630.906	2.484	55.775	1.256	35	0
OSMOND	42.3569, -97.5969	1649.934	11.672	74.803	6.126	3147	0
RANDOLPH 6 S	42.2944, -97.3647	1774.934	10.23	199.803	6.647	78	0
NORFOLK KARL STEFAN MEM AP	41.98, -97.4336	1562.008	15.7	13.123	7.271	27	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.361223, -97.591870
Observation Date	2016-10-11
Elevation (ft)	1654.642
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2016-10-11	2.214567	3.039764	2.834646	Normal	2	3	6
2016-09-11	1.609449	4.155906	1.909449	Normal	2	2	4
2016-08-12	2.328347	3.626378	1.610236	Dry	1	1	1
Result							Normal Conditions - 11



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Development Center



ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PIERCE	42.1986, -97.5172	1575.131	11.867	79.511	6.284	8794	90
PIERCE 2.6 NNE	42.2342, -97.5104	1630.906	2.484	55.775	1.256	37	0
NORFOLK 4W	42.0289, -97.4855	1544.948	11.837	30.183	5.684	1	0
OSMOND	42.3569, -97.5969	1649.934	11.672	74.803	6.126	2436	0
RANDOLPH 6 S	42.2944, -97.3647	1774.934	10.23	199.803	6.647	58	0
NORFOLK KARL STEFAN MEM AP	41.98, -97.4336	1562.008	15.7	13.123	7.271	27	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	42.361223, -97.591870
Observation Date	2018-11-17
Elevation (ft)	1654.642
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2018-11-17	0.529134	1.187795	1.283465	Wet	3	3	9
2018-10-18	1.487795	3.698819	2.937008	Normal	2	2	4
2018-09-18	1.712598	3.437795	1.602362	Dry	1	1	1
Result							Normal Conditions - 14



**US Army Corps
of Engineers®**

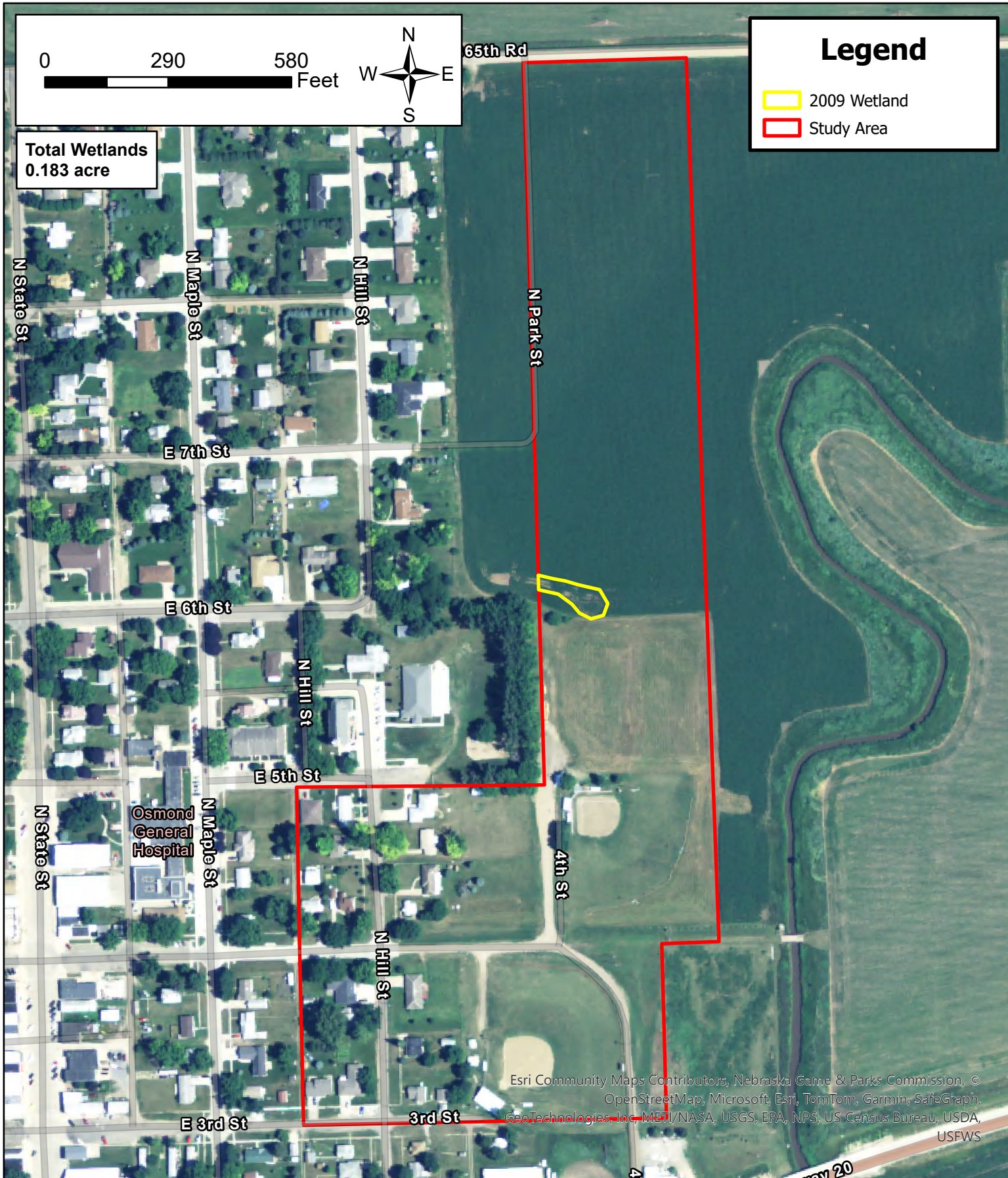
Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



ERDC
ENGINEER RESEARCH & DEVELOPMENT CENTER

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PIERCE	42.1986, -97.5172	1575.131	11.867	79.511	6.284	9524	90
PIERCE 2.6 NNE	42.2342, -97.5104	1630.906	2.484	55.775	1.256	37	0
NORFOLK 4W	42.0289, -97.4855	1544.948	11.837	30.183	5.684	1	0
OSMOND	42.3569, -97.5969	1649.934	11.672	74.803	6.126	1715	0
RANDOLPH 6 S	42.2944, -97.3647	1774.934	10.23	199.803	6.647	49	0
NORFOLK KARL STEFAN MEM AP	41.98, -97.4336	1562.008	15.7	13.123	7.271	27	0



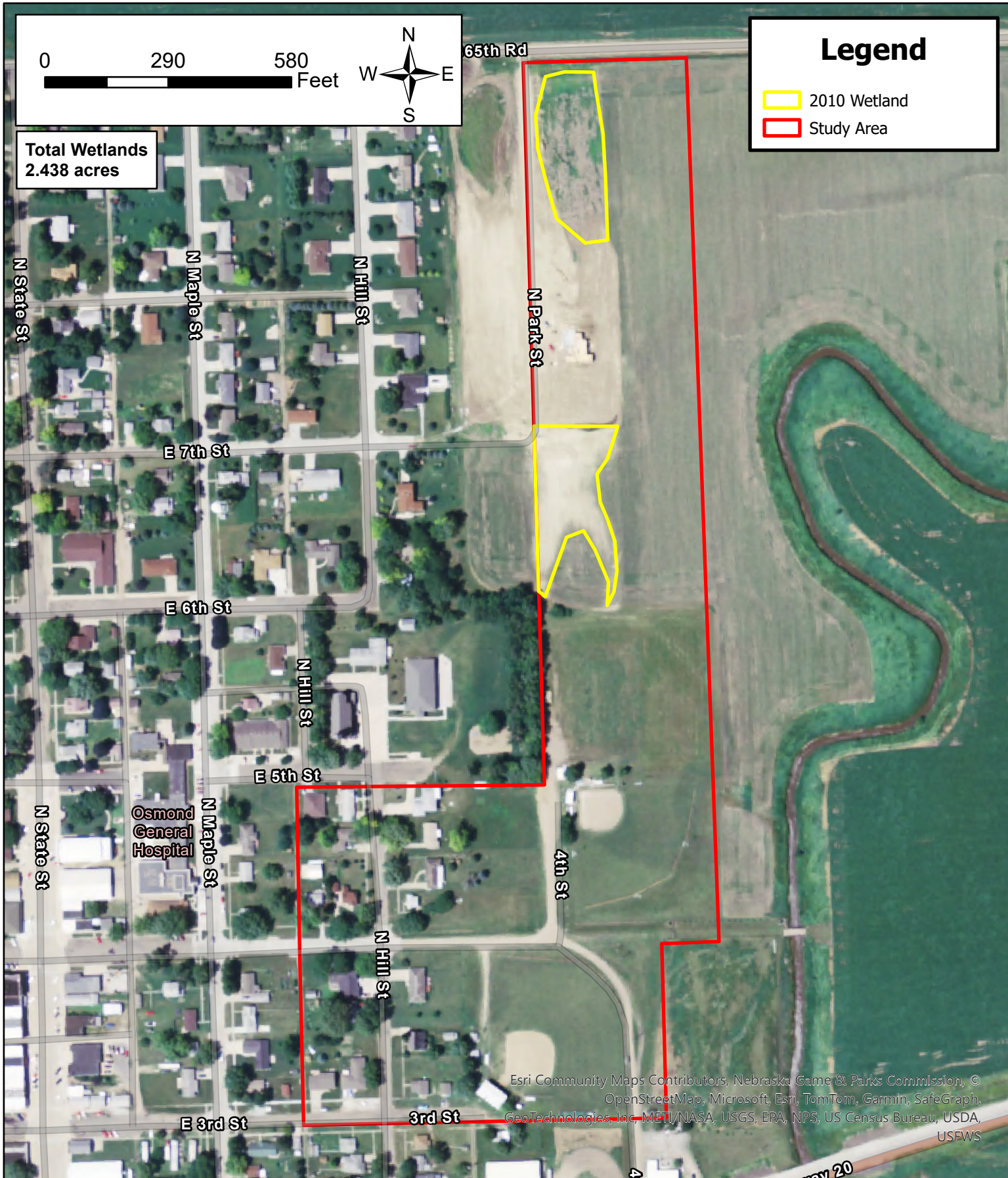
Created By: K. Boden
Date: 7/22/2024
Software: ArcGIS Pro 3.0.3
File: North Fork Elkhorn River WFPO.aprx

LENRD North Fork Elkhorn River Osmond

Figure 1 - 2009 NAIP Imagery
Pierce County, Nebraska

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.



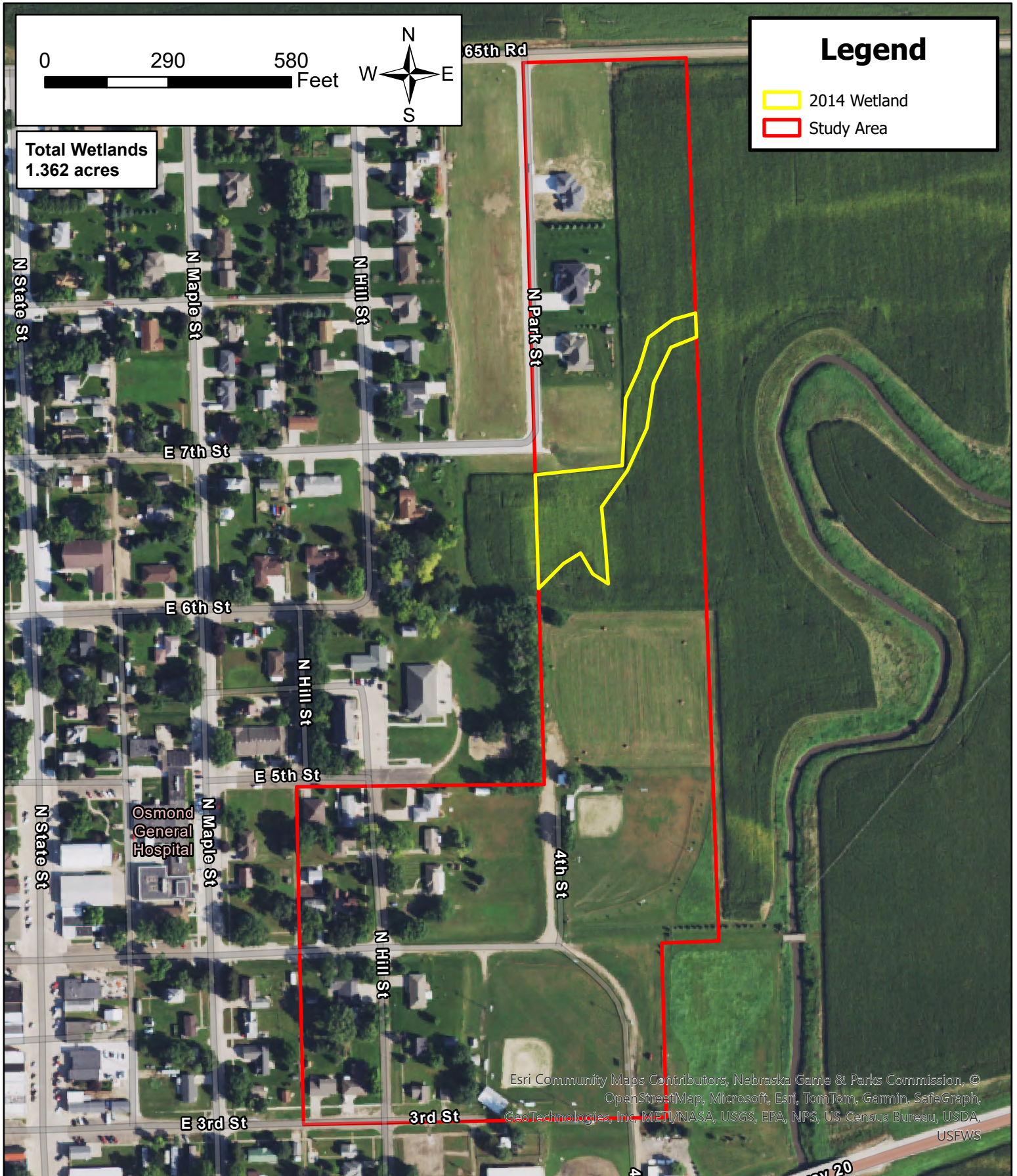


Created By: K. Boden
Date: 7/22/2024
Software: ArcGIS Pro 3.0.3
File: North Fork Elkhorn River WFPO.aprx

LENRD North Fork Elkhorn River Osmond

Figure 2 - 2010 NAIP Imagery
Pierce County, Nebraska

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.

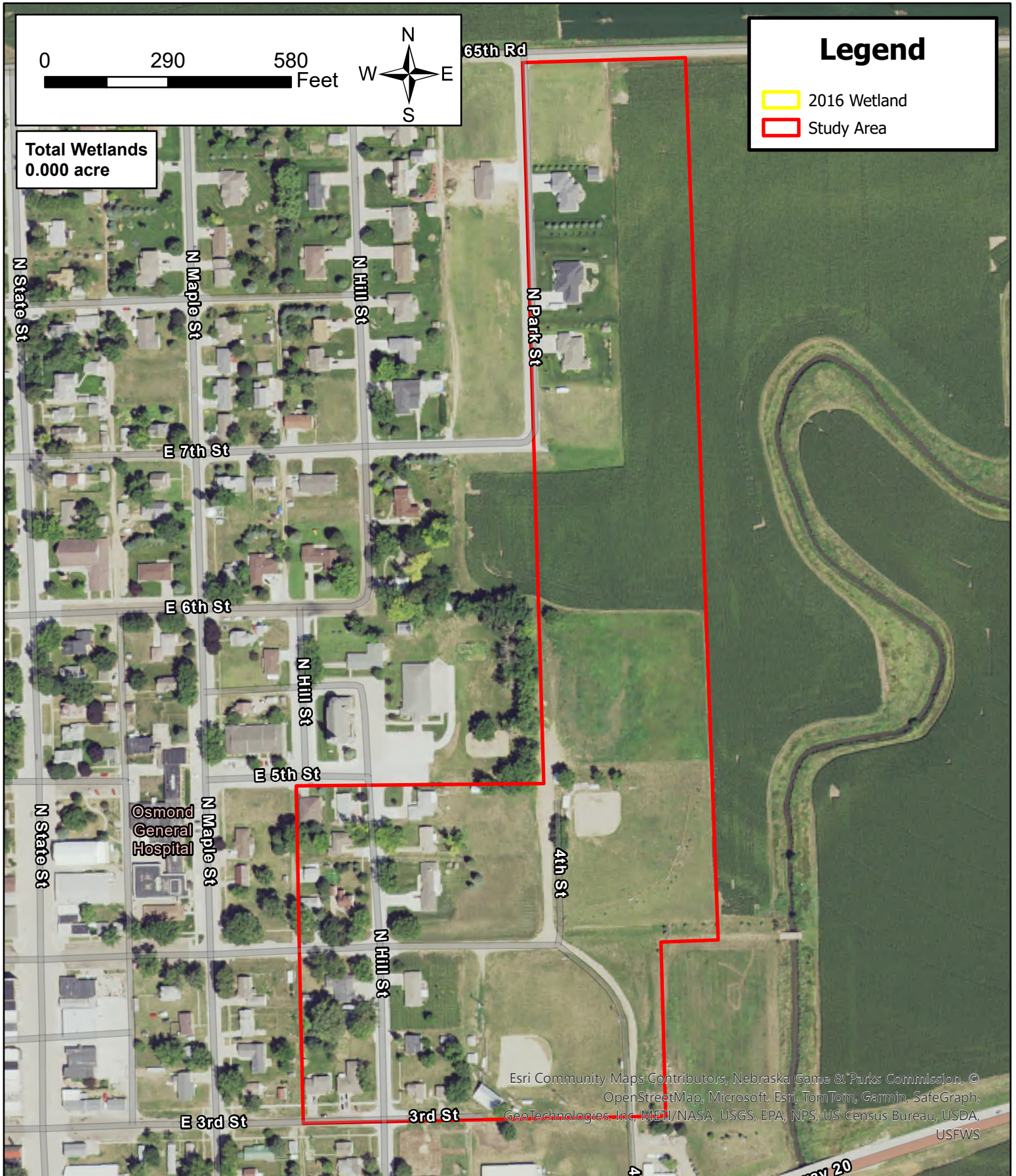


Created By: K. Boden
Date: 7/22/2024
Software: ArcGIS Pro 3.0.3
File: North Fork Elkhorn River WFPO.aprx

LENRD North Fork Elkhorn River Osmond

Figure 3 - 2014 NAIP Imagery
Pierce County, Nebraska

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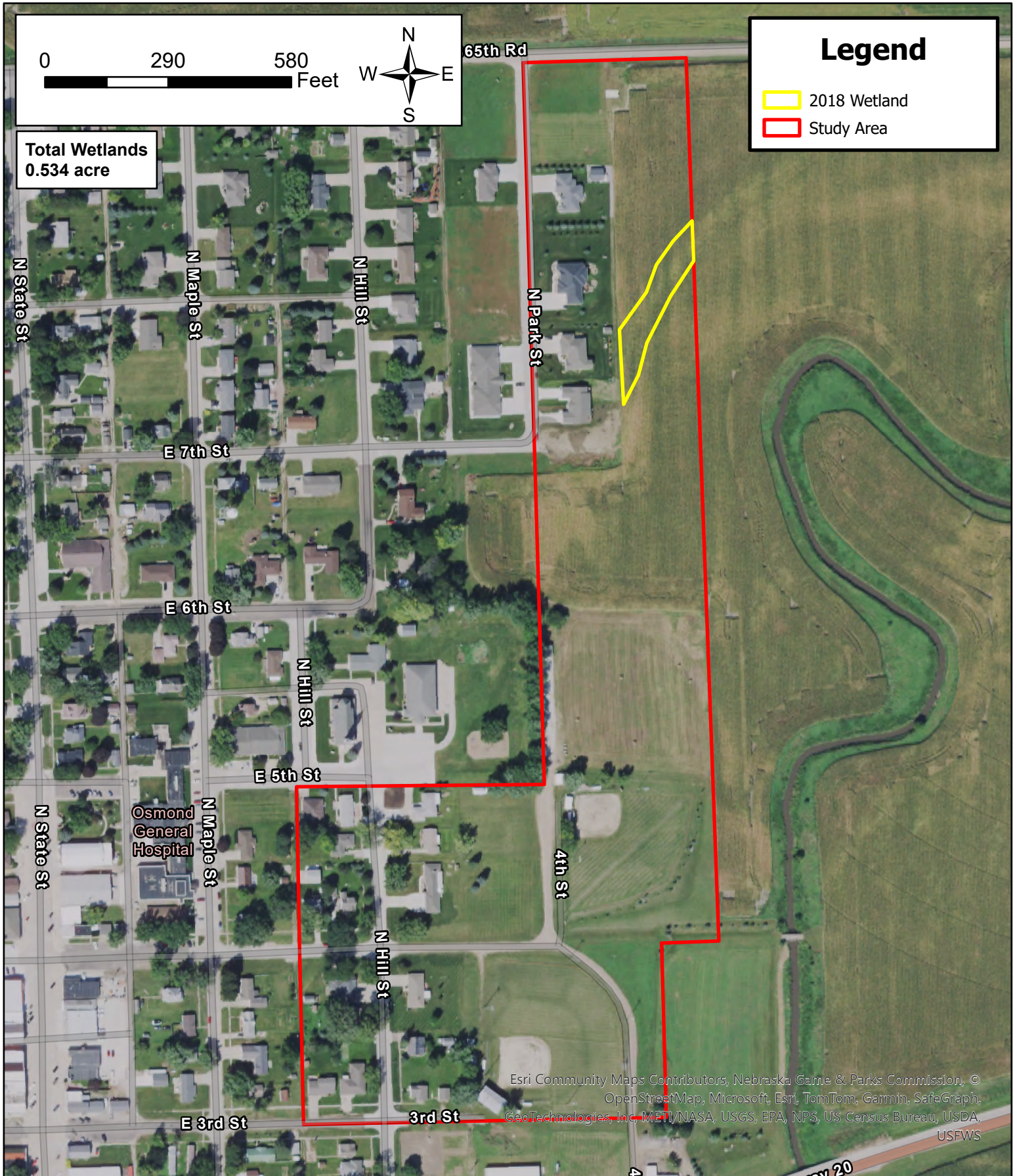
Created By: K. Boden
Date: 7/22/2024
Software: ArcGIS Pro 3.0.3
File: North Fork Elkhorn River WFPO.aprx

LENRD North Fork Elkhorn River Osmond

Figure 4 - 2016 NAIP Imagery
Pierce County, Nebraska

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Created By: K. Boden
 Date: 7/22/2024
 Software: ArcGIS Pro 3.0.3
 File: North Fork Elkhorn River WFPO.aprx

LENRD North Fork Elkhorn River Osmond

Figure 5 - 2018 NAIP Imagery
 Pierce County, Nebraska

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.





Created By: K. Boden
 Date: 7/22/2024
 Software: ArcGIS Pro 3.0.3
 File: North Fork Elkhorn River WFPO.aprx

This map was prepared using information from record drawings supplied by JEO and/or other applicable city, county, federal, or public or private entities. JEO does not guarantee the accuracy of this map or the information used to prepare this map. This is not a scaled plot.

LENRD North Fork Elkhorn River Osmond

Figure 6 - Greater than 50% Overlap
Pierce County, Nebraska





Environmental Review Report

Project Information

Report Generation Date:	9/26/2024 12:28:09 PM
Project Title:	North Fork Elkhorn River WFPO - Osmond ARA
User Project Number(s):	201302.00
System Project ID:	NE-CERT-013293
Project Type:	NRCS Projects/Practices
Project Activities:	356 - Dike (Ft)
Project Size:	31.88 acres
County(s):	Pierce
Watershed(s):	Elkhorn
Watershed(s) HUC 8:	North Fork Elkhorn
Watershed(s) HUC 12:	City of Osmond-North Fork Elkhorn River
Biologically Unique Landscape(s):	None
Township/Range and/or Section(s):	T28R02WS30; T28R02WS31
Latitude/Longitude:	42.361445 / -97.592379

Contact Information

Organization:	JEO Consulting Group
Contact Name:	Dillon Vogt
Contact Phone:	4024748798
Contact Email:	dvogt@jeo.com
Contact Address:	2000 Q St Ste 500 Lincoln NE 68503
Prepared By:	
Submitted On Behalf Of:	LENRD

Project Description

Flood control study for Osmond.

The Nebraska Nongame and Endangered Species Conservation Act (NESCA)

The Nebraska Game and Parks Commission (Commission or NGPC) has responsibility for protecting state-listed endangered and threatened species under authority of the Nongame and Endangered Species Conservation Act (NESCA) (Neb. Rev. Stat. § 37-801 to 37-814). Pursuant to §37-807 (3)(c) of NESCA, **all state agencies shall, in consultation with the Commission, ensure projects they authorize (i.e., issue a permit for), fund or carry out do not jeopardize the continued existence of state-listed endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. If a proposed project may affect state-listed species or designated critical habitat, further consultation with the Commission is required.**

Informal consultation pursuant to NESCA can be completed by using the Conservation and Environmental Review Tool (CERT). The CERT analyzes the project type and location, and based on the analysis, provides information about potential impacts to listed species, habitat questions and/or conservation conditions.

- If project proponent agrees to implement conservation conditions, as outlined in the report and applicable to the project type, then this document serves as documentation of consultation with the Commission and the following actions can be taken to move forward with the project:
 - Sign the report in the designated areas, and
 - Upload the signed and dated report into the project within CERT, and
 - Change the edit status to Final from Draft status.
- When these actions are completed, no additional coordination (i.e., contacting the Commission) is required.
- If the report indicates further consultation is required in the Overall Results section on the following page and/or conservation conditions cannot be met, then the following actions must be taken:
 - Project proponent is required to contact and consult with the Commission. Contact information can be found under the Additional Considerations section.

Review the Overall Results section on the following page for further instructions.

Disclaimer

The U.S. Fish and Wildlife Service has responsibility for conservation and management of fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act; 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act.

It is recommended that a project start with requesting an Official Species List via the Information for Planning and Consultation ([IPaC Tool](#)), to begin informal consultation with the U.S. Fish & Wildlife Service.

The information generated in a CERT Environmental Review Report DOES NOT satisfy consultation obligations between the lead federal agency and the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act (ESA).

For the purposes of ESA, the information in this report should be considered as technical assistance, and does not serve as the U.S. Fish and Wildlife Service's concurrence letter, even if the user signs and agrees to implement conservation conditions in order to satisfy consultation requirements of NESCA.

Review the Additional Considerations section for further information.

Overall Results

The following result is based on a detailed analysis of your project.

- The project may have potential impacts on state-listed species. More information is needed, please answer the questions under the Question and Conservation Conditions section. If conservation conditions are required, review the Conservation Conditions Agreement section. Additional consultation with the Nebraska Game and Parks Commission may or may not be required; please review all the information provided in this document.

Questions and Conservation Conditions

Northern Long-eared Bat

This project is within the range of the state and federally listed endangered Northern long-eared bat (NLEB) (*Myotis septentrionalis*).

Suitable summer roosting habitat for NLEB consist of forests or woodlots which contain suitable roost trees. In Nebraska, suitable roost trees consist of deciduous and/or pine live or dead trees or snags that are greater than or equal to 3 dbh (diameter at breast height) that exhibit peeling bark or have cracks, crevices or cavities. Linear features such as fencerows, riparian forests, and other wooded corridors are suitable for NLEB if they contain potential roost trees. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat.

NLEB have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat when they are within 1000 feet of suitable forested habitat (see above).

Examples of **UN-SUITABLE** habitat for the NLEB include:

- Individual trees that are greater than 1,000 feet from forested/wooded areas;
- Trees found in highly developed urban areas (e.g., street trees, downtown areas) – but note that NLEBs sometimes use relatively extensive forested natural areas within urban areas for summer roosting habitat;
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees.

Habitat Questions for Northern Long-eared Bat:

Is suitable summer habitat, as defined above, located within 1000 feet of the project activities?

☐ Unknown.

☐ No. Conservation measures are not needed for this species unless otherwise indicated. **Additional habitat questions for this species are not applicable if suitable habitat is not present.**

☐ Yes. The following conservation measures must be implemented in order to avoid adverse impacts on Northern long-eared bat.

NLEB CM-2: No removal of suitable trees or roosting structures between May 15 and July 31 (maternity roosting season).

Small White Lady's Slipper

This project is within the range of the state-listed threatened small white lady's slipper (*Cypripedium candidum*).

Habitat Questions for Small White Lady's Slipper:

Is the Action Area within or adjacent to grasslands and flowering plants that are located on low, flat areas adjacent to a stream?

Is the Action Area within 100-feet of a sidehill seep with grasses and flowering plants that has no history of tillage?

Does the Action Area occur in a drainage (ditch, waterway, or other moist soil sites) that contains grasses and flowering plants AND is associated with an grassland with flowering plants that are located on low, flat areas adjacent to a stream?

☐ Unknown for ANY question.

☐ No for ALL questions. Conservation measures are not needed for this species unless otherwise indicated.

☐ Yes for ANY of the questions. The following conservation measures must be implemented in order to avoid adverse impacts on small white lady's slipper:

If "YES" was checked for the habitat questions, then this project **"MAY AFFECT"** small white lady's slipper.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species.

Contact the Nebraska Game and Parks Commission prior to proceeding with the project.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (*Platanthera praeclara*).

Habitat Questions for Western Prairie Fringed Orchid:

Does the area of potential effect have no history of cropping and include undisturbed wet mesic prairie and sedge meadows in alluvial soils of river floodplains or sandy soils of subirrigated meadows and prairie swales?

OR

Does the area of potential effect have no cropping history and within 100 feet of a natively vegetated sidehill seep type wetland (identified by the National Wetland Inventory, an official or certified wetland determination, or identified as a stream on a USGS quadrangle map, NWI or soil survey)?

Note: The area of potential effect described in the two previous questions includes the wetland related habitats along with upstream/upslope adjacent areas.

Note: Individuals with the orchid job approval authority may eliminate ("no effect") Grade D Freshwater Wet Meadows and Tallgrass Prairies with proper site inspections and species composition documentation.

☐ Unknown for EITHER question

☐ No for BOTH questions. Conservation measures are not needed for this species unless otherwise indicated.

☐ Yes for EITHER question. The following conservation measures must be implemented in order to avoid adverse impacts on western prairie fringed orchid:

If "YES" was checked for the habitat question, then this project **"MAY AFFECT"** western prairie fringed orchid.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species.

Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service prior to proceeding with the project.

Conservation Measures Agreement

Based on the information contained in the report, follow the instructions for A, B or C below.

A) If one or more of the habitat questions were answered with "Yes", insert an "X" for one of the two Options below:

_____ **Option 1.** For all species for which there is habitat present (as indicated by checking "Yes" to a habitat question) I understand and agree to implement and/or incorporate the conservation measures for those species as indicated. By agreeing to implement and/or incorporate the conservation measures for those species as indicated, no further consultation with the Nebraska Game and Parks Commission is required.

Sign and date on the line below, and also sign and date the Certification section. Submit a copy of the signed and dated (i.e. certified) report with any type of permit/application required for the project.

Applicant/project proponent signature

Date

_____ **Option 2.** I have concerns regarding one or more of the conservation measures. Sign the Certification section below. When submitting the project as "Final" in CERT, please attach a separate document explaining your concerns with the conservation measures and why they cannot be implemented. Then, contact the Nebraska Game and Parks Commission for further information.

B) If one or more habitat questions were answered with "Unknown" then leave your project as "Draft" and contact the Nebraska Game and Parks Commission for more information. Once your concerns are addressed with the Commission, adjust your answer to "Yes" or "No", sign and date under the Certification section, upload the report using the File Attachments feature and change the Edit Status to "Final".

C) If ALL the habitat questions were answered "No" then sign the Certification section below and submit the project as "Final" in CERT. Once these steps are completed, no additional correspondence with the Nebraska Game and Parks Commission is required. Submit a copy of the signed report with any type of permit/application needed for the project.

Additional coordination with the U.S. Fish and Wildlife Service may be necessary depending on the determination made by the lead federal agency pursuant to their obligations under the Endangered Species Act (ESA).

Certification

I certify that ALL the project information in this report (including project location, project size/configuration, project type, project activities, answers to questions) is true, accurate and complete. If the project type, activities, location, size, or configuration of the project change; if a species listing status is reclassified; if a new species is listed; or if any of the answers to any questions asked in this report change, then this document is no longer valid, and re-consultation with the Nebraska Game and Parks Commission is required.

Applicant/project proponent signature

Date

Additional Considerations

Nebraska Game and Parks Commission

Environmental Review Team
2200 North 33 Street
Lincoln, NE 68503
Phone: (402) 471-5423
Email: ngpc.envreview@nebraska.gov

U.S. Fish and Wildlife Service

Nebraska Ecological Services
9325 South Alda Road
Wood River, NE 68883
Phone: (308) 382-6468
Email: nebraskaes@fws.gov

U.S. Army Corps of Engineers

Omaha Regulatory Office
8901 South 154 Street
Omaha, NE 68138
Phone: (402) 896-0896
Email: NE404Reg@usace.army.mil

The following federal laws contribute to the conservation and management of fish and wildlife resources in the United States: Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Clean Water Act, and the Fish and Wildlife Coordination Act.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*). Under the Eagle Act, "take" of eagles, their parts, nests or eggs is prohibited. Disturbance resulting in injury to an eagle or a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior is a form of "take."

Nebraska Specific Information

Bald eagles use mature, forested riparian areas near rivers, streams, lakes, and wetlands and occur along all the major river systems in Nebraska. The bald eagle southward migration begins as early as October and the wintering period extends from December-March. The golden eagle is found in arid open country with grassland for foraging in western Nebraska and usually near buttes or canyons which serve as nesting sites. Golden eagles are often a permanent resident in the Pine Ridge area of Nebraska. Additionally, many bald and golden eagles nest in Nebraska from mid-February through mid-July. Disturbances within 0.5-miles of an active nest or within line-of-sight of the nest could cause adult eagles to discontinue nest building or to abandon eggs. Both bald and golden eagles frequent river systems in Nebraska during the winter where open water and forested corridors provide feeding, perching, and roosting habitats, respectively. The frequency and duration of eagle use of these habitats in the winter depends upon ice and weather conditions. Human disturbances and loss of wintering habitat can cause undue stress leading to cessation of feeding and failure to meet winter thermoregulatory requirements. These affects can reduce the carrying capacity of preferred wintering habitat and reproductive success for the species.

To comply with the Eagle Act, it is recommended that the project proponent determine if the proposed project would impact bald or golden eagles or their habitats. This can be done by conducting a habitat assessment, surveying nesting habitat for active and inactive nests, and surveying potential winter roosting habitat to determine if it is being used by eagles. The area to be surveyed is dependent on the type of project; however for most projects we recommend surveying the project area and a ½ mile buffer around the project area. If it is determined that either species could be affected by the proposed project, the Commission recommends that the project proponent notify the Nebraska Game and Parks Commission as well as the Nebraska Field Office, U.S. Fish and Wildlife Service for recommendations to avoid "take" of bald and golden eagles.

Migratory Bird Treaty Act and Nebraska Revised Statute §37-540

We recommend the project proponent comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712: Ch. 128 as amended) (MBTA). The project proponent should also comply with Nebraska Revised Statute §37-540, which prohibits take and destruction of nests or eggs of protected birds (as defined in Nebraska Revised Statute §37-237.01). Construction activities in grassland, wetland, stream, woodland, and river bank habitats that would result in impacts on birds, their nests or eggs protected under these laws should be avoided. Although the provisions of these laws are applicable year-round, most migratory bird nesting activity in Nebraska occurs during the period of April 1 to July 15. However, some migratory birds are known to nest outside of the aforementioned primary nesting season period. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15, whereas sedge wrens, which occur in some wetland habitats, normally nest from July 15 to September 10. If development in this area

is planned to occur during the primary nesting season or at any other time which may result in impacts to birds, their nests or eggs protected under these laws, we request that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the absence or presence of nesting migratory birds. If a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities, the Nebraska Game and Parks Commission and the Nebraska Field Office, U.S. Fish and Wildlife Service should be contacted immediately. For more information on avoiding impacts to migratory birds, their nests and eggs, or to report active bird nests that cannot be avoided by planned construction activities, please contact the U.S. Fish and Wildlife Service and/or the Nebraska Game and Parks Commission (contact information within report). Adherence to these guidelines will help avoid unnecessary impacts on migratory birds.

Fish and Wildlife Coordination Act

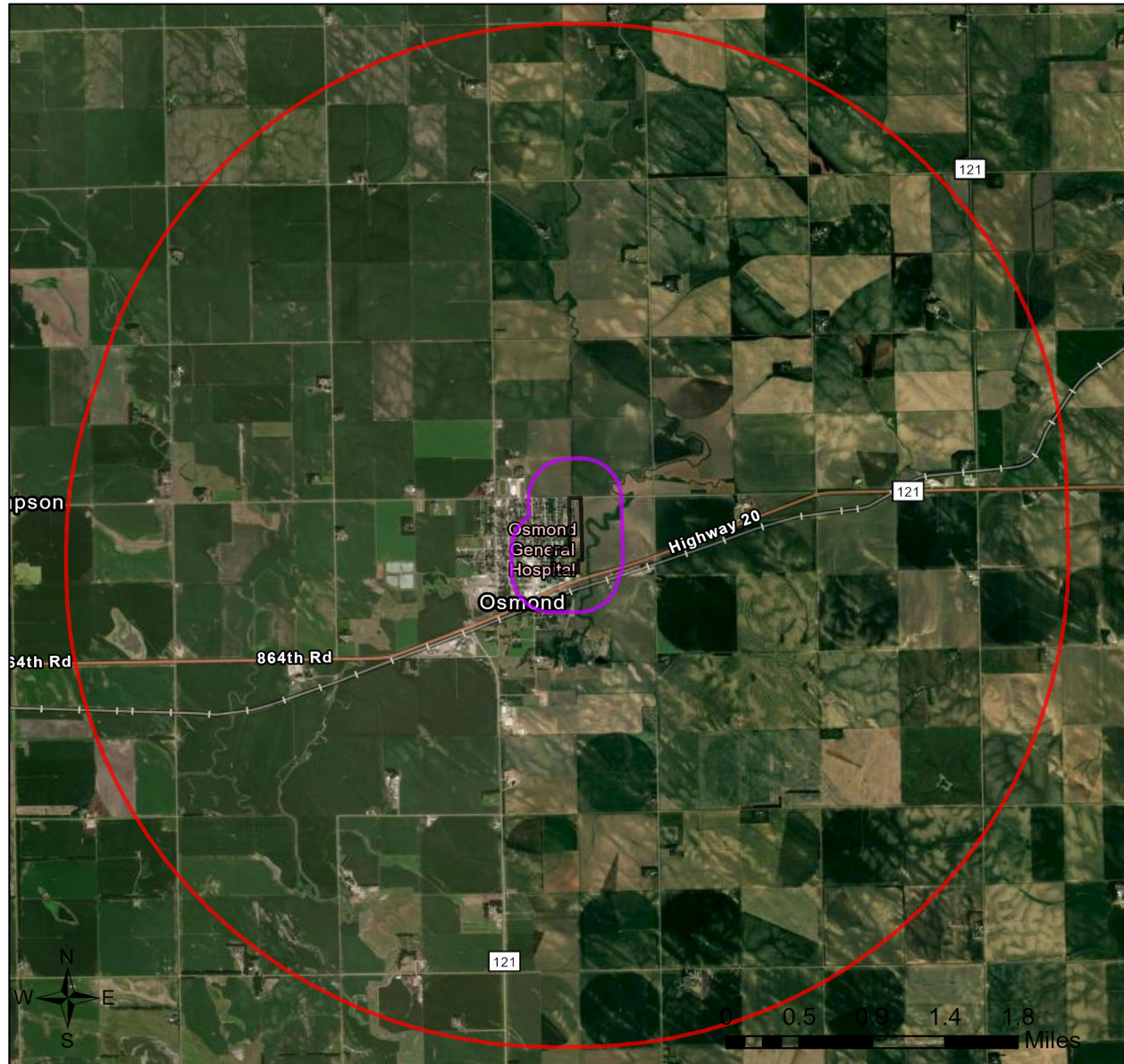
The Fish and Wildlife Coordination Act (FWCA) requires consultation with the U.S. Fish and Wildlife Service (Service) and the State fish and wildlife agency (i.e., Nebraska Game and Parks Commission) for the purpose of preventing loss of and damage to fish and wildlife resources in the planning, implementation, and operation of federal and federally funded, permitted, or licensed water resource development projects. This statute requires that federal agencies take into consideration the effect that the water related project would have on fish and wildlife resources, to take action to prevent loss or damage to these resources, and to provide for the development and improvement of these resources. The comments in this letter are provided as technical assistance only and are not the document required of the Secretary of the Interior pursuant to Section 2(b) of FWCA on any required federal environmental review or permit. This technical assistance is valid only for the described conditions and will have to be revised if significant environmental changes or changes in the proposed project take place. In order to determine whether the effects to fish and wildlife resources from the proposed project are being considered under FWCA, the lead federal agency must notify the Service in writing of how the comments and recommendations in this technical assistance letter are being considered into the proposed project.

Section 404 of the Clean Water Act

In general, the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service have concerns for impacts to wetlands, streams and riparian habitats. We recommend that impacts to wetlands, streams, and associated riparian corridors be avoided and minimized, and that any unavoidable impacts to these habitats be mitigated. If any fill materials will be placed into waterways or wetlands, the U.S. Army Corps of Engineers Regulatory Office in Omaha should be contacted to determine if a 404 permit is needed.

North Fork Elkhorn River WFPO - Osmond ARA

Aerial Image Basemap With Locator Map



3-mile Information Buffer Boundary

Project Review Boundary

Project Boundary

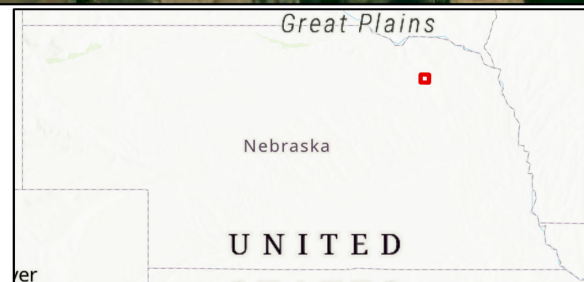
Project Size (acres): 31.88

Lat/Long (DD): 42.3614 / -97.5924

County(s): Pierce

BUL(s):

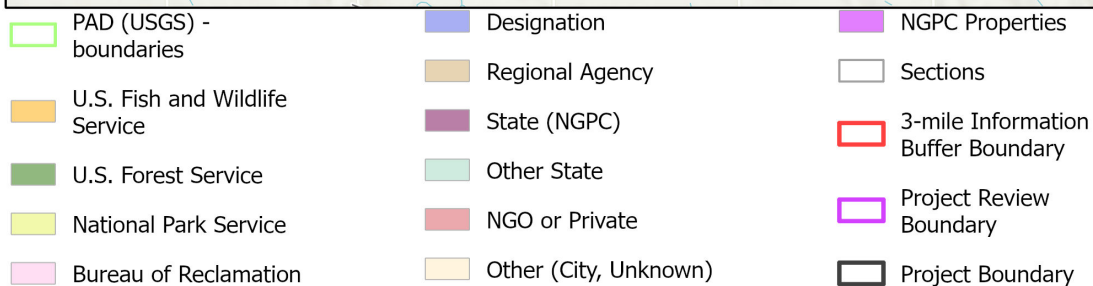
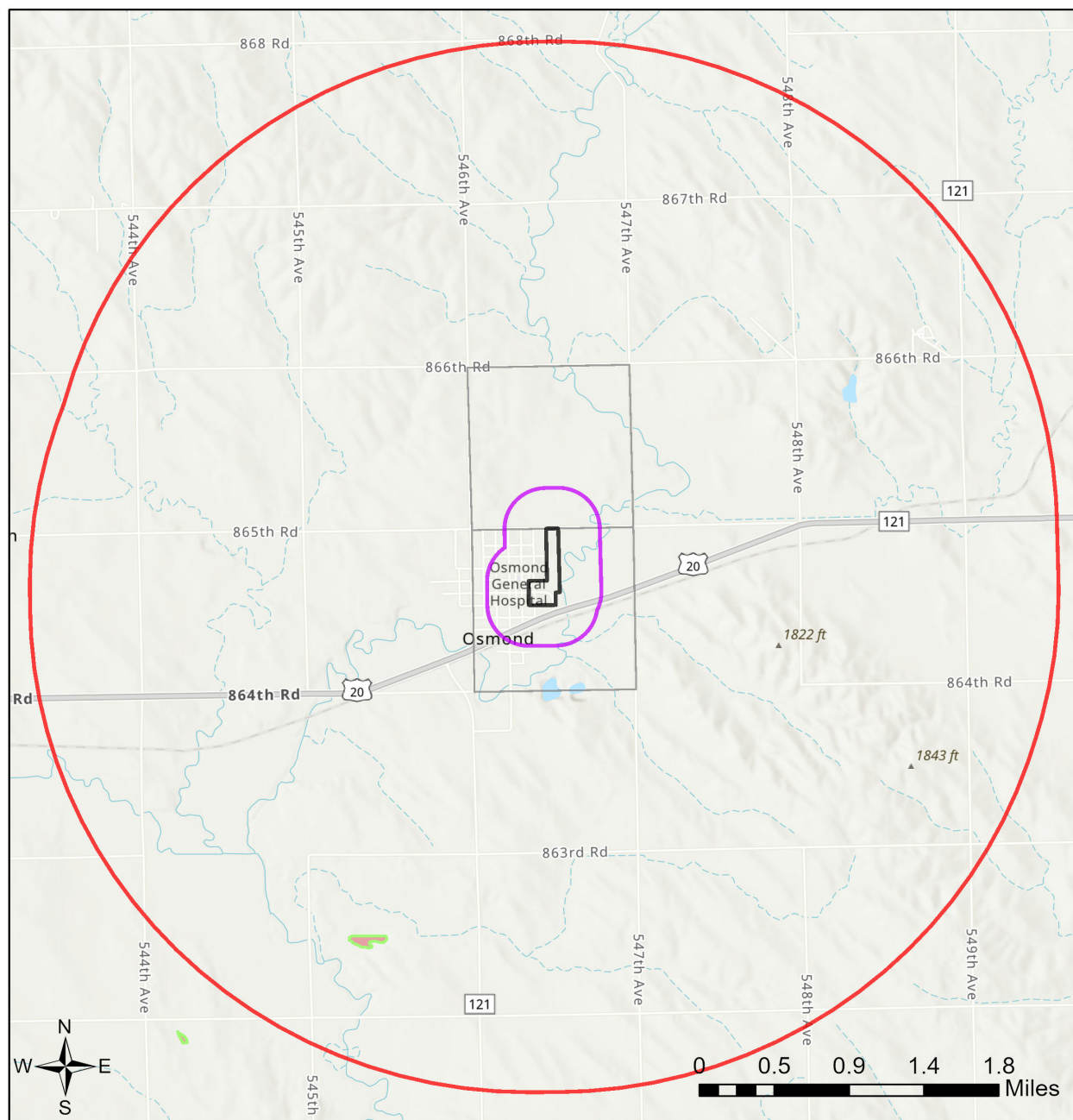
Township/Range/Section(s): T28R02WS30; T28R02WS31



Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS
Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Earthstar Geographics

North Fork Elkhorn River WFPO - Osmond ARA

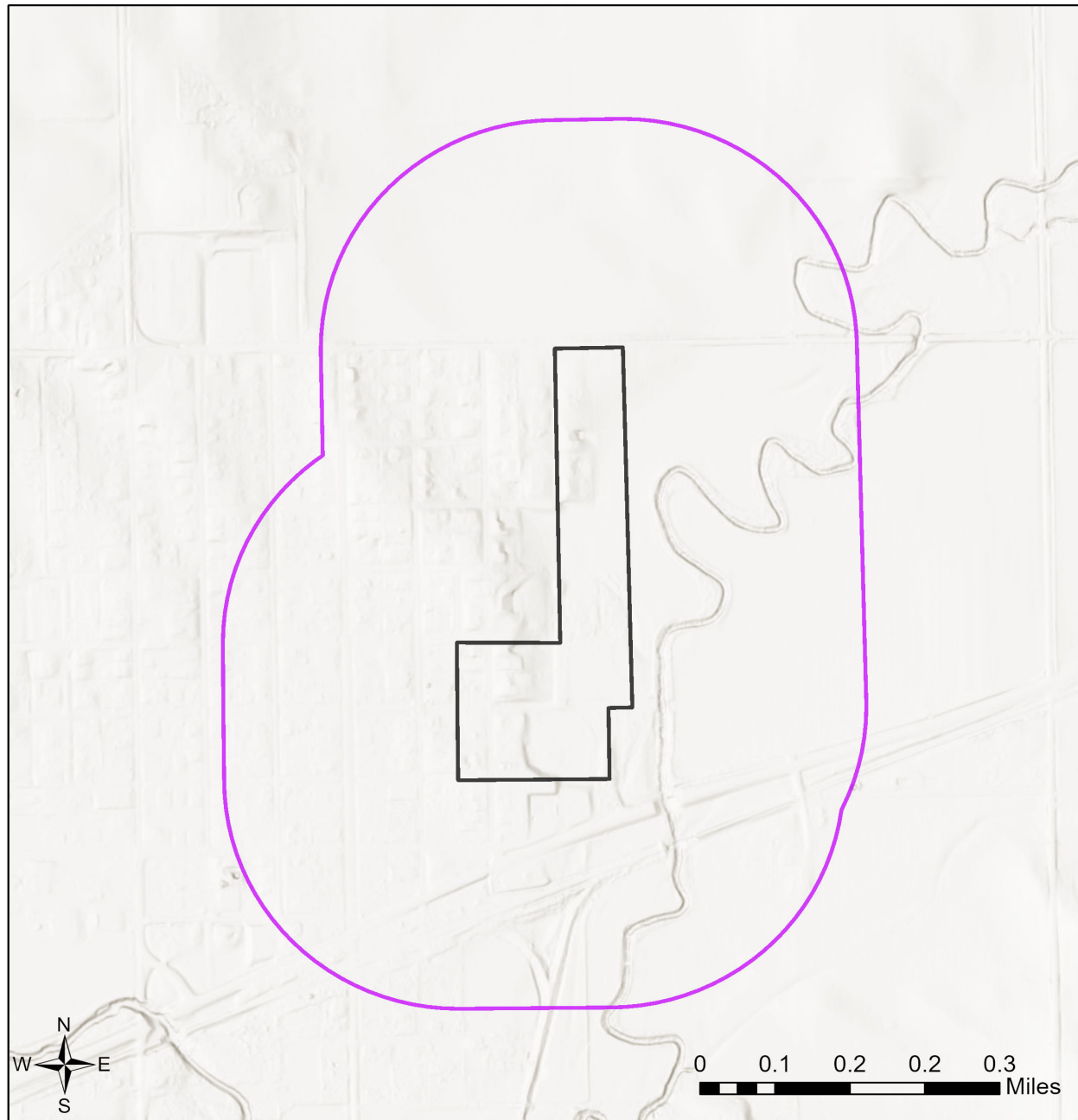
Topographic Basemap With Sections and Protected Areas



Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, USDA, USFWS
Esri, NASA, NGA, USGS

North Fork Elkhorn River WFPO - Osmond ARA

Web Map As Submitted By User



-  Project Review Boundary
-  Project Boundary

Esri, NASA, NGA, USGS, FEMA

Table 1
Protected Areas in Immediate Vicinity of Project (project review area)

This table has no results.

Table 2
Documented Occurrences in Immediate Vicinity of Project (project review area):
Natural communities and selected special areas

This table has no results.

Table 3
Regional Documented Occurrences of Species within 1 Mile of Project Review Area:
Tier 1 and 2 at-risk species and additional S1-S3 plants

This table has no results.

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Argynnis idalia	Regal Fritillary	Range			Tier 1	S3	G3?	
Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	
Atrytone arogos iowa	Iowa Skipper	Range			Tier 1	S1	G2G3T2T3	
Boloria myrina nebraskensis	Nebraska Fritillary	Range			Tier 1	SNR	G5?T3T4	
Boloria myrina sabulocollis	Kohler's Fritillary	Range			Tier 1	S1S2	G5?T3	
Calidris subruficollis	Buff-breasted Sandpiper	Range			Tier 1	S2N	G4	
Catocala nuptialis	Married Underwing	Range			Tier 1	SNR	G3	
Catocala whitneyi	Whitney Underwing	Range			Tier 1	S1	G2G3	
Cicindela limbata limbata	Sandy Tiger Beetle	Range			Tier 1	S4	G5T3T4	
Coccyzus erythrophthalmus	Black-billed Cuckoo	Range			Tier 1	S3	G5	
Cypripedium candidum	Small White Lady's Slipper	Range		T	Tier 1	S1	G4	
Danaus plexippus	Monarch	Range			Tier 1	S2	G4	
Ellipsoptera lepida	Ghost Tiger Beetle	Range			Tier 1	S2	G3	
Emydoidea blandingii	Blanding's Turtle	Range			Tier 1	S4	G4	
Euphyes bimacula illinois	Two-spotted Skipper	Range			Tier 1	S3	G4T1T2	

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Euphyes conspicua buchholzi	Bucholz Black Dash	Range			Tier 1	S1	G4G5T1	
Fundulus sciadicus	Plains Topminnow	Range			Tier 1	S3	G4	
Haliaeetus leucocephalus	Bald Eagle	Range			Tier 2	S3	G5	
Hesperia ottoe	Ottoe Skipper	Range			Tier 1	S2	G3	
Hybognathus argyritis	Western Silvery Minnow	Range			Tier 1	S2	G4	
Hybognathus placitus	Plains Minnow	Range			Tier 1	S2	G4	
Lanius ludovicianus	Loggerhead Shrike	Range			Tier 1	S3	G4	
Lasiurus borealis	Eastern Red Bat	Range			Tier 1	S3	G3G4	
Lasiurus cinereus	Hoary Bat	Range			Tier 1	S3	G3G4	
Lethe eurydice fumosus	Smoky-eyed Brown	Range			Tier 1	S3	G5T3T4	
Myotis septentrionalis	Northern Long-eared Myotis	Range	E	E	Tier 1	S1S2	G2G3	
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G3G4	
Perognathus flavescens perniger	Plains Pocket Mouse	Range			Tier 1	SNR	G5TNR	
Platanthera praeclara	Western Prairie Fringed Orchid	Range	T	T	Tier 1	S2	G3	



Environmental Review Report

Project Information

Report Generation Date:	9/26/2024 12:20:09 PM
Project Title:	North Fork Elkhorn River WFPO - Pierce ARA
User Project Number(s):	201302.00
System Project ID:	NE-CERT-013292
Project Type:	NRCS Projects/Practices
Project Activities:	322 - Channel Bank Vegetation (Ac) - riparian/wetland practice 342 - Critical Area Planting (Ac) 356 - Dike (Ft) 410 - Grade Stabilization Structure (No) 412 - Grassed Waterway (Ac) - cropland practice 580 - Streambank and Shoreline Protection (Ft) - riparian/wetland practice 582 - Open Channel (Ft) 584 - Stream Channel Stabilization (Ft) - riparian/wetland practice
Project Size:	620.54 acres
County(s):	Pierce
Watershed(s):	Elkhorn
Watershed(s) HUC 8:	North Fork Elkhorn
Watershed(s) HUC 12:	City of Pierce-North Fork Elkhorn River; Lower Willow Creek; Pleasant View School
Biologically Unique Landscape(s):	None
Township/Range and/or Section(s):	T26R02WS20; T26R02WS21; T26R02WS22; T26R02WS23; T26R02WS26; T26R02WS27; T26R02WS28; T26R02WS29; T26R02WS33; T26R02WS34
Latitude/Longitude:	42.207728 / -97.538387

Contact Information

Organization:	JEO Consulting Group
Contact Name:	Dillon Vogt
Contact Phone:	4024748798
Contact Email:	dvogt@jeo.com
Contact Address:	2000 Q St Ste 500 Lincoln NE 68503
Prepared By:	
Submitted On Behalf Of:	LENRD

Project Description

Flood control study for Pierce.

The Nebraska Nongame and Endangered Species Conservation Act (NESCA)

The Nebraska Game and Parks Commission (Commission or NGPC) has responsibility for protecting state-listed endangered and threatened species under authority of the Nongame and Endangered Species Conservation Act (NESCA) (Neb. Rev. Stat. § 37-801 to 37-814). Pursuant to §37-807 (3)(c) of NESCA, **all state agencies shall, in consultation with the Commission, ensure projects they authorize (i.e., issue a permit for), fund or carry out do not jeopardize the continued existence of state-listed endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. If a proposed project may affect state-listed species or designated critical habitat, further consultation with the Commission is required.**

Informal consultation pursuant to NESCA can be completed by using the Conservation and Environmental Review Tool (CERT). The CERT analyzes the project type and location, and based on the analysis, provides information about potential impacts to listed species, habitat questions and/or conservation conditions.

- If project proponent agrees to implement conservation conditions, as outlined in the report and applicable to the project type, then this document serves as documentation of consultation with the Commission and the following actions can be taken to move forward with the project:
 - Sign the report in the designated areas, and
 - Upload the signed and dated report into the project within CERT, and
 - Change the edit status to Final from Draft status.
- When these actions are completed, no additional coordination (i.e., contacting the Commission) is required.
- If the report indicates further consultation is required in the Overall Results section on the following page and/or conservation conditions cannot be met, then the following actions must be taken:
 - Project proponent is required to contact and consult with the Commission. Contact information can be found under the Additional Considerations section.

Review the Overall Results section on the following page for further instructions.

Disclaimer

The U.S. Fish and Wildlife Service has responsibility for conservation and management of fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act; 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act.

It is recommended that a project start with requesting an Official Species List via the Information for Planning and Consultation ([IPaC Tool](#)), to begin informal consultation with the U.S. Fish & Wildlife Service.

The information generated in a CERT Environmental Review Report DOES NOT satisfy consultation obligations between the lead federal agency and the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act (ESA).

For the purposes of ESA, the information in this report should be considered as technical assistance, and does not serve as the U.S. Fish and Wildlife Service's concurrence letter, even if the user signs and agrees to implement conservation conditions in order to satisfy consultation requirements of NESCA.

Review the Additional Considerations section for further information.

Overall Results

The following result is based on a detailed analysis of your project.

- The project may have potential impacts on state-listed species. More information is needed, please answer the questions under the Question and Conservation Conditions section. If conservation conditions are required, review the Conservation Conditions Agreement section. Additional consultation with the Nebraska Game and Parks Commission may or may not be required; please review all the information provided in this document.

Additional Information

Nebraska Game and Parks Commission Property

This project is within or near a property owned and/or managed by the Nebraska Game and Parks Commission (NGPC). Please contact the Nebraska Game and Parks Commission to determine if this project will have impacts on the property.

Questions and Conservation Conditions

Northern Long-eared Bat

This project is within the range of the state and federally listed endangered Northern long-eared bat (NLEB) (*Myotis septentrionalis*).

Suitable summer roosting habitat for NLEB consist of forests or woodlots which contain suitable roost trees. In Nebraska, suitable roost trees consist of deciduous and/or pine live or dead trees or snags that are greater than or equal to 3 dbh (diameter at breast height) that exhibit peeling bark or have cracks, crevices or cavities. Linear features such as fencerows, riparian forests, and other wooded corridors are suitable for NLEB if they contain potential roost trees. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat.

NLEB have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat when they are within 1000 feet of suitable forested habitat (see above).

Examples of **UN-SUITABLE** habitat for the NLEB include:

- Individual trees that are greater than 1,000 feet from forested/wooded areas;
- Trees found in highly developed urban areas (e.g., street trees, downtown areas) – but note that NLEBs sometimes use relatively extensive forested natural areas within urban areas for summer roosting habitat;
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees.

Habitat Questions for Northern Long-eared Bat:

Is suitable summer habitat, as defined above, located within 1000 feet of the project activities?

☐ Unknown.

☐ No. Conservation measures are not needed for this species unless otherwise indicated. **Additional habitat questions for this species are not applicable if suitable habitat is not present.**

☐ Yes. The following conservation measures must be implemented in order to avoid adverse impacts on Northern long-eared bat.

NLEB CM-2: No removal of suitable trees or roosting structures between May 15 and July 31 (maternity roosting season).

NLEB CM-4: Plant only native species adapted to site.

Small White Lady's Slipper

This project is within the range of the state-listed threatened small white lady's slipper (*Cypripedium candidum*).

Habitat Questions for Small White Lady's Slipper:

Is the Action Area within or adjacent to grasslands and flowering plants that are located on low, flat areas adjacent to a stream?

Is the Action Area within 100-feet of a sidehill seep with grasses and flowering plants that has no history of tillage?

Does the Action Area occur in a drainage (ditch, waterway, or other moist soil sites) that contains grasses and flowering plants AND is associated with an grassland with flowering plants that are located on low, flat areas adjacent to a stream?

☐ Unknown for ANY question.

☐ No for ALL questions. Conservation measures are not needed for this species unless otherwise indicated.

☐ Yes for ANY of the questions. The following conservation measures must be implemented in order to avoid adverse impacts on small white lady's slipper:

If "YES" was checked for the habitat questions, then this project **"MAY AFFECT"** small white lady's slipper.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species. Contact the Nebraska Game and Parks Commission prior to proceeding with the project.

SWLS CM-1: Survey according to protocol required during flowering period (May 15 to June 7) prior to ground disturbing activities, herbicide application, and/or conversion from haying to grazing with management for shorter duration or timing. If the species is found during the survey, further consultation with the Nebraska Game and Parks Commission is required prior to commencement of project activities. If the species is not found during the survey, work may proceed.

SWLS CM-2: Year round, no shaping or using heavy equipment causing compaction. During growing season, no repetitive travel and use light equipment (ATV, pickup, small tractor).

SWLS CM-3: No planting of introduced cool season grass (e.g. reed canarygrass, creeping foxtail) upstream from natively vegetated areas described in the habitat questions (i.e., Evaluation Parameters questions.) Plant only native species adapted to site.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (*Platanthera praeclara*).

Habitat Questions for Western Prairie Fringed Orchid:

Does the area of potential effect have no history of cropping and include undisturbed wet mesic prairie and sedge meadows in alluvial soils of river floodplains or sandy soils of subirrigated meadows and prairie swales?

OR

Does the area of potential effect have no cropping history and within 100 feet of a natively vegetated sidehill seep type wetland (identified by the National Wetland Inventory, an official or certified wetland determination, or identified as a stream on a USGS quadrangle map, NWI or soil survey)?

Note: The area of potential effect described in the two previous questions includes the wetland related habitats along with upstream/upslope adjacent areas.

Note: Individuals with the orchid job approval authority may eliminate ("no effect") Grade D Freshwater Wet Meadows and Tallgrass Prairies with proper site inspections and species composition documentation.

☐ Unknown for EITHER question

☐ No for BOTH questions. Conservation measures are not needed for this species unless otherwise indicated.

☐ Yes for EITHER question. The following conservation measures must be implemented in order to avoid adverse impacts on western prairie fringed orchid:

If "YES" was checked for the habitat question, then this project **"MAY AFFECT"** western prairie fringed orchid.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species.

Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service prior to proceeding with the project.

WPFO CM-1: Survey according to protocol required during flowering period (June 15 - July 15) prior to ground disturbing activities, herbicide application, and/or conversion from haying to grazing with management for shorter duration or timing. If the species is found during the survey, further consultation with the Nebraska Game and Parks Commission is required prior to commencement of project activities. If the species is not found during the survey, work may proceed.

WPFO CM-2: Year round, no shaping or using heavy equipment causing compaction. During growing season, no repetitive travel and use light equipment (ATV, pickup, small tractor).

WPFO CM-3: No planting of introduced cool season grass (e.g. reed canarygrass, creeping foxtail) upstream from natively vegetated areas described in the habitat questions (i.e., Evaluation Parameters questions.) Plant only native species adapted to site.

Conservation Measures Agreement

Based on the information contained in the report, follow the instructions for A, B or C below.

A) If one or more of the habitat questions were answered with "Yes", insert an "X" for one of the two Options below:

_____ **Option 1.** For all species for which there is habitat present (as indicated by checking "Yes" to a habitat question) I understand and agree to implement and/or incorporate the conservation measures for those species as indicated. By agreeing to implement and/or incorporate the conservation measures for those species as indicated, no further consultation with the Nebraska Game and Parks Commission is required.

Sign and date on the line below, and also sign and date the Certification section. Submit a copy of the signed and dated (i.e. certified) report with any type of permit/application required for the project.

Applicant/project proponent signature

Date

_____ **Option 2.** I have concerns regarding one or more of the conservation measures. Sign the Certification section below. When submitting the project as "Final" in CERT, please attach a separate document explaining your concerns with the conservation measures and why they cannot be implemented. Then, contact the Nebraska Game and Parks Commission for further information.

B) If one or more habitat questions were answered with "Unknown" then leave your project as "Draft" and contact the Nebraska Game and Parks Commission for more information. Once your concerns are addressed with the Commission, adjust your answer to "Yes" or "No", sign and date under the Certification section, upload the report using the File Attachments feature and change the Edit Status to "Final".

C) If ALL the habitat questions were answered "No" then sign the Certification section below and submit the project as "Final" in CERT. Once these steps are completed, no additional correspondence with the Nebraska Game and Parks Commission is required. Submit a copy of the signed report with any type of permit/application needed for the project.

Additional coordination with the U.S. Fish and Wildlife Service may be necessary depending on the determination made by the lead federal agency pursuant to their obligations under the Endangered Species Act (ESA).

Certification

I certify that ALL the project information in this report (including project location, project size/configuration, project type, project activities, answers to questions) is true, accurate and complete. If the project type, activities, location, size, or configuration of the project change; if a species listing status is reclassified; if a new species is listed; or if any of the answers to any questions asked in this report change, then this document is no longer valid, and re-consultation with the Nebraska Game and Parks Commission is required.

Applicant/project proponent signature

Date

Additional Considerations

Nebraska Game and Parks Commission

Environmental Review Team
2200 North 33 Street
Lincoln, NE 68503
Phone: (402) 471-5423
Email: ngpc.envreview@nebraska.gov

U.S. Fish and Wildlife Service

Nebraska Ecological Services
9325 South Alda Road
Wood River, NE 68883
Phone: (308) 382-6468
Email: nebraskaes@fws.gov

U.S. Army Corps of Engineers

Omaha Regulatory Office
8901 South 154 Street
Omaha, NE 68138
Phone: (402) 896-0896
Email: NE404Reg@usace.army.mil

The following federal laws contribute to the conservation and management of fish and wildlife resources in the United States: Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Clean Water Act, and the Fish and Wildlife Coordination Act.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*). Under the Eagle Act, “take” of eagles, their parts, nests or eggs is prohibited. Disturbance resulting in injury to an eagle or a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior is a form of “take.”

Nebraska Specific Information

Bald eagles use mature, forested riparian areas near rivers, streams, lakes, and wetlands and occur along all the major river systems in Nebraska. The bald eagle southward migration begins as early as October and the wintering period extends from December-March. The golden eagle is found in arid open country with grassland for foraging in western Nebraska and usually near buttes or canyons which serve as nesting sites. Golden eagles are often a permanent resident in the Pine Ridge area of Nebraska. Additionally, many bald and golden eagles nest in Nebraska from mid-February through mid-July. Disturbances within 0.5-miles of an active nest or within line-of-sight of the nest could cause adult eagles to discontinue nest building or to abandon eggs. Both bald and golden eagles frequent river systems in Nebraska during the winter where open water and forested corridors provide feeding, perching, and roosting habitats, respectively. The frequency and duration of eagle use of these habitats in the winter depends upon ice and weather conditions. Human disturbances and loss of wintering habitat can cause undue stress leading to cessation of feeding and failure to meet winter thermoregulatory requirements. These affects can reduce the carrying capacity of preferred wintering habitat and reproductive success for the species.

To comply with the Eagle Act, it is recommended that the project proponent determine if the proposed project would impact bald or golden eagles or their habitats. This can be done by conducting a habitat assessment, surveying nesting habitat for active and inactive nests, and surveying potential winter roosting habitat to determine if it is being used by eagles. The area to be surveyed is dependent on the type of project; however for most projects we recommend surveying the project area and a ½ mile buffer around the project area. If it is determined that either species could be affected by the proposed project, the Commission recommends that the project proponent notify the Nebraska Game and Parks Commission as well as the Nebraska Field Office, U.S. Fish and Wildlife Service for recommendations to avoid “take” of bald and golden eagles.

Migratory Bird Treaty Act and Nebraska Revised Statute §37-540

We recommend the project proponent comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712: Ch. 128 as amended) (MBTA). The project proponent should also comply with Nebraska Revised Statute §37-540, which prohibits take and destruction of nests or eggs of protected birds (as defined in Nebraska Revised Statute §37-237.01). Construction activities in grassland, wetland, stream, woodland, and river bank habitats that would result in impacts on birds, their nests or eggs protected under these laws should be avoided. Although the provisions of these laws are applicable year-round, most migratory bird nesting activity in Nebraska occurs during the period of April 1 to July 15. However, some migratory birds are known to nest outside of the aforementioned primary nesting season period. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15, whereas sedge wrens, which occur in some wetland habitats, normally nest from July 15 to September 10. If development in this area

is planned to occur during the primary nesting season or at any other time which may result in impacts to birds, their nests or eggs protected under these laws, we request that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the absence or presence of nesting migratory birds. If a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities, the Nebraska Game and Parks Commission and the Nebraska Field Office, U.S. Fish and Wildlife Service should be contacted immediately. For more information on avoiding impacts to migratory birds, their nests and eggs, or to report active bird nests that cannot be avoided by planned construction activities, please contact the U.S. Fish and Wildlife Service and/or the Nebraska Game and Parks Commission (contact information within report). Adherence to these guidelines will help avoid unnecessary impacts on migratory birds.

Fish and Wildlife Coordination Act

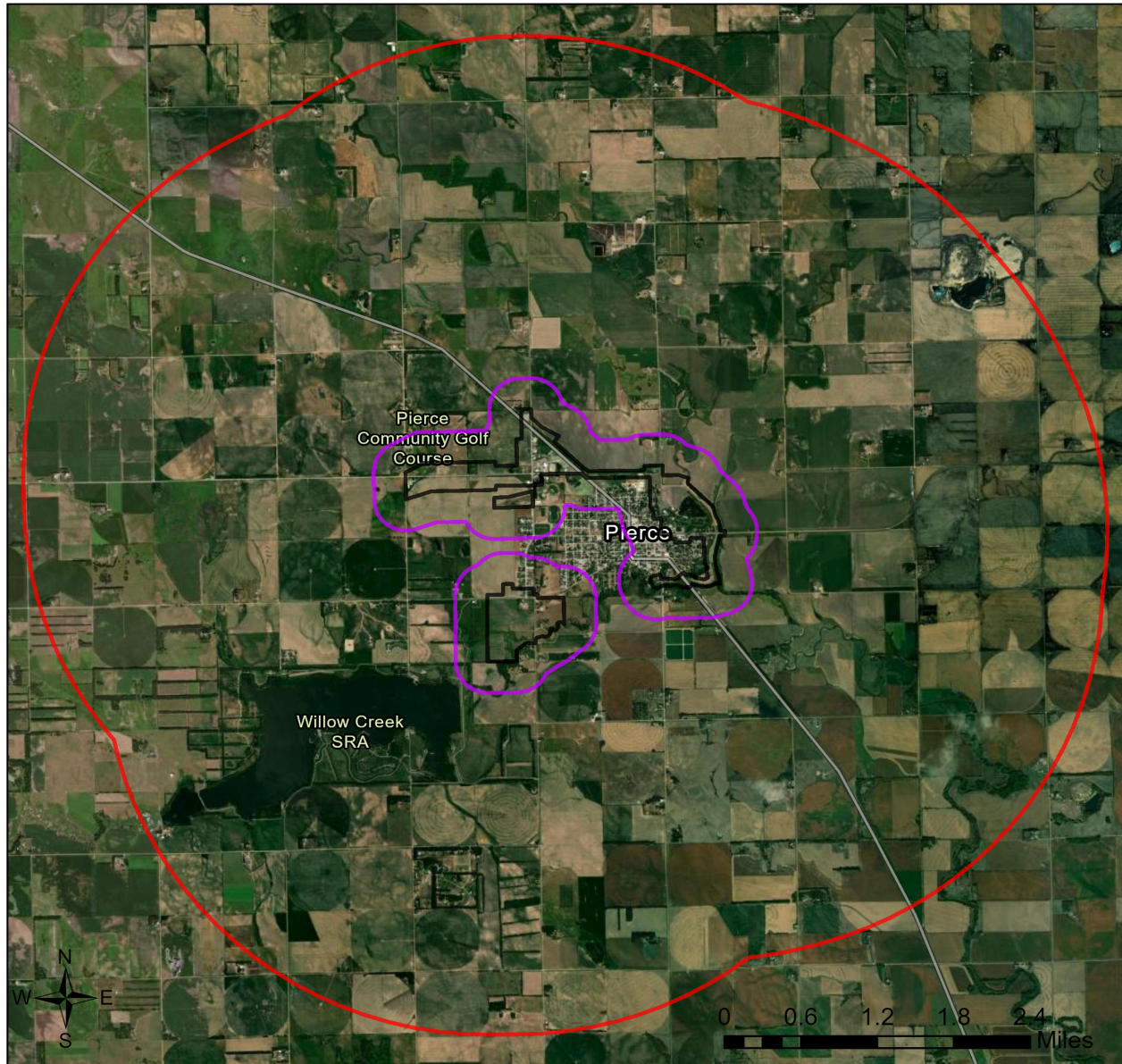
The Fish and Wildlife Coordination Act (FWCA) requires consultation with the U.S. Fish and Wildlife Service (Service) and the State fish and wildlife agency (i.e., Nebraska Game and Parks Commission) for the purpose of preventing loss of and damage to fish and wildlife resources in the planning, implementation, and operation of federal and federally funded, permitted, or licensed water resource development projects. This statute requires that federal agencies take into consideration the effect that the water related project would have on fish and wildlife resources, to take action to prevent loss or damage to these resources, and to provide for the development and improvement of these resources. The comments in this letter are provided as technical assistance only and are not the document required of the Secretary of the Interior pursuant to Section 2(b) of FWCA on any required federal environmental review or permit. This technical assistance is valid only for the described conditions and will have to be revised if significant environmental changes or changes in the proposed project take place. In order to determine whether the effects to fish and wildlife resources from the proposed project are being considered under FWCA, the lead federal agency must notify the Service in writing of how the comments and recommendations in this technical assistance letter are being considered into the proposed project.

Section 404 of the Clean Water Act

In general, the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service have concerns for impacts to wetlands, streams and riparian habitats. We recommend that impacts to wetlands, streams, and associated riparian corridors be avoided and minimized, and that any unavoidable impacts to these habitats be mitigated. If any fill materials will be placed into waterways or wetlands, the U.S. Army Corps of Engineers Regulatory Office in Omaha should be contacted to determine if a 404 permit is needed.

North Fork Elkhorn River WFPO - Pierce ARA

Aerial Image Basemap With Locator Map



- 3-mile Information Buffer Boundary
□ Project Review Boundary
□ Project Boundary

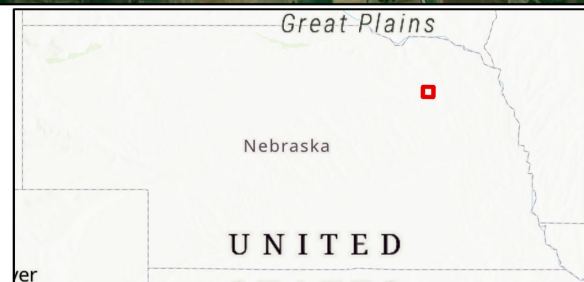
Project Size (acres): 620.54

Lat/Long (DD): 42.2077 / -97.5384

County(s): Pierce

BUL(s):

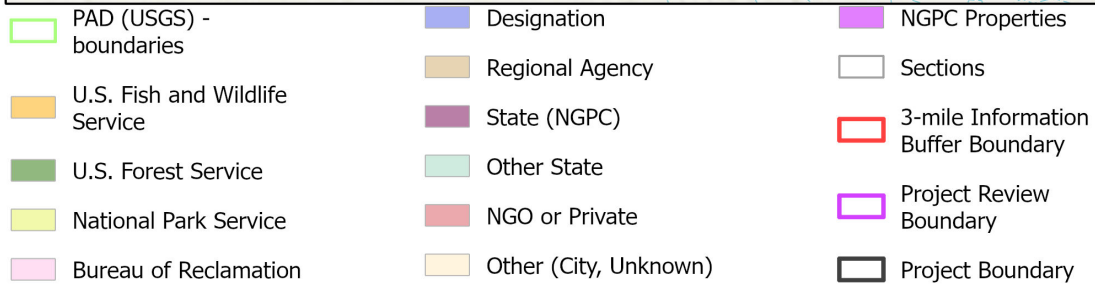
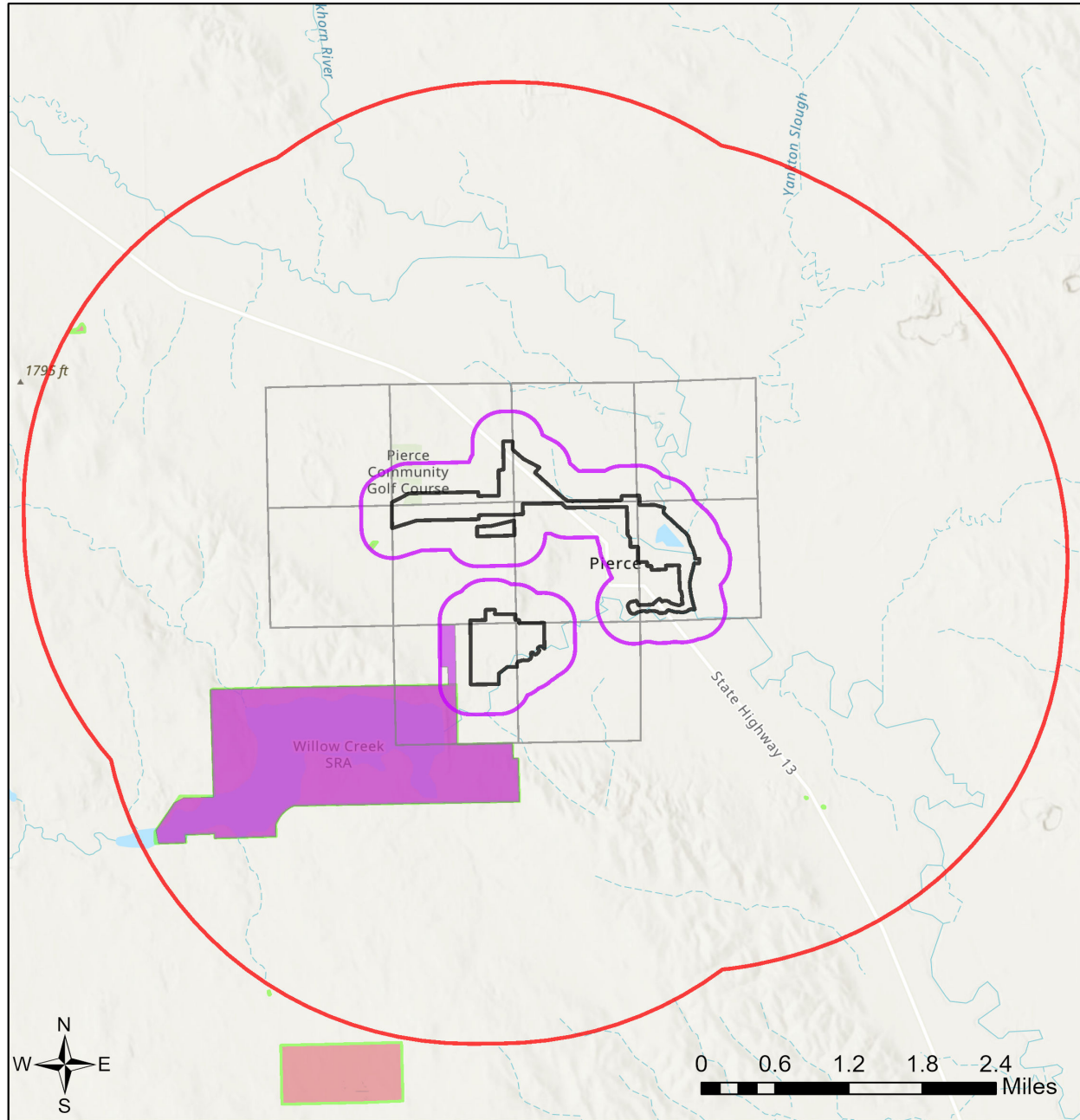
Township/Range/Section(s): T26R02WS20; T26R02WS21; T26R02WS22; T26R02WS23; T26R02WS26 +



Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS
 Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
 Earthstar Geographics

North Fork Elkhorn River WFPO - Pierce ARA

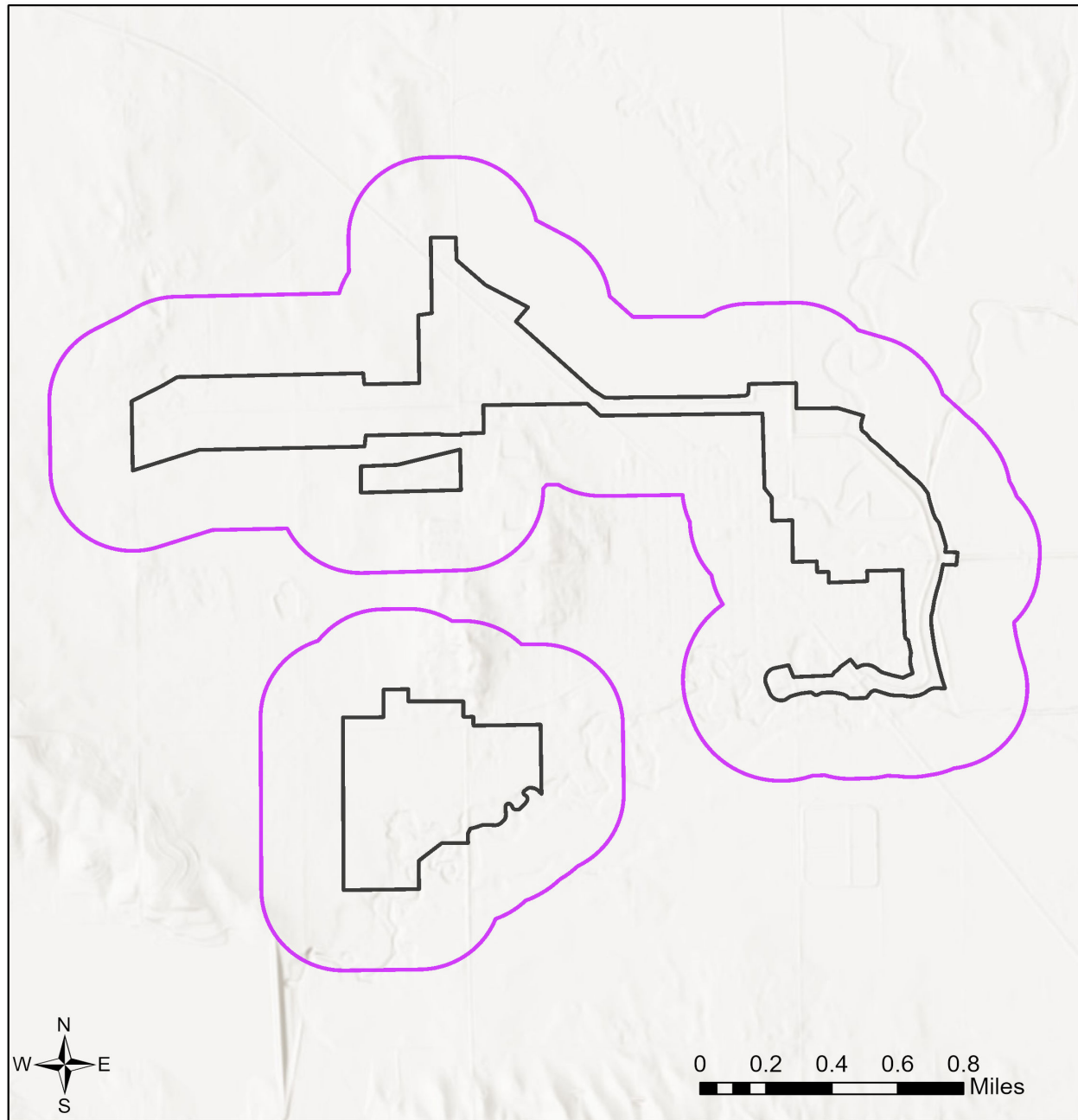
Topographic Basemap With Sections and Protected Areas



Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS
Esri, NASA, NGA, USGS

North Fork Elkhorn River WFPO - Pierce ARA

Web Map As Submitted By User



- █ Project Review Boundary
- Project Boundary

Table 1
Protected Areas in Immediate Vicinity of Project (project review area)

Area Name	Owner/Manager	Information Source
Other Stewardship Lands (OSL), Pierce (31139), NE	Private	USGS Protected Areas Database
Willow Creek SRA	Nebraska Game and Parks Commission	NGPC
Willow Creek State Recreation Area	Regional Agency Land	USGS Protected Areas Database

Table 2
Documented Occurrences in Immediate Vicinity of Project (project review area):
Natural communities and selected special areas

This table has no results.

Table 3
Regional Documented Occurrences of Species within 1 Mile of Project Review Area:
Tier 1 and 2 at-risk species and additional S1-S3 plants

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Cypripedium candidum	Small White Lady's Slipper		T	Tier 1	S1	G4	Vascular Plant - Monocots
Emydoidea blandingii	Blanding's Turtle		NC	Tier 1	S4	G4	Vertebrate Animal - Turtles
Euphyes conspicua buchholzi	Bucholz Black Dash			Tier 1	S1	G4G5T1	Invertebrate Animal - Butterflies and Skippers
Fundulus sciadicus	Plains Topminnow			Tier 1	S3	G4	Vertebrate Animal - Fishes
Haliaeetus leucocephalus	Bald Eagle			Tier 2	S3	G5	Vertebrate Animal - Birds
Hybognathus placitus	Plains Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Lycaena phlaeas	American Copper			Tier 2	S1S2	G5	Invertebrate Animal - Butterflies and Skippers
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	Tier 1	S2	G3	Vascular Plant - Monocots
Scolopax minor	American Woodcock			Tier 2	S3	G5	Vertebrate Animal - Birds
Speyeria idalia	Regal Fritillary			Tier 1	S3	G3?	Invertebrate Animal - Butterflies and Skippers

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Argynnis idalia	Regal Fritillary	Range			Tier 1	S3	G3?	
Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	
Atrytone arogos iowa	Iowa Skipper	Range			Tier 1	S1	G2G3T2T3	
Boloria myrina nebraskensis	Nebraska Fritillary	Range			Tier 1	SNR	G5?T3T4	
Boloria myrina sabulocollis	Kohler's Fritillary	Range			Tier 1	S1S2	G5?T3	
Calidris subruficollis	Buff-breasted Sandpiper	Range			Tier 1	S2N	G4	
Catocala nuptialis	Married Underwing	Range			Tier 1	SNR	G3	
Catocala whitneyi	Whitney Underwing	Range			Tier 1	S1	G2G3	
Cicindela limbata limbata	Sandy Tiger Beetle	Range			Tier 1	S4	G5T3T4	
Coccyzus erythrophthalmus	Black-billed Cuckoo	Range			Tier 1	S3	G5	
Cypridium candidum	Small White Lady's Slipper	Range		T	Tier 1	S1	G4	
Danaus plexippus	Monarch	Range			Tier 1	S2	G4	
Eleocharis wolfii	Wolf's Spikerush	Range			Tier 1	S4	G3G5	
Ellipsoptera lepida	Ghost Tiger Beetle	Range			Tier 1	S2	G3	
Emydoidea blandingii	Blanding's Turtle	Range			Tier 1	S4	G4	
Euphyes bimacula illinois	Two-spotted Skipper	Range			Tier 1	S3	G4T1T2	
Euphyes conspicua buchholzi	Bucholz Black Dash	Range			Tier 1	S1	G4G5T1	
Fundulus sciadicus	Plains Topminnow	Range			Tier 1	S3	G4	
Haliaeetus leucocephalus	Bald Eagle	Range			Tier 2	S3	G5	
Hesperia ottoe	Ottoe Skipper	Range			Tier 1	S2	G3	
Hybognathus argyritis	Western Silvery Minnow	Range			Tier 1	S2	G4	
Hybognathus placitus	Plains Minnow	Range			Tier 1	S2	G4	
Lanius ludovicianus	Loggerhead Shrike	Range			Tier 1	S3	G4	
Lasiurus borealis	Eastern Red Bat	Range			Tier 1	S3	G3G4	
Lasiurus cinereus	Hoary Bat	Range			Tier 1	S3	G3G4	

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Lethe eurydice fumosus	Smoky-eyed Brown	Range			Tier 1	S3	G5T3T4	
Myotis septentrionalis	Northern Long-eared Myotis	Range	E	E	Tier 1	S1S2	G2G3	
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G3G4	
Perognathus flavescens perniger	Plains Pocket Mouse	Range			Tier 1	SNR	G5TNR	
Pica hudsonia	Black-billed Magpie	Range			Tier 1	S2	G5	
Platanthera praeclara	Western Prairie Fringed Orchid	Range	T	T	Tier 1	S2	G3	



Environmental Review Report

Project Information

Report Generation Date:	3/17/2025 10:06:54 AM
Project Title:	North Fork Elkhorn River WFPO
User Project Number(s):	201302.00
System Project ID:	NE-CERT-014262
Project Type:	NRCS Projects/Practices
Project Activities:	342 - Critical Area Planting (Ac) 356 - Dike (Ft) 410 - Grade Stabilization Structure (No) 472 - Access Control (Ac) 500 - Obstruction Removal (Ac) 533 - Pumping Plant (No) - secondary practice 560 - Access Road (Ft) 580 - Streambank and Shoreline Protection (Ft) - riparian/wetland practice 582 - Open Channel (Ft) 620 - Underground Outlet (Ft)
Project Size:	226,050.10 acres
County(s):	Antelope; Cedar; Knox; Pierce
Watershed(s):	Elkhorn; Missouri Tributaries
Watershed(s) HUC 8:	Lewis and Clark Lake; Logan; North Fork Elkhorn
Watershed(s) HUC 12:	Breslau Creek; City of Osmond-North Fork Elkhorn River; City of Pierce-North Fork Elkhorn River; Crawford Valley Church +
Biologically Unique Landscape(s):	Verdigris-Bazile
Township/Range and/or Section(s):	026N002W; 026N003W; 026N004W; 026N005W; 027N002W; 027N003W; 027N004W; 027N005W; 027N006W; 028N001W; 028N002W; 028N003W; 028N004W; 028N005W; 029N001W; 029N002W; 029N003W; 029N004W; 030N002W
Latitude/Longitude:	42.371532 / -97.651564

Contact Information

Organization:	JEO Consulting Group
Contact Name:	Dillon Vogt
Contact Phone:	4024748798
Contact Email:	dvogt@jeo.com
Contact Address:	2000 Q St Ste 500 Lincoln NE 68503
Prepared By:	
Submitted On Behalf Of:	LENRD

Project Description

Investigation of potential measures to reduce flooding in Pierce and Osmond.

Project Duration

To be determined.

Existing Land Use

Urban and agricultural.

Waterbodies

To be determined.

The Nebraska Nongame and Endangered Species Conservation Act (NESCA)

The Nebraska Game and Parks Commission (Commission or NGPC) has responsibility for protecting state-listed endangered and threatened species under authority of the Nongame and Endangered Species Conservation Act (NESCA) (Neb. Rev. Stat. § 37-801 to 37-814). Pursuant to §37-807 (3)(c) of NESCA, **all state agencies shall, in consultation with the Commission, ensure projects they authorize (i.e., issue a permit for), fund or carry out do not jeopardize the continued existence of state-listed endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. If a proposed project may affect state-listed species or designated critical habitat, further consultation with the Commission is required.**

Informal consultation pursuant to NESCA can be completed by using the Conservation and Environmental Review Tool (CERT). The CERT analyzes the project type and location, and based on the analysis, provides information about potential impacts to listed species, habitat questions and/or conservation conditions.

- If project proponent agrees to implement conservation conditions, as outlined in the report and applicable to the project type, then this document serves as documentation of consultation with the Commission and the following actions can be taken to move forward with the project:
 - Sign the report in the designated areas, and
 - Upload the signed and dated report into the project within CERT, and
 - Change the edit status to Final from Draft status.
- When these actions are completed, no additional coordination (i.e., contacting the Commission) is required.
- If the report indicates further consultation is required in the Overall Results section on the following page and/or conservation conditions cannot be met, then the following actions must be taken:
 - Project proponent is required to contact and consult with the Commission. Contact information can be found under the Additional Considerations section.

Review the Overall Results section on the following page for further instructions.

Disclaimer

The U.S. Fish and Wildlife Service has responsibility for conservation and management of fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act; 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act.

It is recommended that a project start with requesting an Official Species List via the Information for Planning and Consultation ([IPaC Tool](#)), to begin informal consultation with the U.S. Fish & Wildlife Service.

The information generated in a CERT Environmental Review Report DOES NOT satisfy consultation obligations between the lead federal agency and the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act (ESA).

For the purposes of ESA, the information in this report should be considered as technical assistance, and does not serve as the U.S. Fish and Wildlife Service's concurrence letter, even if the user signs and agrees to implement conservation conditions in order to satisfy consultation requirements of NESCA.

Review the Additional Considerations section for further information.

Overall Results

The following result is based on a detailed analysis of your project.

- The project may have potential impacts on state-listed species. More information is needed, please answer the questions under the Question and Conservation Conditions section. If conservation conditions are required, review the Conservation Conditions Agreement section. Additional consultation with the Nebraska Game and Parks Commission may or may not be required; please review all the information provided in this document.

Additional Information

Nebraska Game and Parks Commission Property

This project is within or near a property owned and/or managed by the Nebraska Game and Parks Commission (NGPC). Please contact the Nebraska Game and Parks Commission to determine if this project will have impacts on the property.

Questions and Conservation Conditions

Northern Long-eared Bat

This project is within the range of the state and federally listed endangered Northern long-eared bat (NLEB) (*Myotis septentrionalis*).

Suitable summer roosting habitat for NLEB consist of forests or woodlots which contain suitable roost trees. In Nebraska, suitable roost trees consist of deciduous and/or pine live or dead trees or snags that are greater than or equal to 3 dbh (diameter at breast height) that exhibit peeling bark or have cracks, crevices or cavities. Linear features such as fencerows, riparian forests, and other wooded corridors are suitable for NLEB if they contain potential roost trees. Individual trees may be considered suitable habitat when they exhibit characteristics of suitable roost trees and are within 1,000 feet of other forested/wooded habitat.

NLEB have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat when they are within 1000 feet of suitable forested habitat (see above).

Examples of **UN-SUITABLE** habitat for the NLEB include:

- Individual trees that are greater than 1,000 feet from forested/wooded areas;
- Trees found in highly developed urban areas (e.g., street trees, downtown areas) – but note that NLEBs sometimes use relatively extensive forested natural areas within urban areas for summer roosting habitat;
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees.

Habitat Questions for Northern Long-eared Bat:

Is suitable summer habitat, as defined above, located within 1000 feet of the project activities?

☐ Unknown.

☐ No. Conservation measures are not needed for this species unless otherwise indicated. **Additional habitat questions for this species are not applicable if suitable habitat is not present.**

☐ Yes. The following conservation measures must be implemented in order to avoid adverse impacts on Northern long-eared bat.

If "YES" was checked for the habitat questions, then this project **"MAY AFFECT"** northern long-eared bat.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species. Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service prior to proceeding with the project.

NLEB CM-2: No removal of suitable trees or roosting structures between May 15 and July 31 (maternity roosting season).

NLEB CM-4: Plant only native species adapted to site.

Small White Lady's Slipper

This project is within the range of the state-listed threatened small white lady's slipper (*Cypripedium candidum*).
Habitat Questions for Small White Lady's Slipper:

Is the Action Area within or adjacent to grasslands and flowering plants that are located on low, flat areas adjacent to a stream?

Is the Action Area within 100-feet of a sidehill seep with grasses and flowering plants that has no history of tillage?

Does the Action Area occur in a drainage (ditch, waterway, or other moist soil sites) that contains grasses and flowering plants AND is associated with an grassland with flowering plants that are located on low, flat areas adjacent to a stream?

☐ Unknown for ANY question.

☐ No for ALL questions. Conservation measures are not needed for this species unless otherwise indicated.

☐ Yes for ANY of the questions. The following conservation measures must be implemented in order to avoid adverse impacts on small white lady's slipper:

If "YES" was checked for the habitat questions, then this project **"MAY AFFECT"** small white lady's slipper.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species.

Contact the Nebraska Game and Parks Commission prior to proceeding with the project.

SWLS CM-1: Survey according to protocol required during flowering period (May 15 to June 7) prior to ground disturbing activities, herbicide application, and/or conversion from haying to grazing with management for shorter duration or timing. If the species is found during the survey, further consultation with the Nebraska Game and Parks Commission is required prior to commencement of project activities. If the species is not found during the survey, work may proceed.

SWLS CM-2: Year round, no shaping or using heavy equipment causing compaction. During growing season, no repetitive travel and use light equipment (ATV, pickup, small tractor).

SWLS CM-3: No planting of introduced cool season grass (e.g. reed canarygrass, creeping foxtail) upstream from natively vegetated areas described in the habitat questions (i.e., Evaluation Parameters questions.) Plant only native species adapted to site.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (*Platanthera praeclara*).

Habitat Questions for Western Prairie Fringed Orchid:

Does the area of potential effect have no history of cropping and include undisturbed wet mesic prairie and sedge meadows in alluvial soils of river floodplains or sandy soils of subirrigated meadows and prairie swales?

OR

Does the area of potential effect have no cropping history and within 100 feet of a natively vegetated sidehill seep type wetland (identified by the National Wetland Inventory, an official or certified wetland determination, or identified as a stream on a USGS quadrangle map, NWI or soil survey)?

Note: The area of potential effect described in the two previous questions includes the wetland related habitats along with upstream/upslope adjacent areas.

Note: Individuals with the orchid job approval authority may eliminate ("no effect") Grade D Freshwater Wet Meadows and Tallgrass Prairies with proper site inspections and species composition documentation.

____ Unknown for EITHER question

____ No for BOTH questions. Conservation measures are not needed for this species unless otherwise indicated.

____ Yes for EITHER question. The following conservation measures must be implemented in order to avoid adverse impacts on western prairie fringed orchid:

If "YES" was checked for the habitat question, then this project **"MAY AFFECT"** western prairie fringed orchid.

FURTHER CONSULTATION IS REQUIRED even if conservation measures are listed for this or other species.

Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service prior to proceeding with the project.

WPFO CM-1: Survey according to protocol required during flowering period (June 15 - July 15) prior to ground disturbing activities, herbicide application, and/or conversion from haying to grazing with management for shorter duration or timing. If the species is found during the survey, further consultation with the Nebraska Game and Parks Commission is required prior to commencement of project activities. If the species is not found during the survey, work may proceed.

WPFO CM-2: Year round, no shaping or using heavy equipment causing compaction. During growing season, no repetitive travel and use light equipment (ATV, pickup, small tractor).

WPFO CM-3: No planting of introduced cool season grass (e.g. reed canarygrass, creeping foxtail) upstream from natively vegetated areas described in the habitat questions (i.e., Evaluation Parameters questions.) Plant only native species adapted to site.

Whooping Crane and Whooping Crane Critical Habitat

This project is within the range of the state and federally listed endangered whooping crane (*Grus americana*) and MAY also be within federally designated critical habitat for whooping crane (Central Platte River corridor between Lexington and Shelton, Nebraska).

Habitat Questions for Whooping Crane and Whooping Crane Critical Habitat:

Is the Action Area or area of potential effect outside of densely populated residential, commercial, or industrial areas?

AND

Does the Action Area or area of potential effect (within 1/2 mile of) include suitable habitat, which includes but is not limited to, sub-irrigated grasslands, meadows, shallow wetland habitat, farm ponds, or major rivers?

____ Unknown for EITHER question.

____ No for EITHER question. Conservation measures are not needed for this species unless otherwise indicated.

____ Yes for BOTH questions. The following conservation measures must be implemented in order to avoid adverse impacts on whooping crane and/or critical habitat for whooping crane:

If "YES" was checked for the habitat question, then this project **"MAY AFFECT"** whooping crane and/or federally designated critical habitat for whooping crane. **FURTHER CONSULTATION IS REQUIRED** even if conservation measures are listed for this or other species. Contact the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service prior to proceeding with the project.

WC CM-1: Livestock exclusion is allowed for the purposes of vegetation management e.g. to meet conservation program guidelines.

Unless otherwise indicated, conservation measure WC CM-2 **or** WC CM-3 is required (not both), in addition to any other conservation measures listed for this species:

WC CM-2: If project or management actions/activities must occur during the spring (March 6 - April 29) or fall (October 9 - November 15) migration periods, then a survey must be conducted according to the standard protocol. Take note of the worktime restrictions as stated in the protocol.

OR

WC CM-3: Project or management actions/activities will not be implemented during the spring (March 6 - April 29) or fall (October 9 - November 15) whooping crane migration periods.

WC-CM5: No work within the Plattes, Loups, Niobrara, or Elkhorn Rivers proper.

Conservation Measures Agreement

Based on the information contained in the report, follow the instructions for A, B or C below.

A) If one or more of the habitat questions were answered with "Yes", insert an "X" for one of the two Options below:

_____ **Option 1.** For all species for which there is habitat present (as indicated by checking "Yes" to a habitat question) I understand and agree to implement and/or incorporate the conservation measures for those species as indicated. By agreeing to implement and/or incorporate the conservation measures for those species as indicated, no further consultation with the Nebraska Game and Parks Commission is required.

Sign and date on the line below, and also sign and date the Certification section. Submit a copy of the signed and dated (i.e. certified) report with any type of permit/application required for the project.

Applicant/project proponent signature

Date

_____ **Option 2.** I have concerns regarding one or more of the conservation measures. Sign the Certification section below. When submitting the project as "Final" in CERT, please attach a separate document explaining your concerns with the conservation measures and why they cannot be implemented. Then, contact the Nebraska Game and Parks Commission for further information.

B) If one or more habitat questions were answered with "Unknown" then leave your project as "Draft" and contact the Nebraska Game and Parks Commission for more information. Once your concerns are addressed with the Commission, adjust your answer to "Yes" or "No", sign and date under the Certification section, upload the report using the File Attachments feature and change the Edit Status to "Final".

C) If ALL the habitat questions were answered "No" then sign the Certification section below and submit the project as "Final" in CERT. Once these steps are completed, no additional correspondence with the Nebraska Game and Parks Commission is required. Submit a copy of the signed report with any type of permit/application needed for the project.

Additional coordination with the U.S. Fish and Wildlife Service may be necessary depending on the determination made by the lead federal agency pursuant to their obligations under the Endangered Species Act (ESA).

Certification

I certify that ALL the project information in this report (including project location, project size/configuration, project type, project activities, answers to questions) is true, accurate and complete. If the project type, activities, location, size, or configuration of the project change; if a species listing status is reclassified; if a new species is listed; or if any of the answers to any questions asked in this report change, then this document is no longer valid, and re-consultation with the Nebraska Game and Parks Commission is required.

Applicant/project proponent signature

Date

Additional Considerations

Nebraska Game and Parks Commission

Environmental Review Team
2200 North 33 Street
Lincoln, NE 68503
Phone: (402) 471-5423
Email: ngpc.envreview@nebraska.gov

U.S. Fish and Wildlife Service

Nebraska Ecological Services
9325 South Alda Road
Wood River, NE 68883
Phone: (308) 382-6468
Email: nebraskaes@fws.gov

U.S. Army Corps of Engineers

Omaha Regulatory Office
8901 South 154 Street
Omaha, NE 68138
Phone: (402) 896-0896
Email: NE404Reg@usace.army.mil

The following federal laws contribute to the conservation and management of fish and wildlife resources in the United States: Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Clean Water Act, and the Fish and Wildlife Coordination Act.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*). Under the Eagle Act, “take” of eagles, their parts, nests or eggs is prohibited. Disturbance resulting in injury to an eagle or a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior is a form of “take.”

Nebraska Specific Information

Bald eagles use mature, forested riparian areas near rivers, streams, lakes, and wetlands and occur along all the major river systems in Nebraska. The bald eagle southward migration begins as early as October and the wintering period extends from December-March. The golden eagle is found in arid open country with grassland for foraging in western Nebraska and usually near buttes or canyons which serve as nesting sites. Golden eagles are often a permanent resident in the Pine Ridge area of Nebraska. Additionally, many bald and golden eagles nest in Nebraska from mid-February through mid-July. Disturbances within 0.5-miles of an active nest or within line-of-sight of the nest could cause adult eagles to discontinue nest building or to abandon eggs. Both bald and golden eagles frequent river systems in Nebraska during the winter where open water and forested corridors provide feeding, perching, and roosting habitats, respectively. The frequency and duration of eagle use of these habitats in the winter depends upon ice and weather conditions. Human disturbances and loss of wintering habitat can cause undue stress leading to cessation of feeding and failure to meet winter thermoregulatory requirements. These affects can reduce the carrying capacity of preferred wintering habitat and reproductive success for the species.

To comply with the Eagle Act, it is recommended that the project proponent determine if the proposed project would impact bald or golden eagles or their habitats. This can be done by conducting a habitat assessment, surveying nesting habitat for active and inactive nests, and surveying potential winter roosting habitat to determine if it is being used by eagles. The area to be surveyed is dependent on the type of project; however for most projects we recommend surveying the project area and a ½ mile buffer around the project area. If it is determined that either species could be affected by the proposed project, the Commission recommends that the project proponent notify the Nebraska Game and Parks Commission as well as the Nebraska Field Office, U.S. Fish and Wildlife Service for recommendations to avoid “take” of bald and golden eagles.

Migratory Bird Treaty Act and Nebraska Revised Statute §37-540

We recommend the project proponent comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712: Ch. 128 as amended) (MBTA). The project proponent should also comply with Nebraska Revised Statute §37-540, which prohibits take and destruction of nests or eggs of protected birds (as defined in Nebraska Revised Statute §37-237.01). Construction activities in grassland, wetland, stream, woodland, and river bank habitats that would result in impacts on birds, their nests or eggs protected under these laws should be avoided. Although the provisions of these laws are applicable year-round, most migratory bird nesting activity in Nebraska occurs during the period of April 1 to July 15. However, some migratory birds are known to nest outside of the aforementioned primary nesting season period. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15, whereas sedge wrens, which occur in some wetland habitats, normally nest from July 15 to September 10. If development in this area

is planned to occur during the primary nesting season or at any other time which may result in impacts to birds, their nests or eggs protected under these laws, we request that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the absence or presence of nesting migratory birds. If a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities, the Nebraska Game and Parks Commission and the Nebraska Field Office, U.S. Fish and Wildlife Service should be contacted immediately. For more information on avoiding impacts to migratory birds, their nests and eggs, or to report active bird nests that cannot be avoided by planned construction activities, please contact the U.S. Fish and Wildlife Service and/or the Nebraska Game and Parks Commission (contact information within report). Adherence to these guidelines will help avoid unnecessary impacts on migratory birds.

Fish and Wildlife Coordination Act

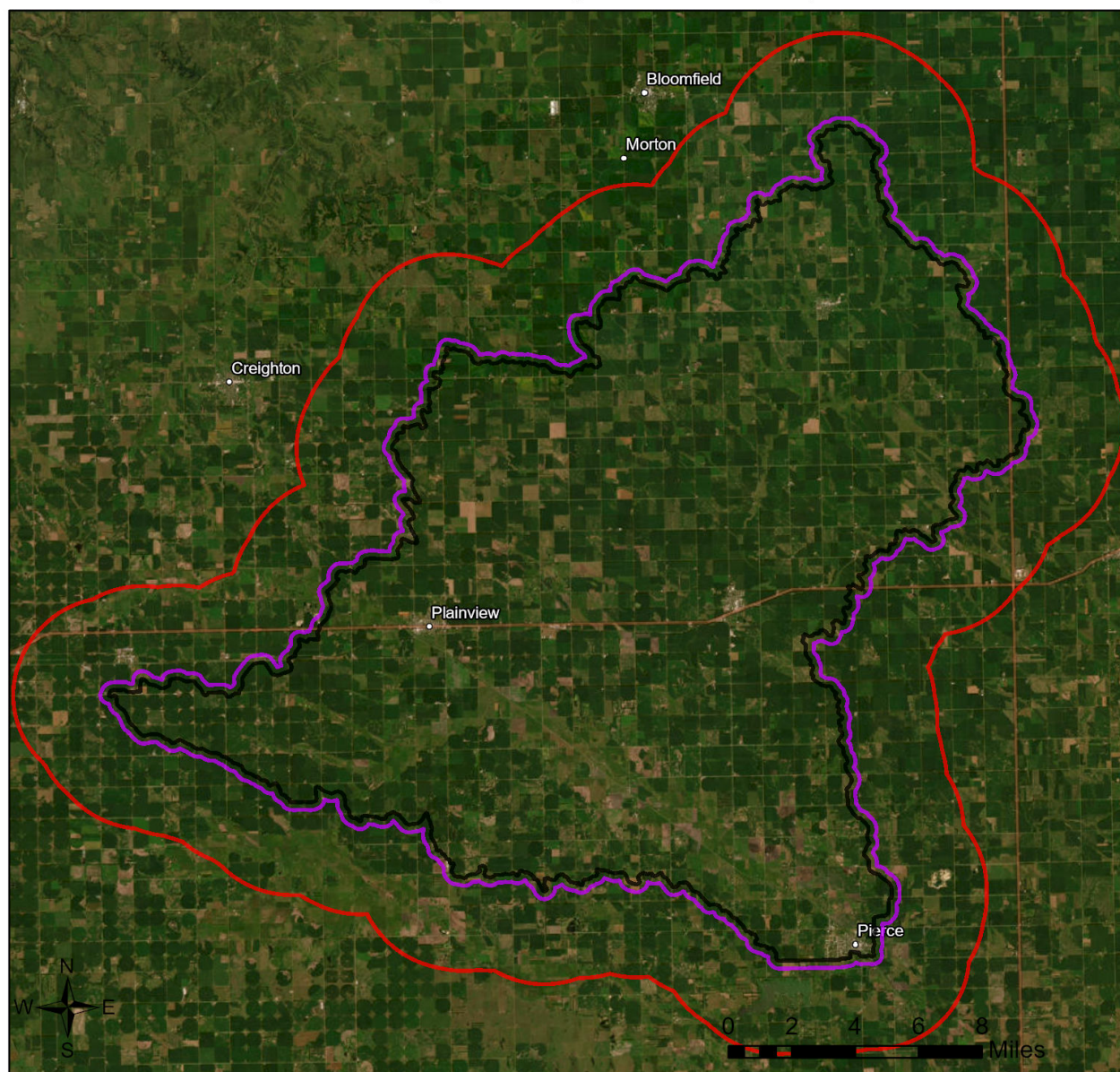
The Fish and Wildlife Coordination Act (FWCA) requires consultation with the U.S. Fish and Wildlife Service (Service) and the State fish and wildlife agency (i.e., Nebraska Game and Parks Commission) for the purpose of preventing loss of and damage to fish and wildlife resources in the planning, implementation, and operation of federal and federally funded, permitted, or licensed water resource development projects. This statute requires that federal agencies take into consideration the effect that the water related project would have on fish and wildlife resources, to take action to prevent loss or damage to these resources, and to provide for the development and improvement of these resources. The comments in this letter are provided as technical assistance only and are not the document required of the Secretary of the Interior pursuant to Section 2(b) of FWCA on any required federal environmental review or permit. This technical assistance is valid only for the described conditions and will have to be revised if significant environmental changes or changes in the proposed project take place. In order to determine whether the effects to fish and wildlife resources from the proposed project are being considered under FWCA, the lead federal agency must notify the Service in writing of how the comments and recommendations in this technical assistance letter are being considered into the proposed project.

Section 404 of the Clean Water Act

In general, the Nebraska Game and Parks Commission and the U.S. Fish and Wildlife Service have concerns for impacts to wetlands, streams and riparian habitats. We recommend that impacts to wetlands, streams, and associated riparian corridors be avoided and minimized, and that any unavoidable impacts to these habitats be mitigated. If any fill materials will be placed into waterways or wetlands, the U.S. Army Corps of Engineers Regulatory Office in Omaha should be contacted to determine if a 404 permit is needed.

North Fork Elkhorn River WFPO

Aerial Image Basemap With Locator Map



- | | |
|---|--|
| □ 3-mile Information Buffer Boundary | □ Project Review Boundary |
| | □ Project Boundary |

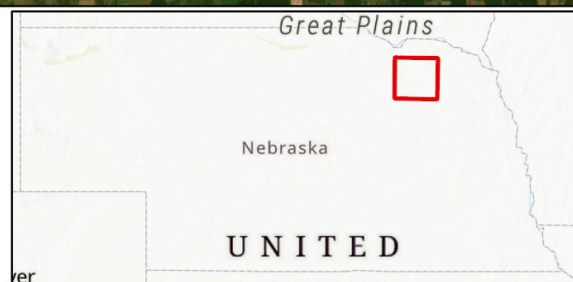
Project Size (acres): 226,050.10

Lat/Long (DD): 42.3715 / -97.6516

County(s): Antelope; Cedar; Knox; Pierce

BUL(s): Verdigris-Bazile

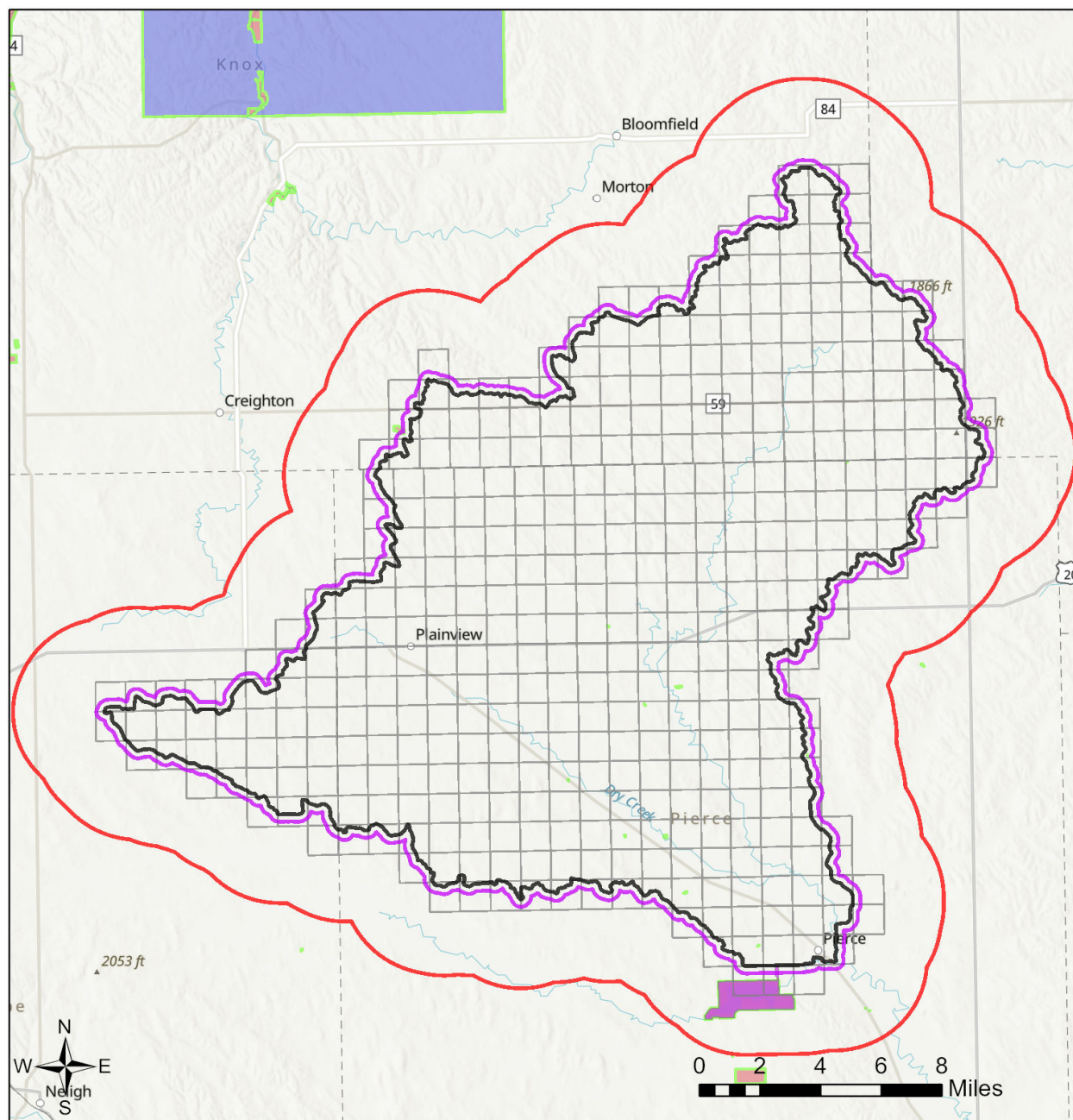
Township/Range/Section(s): T26R02WS02; T26R02WS03; T26R02WS04; T26R02WS05; T26R02WS06 +



Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
 Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
 Earthstar Geographics

North Fork Elkhorn River WFPO

Topographic Basemap With Sections and Protected Areas

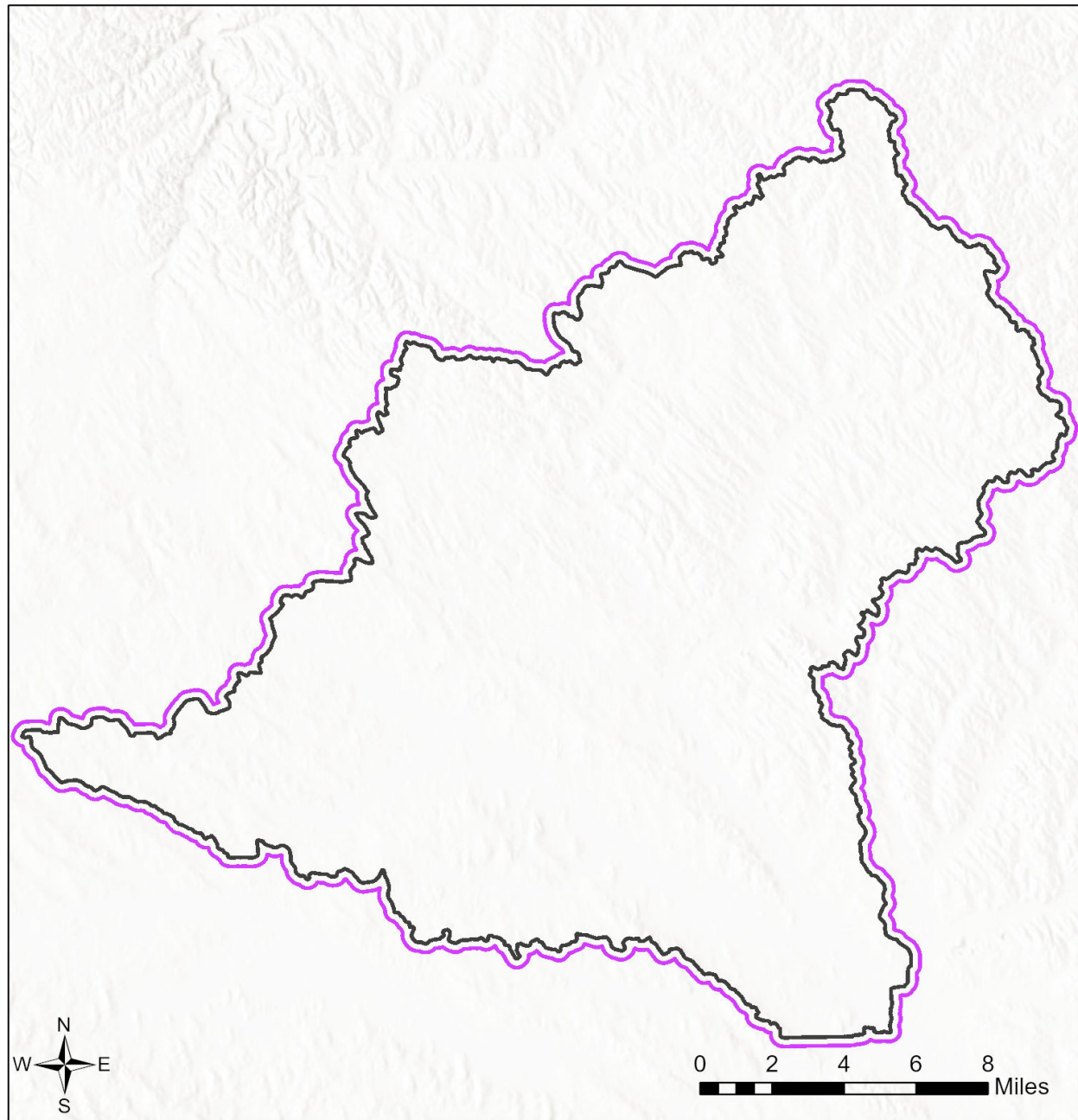


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|--|--|---|
| PAD (USGS) - boundaries | Designation | NGPC Properties |
| U.S. Fish and Wildlife Service | Regional Agency | Sections |
| U.S. Forest Service | State (NGPC) | 3-mile Information Buffer Boundary |
| National Park Service | Other State | Project Review Boundary |
| Bureau of Reclamation | NGO or Private | Project Boundary |
| | Other (City, Unknown) | |

Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, FAO, METI/IASA, USGS, EPA, NPS, USFWS
Esri, CGIAR, USGS

North Fork Elkhorn River WFPO

Web Map As Submitted By User



-  Project Review Boundary
-  Project Boundary

Esri, CGIAR, USGS

Table 1
Protected Areas in Immediate Vicinity of Project (project review area)

Area Name	Owner/Manager	Information Source
Other Stewardship Lands (OSL), Pierce (31139), NE	Private	USGS Protected Areas Database
Wetlands Reserve Program (WRP), Knox, NE	Private	USGS Protected Areas Database
Willow Creek SRA	Nebraska Game and Parks Commission	NGPC

Table 2
Documented Occurrences in Immediate Vicinity of Project (project review area):
Natural communities and selected special areas

Name	Other Information	SRank	GRank
Eastern Cordgrass Wet Prairie	Eastern Cordgrass Wet Prairie	S1	G3?
Eastern Sand Prairie	Eastern Sand Prairie	S4	GNR
Lowland Tall-grass Prairie	Lowland Tall-grass Prairie	S1	GNR
Northern Cordgrass Wet Prairie	Northern Cordgrass Wet Prairie	S2	G3?
Upland Tall-grass Prairie	Upland Tall-grass Prairie	S1S2	G2
Verdigris-Bazile Biologically Unique Landscape	Link to BUL document		

Table 3
Regional Documented Occurrences of Species within 1 Mile of Project Review Area:
Tier 1 and 2 at-risk species and additional S1-S3 plants

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Allium canadense var. fraseri	Fraser's Wild Onion			Tier 2	S2	G5T4T5	Vascular Plant - Monocots
Boloria selene	Silver-bordered Fritillary			Tier 1	S2	G5	Invertebrate Animal - Butterflies and Skippers
Caltha palustris	Yellow Marsh-marigold			Tier 2	S2	G5	Vascular Plant - Dicots
Crocanthemum bicknellii	Plains Frostweed			Tier 2	S1S2	G5	Vascular Plant - Dicots
Cypripedium candidum	Small White Lady's Slipper		T	Tier 1	S1	G4	Vascular Plant - Monocots
Dichanthelium linearifolium	Slender-leaf Spring-panicum				S1	G5	Vascular Plant - Monocots
Eleocharis elliptica	Bog Spikerush				S2S4	G5	Vascular Plant - Monocots
Eleocharis wolfii	Wolf's Spikerush			Tier 1	S4	G3G5	Vascular Plant - Monocots
Emydoidea blandingii	Blanding's Turtle		NC	Tier 1	S4	G4	Vertebrate Animal - Turtles
Euphyes conspicua buchholzi	Bucholz Black Dash			Tier 1	S1	G4G5T1	Invertebrate Animal - Butterflies and

Table 3
Regional Documented Occurrences of Species within 1 Mile of Project Review Area:
Tier 1 and 2 at-risk species and additional S1-S3 plants

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
							Skippers
Fundulus sciadicus	Plains Topminnow			Tier 1	S3	G4	Vertebrate Animal - Fishes
Grus americana	Whooping Crane	E	E	Tier 1	S1	G1	Vertebrate Animal - Birds
Haliaeetus leucocephalus	Bald Eagle			Tier 2	S3	G5	Vertebrate Animal - Birds
Hybognathus placitus	Plains Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Lampsilis cardium	Plain Pocketbook			Tier 1	S2	G5	Invertebrate Animal - Freshwater Mussels
Lycaena phlaeas	American Copper			Tier 2	S1S2	G5	Invertebrate Animal - Butterflies and Skippers
Noturus gyrinus	Tadpole Madtom			Tier 2	S3	G5	Vertebrate Animal - Fishes
Perognathus flavescens perniger	Plains Pocket Mouse			Tier 1	SNR	G5TNR	Vertebrate Animal - Mammals
Pimephales notatus	Bluntnose Minnow			Tier 2	S3	G5	Vertebrate Animal - Fishes
Platanthera praeclara	Western Prairie Fringed Orchid	T	T	Tier 1	S2	G3	Vascular Plant - Monocots
Podilymbus podiceps	PIED-BILLED GREBE			Tier 2	S3	G5	Vertebrate Animal - Birds
Prenanthes racemosa ssp. multiflora	Purple Rattlesnake-root			Tier 2	S1	G5T4?	Vascular Plant - Dicots
Rhinichthys obtusus	Western Blacknose Dace			Tier 2	S2	G5	Vertebrate Animal - Fishes
Scolopax minor	American Woodcock			Tier 2	S3	G5	Vertebrate Animal - Birds
Speyeria idalia	Regal Fritillary			Tier 1	S3	G3?	Invertebrate Animal - Butterflies and Skippers

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Argynnis idalia	Regal Fritillary	Range			Tier 1	S3	G3?	
Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	
Atrytone arogos iowa	Iowa Skipper	Range			Tier 1	S1	G2G3T2T3	

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Boloria myrina nebraskensis	Nebraska Fritillary	Range			Tier 1	SNR	G5?T3T4	
Boloria myrina sabulocollis	Kohler's Fritillary	Range			Tier 1	S1S2	G5?T3	
Calidris subruficollis	Buff-breasted Sandpiper	Range			Tier 1	S2N	G4	
Catocala nuptialis	Married Underwing	Range			Tier 1	SNR	G3	
Catocala whitneyi	Whitney Underwing	Range			Tier 1	S1	G2G3	
Cicindela limbata limbata	Sandy Tiger Beetle	Range			Tier 1	S4	G5T3T4	
Coccyzus erythrophthalmus	Black-billed Cuckoo	Range			Tier 1	S3	G5	
Cypridium candidum	Small White Lady's Slipper	Range		T	Tier 1	S1	G4	
Danaus plexippus	Monarch	Range			Tier 1	S2	G4	
Eleocharis wolfii	Wolf's Spikerush	Range			Tier 1	S4	G3G5	
Ellipsoptera lepida	Ghost Tiger Beetle	Range			Tier 1	S2	G3	
Emydoidea blandingii	Blanding's Turtle	Range			Tier 1	S4	G4	
Euphyes bimacula illinois	Two-spotted Skipper	Range			Tier 1	S3	G4T1T2	
Euphyes conspicua buchholzi	Bucholz Black Dash	Range			Tier 1	S1	G4G5T1	
Fundulus sciadicus	Plains Topminnow	Range			Tier 1	S3	G4	
Grus americana	Whooping Crane	Range	E	E	Tier 1	S1	G1	
Haliaeetus leucocephalus	Bald Eagle	Range			Tier 2	S3	G5	
Hesperia ottoe	Ottoe Skipper	Range			Tier 1	S2	G3	
Hybognathus argyritus	Western Silvery Minnow	Range			Tier 1	S2	G4	
Hybognathus placitus	Plains Minnow	Range			Tier 1	S2	G4	
Lanius ludovicianus	Loggerhead Shrike	Range			Tier 1	S3	G4	
Lasiurus borealis	Eastern Red Bat	Range			Tier 1	S3	G3G4	
Lasiurus cinereus	Hoary Bat	Range			Tier 1	S3	G3G4	
Lethe eurydice fumosus	Smoky-eyed Brown	Range			Tier 1	S3	G5T3T4	
Myotis septentrionalis	Northern Long-eared Myotis	Range	E	E	Tier 1	S1S2	G2G3	

Table 4
Potential Occurrences in Immediate Vicinity of Project (project review area):
Special status species (Tier 1 at-risk species and Bald and Golden Eagle), based on models or range maps

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G3G4	
Perlesta golconda	Two-lined Stonefly	Range			Tier 1	SNR	G2G3	
Perognathus flavescens perniger	Plains Pocket Mouse	Range			Tier 1	SNR	G5TNR	
Pica hudsonia	Black-billed Magpie	Range			Tier 1	S2	G5	
Platanthera praeclara	Western Prairie Fringed Orchid	Range	T	T	Tier 1	S2	G3	
Schoenoplectus hallii	Hall's bulrush	Range			Tier 1	S3	G3	
Schoenoplectus saximontanus	Rocky Mountain Bulrush	Range			Tier 1	S1	G5	



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Nebraska Ecological Services Field Office
9325 B South Alda Rd., Ste B
Wood River, NE 68883-9565
Phone: (308) 382-6468 Fax: (308) 384-8835



In Reply Refer To:

06/20/2025 14:13:30 UTC

Project Code: 2025-0111991

Project Name: North Fork Elkhorn River WFPO

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

To Whom It May Concern:

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

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

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

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

contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the [Endangered Species Consultation Handbook](#) or at our [Nebraska Ecological Services Field Office - Project Review and Planning webpage](#). **For recommendations to minimize the effects**

of project actions on listed species or critical habitat, please view the [Nebraska Ecological Service's Field Office Conservation Measures Technical Assistance Guide](#).

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Consultation Code in the header of this letter (i.e., YEAR-XXXXXXX) with any request for consultation or correspondence about your project that you submit to our office.

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts and permitting see <https://www.fws.gov/program/migratory-bird-permit>

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on threats to birds and recommended conservation measures visit <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit:

<https://www.federalregister.gov/documents/2012/10/03/2012-24433/migratory-bird-conservation-executive-order-13186>

Platte River System: The Platte River, its tributaries, and associated wetland habitats are resources of national importance. Due to the cumulative effect of many water depletion projects in the Platte River basin, the Service considers any direct or indirect depletion of flows from the Platte River system to be significant and will continue to further deteriorate the already stressed

habitat conditions. Federal agencies must consult with the Service under section 7 of the ESA for projects in Nebraska that may lead to water depletions or have the potential to impact water quality in the Platte River system, because these actions may affect threatened and endangered species inhabiting the downstream reaches of these river systems. The federally listed species that could be impacted from Platte River water depletions include the federally endangered Whooping Crane (*Grus americana*), and Pallid Sturgeon (*Scaphirhynchus albus*); the threatened Piping Plover (*Charadrius melodus*) and Western Prairie Fringed Orchid (*Platanthera praeclara*). In general, depletions include evaporative losses and/or consumptive use of surface or groundwater within the affected basin, often characterized as diversions minus return flows. Project elements that could be associated with depletions include, but are not limited to: borrow sites, ponds, lakes, and reservoirs (e.g., for detention, recreating, irrigation, storage, stock watering, municipal storage, and power generation); hydrostatic testing of pipelines; wells; dust abatement; diversion structures; and water treatment facilities. For more information on consultation requirements for the Platte River species, please visit <https://fws.gov/partner/platte-river-recovery-implementation-program>.

Nebraska Nongame and Endangered Species Conservation Act: Federally listed species protected under the Endangered Species Act are also state-listed under the Nebraska statute, the Nebraska Nongame and Endangered Species Conservation Act. There may be state-listed species affected by the proposed project that are not federally listed. To determine if the proposed project may affect state-listed species, the Service recommends that the project proponent contact the Nebraska Game and Parks Commission (NGPC) Planning and Program Division located at 2200 North 33rd Street Lincoln, Nebraska 68503-0370. For more information and to request an environmental review from the NGPC, visit their Environmental Review website at <http://outdoornebraska.gov/environmentalreview/> for instructions and contact information.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Nebraska Ecological Services Field Office

9325 B South Alda Rd., Ste B

Wood River, NE 68883-9565

(308) 382-6468

PROJECT SUMMARY

Project Code: 2025-0111991

Project Name: North Fork Elkhorn River WFPO

Project Type: Levee / Dike - New Construction

Project Description: In Pierce, levee improvements consisting of seepage berms and a height increase would be constructed in conjunction with interior drainage improvements consisting of two diversion channels, and two stormwater pumping stations. All these elements are interdependent to provide a complete alternative. Interior drainage issues would not exist had the levee not been built, and therefore the additional measures to mitigate interior flooding are interdependent with the levee improvements which will provide protection from exterior flooding sources.

In Osmond, a road raise and berm would be constructed, and nonstructural improvements would be made to homes south of Highway 20. The road raise and berm elements are interdependent. The 4th Street road raise prevents floodwater from entering the central portion of Osmond, but also results in increases to floodwater depth to the northeast. The berm element of the alternative was therefore included to provide protection to the northeastern portion of Osmond. Nonstructural improvements would be made to up to a dozen homes identified south of Highway 20 that are prone to frequent flooding damage.

These improvements would be designed and installed over a five year period. Ideally the project would begin in 2027 and be complete in 2032.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.224363499999995,-97.4766589334308,14z>



Counties: Pierce County, Nebraska

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

FISHES

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: Water use or contamination may adversely affect the species. Within the Platte River basin, depletions may adversely affect the species. These affects must be considered even outside occupied range. See local FWS office for more information. Species profile: https://ecos.fws.gov/ecp/species/7162 General project design guidelines: https://ipac.ecosphere.fws.gov/project/V6UB233RQJFDHO4MQ4MZAYK5CM/documents/generated/8697.pdf	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743 General project design guidelines: https://ipac.ecosphere.fws.gov/project/V6UB233RQJFDHO4MQ4MZAYK5CM/documents/generated/8697.pdf	Proposed Threatened
Suckley's Cuckoo Bumble Bee <i>Bombus suckleyi</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1669	Threatened

NAME

STATUS

General project design guidelines:

<https://ipac.ecosphere.fws.gov/project/V6UB233RQJFDHO4MQ4MZAYK5CM/documents/generated/8697.pdf>

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

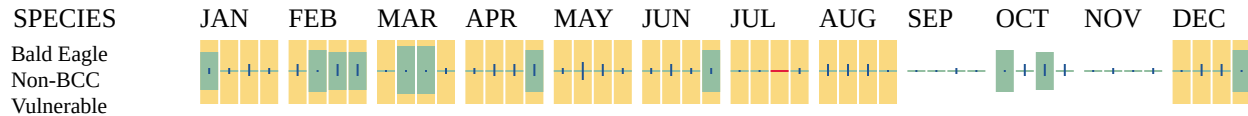
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Tern <i>Chlidonias niger surinamenis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20

NAME	BREEDING SEASON
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	Breeds elsewhere
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds May 1 to Jul 31
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
Western Grebe <i>aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

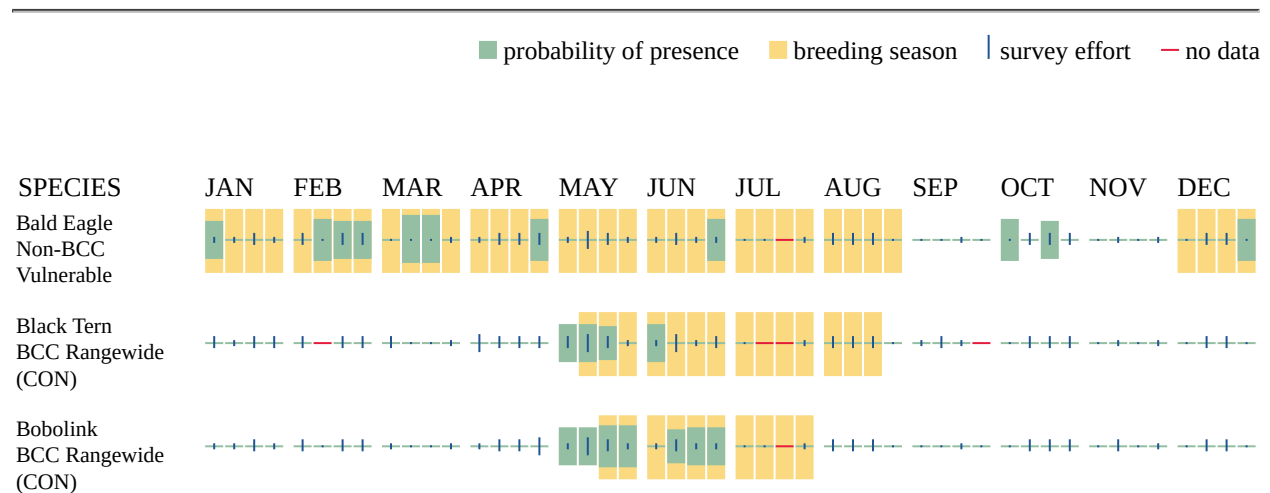
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBCx
- R4SBC
- R5UBH
- R2UBGx
- R2UBG
- R2UBH

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1A
- PEM1Ax
- PEM1Cx

FRESHWATER FORESTED/SHRUB WETLAND

- PFOA

FRESHWATER POND

- PUBF
- PUBFx

IPAC USER CONTACT INFORMATION

Agency: Natural Resources Conservation Service

Name: Melissa Baier

Address: 1121 Lincoln Mall Room 360

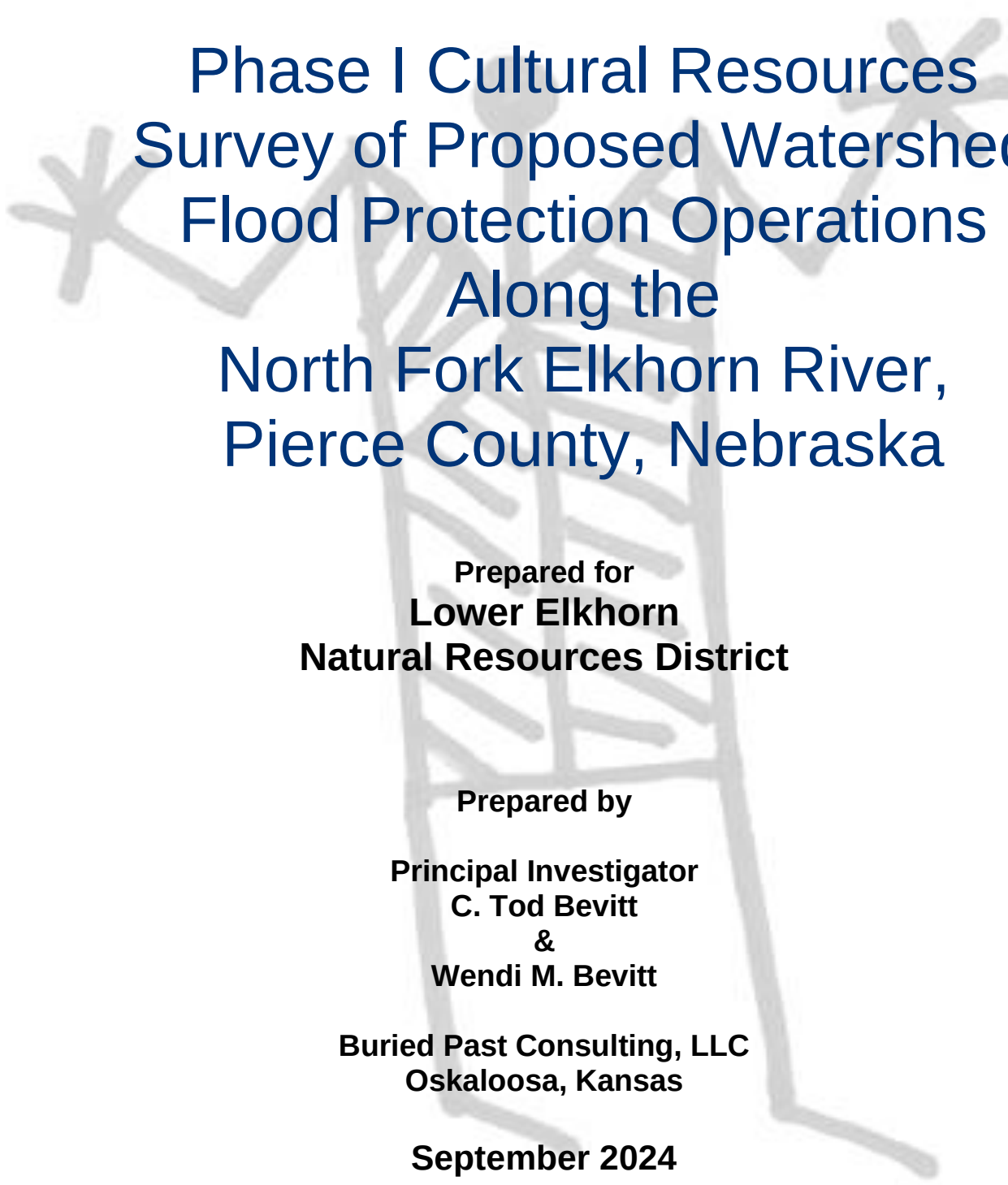
City: Lincoln

State: NE

Zip: 68508

Email: melissa.baier@usda.gov

Phone: 4024374065



Phase I Cultural Resources Survey of Proposed Watershed Flood Protection Operations Along the North Fork Elkhorn River, Pierce County, Nebraska

**Prepared for
Lower Elkhorn
Natural Resources District**

**Prepared by
Principal Investigator
C. Tod Bevitt
&
Wendi M. Bevitt**

**Buried Past Consulting, LLC
Oskaloosa, Kansas**

September 2024

Redacted copy

ABSTRACT

This report describes the results of an intensive cultural resource survey for a proposed watershed flood protection operations project along North Fork Elkhorn River for the communities of Osmond and Pierce, Pierce County, Nebraska. The Area of Potential Effects for Osmond area improvements totaled 12.8 hectares (31.6 acres) and Pierce area improvements totaled 214.3 hectares (529.5 acres) with the total North Fork Elkhorn River Project Area encompassing 227.1 hectares (561.1 acres). Fieldwork was carried out in late July and early August 2024 by means of pedestrian visual inspection of project landscapes for cultural resources supplemented systematic shovel testing in settings with limited ground surface visibility.

No archaeological sites were encountered during the survey effort. Consideration of architectural properties in and adjacent to the Project Area documented 14 properties in the Osmond area and 35 properties in the Pierce vicinity consisting of residences, small farm settings, parks, a church, and levee that continue to be occupied or see regular use. The residences, farms, and church may be indirectly affected by project implementation as these properties either lie outside the APE for direct effects or are within the current APE but are unlikely to be taken or affected directly by any project construction. St. Mary's Church and the Pony Pratt Truss bridge at Osmond as well as the historic features at Gilman Park and the levee at Pierce were recommended to be potentially eligible for the NRHP. All other properties were considered not eligible.

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1.0 INTRODUCTION

1.1 Description of the Project Area

The North Fork Elkhorn River Project Area consists of two widely separated Project Areas where Watershed and Flood Prevention Operations (WFPO) planning for flood protection will serve the communities of Osmond and Pierce, Pierce County, Nebraska (Figure 1). The Osmond Project Area encompassed approximately 12.8 hectares (31.6 acres) on the east side of that community (Figure 2) while the Pierce Project Area covered approximately 214.3 hectares (529.5 acres) in areas surrounding the town (Figure 3). Besides areas investigated as part of a direct Area of Potential Effects (APE), areas of each community adjoining the project APEs were subject to survey of indirect effects to the built environment of nearby properties (Figure 2; Figure 3). Project planning has identified a variety of improvements including efforts to augment existing levee infrastructure and drainage channels as well as introduce new elements as needed to provide adequate flood protection to the two communities. Ground disturbance will include modification of existing infrastructure and creation of new infrastructure with adjacent areas providing settings for equipment and materials storage, spoil disposal from excavations, and general workspace during construction.

1.2 Objectives of the Investigation

The primary objectives of the cultural resources investigation were to: (1) systematically evaluate the Project Area for the presence of cultural resources and (2) tentatively evaluate discovered resources based on the eligibility criteria set forth for listing a property in the National Register of Historic Places (NRHP). All work was conducted to professional standards and guidelines in accordance with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44742) and in accordance with the *Secretary's Standard for Identification* (48 FR 44720-44723). Guidance provided by the Nebraska State Historic Preservation Office's (NeSHPO) *National Historic Preservation Act, Archeological Properties, Section 106 Guidelines* directed the field investigation, reporting, and consideration of identified cultural resources. Buried Past Consulting, LLC conducted cultural resource investigations of the Project Area to a level that would meet or exceed the minimum requirements of professional standards based on Section 106 of the National Historic Preservation Act (NHPA) 1966 (as amended).

1.3 Personnel

Buried Past Consulting, LLC conducted surveys associated with this project July 23-27 and August 12-15, 2024. Principal investigator Tod Bevitt carried out field investigations with the assistance of Liam Bevitt, Melanie Naden, and Roger Ward. Wendi Bevitt conducted historical and archival background

research and authored sections on historical background, historic archival research, and discussion of the built environment in the project environs in addition to serving as lead editor for the overall report. Mr. Bevitt was responsible for sections detailing the project background, results of investigation, and recommendations with contributions by Mrs. Bevitt regarding historic architectural resources in and near the project APE.

2.0 ENVIRONMENTAL SETTING

The Project Area lies along the middle reaches of the North Fork Elkhorn River (Figure 1). The area originally consisted widespread prairie spanning valley settings and adjacent rolling uplands. The landscape today is notably different, comprised mostly of a mosaic of cultivated agricultural fields and pasturelands with scattered farmsteads and residences surrounding the communities of Osmond and Pierce. This section gives a brief overview of the environmental setting.

2.1 Physiography & Geology

The Project Area lies within the western extent of the Western Corn Belt Plains, part of a smaller Transitional Sandy Plain Component adjoining the Northeastern Nebraska Loess Hills (Chapman et al. 2001). North Fork Elkhorn River lies along this sub-region divide. Elsewhere, the region is included as the extreme western extent of the Central Feed Grains and Livestock Region as part of the Loess Uplands (NRCS 2022:353-355; 362-364). The region lies east of the eastern flank of the Nebraska Sand Hills, the largest dune field on the North American continent with a lengthy history of periodic activity and stability (Mason et al. 2020).

Geologically the area is underlain by Miocene-Pliocene age deposits associated with the Ogallala group (Brogden et al. 1976:8-11; Burchett and Pabian 1991; Diffendal 1995). This broad zone of Neogene silts, sands, gravels, and distinctive calcareous “mortar bed” zones forms High Plains tablelands in western parts of the state but are largely mantled by Pleistocene age eolian deposits forming the Sand Hills region and thick deposits of windblown loess in central Nebraska. Ogallala group deposits form a broad aquifer that extends along much of the High Plains east of the Rocky Mountains. This aquifer has historically provided reliable supplies of water for consumption and irrigation purposes and as part of the High Plains aquifer is a major contributor of groundwater forming perennial stream flow in many of the region’s watersheds (Diffendal 1995; Gutentag et al. 1984).

Mantling Ogallala group deposits in the vicinity and indeed over wide areas of Nebraska are deposits of Pleistocene loess. Three loess units of late Quaternary age are defined in Nebraska, including (from oldest to youngest) the Gilman Canyon Formation, Peoria Loess, and Bignell Loess (Condra et al. 1947; Muhs et al. 2008). The Project Area is situated along the eastern boundary of the broad expanse of Ogallala geology where the uppermost formations of Cretaceous age bedrock occur in the deeper subsurface geology of the area with Pierre Shale Niobrara Formation strata occurring within a few miles to the north and east of the project locale (Brogden et al. 1976:8-11; Burchett and Pabian 1991).

Surficial deposits of Holocene and Pleistocene age consist mostly of alluvium with some areas of dunes along modern stream valleys where floodplains and alluvial terraces may be found, instances of ancient terrace/floodplains systems, instances of loess mantling upland settings, and occasional till deposits in upland locales as well (Brogden et al. 1976:8-11).

The most recent geologic past is confined to area drainages where late Pleistocene and, more commonly, Holocene age alluvial/colluvial deposits may be found. From a cultural resource perspective, geology has a strong bearing on the expectations for what may be encountered during survey in a particular area. Geomorphological processes act as a geologic filter that can remove and/or redeposit fill in some areas while deeply burying it in other settings or more fully exposing locations that might otherwise go unnoticed (Bettis and Mandel 2002). Geomorphological studies in the Elkhorn River watershed and elsewhere in eastern Nebraska have provided a good foundation for understanding landscape evolution in the region (Layzell et al. 2018; Mandel 2002).

Sources of tool stone and other materials such as clay for ceramics were of high importance for pre-contact native populations of the region. High quality, bedrock sources of tool stone for chipped stone tools were not available locally, however chert gravels, petrified wood, quartzite cobbles, and other stone may occur along the Elkhorn River as secondary deposits (cf. Carlson and Peacock 1975). Evidence of significant past habitation located at greater distances from known source areas is well documented and is indicative of the complex connections between past human populations and the environs that provided resources for their daily use.

2.2 Soils

The vicinity of both the Osmond and Pierce Project Areas are comprised of a variety of soil types that are regularly associated with specific landform settings and related substratum parent material (Soil Survey Staff 2024; Table 1; Table 2).

A small portion of the Osmond Project Area consists of Aowa series soils formed in stratified calcareous alluvium. In the project vicinity these soils are situated along the channel of North Fork Elkhorn River. This narrow band of recent floodplain alluvium exhibits a thin, weakly developed topsoil/A horizon about 20 centimeters (8 inches) thick with a deep series of grayish brown to pale brown, silt loam substratum/C horizon strata (Soil Survey Staff 2024; Table 1). In the Project Area this soil occurred on undulating surfaces with light colored/textured soil.

Muir silt loam occurs as a band along the west flank of North Fork Elkhorn River in the Osmond vicinity, associated with an alluvial terrace setting adjacent to the floodplain through the area. The soil consists of

a thick topsoil dark to very dark grayish brown silt loam extending to 55 centimeters (21.6 inches) transitioning to a dark grayish brown silty clay loam that continues to as much as 127 centimeters (50 inches) below the surface. A thick BC horizon continues to 200 centimeters (80 inches), ultimately transitioning to substratum parent alluvium below that point (Soil Survey Staff 2024; Table 1).

Table 1: Common soils in the Osmond and Pierce Project Areas (Soil Survey Staff 2024).

Numeric ID	Soil Type	Parent Material	Setting
OSMOND			
6301	Aowa silt loam channeled, frequently flooded	Stratified calcareous alluvium	Floodplains
3775	Muir silt loam 0-2% slopes, rarely flooded	Alluvium	Alluvial terraces
6575	Trent silt loam 0-2% slopes	Loess	Uplands Upland drainageways
6808 6811	Moody silty clay loam 0-2%, 2-6% slopes	Loess	Uplands
PIERCE			
6369	Orwet loam rarely flooded	Stratified sandy alluvium	Floodplains
6352	Leshara silt loam occasionally flooded	Stratified loamy alluvium	Floodplains
3553	Hobbs silt loam frequently flooded	Alluvium	Floodplains
2354	Inavale loamy fine sand 0-3% slopes, frequently flooded	Sandy alluvium	Floodplains
3556	Muir silt loam rarely flooded	Alluvium	Alluvial terraces
6570	Thurman fine sandy loam 0-2% slopes	Sandy alluvium	Alluvial terraces
6700 6703	Thurman fine sandy loam 0-2%, 2-6% slopes	Sandy eolian	Uplands
4241 4244	Ord loam/fine sandy loam occasionally flooded	Loamy/sandy eolian	Interdunes Uplands
4553	Elsmere loamy fine sand 0-2% slopes, rarely flooded	Sandy eolian	Interdunes Uplands

Adjacent upland settings with gently sloping transition from the adjacent valley floor consisted almost entirely of Moody silty clay loam formed in loess with a narrow area of Trent silt loam marking an upland

drainageway entering the area from the west (Soil Survey Staff 2024; Table 1). Moody series soils have a thin, dark grayish brown silty clay loam topsoil approximately 25 centimeters (10 inches) thick with a complex series of subsoil/B horizon strata transitioning from grayish brown to brown and light yellowish brown silty clay loam and silt loam extending to approximately 1.2 meters (4 feet) below which a very pale brown loess-like substratum is common (Soil Survey Staff 2024; Table 1). Trent soils have a thicker, stratified topsoil/A horizon consisting of black, silty clay loam extending to depths of up to 50 centimeters (19.7 inches) with a thick series of subsoil strata that become lighter colored and textured with depth, transitioning to light brownish gray silt loam loess below approximately 1.3 meters (4.25 feet) (Soil Survey Staff 2024; Table 1).

In the Pierce vicinity alluvial soils include Orwet loam, Leshara silt loam, Hobbs silt loam, and Inavale loamy fine sand in floodplain settings and Muir silt loam and Thurman loamy fine sand forming adjacent alluvial terraces. Orwet series soils consist of black loam extending to 20 centimeters (8 inches) overlying stratified gray sand that extends to depths of over 1.5 meters (5 feet) (Soil Survey Staff 2024; Table 1). Inavale loamy fine sand consists of a grayish brown sandy soil of similar depth with a light gray fine sand substratum (Soil Survey Staff 2024; Table 1). Hobbs series soils consist of a similarly thick, very dark grayish brown silt loam with stratified gray silt loam substratum (Soil Survey Staff 2024; Table 1). Leshara soils consist of a thick, black silt loam up to 50 centimeters (20 inches) thick with a grayish brown subsoil extending to 90 centimeters (36 inches) and olive gray silt loam substratum continuing to 1.5 m (5 feet) (Soil Survey Staff 2024; Table 1). Thurman loam fine sand includes a dark grayish brown topsoil to 25 centimeters (10 inches) and light yellowish-brown sand to depths beyond 2 meters (6.6 feet) (Soil Survey Staff 2024; Table 1). Ortello and Ovina fine sandy loams occupy small areas of valley settings in the Pierce area as well.

Thurman soils also occupy broad areas of adjacent upland settings where it forms in eolian deposits with a similar stratigraphy. Other common upland soils in the Pierce area also developed from eolian deposits including Ord fine sandy loam and Elsmere loamy fine sand. Both soils consist of very dark gray fine sand or fine sandy loam to approximately 40-45 centimeters (16-18 inches) with grayish brown to light gray sand continuing to depths of at least 2 meters (6.6 feet) (Soil Survey Staff 2024; Table 1). Besides these common upland soils, Thurman-Valentine complex and Boelus-Loretto complex soils occur in small areas of the Pierce Project Area.

2.3 Hydrology

Both the Osmond and Pierce Project Areas lie along North Fork Elkhorn River whose basin covers approximately 382 square miles. The headwaters are located in loess hills about 20 miles north of

Osmond flowing south about 50 miles to join the Elkhorn River at Norfolk about 16 miles southeast of Pierce. The Elkhorn River forms in the Nebraska Sand Hills to the west and is one of the major tributaries of the Platte River which it joins about 80 miles below the North Fork confluence at Norfolk. The Osmond Project Area lies between the points where East Branch and West Branch of the North Fork Elkhorn River join that drainage with East Branch entering a little more than 0.5 mile upstream from Osmond and West Branch joining North Fork about 2 miles below town. At Pierce, Yankton Slough joins North Fork on the northeast side of town while Willow Creek flows along the south side of town to enter North Fork on the southeast side of Pierce. Portions of lower Willow Creek and North Fork Elkhorn River as it passes the east side of town have been reconfigured as part of previous flood control efforts in the early 1960s. A small, unnamed intermittent drainage on the north side of Pierce that flowed to North Fork has largely been replaced by a constructed drainage channel through that area created during that same period.

2.4 Flora

The pre-settlement flora of the area is dominated by tallgrass prairie in valley floor settings with only a small band of riparian woodland identified near the confluence of Willow Creek and North Fork Elkhorn River (GLO 1859). Grass species of the area prairies included big and little bluestem, Indian grass, switchgrass, and other mixed grasses. Any sparse stands of riparian timber would have consisted largely of cottonwood and willow although occasional hardwood species might be expected as well (Küchler 1964; Weaver 1965). Areas with increased species diversity and potential for seasonally available resources would likely be of greater utility and value to the inhabitants of the area in settlement, early contact, and prehistoric periods.

Modern land use has modified the pattern of native flora in the area to a large degree. Valley floor settings and many upland areas once dominated by grassland species have been long subject to intensive cultivation with some land leveling occurring, particularly in conjunction with the establishment of center-pivot irrigation. Some upland settings where the terrain tends to be more dissected, and some areas with sandier soils remain (or have been re-established) as mixed native grass pastures. Trees are more common in general across a landscape now protected from regular burning which promoted the dominance of grasses across the region. Historically, outside of farmstead and fencerow settings trees were not common and when present were limited to drainage settings.

2.5 Fauna

A variety of terrestrial fauna would have inhabited the rolling hills and valley settings in and near the Project Area. Many of these species were an important food resource for Euro-American settlers and

travelers, contact period Native Americans, and pre-contact Native American populations in the region. Some species native to the area include bison, elk/wapiti, pronghorn, white-tailed deer, wild turkey, wolf, coyote, cottontail rabbit, raccoon, fox, striped skunk, beaver, and muskrat. Bison, while no longer present in the wild, are present in the region as farm/ranch livestock and occasionally on public preserves. Likewise, elk disappeared from the region by the late 19th century but began returning by the mid-20th century in small numbers from neighboring populations and today several small herds make central and western Nebraska their home (Fricke et al. 2008). Other species that are still important to inhabitants of the area include wild turkey and white-tailed deer, both of which are hunted on a seasonal basis and maintain healthy populations. Select small mammal species continue to be hunted and trapped for their hides/furs on a smaller scale.

Migratory birds ranging from songbirds to raptors to herons/cranes and other waterfowl likewise are notable wildlife species contributing to a diverse fauna in the region. Perennial streams could be expected to support modest numbers of fish and mollusks, but stream health is of increasing concern in the modern era. Sediment load and pollutants that were not issues in the distant past are today causing some native aquatic species to be locally extirpated along area drainages.

3.0 CULTURAL HISTORY OVERVIEW

This section provides a general overview of the cultural periods represented in the region of the Project Area. Typically, archaeologists and historians divide the prehistory and history of the region into several periods, each of which has broad developments and features characterizing each period. The prehistoric or pre-contact cultural sequence includes Paleoindian and Archaic periods generally associated with nomadic hunting and gathering bands and Woodland, Plains Village, and Protohistoric periods during which sedentism becomes increasingly common and several technological and lifestyle changes occur that may be discernable in the archaeological record. The Historic/Contact period begins with the increasingly frequent encounter of native populations with Euro-Americans initially as explorers and traders and culminating in permanent settlement of the area in the mid to late 19th century by Euro-American populations and the restriction of native populations to reservations or tribal allotments limiting those groups to small parcels or even removing them permanently from the area.

3.1 Paleoindian Period (Before 13,500 to 9,000 years before present) (BP)

The Paleoindian period represents the earliest evidence of human occupation in North America. Paleoindian sites typically range in age from around 13,500 to 9,000 BP. However, the results of investigations at an increasing number of sites in North and South America indicate human occupation may extend as far back as 18,000 BP or more and likely represents a series of incursions onto the continents at different times and possibly even from different directions.

The Paleoindian complexes that have been identified archaeologically do not represent a single homogeneous adaptation. Some populations appear to have been more focused on hunting and processing large mammals such as mammoth and bison while others had a more generalized, seasonally based economic approach (Blackmar and Hofman 2006; Hofman 1996). Distinct toolkits and projectile point forms often help distinguish Paleoindian artifact assemblages. Archaeologists assign the earliest recognizable varieties of Paleoindian assemblages to the Clovis complex or tradition that was widespread on the North American continent. Artifact assemblages recovered at Clovis sites are consistent with use by small bands of hunter-gatherers with high residential mobility. The Folsom complex followed the Clovis technological tradition. Other late Paleoindian cultures and point types such as Agate Basin, Alberta, and Cody (Scottsbluff and Eden types) complexes generally followed Folsom (Frison 1998). All these complexes are distinguishable by projectile point forms and in some instances can be differentiated by region of occurrence as well as having temporal differences that become evident when limited opportunities for dating sites arise.

The Paleoindian period spans the Pleistocene-Holocene transition. This was a period of major environmental change in North America (Mandel 2006). Glacial conditions that had greatly influenced climate were subsiding, resulting in increased seasonality and insolation during the summers (Kutzbach and Webb 1993). This transitional period reflected a general warming trend following the last glacial maximum with its periodic cooling. It is likely that these climatic and environmental changes contributed to the way humans interacted with their surroundings with differing behaviors and activities contributing to the variability of the archaeological record.

Finds related to the Paleoindian period are generally limited to isolated occurrences of projectile points in the region, typically from high upland settings or eroded areas along major drainages (Holen 2001, 2003). Folsom age components are nearly non-existent in eastern Nebraska with wide areas lacking any recorded instances. Whether these gaps are a product of limited reporting or one demonstrating limited presence is not known, however the relative lack of Folsom artifacts in areas where Clovis age materials are present in some numbers may suggest that Folsom age peoples did not frequent the environs of eastern Nebraska to the same degree as other Paleoindian groups may have or as much as Folsom populations utilized other regions (i.e. Central Plains, Sand Hills, High Plains) (Williams 2015).

3.2 Archaic Period (9,000 BP to 2,000 BP)

The Archaic period (divided into early, middle, and late intervals) roughly coincides with the beginning of the Holocene and terminates around 2,000 BP. During the Holocene there were gradual changes in the environment and landscape. For example, the warming global climate coming out of the end of the Pleistocene accelerated the melting of polar ice caps and continental glaciers, resulting in sea level rise. At the onset of the Archaic period, the sea level was 90 feet lower than it is today. By the end of the Archaic period, sea level had roughly stabilized and was close to sea levels of modern times (Bense 1994). In comparison to the climate at the Pleistocene-Holocene transition, the early Holocene marks the onset of a warmer and drier climate. Researchers have referred to this warm and dry period as the Altithermal (Antevs 1955), Hypsithermal (Deevey and Flint 1957), or Atlantic climate episode (Baerreis and Bryson 1965).

On the Plains this warmer and drier climate led to an expansion of grasslands into previously forested areas and the disappearance of broad wetland areas and associated vegetation. Wooded areas persisted in the moist bottomlands near rivers and streams forming attractive environments for game species then as they tend to in the present. The concentration of faunal resources in riparian areas combined with an increased reliance on riparian resources such as nuts, berries, and starchy roots, led hunter-gatherer populations to focus on these areas as a major component of their seasonal subsistence (Hofman 1996).

Changes in subsistence practices during the Archaic are reflected in technological changes observed in lithic toolkits. For example, while prehistoric people continued to use lanceolate style points, diversification of styles to include stemmed (expanding and contracting) and notched (corner and basal) projectile points are apparent over time with the implication that hafting technologies may have changed over time as well. The lithic toolkit expanded to include a more diverse assemblage of pecked and ground stone tools such as nutting stones, manos, metates, celts, and grooved axes, suggesting increased reliance on plant foods in prehistoric diets (Sabo and Early 1990).

The Logan Creek site located in nearby Burt County is a significant archaeological site in terms of understanding Archaic age populations (among other components present at the location) and the role that geologic processes play in the preservation of the past. The site was first investigated in the 1950s and 1960s by the Nebraska State Historical Society (Kay 1998:174-177; Kivett 1958, 1962; Mandel 1995; Snyder and Bozell 1983). Today, several other locations in the region with similar cultural material including distinctive side-notched dart points (dating between 8,600 and 6,000 BP) are collectively known as the Logan Creek complex (Anderson et al. 1980).

3.3 Woodland Period (2,000– 1,000 BP)

Archaeologists characterize the Woodland period by increased sedentism of populations, early evidence of horticultural activity, expanding regional trade networks, and the elaboration of ceremonial activities and mortuary practices (Bozell 2006; A.M. Johnson and A.E. Johnson 1998). The origin of these trends extends to varying degrees into the preceding Late Archaic, and the continuum of these developments form the basis for distinguishing the Woodland from earlier and later periods.

In many respects the earlier part of the Woodland period has a similar toolkit to the Late Archaic period with larger dart point styles dominating forms of diagnostic projectile point/knives. After around A.D. 500, bow and arrow technology is introduced and by late in the period becomes the predominate form of projectile. Ceramic technology becomes common among Woodland populations after their initial development in the Late Archaic with isolated complexes in the region such as Nebo Hill in the Kansas City area (Reid 1984) and Munkers Creek in the Flint Hills of Kansas (Schmits 1976, Witty 1982). The technological innovation of ceramic vessels for storage and cooking is a complementary development to an increasing reliance on gathering wild floral resources and early horticultural reliance (Adair 1988; Bozell and Winfrey 1994). Woodland pottery tends to be relatively thick, heavily cordmarked, and often coarsely tempered. Vessel forms are typically conical with little to no shoulders or constriction on the upper body (Bozell 2006; Bozell and Winfrey 1994; Hill and Kivett 1940; Kivett 1952).

Habitation sites with evidence of structures are limited, but examples demonstrate that oval-shaped, lightweight pole structures, covered perhaps with hides, woven mats, or thatched grass bundles were common on the Plains (Bozell 2006; Hill and Kivett 1940; Logan 2006). Structures with wattle-and-daub construction tend to result in more highly visible remains archaeologically as this material becomes a low-fired ceramic upon burning commonly called daub allowing this material to persist in the archaeological record. Often this daub bears the impressions of materials against which it was plastered.

The Woodland age Valley variant covers a broad region extending from the Missouri River valley in South Dakota across portions of the Loup and lower Platte Rivers of central and eastern Nebraska and southward into northern Kansas, particularly in the Blue River drainage south toward the Kansas River (Bozell 2006; Bozell and Winfrey 1994; Logan 2006). Woodland age sites are not well documented in the project vicinity with key sites that have been investigated situated along major drainages such as the Loup, Platte, and Missouri Rivers. Examples of Woodland age artifacts in the area include smaller corner-notched arrowpoints, larger stemmed and corner-notched dart points, and occasional examples of thick, coarse-tempered, cordmarked pottery.

3.4 Plains Village Period (1,000 – 500 BP)

The Plains Village period is characterized by more substantial residential structures, increased use of storage facilities in the form of deep straight-sided and bell-shaped pits, and a settlement pattern resembling extended communities and even villages. Together these traits are indicative of populations that were increasing and becoming more sedentary (Logan 1996a; Steinacher and Carlson 1998; Roper 2006a). These populations became more reliant on horticulture than in the preceding Woodland period with cultivated crops becoming an increasingly important aspect of the diet (Adair 1988, 2006).

Artifacts typical of the Plains Village period include small endscrapers, small triangular arrowpoints that are often notched, and occasional bone tools such as bison tibia digging stick tips and scapula hoes used for digging and gardening. Distinctive ceramic globular jars and bowls are typically thin and occasionally bear decoration (usually on rims and shoulders). Together with the projectile point styles and other classes of artifacts such as bone digging implements, these traits help distinguish surface scatters of artifacts from earlier Woodland sites in the region.

Habitation sites often consist single residential structures with some sites bearing evidence of repeated occupation and multiple houses. Structures were more substantial and generally square to rectangular with extended entryways although examples of circular structures also occur (Roper 2006a; Steinacher and

Carlson 1998). Houses were usually of wattle-and-daub construction with burned examples of structures bearing characteristic impressions of grass and poles of the structure in pieces of burned clay plastering.

The Central Plains tradition, comprised of various archaeological phases separated based on geography, variations of material culture, and radiocarbon dates to varying degrees, covers a broad area of the Plains from the Missouri River trench in southeastern South Dakota downstream to the Kansas River and westward up the Platte and Kansas/Republican River basins and nearby areas. In relation to the current Project Area and in the most general terms, the Nebraska phase is situated along the Missouri River to the east and south, Itskari phase is located to the west along the Platte and Loup rivers, and the Smoky Hill phase is usually extended northward into southern Nebraska at least within the Blue River valley south of the Platte River but even as far north as the big bend area of the Platte River (Bozell and Ludwickson 1999:132; Roper 2006a:106; Steinacher and Carlson 1998:236).

Elsewhere nearby, a Coalescent tradition was proposed for sites along the Missouri River as far south as near the confluence with the Niobrara River. This period was named for the apparent mix of Central Plains tradition and Middle Missouri tradition traits among a group of sites in the region (Lehmer 1954:150-153, 1971:32-33). This framework has long been questioned due to complexities of material culture, improved radiocarbon dating, and realization that topics of replacement and coalescence of archaeologically defined cultures is fraught with issues (cf. Fox 1980; Steinacher 1983).

It has become increasingly clear that these archaeological constructs that serve to help identify and distinguish core areas of different phases become more problematic as investigations take place outside of these central areas. Furthermore, it is important to remember that these observed distinctions should not be taken to represent past cultural groups such as bands or tribes whose identities are based on much more than the material remains of these past groups. In discussing the results of extensive investigations at the Patterson site (25SY31) in Sarpy County, the problem of assigning at least some Plains Village collections to defined phases was considered, serving as a caution towards such assignments elsewhere, particularly with smaller collections and/or strictly surface-derived collections (Bozell and Ludwickson 1999; Bozell et al. 1999:101-108).

3.5 Protohistoric Period (500 – 250 BP) and Historic/Contact Period Native American (250 BP – 150 BP)

The period leading up to the Historic/Contact period is often identified as the Protohistoric period. It represents a time when Europeans made their first contact with populations native to North America. Here in the interior of the continent little or no direct contact with the native populations was made aside from

isolated Spanish exploration out of the greater Southwest (Bolton 1949; Hammond and Rey 1940; 1953) and limited chronicles of a French presence extending onto the Plains from the east (Blakeslee 1995; Giraud 1958; Hafen 1997; Norall 1988). Spanning this period are several archaeological manifestations including Lower Loup phase, Red Bird focus, and Oneota tradition. Contact period tribes present along the Platte River and Missouri River around the mid 18th century include the Pawnee, Omaha, Ponca, Ioway, and Otoe-Missouria. It is important to recognize that these historic period groups were present in the area prior to entering the Euro-American historic record more fully while others entered the region during and after European contact was established in the region.

A typical lithic tool technology might be expected to include plain triangular arrowpoints, beveled knives, small endscrapers, drills of various forms, and other specialized tools. Study of chipped stone raw material sources suggests that seasonal long-distance excursions for bison procurement also served as opportunities to acquire high quality tool stone for some groups (Holen 1983). It is also clear that over time chipped stone tools were supplanted by metal tools as contact with European and later American traders became common during the Historic period (Hudson 1993). Bone and shell items are not particularly diagnostic and include bison scapula hoes, spatulas, and knives, tibia digging sticks, various types of awls and antler tools, mussel shell scrapers, and bone/shell beads and other decorative items, again with inventories of these classes of tools and ornaments reflecting European contact late in time.

Ceramic manufacture and treatment vary widely but globular jars were common with a distinct paddle-and-anvil technique leaving a visible surface treatment distinct from earlier cordmarked ceramics. Other ceramics were primarily plain or had a smoothed surface treatment. Decoration is common with some groups including Lower Loup and some Oneota groups to include opposing diagonal lines, herringbone, and chevron patterns with Lower Loup populations also bearing distinct collared and braced rims (Grange 1968; Logan 1996b) and Oneota ceramics commonly having flaring rims and shell tempering with characteristic decorative motifs (Henning 1970; Raish 1979; Wedel 1959:131-171). In some cases, close relationships with nearby groups (e.g., Arikara) introduce significant quantities of ceramics that do not bear the cultural ties of the local population (e.g., Ponca and Omaha) (Henning 1993; Wood 1965; see also Fletcher and LaFlesche 1992:74-78).

Lower Loup is commonly considered to represent late pre-contact populations of Pawnee (Grange 1968, 1979; Logan 1996b; O'Shea 1989; Wedel 1938). Records mentioning groups native to the region were irregular and relatively vague prior to the mid-1700s with references of Pawnee as *Panimaha* (Skiri) and *Pani* (South Bands) on rare occasions, and when located on period maps, these groups are situated along the Platte and Loup rivers (Roper 2006b:245-246; M.M. Wedel 1979). Sites consist of unfortified villages

of earthlodges on stream terraces and adjacent uplands along the Loup and Platte Rivers as well as hunting camps over a wider area beyond (Dunlevy 1936; Logan 1996b; Roper 1989). J. H. Colton's 1854 map notes the Pawnee Tribe residing on both sides of the Platte River (Colton 1854). As a result of a treaty in 1857, the Pawnee released their claim to all except a 288,000-acre reservation contained within what is now Nance allowing expansion of Euro-American settlement through the region (Archer et al 2017:43). Pawnee ties to the region are among the strongest of the historic tribes that were present in the area during the late 18th/early 19th centuries with an ancestral connection to the region appearing to extend back centuries if not millennia.

The Oneota tradition spans a wide area of time and space in the central part of the North American continent from the Great Lakes to the Great Plains and as such defies definition while still having significant meaning regarding the cultural material markers the term evokes. Oneota groups are commonly tied to Siouan language families including Chiwere (Ioway-Otoe-Missouria) and Dhegiha (Omaha-Ponca-Kansa-Osage), many of whom are late arrivals to the Plains of the Missouri River region and beyond (post 1600-1650), having moved into the region from areas to the east (Henning 1993; Springer and Witkowski 1982). As such, these groups might be considered to have already begun a transition towards reliance on European trade goods during the period.

By the time the Omaha enter the Missouri River area in the 1770s with establishment of the "Big Village," their material culture was already significantly comprised of European trade goods with a corresponding decline in native manufactured items (O'Shea and Ludwickson 1991). Henning (1993) suggests that the Blood Run site near Sioux Falls, South Dakota offers a good candidate for an earlier expression of Omaha culture. The site may have been the principal village of the Omaha in the late 17th/early 18th century (M.M. Wedel 1981).

At some point during this same period the Ponca split from the Omaha and appear on European maps in the early 18th century for the first time (Henning 1998; Ritter 2002). The earliest written account of the Ponca occurs in a 1785 letter noting a village on "The River that Runs" (Niobrara River) (Howard 1995:24). Archaeologically, the Red Bird focus has been tentatively tied to the Ponca despite some inconsistencies with how the historical and archaeological records connect (see Wood 1965:127-130). Associated Red Bird focus sites are clustered in a small area near the mouth of the Niobrara River consisting of earthlodges situated together on terraces and low bluffs overlooking drainages (Wood 1956, 1965). Records of Ponca village sites cluster around the Missouri-Niobrara River confluence, but traditional and historic accounts also place them on the Elkhorn River and along upstream areas of the Niobrara River in the early 19th century (Howard 1970). The Ponca settled into a reservation restricted to

their traditional village territory between the Niobrara and Missouri Rivers in northeast Nebraska through treaties in 1858 with an adjusted reservation through a 1865 treaty. With the Indian cessations, the lands in western Nebraska reverted to governmental ownership and became what was known as the Unorganized Territory. The second Fort Laramie Treaty of 1868 then confirmed Sioux hunting rights in the northwest part of the state and established Red Cloud's agency where the Sioux were to be confined but, in the process, the Ponca reservation was significantly reduced (McIntosh 1996:77).

The Chiwere speaking Otoe-Missouria originally lived in the Great Lakes region from which they emigrated along with Winnebago and Ioway as early as the 16th century. Over time these groups split from one another with the Otoe settling in the lower Platte River drainage in the 18th century and the Missouria farther downstream along and east of the Missouri River. By around 1775 the Otoe were living in a large village along the west bank of the Platte River in what is today Saunders County south of the Project Area. The Yutan site (25SD1), added to the NRHP in 1972, was investigated over a period of years by the Nebraska State Historical Society where circular earthlodges were uncovered along with numerous storage pits containing abundant refuse of daily life. Due to the late age of the site and a prominent location on the Platte River, Euro-American trade goods were common among items of native manufacture. The village was also home to part of the Missouria people beginning in the late 18th century. The Eagle Ridge site (25SY116) in western Sarpy County and Ashland site (25CC1) in Cass County farther to the southeast were also important Otoe-Missouria habitations. Through a series of treaties with the U.S. government, Otoe-Missouri claims in the area were slowly relinquished and they were settled to a reservation on the Blue River along the modern Kansas-Nebraska state line in 1854 and later were relocated south to Indian Territory (later Oklahoma) in the 1880s.

During the mid-18th century, the Teton Sioux made their appearance in the Upper Missouri region and prior to the turn of the 19th century the Oglala and Brulé moved westward into the Bad River and White River drainages respectively (Hyde 1984:16, 20-22). The Teton Sioux asserted themselves over a broad territory extending from northwest Kansas and northeast Colorado northward to encompass much of western Nebraska and the Dakotas and eastern Wyoming and Montana (Wilson 1941:15). A 1688 map by a trader named Franquelin showed the Yankton, Lakota, and Wahpeton Sioux tribes east of the Mississippi River in modern-day Minnesota, with other accounts also placing the Issati (Santee) in the same area (Hanson and Jenks 2011:105). By the middle part of the 18th century, all the Sioux bands were moving westward because of various pressures (Hanson and Jenks 2011:105).

Around the turn of the 19th century, a Sioux alliance consisting of the Lakota, Nakota, and Yankton expanded into the Missouri River valley and Black Hills displacing weaker local tribes (Hanson and Jenks

2011:103; Hanson 1998). The Brulé were the southernmost of these groups and competed for bison lands against the Ponca and Pawnee in western Nebraska (Hanson and Jenks 2011:103). The Omaha and the Pawnee generally claimed lands as far west as the eastern Sand Hills (Wishart 1994:13-15). Both the Omaha and Ponca are noted historically to have made seasonal bison hunts onto the Plains into the Sand Hills beyond the Loup River basin. By the time of Nebraska statehood, the Lakota and other Sioux tribes controlled an area of the Plains from Minnesota to the Yellowstone River and from North Dakota to the Platte River in Nebraska (Hanson and Jenks 2011:95).

The Santee Sioux were settled on a reservation within modern-day Knox County in 1866 (Mattison 1955:150). This was the second reservation for the tribe, the first being on a temporary reservation on Crow Creek in South Dakota. The Santee reservation originally consisted of approximately 115,000 acres but was reduced in acreage with land granted by allotments by 1877 and later through the Dawes Severalty Act of 1887 (Mattison 1955:150; Meyer 1968).

3.6 Historic Euro-American Settlement (200 BP – Present)

The first Euro-American arrivals of the region were predominantly situated along the Platte River corridor. This early contact in Nebraska likely came through French traders in the early 18th century and infrequent Spanish excursions onto the Plains. French traders and explorers, such as Pierre and Paul Mallet, brought increasing contact between European and native groups in the region as seen in Soulard's 1795 map identifying regional groups (Wood 1996). The Ponca claimed lands between the White and Platte Rivers and westward to the Black Hills. The Pawnee and the Omaha claimed lands into the eastern edge of the Sand Hills (Wishart 1994: 13-15). The Sioux arrived in the region when they were moved out of Minnesota due to conflict with the Chippewas in the early 19th century (Utley 1984:11). After European interest and claims in the region were transferred from France to the United States through the Louisiana Purchase of 1803, a new period of exploration and contact ensued

The 1851 treaty at Ft. Laramie was the first in a series of talks between the United States and the tribes. This treaty sought to determine the relationship between the tribes and the government and establish a peace in the area while allowing for Euro-American encroachment into western lands along corridors such as the Oregon-California Trail. The Ft. Laramie treaty was successful in defining tribal boundaries which attempted to ease territorial disputes between tribes. It also laid the foundation for future reservations (Utley 1984:61).

The passage of the Kansas-Nebraska Act in 1854 created Kansas and Nebraska Territories and allowed for the settlement of land by Euro-Americans. Nine original counties were created during the territorial

period in the eastern portion of the state. The territorial capital of Omaha was surveyed in 1854, purchased from the former lands occupied by the Omaha tribe (Morton et al. 1911:223). For the western part of the state, however, the lands remained either as part of tribal lands or unorganized territory.

As railroads pushed farther and farther west onto the Plains, the previously uncharted territory of western Nebraska necessitated exploration to locate the best route for rail lines. Following the opening of much of Nebraska as a territory, one of these early explorers, Gouverneur Kemble Warren, took part in multiple expeditions through the unorganized territory, lands still used by the local tribes in the western part of the state, notably in 1855 and 1857. These treks traversed the area from Ft. Kearney in the southern portion of Nebraska, to Ft. Pierre in the Dakotas, crossing near or within the area of modern-day Custer County. Warren's expeditions utilized Indian trails, and he encountered signs of the Brulé, Ponca, and Pawnee in the region (McIntosh 1996:42-59). Because of his exploration, Warren was able to lay out a road (called the Calamus Trail), publish reports of his surveys, and create reliable maps of a wider region. Warren's maps and reports enabled advancement of the railroad through the area after the Civil War. In 1856, Lt. William D. Smith also journeyed from Fort Kearney to Fort Randall (South Dakota), bisecting the path that Warren took the previous year (Ducey 2017; Warren 1858). The goal of the Smith expedition was to find an acceptable wagon route between the two forts.

Nebraska was granted statehood in 1867. Growth after this time within the territory was encouraged by the Homestead Act and the creation of railroads. The Homestead Act of 1862 allowed individuals the opportunity to settle on 160-acre tracts within the territory. Laying rail lines in Nebraska began in the late 1860s and continued for the following two decades as a means of connecting developing communities (McKee 2012). The Pacific Railroad Act of 1862 granted all odd-numbered sections in every township within 10 miles of the proposed transcontinental railroad to be set aside for railroad use. Two years later, the land grant was expanded to a 20-mile width (Combs 1969:2). After the passage of the Railroad Act of 1862, the completion of a transcontinental route took priority over all else, and work was focused on the Platte River Valley (Beezley 1972:62). Funding was limited for additional work or surveys and further delayed by the Civil War. Laying track in Nebraska began in earnest in the late 1860s and continued for the following two decades as a means of connecting developing communities (McKee 2012).

Pierce County was created in 1859, named for President Franklin Pierce. Initial settlement was at Willow Creek (modern-day Pierce) in 1870 (Andreas 1882). Pierce City was later granted the county seat. The county boundaries were adjusted on the northern side in 1875 (Andreas 1882). Pierce County saw an increase in commerce and industry in the latter part of the 19th century with the insertion of the railroad. In 1879, the Fremont, Elkhorn, and Missouri Valley Railroad (FE&MV) crossed the county through

towns including Pierce (Hansen nd:15). The Great Northern, which was a short line, stimulated the communities of towns like Osmond (Mead & Hunt 2001: 11).

4.0 RESEARCH DESIGN AND METHODS

This cultural resource investigation focused on the identification and preliminary assessment of cultural resources in the defined Project Area. The following section details a methodology for identifying, recording, and evaluating cultural resources in the project APE using standard archaeological methods and practices to locate and provide initial evaluation of cultural resources per guidance set forth in the NRHP criteria and established by NeSHPO standards for conducting and reporting investigations and considering identified cultural resources.

4.1 Objectives

The purposes of the cultural resources investigation were to: (1) systematically evaluate each area for the presence of cultural resources that could be affected by the proposed undertaking; and (2) provide an initial evaluation of any discovered resources based on the eligibility criteria set forth in the NRHP. Based on the findings of this investigation, final planning decisions can be made to avoid any cultural resources that may have the potential for NRHP eligibility when possible.

This study was conducted to professional standards and guidelines in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44742), and the Secretary's *Standard for Identification* (48 FR 44720-44723) and meets the standards of Section 106 of the National Historic Preservation Act (NHPA). The NRHP criteria of significance helped guide the investigation and the preliminary evaluation of identified cultural resources.

The guiding NRHP criteria are:

Criteria for evaluation: The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, associations, and

- A. that are associated with the events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that yielded, or may be likely to yield, information important in prehistory or history.

Criteria considerations: Ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations, reconstructed historic buildings; properties primarily

commemorative in nature; and properties that have achieved their significance within the past 50 years shall not be considered eligible for the National Register (36 CFR § 60.4). These resources may merit NRHP inclusion if they possess exceptional significance.

In general, prehistoric and historic sites containing subsurface deposits in the form of features or middens or that may be located in deeply buried settings suggesting intact deposits may be eligible for NRHP listing under Criterion D. Cultural resources related to the built environment or that are especially characteristic of certain periods of our collective past are typically evaluated by other criteria.

Site integrity and condition are key factors in evaluating NRHP significance. Evaluating the integrity of a cultural resource includes consideration of seven elements: 1) *Location*- the specific place the property occupies; 2) *Design*- the combination of elements creating the space, structure, and style of a property; 3) *Setting*- the physical environment of the property; 4) *Materials*- the physical elements that define the property; 5) *Workmanship*- the evidence of the technology and skills demonstrated in a property or components of the property; 6) *Feeling*- how the property physically conveys its original purpose and character; and 7) *Association*- the readily apparent relationship a property and the period, event, or activity it represents.

4.2 Archival Research

Buried Past Consulting, LLC conducted a review of archaeological and historical documents relevant to the Project Area prior to entering the field and carried out additional research during and after the conclusion of the field investigation as preliminary findings warranted. Archival research included accessing archaeological inventory records maintained by the Nebraska State Historical Society for identified cultural resources in the vicinity of the Project Area. Archival research also provided a summary of past cultural resource investigations conducted around the current project. In conjunction with the NRHP significance criteria the archival research results helped to provide a context by which cultural resources, or the potential for encountering cultural resources, could be evaluated, and served to pinpoint areas where past cultural resources studies and sites might coincide with the current Project Area. Finally, background research on the early history of the area was considered vital to determining the types of historic features such as early trails/roads, contact period Native villages or camps, and settlement period farmsteads or other development that might be encountered during the field survey.

Institutions and online resources consulted as part of the archival research included:

- Nebraska State Historical Society
 - Recorded archaeological sites in Project Area vicinity
 - Previous cultural resource studies in the project vicinity

- NRHP listings for Pierce County
 - Previous historic building surveys in Pierce County
- Historic Map Works (<https://historicmapworks.com>)
 - 1885 Everts & Kirk – *Official State Atlas of Nebraska*
 - 1920 George A. Ogle – *Standard Atlas of Pierce County, Nebraska*
- Bureau of Land Management, <https://glorerecords.blm.gov>
 - General Land Office (GLO) plat maps (1859)
 - Land Patents
- Archive.org
 - 2001 Mead & Hunt – *Pierce County, Nebraska Historic Buildings Survey*

4.3 Field Methods

A variety of field methods may be used during a cultural resources survey to identify the loci of past human presence in an area. Thorough methodology contributes to the ability to efficiently identify existing cultural resources and, when encountered, to obtain data needed to identify age, function, and integrity in each instance an archaeological site is discovered. This field methodology relied upon NeSHPO guidance for directing investigations and reporting.

Significant prehistoric sites tend to cluster near perennial stream valleys although smaller special use and temporary campsites may be found nearly anywhere and together these provide a more comprehensive view of prehistoric life ways in the area. Historic age resources predictably cluster along routes of travel—roadways and railways. These routes were conduits for traffic, linking rural inhabitants to surrounding communities and commodities and therefore provide an increased likelihood of isolated farmsteads and settlements along these corridors. Creeks with perennial stream flow also tend to be a focal point of significant settlement and use. Archival research assisted in determining if and where early settlement, roads, and other infrastructure were situated in the area and whether such resources coincided with the areas surveyed as part of this project.

4.3.1 Pedestrian Survey/Visual Inspection

This field survey involved a focused, systematic examination of the anticipated APE of the Project Area comprised of two widely separated areas. Detailed field maps for the locations were prepared with USGS topographic and recent aerial imagery coverages. The use of maps in the field for location and orientation was supplemented with GPS capable of up to one-meter accuracy to assure complete coverage up to the projected APE boundaries and to pinpoint the locations of cultural resources and other landscape features

as they were encountered. Use of mobile phone GPS and common mapping apps available for such devices were also employed for general orientation and recordation by individual crew members.

Pedestrian survey consisted of covering the survey areas on no greater than 15-meter (50 feet) intervals dependent upon perceived potential for encountering cultural resources. Transects were modified as necessary depending upon variables of terrain, property and fence lines, and other potential obstructions to allow easier movement across the landscape. Survey was accomplished by walking a series of transects within the APE to partition coverage in an orderly and common-sense manner throughout the area. Typically, survey was initiated from a point of public access such as an adjacent township road and was followed across individual fields to a predetermined end point with return through the same area on alternating transects until coverage of the target acreage was achieved. Use of multiple vehicles allowed most locations to be surveyed without needing to return to the point of origin upon completion of survey of accessible acreage.

Visual examination consisted of inspection of the surrounding ground surface along each transect with 10% visibility considered to be the absolute minimum without considering employment of supplemental shovel testing as part of the survey effort. During the pedestrian walk-over transects were often deviated from slightly to take advantage of localized areas of improved surface visibility due to vegetation variation or to inspect animal burrows, areas of erosion, mechanical modification, or other disturbance. This frequently offered a notable improvement in the overall impression of visibility in areas that might otherwise be considered to have less than ideal surface exposure.

Photographs were taken to provide an overview of the Project Area including landforms and topography, examples of vegetation and ground cover, drainage channels, any identified cultural resources, and of the ongoing survey to document the general conditions and level of effort of the investigation with the expectation that these images would serve to illustrate the survey results in a report of the investigation.

4.3.2 Subsurface Testing

To supplement the visual inspection and account for the potential for buried cultural resources that might be disturbed during construction, subsurface excavation via shovel testing was conducted where ground surface visibility was limited and there was a perceived high potential for buried cultural deposits.

Background research included consideration of soils and characteristics of varying soil stratigraphy that would likely be encountered in the project vicinity. U.S. Department of Agriculture/Natural Resource Conservation Service soils descriptions contributed to a better understanding of the soils in the Project

Area and the general depth of the soils that might have the potential for bearing cultural material along the survey corridor.

Subsurface tests were commonly placed on approximate 30-meter (100 feet) intervals, measuring a minimum of 30 centimeters (12 inches) in diameter and excavated in approximate 10-centimeter (4 inch) levels into clear subsoil deposits or to depths of 50-60 centimeters, the depth that effective excavation was often limited. Observations of soil structure, color, and inclusions were made for each excavation on standard field forms to provide a consistent record of examination. All excavated soil was screened through ¼ inch mesh hardware cloth to allow for consistent recovery of small debris and allow closer examination of the excavated matrix with excavations backfilled upon completion.

4.3.3 Cultural Resource Documentation

Archival research indicated the presence of previously recorded cultural resources in the general vicinity of the Project Area. During field investigations any occurrences of cultural material consisting of artifact isolates, artifact scatters, isolated architecture, or structures or complexes of buildings were to be designated as unique cultural resource loci in the field. All field notes, maps, and other survey generated data were to be recorded using either the archaeological site trinomial in the case of previously recorded sites, or a temporary field number if the resource was newly identified. NeSHPO standards were relied upon to make determinations of what loci qualified as sites. Prehistoric finds would be designated as sites if the observed remains were not in clearly secondary contexts such as stream channels or obviously dumped/redeposited fill from elsewhere. In cases of clear secondary deposition and loci lacking primary context, these isolates would be discussed in the report, but receive no formal site number. When encountered, artifacts were expected to be analyzed in the field with few exceptions necessitating collection with the intent of returning any materials to the landowner upon completion of the project unless other arrangements with the landowner were made. While all field crew were expected to be proficient in carrying out the necessary field documentation, the principal investigator would ordinarily oversee this task to assure a consistent standard of analysis and documentation.

Historic sites were subject to these same provisions of context as well as requiring that isolated finds of artifacts be at least approximately 100 years old. Items not meeting these criteria were not further documented in records or reporting. Historic loci that were less than 50 years old were recorded as sites only if they were clearly abandoned.

The built environment in and adjacent to the Project Area was documented at a reconnaissance level due to the potential for indirect effects to areas outside the primary project APE. Project planning and

consultation with NRCS cultural resources personnel identified several localities that may be indirectly affected by project implementation due to proximity to the project APE. These locations included occupied residences and ancillary buildings that are currently in use (or have been used in the recent past). Properties were documented by visual inspection from the project APE or adjacent public ROW (township roads, highways, etc.) with brief notes concerning construction, modification, and current condition and use recorded along with photos of the buildings comprising these properties as could be best depicted without entering these properties.

5.0 RESULTS OF INVESTIGATION

The results of the current investigation are presented below in sections providing context for the investigation as a summary of historic archival research and past cultural resources investigations and previously recorded archaeological sites and a discussion of the results of the current work detailing field observations, describing cultural resources observed, and documenting/assessing historic period buildings in and immediately adjacent to the Project Area.

5.1 Historic Archival Research

Pierce was established in 1871 not long after the county started to see its first Euro-American settlement. Pierce was the only town in the county that was not created by the railroad (Mead & Hunt 2001:13). With the insertion of the railroad, the community saw a boom in settlement, and the community included such things as a flour mill and associated dam.

With the rise of automobile traffic in the mid-1910s the so-called Good Roads Movement (in conjunction with the See America First Campaign) increased the number of improved roads and automobile traffic in many parts of the country. It was during this period that many local governments made efforts to improve roads. Impacting Pierce County, a regional Meridian Road Association was formed in 1911 to establish a route that closely followed the Sixth Principal Meridian (Texas Oil News ca. 1917). This association was one of the earliest of its kind. Meridian Highway was designated a state highway in 1922 (Long 1922). Towns along the route promoted their services geared toward travelers along the route and the community of Pierce was among those that promoted camping grounds by 1921 (Long 1921). Nearby Gilman Park served as a public campground for travelers.

The community of Osmond was created along the Great Northern Railroad's Pacific Short Line in 1890 (Mead & Hunt 2001). The community maintained a steady growth into the twentieth century.

5.2 Previously Recorded Cultural Resources and Past Investigations

Several cultural resource investigations have been carried out in the Osmond and Pierce vicinities over the past couple of decades (Table 2). Surveys in and around Osmond include four cell tower surveys and a railroad radio communications tower location (Table 2; Clark et al. 2014; Kelly 2011; Kerst 2010; Parks 2008; Scott and Hemmingson 2024). These small acreage investigations failed to identify any cultural resources within their small APEs. Transportation related projects near Osmond include survey of the U.S. Highway 20 crossing of North Fork Elkhorn River on the east side of town and survey near the intersection of Nebraska Highway 121 and U.S. Highway 20 (Table 2; Bozell 2004; Carlson 2012). Neither project resulted in documentation of cultural resources.

The only documented cultural resource in the Osmond area is the generally located site of the former Osmond roller mill (25PC503), recorded as part of a statewide effort to document mills found in historic records (Table 3). The mill precise location was not readily known based on available archival information. The mill is not depicted in the Osmond town plat map in the 1920 Pierce County atlas but is considered unlikely to have been in the immediate project vicinity (Ogle 1920).

Table 2. Past cultural resource investigations within approximately 1 mile of the Osmond and Pierce Project Areas.

ID No.	Date	Author	Title
OSMOND			
04-0096	2004	Rob Bozell	<i>NHAP-PSS NH-20-5(110), Osmond East.</i>
08-0084	2008	Stanley Parks	<i>Archeological Investigations: Viaero Wireless- Osmond Tower Site, Pierce County, Nebraska.</i>
10-0039	2010	Adrienne Merola Kerst	<i>Archeological and Historic Structure Inventory for the US Cellular Osmond 855544 (V09133) Communication Tower, Pierce County, Nebraska.</i>
11-0128	2011	Mark W. Kelly	<i>Verizon Wireless Osmond Tower Site, Pierce County, Nebraska.</i>
12-0117	2012	Nancy F. Carlson	<i>NHAP-PSS STP-121-4(111), N-13 to Osmond, Pierce County, Nebraska.</i>
14-0128	2014	Jesse Clark Nicole Sauvageau Rockwell	<i>Results of a Cultural Resource Inventory for the Proposed BNSF Railway Osmond Dispatch Radio Tower (TCNS #97088) in Pierce County, Nebraska.</i>
24-0008	2024	Lindsay D. Scott Cash Hemmingson	<i>Historic Properties Inventory for the Osmond DT Monopole Tower Telecommunications Project, VPS #NE24-4, Pierce County, Nebraska, Township 28N, Range 2W, Section 31.</i>
PIERCE			
02-0035	2001	Rob Bozell	<i>NHAP-PSS STPB-70(13), Pierce Willow Creek Trail.</i>
02-0094	2002	Rob Bozell	<i>NHAP-PSS BRO-7070(9), Pierce North.</i>
04-0045	2003	Rob Bozell	<i>NHAP-PSS STPD-13-4(107), Pierce Southeast.</i>
07-0140	2007	Todd Kapler	<i>Results of an Archaeological Survey Prior to Installation of a 250 Ft. Cellular Communications Tower in Pierce County, Nebraska.</i>
08-0064	2007	John Ludwickson	<i>NHAP-PSS SRR-70(17), Willow Creek Recreation Roads.</i>
13-0099	2012	Nolan Johnson	<i>NHAP-PSS SRTS-70(20), Pierce Community Saft Routes to School, Pierce County, Nebraska.</i>
18-0047	2016	Nolan Johnson	<i>STP-98-5(107)- Pierce East, Road Resurfacing, Restoration, and Rehabilitation, Control #32125, Pierce County, Nebraska.</i>
18-0187	2017	Nolan Johnson	<i>STP-13-4(112)- Pierce Northwest, Road Resurfacing, Restoration, and Rehabilitation, Control #32283, Pierce County, Nebraska.</i>

Past investigations near Pierce are largely the result of transportation improvements (Table 2). Highway upgrades along Nebraska Highway 98 east of town and Nebraska Highway 13 northwest of town are among the most recent work in the area (Table 2; Johnson 2016; 2017). Other work includes survey of road improvements associated with Willow Creek Recreation Area southwest of town along 549th Avenue and 853rd Road (Table 2; Ludwickson 2007). Bridge improvement projects in the Pierce vicinity include the Nebraska Highway 13 crossing of Willow Creek on the south side of Pierce and the 855th Road crossing of North Fork Elkhorn River northeast of town (Table 2; Bozell 2002, 2003). Improvements related to sidewalk and trail systems at Pierce include sidewalk improvements in the vicinity of the elementary school in town and for the Willow Creek recreational trail connecting the Pierce community with the nearby recreation area (Table 2; Bozell 2001; Johnson 2012). A single cell tower survey covered a small area along 853rd Road (Table 2; Kapler 2007). No cultural resources were recorded because of these various investigations.

Two previously recorded sites are documented in or near Pierce (Table 3). The location of the former Pierce Milling Company (25PC501) was recorded as part of an effort to document mill locations statewide from historic records. Based on this information, the location of the mill was on a bend of North Fork Elkhorn River in what is now the west part of Gilman Park on the northeast side of Pierce. A 1920 plat map of Pierce shows the mill and associated improvements at that location (Ogle 1920). Southwest of Pierce, a long, southeast trending upland ridge finger overlooking Willow Creek provides the setting for a small prehistoric campsite of unknown age (25PC3). Neither site has been evaluated for NRHP eligibility. It is unlikely that the location of the mill, which falls within the current Project Area, is extant considering the extensive modifications to the landscape within the confines of modern Gilman Park.

Table 3. Previously recorded archaeological sites located within approximately 1 mile of the Osmond and Pierce Project Areas.

Site No.	Site Type	Cultural Context	Work Status	National Register Status
25PC3	Campsite	Unknown Prehistoric	Surveyed	Undetermined
25PC501 Pierce Milling Co. Mill	Industrial/Commercial	Late 19 th /Early 20 th c. Euroamerican	Surveyed	Undetermined
25PC503 Osmond Roller Mill	Industrial/Commercial	Late 19 th /Early 20 th c. Euroamerican	Recorded	Undetermined

5.3 Current Field Investigations

The current investigation consisted of an intensive cultural resources survey of WFPO project alternatives for the communities of Osmond and Pierce (Figure 1; Figure 2; Figure 3). The Osmond Project Area

encompassed 12.8 hectares (31.6 acres) on the east side of that community (Figure 4) while the Pierce Project Area covered a total of 214.3 hectares (529.5 acres) in three areas surrounding the town (Figure 5; Figure 6; Figure 7; Figure 8). Two parcels on the northeast side of Pierce totaling 7.2 and 18.5 acres respectively (26.7 acres total) were unable to be surveyed due to access refusal (Figure 6). Besides areas investigated as part of a direct Area of Potential Effects (APE), areas of each community adjoining the project APEs were subject to survey of indirect effects to the built environment of nearby properties (Figures 4-8).

5.3.1 Pedestrian Survey/Visual Inspection

Osmond Locality

Approximately 20% of the Osmond Project Area consisted of cropland. This field lay in the northern portion of the APE (Figure 4). Maturing corn 8-10 feet tall in rows up to approximately 3 feet wide was encountered with excellent ground surface visibility (75-90%) (Figure 9). Bordering this field was a group of four homes of recent construction. Review of aerial photos indicate this row of homes, and indeed all residences along North Park Street, have been built within the past 15 years, having been constructed on lots developed from the acreage that was up until circa 2008 part of the crop field (Figure 10).

The southern extent of the Osmond APE extended across city property where two ball fields and adjacent open greenspace as well as connecting access roads and parking is located (Figure 2; Figure 11; Figure 12). These recreational fields covering slightly less than 20% of the APE were inspected but no supplemental excavation was conducted despite limited surface visibility overall due to the ongoing use of these areas and associated safety concerns. It is unlikely these fields will be directly impacted by project construction.

Between the north ballfield and the crop field and to the east of that ballfield was an area of mixed, taller grass and undulating ground surface with mixed surface visibility (10-50%) covering approximately 10% of the project APE (Figure 13). Scattered evidence of episodic mechanical ground disturbance was noted, as were isolated areas of fill deposited to level some of the lower spots in the field. Review of aerial imagery indicates this area is usually maintained by seasonally cutting the small acreage for hay. Survey of this area was supplemented by subsurface testing.

Open greenspace beyond the outfield fences of the ballfields and undeveloped but mowed areas nearby cover less than 10% of the APE (Figure 14; Figure 15). These areas are regularly mowed and maintained as part of the grounds surrounding the ballfields, consisting of fescue grass with limited ground surface

visibility (0-10%) apart from occasional exposure by mechanical disturbance and isolated animal burrows. These areas were visually inspected, relying on supplemental subsurface testing to assure survey coverage.

Slightly less than 25% of the outlined APE included residential properties documented for potential indirect effects along both sides of Hill Street between 3rd and 5th Streets (Figure 4). These properties were not entered as part of this documentation with inspection being made from adjoining parts of the project APE and public ROW. The results of this documentation are presented separately in a following section of this report. One planned project alternative along 4th Street east of Hill Street was also surveyed in this vicinity where the street grade has been downcut through the hillslope into creating a pathway for flooding into town as a result (Figure 16; Figure 17). This street corridor has been significantly modified, cutting deeply into subsoil horizons.

Pierce Locality

The Pierce Project Area consists of three separate APEs. The largest APE (Area A) consists of a largely narrow area stretching from along 854th Road and adjoining portions of 549th Avenue and Nebraska Highway 13 where drainage channel improvements of existing ditches may occur on the northwest side of Pierce, continuing east along an existing drainage channel and levee bordering the north side of town (Figure 5; Figure 6). The project APE continues from there to include the existing levee which is expected to be modified along the west bank of North Fork Elkhorn River and adjacent Gilman Park, south to the confluence of Willow Creek where the APE continues up Willow Creek along the existing levee across Nebraska Highway 13 to the vicinity of South 1st Street/550th Avenue (Figure 7). This APE encompasses the most extensive WFPO alternatives for the project in the Pierce vicinity covering 162 hectares (401 acres) of crop fields, greenspace, riparian corridors, recreational areas such as the Pierce County Fairgrounds and Gilman Park, and residences on the outskirts of town as well as residential areas in town along portions of North Mill Street, East Main Street and South Hall Street on the northeast and east sides of Pierce. Two parcels, one a small hay meadow on the west side of Mill Street bordering the county fairgrounds covering 2.9 hectares (7.2 acres) and the other a crop field covering 7.5 hectares (18.5 acres) on the opposite side of Mill Street bordering the north side of Gilman Park were denied access for this survey (Figure 7).

A small area of city property along 549th Avenue on the west side of Pierce (Area B) is targeted for use as a location for dumping excavated soil from project construction (Figure 5). Covering 1.9 hectares (4.6

acres) within a fenced enclosure, the property is reported to have been used at one time as a debris/trash dump but is now largely maintained for materials storage or otherwise unused.

The final Pierce vicinity APE (Area C) lies near the southwest side of town, consisting mostly of crop fields, former crop fields long planted to grass, riparian areas along Willow Creek, and adjacent residences bordering 549th Avenue and 853rd Road (Figure 8). The area covers 50 hectares (124 acres) and includes the edge of a newer residential neighborhood near the intersection of 549th Avenue and 853rd Road and a small farmstead in that vicinity as well.

Area A

Survey began in the western extent of Area A, in areas west of Mill Street that mostly consisted of agricultural fields, small areas of grass/pasture, and existing flood control infrastructure. Approximately 38.5 hectares (95.1 acres) of crop fields were inspected west of Mill Street with nearly 80% of that acreage consisting of maturing corn (Figure 18; Figure 19). Despite the late season growth of the field crops, ground surface visibility was commonly very good to excellent (60-90%). Besides observing occasional changes in the consistency of the soil with occasional swales and small low areas, sandy washes, and more common loamy/sandy loam with occasional coarse quartzite sand and small gravels, nothing notable was observed.

Small areas of grass were encountered in the APE west of Mill Street including the corners of pivot irrigated fields, an area of hay meadow and livestock pasture interspersed between adjacent commercial and light industrial development, and small hay meadows and grassy areas bordering the levee (Figure 5; Figure 6). These pasture and hay meadow areas, while closely grazed/cut in most cases offered limited visibility overall (0-20%) with only isolated instances of better visibility (Figure 20; Figure 21). Survey in these areas was supplemented with subsurface testing. The fallow areas near pivot irrigated crops were reseeded to mixed grass with occasional weedy patches with these areas often having adequate visibility among the clumping grasses and areas among patches of weeds (25-40%). No subsurface testing was carried out in these small areas. Along most of these undeveloped areas were sizeable drainage ditches along adjoining roads with areas north of Nebraska Highway 13 to Mill Street situated along existing flood control infrastructure consisting of drainage channels and levee (Figure 22; Figure 23).

Other areas considered as part of Area A west of Mill Street include an approximately 2-hectare (5 acre) portion of the Pierce County Fairgrounds including an enclosed show pen/arena and the northern extent of grounds on the interior of a former oval track now used for other events in front of a grandstands on the south side of old track (Figure 24; Figure 25). These areas were visually inspected but not supplemented

with subsurface testing due to the ongoing use of the property and overall adequate visibility over large portions of the shallowly disturbed grounds. Residential development on the outskirts of town with isolated instances of structures over 50 years old that were documented as part of the survey effort and more examples of homes, commercial properties, and light industrial development ranging between approximately less than 5 years to 40 years in age that were photographed to during survey but were not further documented as potential historic properties (Figure 26). A neighborhood west of Gilman Park represents the densest area of residential properties included as part of consideration of indirect effects to architectural resources along the north side of Pierce (Figure 27). Properties older than approximately 50 years of age were documented and are discussed in a following section. None of these properties were entered as part of fieldwork as potential impacts will be of an indirect nature with only adjacent, undeveloped areas and adjoining drainage ditches included as part of possible project alternatives.

East of Mill Street, the project APE includes only limited areas of crop fields with much of the area consisting of greenspace along the levee system, patchy riparian areas, Gilman Park, and nearby residential neighborhoods (Figure 7). Agricultural fields include portion of a field on the north side of town where corn up to 10 feet tall offering ground surface visibility of 50-90% was encountered (Figure 28). The only other cultivated field was a small alfalfa field east of Hall Street along the levee on the east side of town which had recently been cut with very good visibility of 50-75% among the cut alfalfa (Figure 29).

Areas of grass include a narrow corridor between the levee and North Fork Elkhorn River on the east side of town. These areas had been mowed as part of routine maintenance earlier in the year with the fescue grass at the time of survey being approximately 6 inches tall and offering little surface visibility (0-10%) (Figures 30; Figure 31). These areas were relatively level with occasional meandering shallow swales and some evidence of having been subject to shallow modification and disturbance, likely as part of the adjacent levee construction. At the confluence with Willow Creek, the narrow strip of grass continued along the town side of the levee with little area for survey between the toe of the levee and Willow Creek (Figure 7). The margins of a riparian area with mature growth of trees (mostly silver maple and ash) and scattered thick grass and patches of weeds marked a channel swale of Willow Creek that was cutoff in a flood control effort that reconfigured the lower reaches of the stream and confluence with North Fork Elkhorn River (Figure 32). West of Nebraska Highway 13, small patches of hay meadow of livestock pasture bordered Willow Creek and the levee system in this area. These grassy areas offered variable low visibility (0-20%) (Figure 33). Survey of all grassy areas was subject to supplemental subsurface testing placed at a minimum of 15 meters (50 feet) from the toe of any adjacent levee area. This additional effort is described separately below.

Other areas considered as part of Area A east of Mill Street include the environs of Gilman Park, an approximately 19.6 hectare (48.3 acre) public park with lake, museum grounds, new swimming pool, miscellaneous playground and picnicking improvements, and abundant greenspace (Figure 34; Figure 35; Figure 36). The park lies along and within a former meander of North Fork Elkhorn River that was ultimately cut off by 1960s era flood control improvements leaving a self-contained lake and a marshy, wetland swale of the former channel meandering through the park. Gilman Park is described in greater detail as a cultural resource in a following section of the report. It is expected that direct impacts to the environs of Gilman Park will be limited to the eastern extent of the drainage swale where improvements to a gated flood control structure in the Pierce levee are anticipated, necessitating modifications to the landscape and drainage in that isolated area in the southeast corner of the park (Figure 7; Figure 37; Figure 38). This area was subject to intensive visual inspection supplemented by limited subsurface excavation.

Areas along either side of East Main Street east of Mill Street and south along Hall Street were subject to reconnaissance survey and documentation of structures over 50 years old. A short segment of South 1st Street was also reviewed for the built environment in that area. As was the case elsewhere, none of these properties were entered as part of fieldwork as potential impacts will be of an indirect nature with adjoining undeveloped space being the mostly likely areas for direct impact.

Area B

Area B of the Pierce Project Area consisted of an area of city owned property west of 849th Avenue on the west side of Pierce (Figure 5). The property is reported to have once been a community dump decades ago that in the recent past has been renovated with debris being removed from the grounds. Originally the area was expected to extend beyond a fenced compound encompassing 1.9 hectares (4.6 acres) but ultimately it was resolved that areas outside the fencing would not be necessary for the expected function of providing an area for excavated fill from project construction to be deposited. At the time of survey, the area had recently been mowed, leaving short cut grass/weeds, abundant bare ground and generally open space, and isolated materials stored on-site (Figure 40; Figure 41). Ground surface visibility was variable but often good to excellent (40-80%). Many areas exhibited evidence of extensive ground disturbance, including mixing of soil and pulverized debris such as miscellaneous metal, glass, plastic, rubber, and various building material. The entire area was found to be thoroughly disturbed with widespread mixed debris seeming to confirm the report that the property was the location of episodic dumping of a wide range of materials.

Area C

Area C was situated southwest of the intersection of 853rd Road and 549th Avenue on the southwest side of Pierce (Figure 3; Figure 8). The area covers approximately 50 hectares (124 acres) including a farmstead and farmyard covering 3.4 hectares (8.4 acres) and a patchwork of formerly cultivated crop fields replanted to grass, areas of hay meadows, and other pastures north of Willow Creek. Much of this area was subject to subsurface testing in addition to pedestrian survey and visual inspection due to ground surface visibility limitations. It is expected that only small portions of this entire acreage will be impacted by future improvements consisting of construction of additional channeled drainage from drainage ditches along 853rd Road that will be improved as well. Shallow disturbances created by areas of spoil disposal, equipment and materials storage, and general workspace are expected to be the more common potential disturbance throughout the area. It is unlikely that the farmstead residence, outbuildings, or surrounding farmyard will be impacted directly by the work.

Survey encountered variable ground surface visibility although areas of negligible to low visibility were not as common as might be expected viewing the widespread taller grasses, weeds, and brush from afar. Instances of limited visibility (0-10%) were commonly interspersed with examples of good visibility (25-40%) and occasional areas where animal burrowing was common with a loamy fine sand with few inclusions commonly observed among these burrows scattered over a wide portion of the survey area. Supplemental subsurface excavations assisted in assessing various areas and landforms around the APE. The west and north extents of the APE formed a broad alluvial terrace setting with a distinct transition to the adjacent stream channel and flood plain surface in the southeast portion of the survey area.

In the southwest corner, a healthy stand of native tallgrass prairie grass (likely reintroduced) covered the area (Figure 43). East of this the landform drops to a floodplain with a meandering band of thickly overgrown weeds, cattails, and abundant grass around a channel that was abandoned by a short channelization of Willow Creek (Figure 44). Much of this channel is seasonally wet and includes a small pond along a portion of one meander (Figure 8). A small portion of alluvial terrace similar to the wider expanse to the north and west was present between this meander and the current channel of Willow Creek to the south. In the southeast corner, adjacent to 849th Avenue was a small hay meadow that had recently been cut (Figure 45). This hayfield formed the southern extent of the alluvial terrace landform in this portion of the survey area. Separating these areas from the north half of the APE was a long access drive paved with sand/gravel aggregate. Areas to the north of this had clearly been cultivated in the past based on aerial imagery and occasional visual evidence of former crop rows in the field. This field extended to 853rd Road on the north (Figure 46). This area was relatively level with occasional drainage swales, the

largest of which extends across the southwest portion of the field. Smaller drainages flow south towards this wide, shallow swale and to a broad, constructed drainageway carrying along the north side of the access road into the property to the drainage ditch along 549th Avenue. No evidence of cultural resources were observed during pedestrian survey of Area C apart from the currently occupied residence in the northeast corner of the property which is described in greater detail in a following section.

5.3.2 Subsurface Testing

Osmond Locality

As noted above, several small areas of shovel testing supplemented visual inspection where ground surface visibility was limited by vegetation cover. For the most part, these areas coincide with likely workspace and equipment and material storage that will have limited vertical effects beyond surface and near surface disturbances. Shovel tests were commonly excavated on intervals of approximately 30 meters (100 feet) with placement of other tests being opportunistically located to test small intact areas and avoid drainage swales and intermixed areas of disturbance. (Table 4; Figure 4.

A total of 27 subsurface tests were excavated in various grassy areas in the APE (Table 5). Eight tests across the lawn north of 4th Street consistently exhibited evidence of mixed and disturbed soils with occasional crushed gravel, asphalt, and even isolated pulverized brick fragments and wire nails extending up to 45 centimeters (18 inches) deep. Five tests east of the south access road (Park Street) consistently encountered a dense mix of sand/crushed gravels which extended to depths of greater than 10-15 centimeters (4-6 inches) before excavation was abandoned. The area is considered to represent a parking area with a packed aggregate surface that currently has a thin layer of soil and thick grass at the surface. The remaining 14 tests were scattered in the undulating, thick mixed grass north of the ballfield and areas beyond the north ballfield outfield fence demonstrated little consistency with 15-25 centimeters (6-10 inches) of very dark grayish brown and grayish brown silt loam topsoil and subsoil strata ranging from yellowish brown loam to grayish brown sandy silt loam and yellowish brown to light gray sand extending to 40-50 centimeters (16-20 inches) (Table 4). These tests sought to avoid areas of clear disturbance but still encountered mixed soil and debris in two tests. No tests were excavated in the northeast corner of the area north of the ballfield where a wide drainage swale was present. No evidence of cultural resources were encountered in these 27 tests which often indicated past disturbance even in areas that visually appeared to be undisturbed.

Pierce Locality

Subsurface testing at Pierce was carried out in several locations, the primary being Area C on the southwest side of town where grass coverage was widely abundant and various locations in Area A (Figure 3; Figure 6; Figure 7). Area A had several areas of testing including livestock pasture and hay meadows interspersed among commercial and light industrial properties bounded by 549th Avenue, 854th Street, and Nebraska Highway 13 and a short segment of pasture west of the Pierce County Fairgrounds (Figure 6). The lengthy grassy corridors along the Pierce levee bordering North Fork Elkhorn River on the east side of town and isolated patches of hay meadow and livestock pasture along Willow Creek on the south side of Pierce were shovel tested as well.

A total of 47 shovel tests were excavated across the pastures and small hay meadows behind and beside various businesses off Highway 13 (Figure 20; Figure 21). Tests consisted of a variably colored (brown, dark grayish brown, very dark grayish brown, and dark gray) sandy loam extending to 40-60 centimeters (16-24 inches) below ground surface (Table 5). Evidence of disturbance in the form of cinders and crushed gravel or recent items such as plastic, aluminum, and miscellaneous metal were occasionally noted as were sporadic shallowly mixed soils. Below the variably thick sandy topsoil horizon, a light gray to grayish brown sand was encountered (Table 5). No cultural materials of concern were observed in this area.

The area bordering the levee west of the fairgrounds consisted of mixed grass pasture with a small drainageway bisecting the area. Besides this drainage, at least three shallow swales were also encountered. A total of eight shovel tests were excavated. Tests encountered a brown to dark gray sandy loam to 50 centimeters (20 inches) with a homogenous light gray sand continuing to depths more than 70 centimeters (Table 5). No inclusions were observed among the consistent group of subsurface tests.

A narrow strip of ground on the east and south side of the Pierce levee measured approximately 40 meters (131.3 feet) wide along North Fork Elkhorn River and up to 50 meters (164 feet) wide on the north bank of Willow Creek consisted of a thick cover of mowed/maintained fescue grass (Figure 30; Figure 31; Figure 33). Leaving a buffer from the toe of the levee of at least 15 meters where no subsurface excavation was attempted in order to maintain the integrity of the existing levee, a total of 65 tests were excavated along the remaining strip of ground (Table 5). Along nearly 450 meters (1,476 feet) of the river, tests exhibited soil profiles of 10-30 centimeters (4-12 inches) of mostly very dark gray, very dark grayish brown, and dark grayish brown silty clay loam to occasional silt loam topsoil with a following horizon of dark grayish brown to brown silt loam or loam extending to 50-60 centimeters (20-24 inches)

(Table 5). As work continued west from the confluence of Willow Creek to the southern termination of the APE, tests encountered extensive disturbance in the vicinity of a city materials storage yard with a thick very dark grayish brown silt loam with a slightly clayey feel. West of Nebraska Highway 13 small clusters of tests in pasture/hay meadow areas exhibited a sandier texture of dark grayish brown to brown loamy sand with an abrupt change to yellowish brown sand and loamy sand (Table 5). No natural inclusions or cultural material beyond recent/modern debris in shallow contexts were observed in these tests.

To the southwest, a total of 222 subsurface tests were excavated in the various grassy areas throughout Area C except for low areas along an abandoned channel of Willow Cree (Table 6; Figure 8; Figure 43; Figure 44; Figure 45; Figure 46). Despite covering a relatively wide expanse, tests across the area displayed similar results. Topsoil strata of brown loamy sand commonly extended to depths of about 40 centimeters (16 inches) with occasionally darker variation of dark grayish brown to very dark grayish brown in areas with more moisture or where broad, shallow swales were noted (Table 6). Below this and extending to depths of 50-90 centimeters (20-35.5 inches), brown to light gray loamy sand continued, occasionally becoming notably damp with depth (Table 6). Some tests identified a second stratum between these two horizons where a dark grayish brown loamy sand up to 30 centimeters (12 inches) thick was noted (Table 6). Nothing notable was encountered in subsurface testing across Area C with tests maintaining a consistently sandy loam texture throughout the area.

5.3.3 Historic Building Survey

Osmond Locality

A reconnaissance level survey of the built environment was conducted of properties adjacent to what is expected to be the direct project APE where nearby structures might be indirectly affected by the project implementation (Figure 4; Table 7). Approximate age was determined by style and public parcel records maintained by Pierce County. A total of fourteen properties were documented at Osmond (Figure 4). Of those 14 structures, six were less than 50 years old and not considered further for NRHP eligibility. Residences more than 50 years old represented growth in Osmond after the turn of the twentieth century with a majority dating to the post-World War II period. The earliest residences were primarily of indeterminate style or showed heavy modifications.

Architectural Resource 1. XXX 4th St.

The property at this location consists of two residences. One is a story and a half structure with a gambrel roof of indeterminate age with an attached single car garage (Figure 46). The other residence is a ca.

1925, single story structure with a two-car garage (Figure 47). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP

Architectural Resource 2. XXX 4th St.

The property at this location is a single story, Minimal Traditional style home with a gable and wing form (Figure 48; McAlester 2013). This structure dates to approximately 1950. There are two associated outbuildings of newer construction but indeterminate age. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 3. XXX 4th St.

The property at this location is a one and a half story Minimal Traditional home with a gable and wing form and vinyl siding (Figure 49; McAlester 2013). This structure dates to approximately 1948. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 4. XXX Hill St.

The property at this location is a single-story residence of indeterminate style and multiple additions, dating to approximately 1908 (Figure 50). A modern detached garage and small shed of indeterminate age are also located on the property. A subsurface root cellar of indeterminate age with corrugated metal door is located between the garage and house. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP.

Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of

the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 5. XXX Hill St.

The property at this location is a two-story residence side gabled residence of indeterminate style with multiple additions (Figure 51). Among the additions to the house is a single car garage. The house has an approximate construction date of 1910. An early twentieth century single car detached garage is also located on the property (Figure 52). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP.

Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 6. XXX Hill St.

The property at this location is a residence in the ranch style with a cross hipped roof dating to approximately 1949 (Figure 53). The house has an attached three car garage. A modern shed of indeterminate age is also located on the property. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP.

Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 7. XXX Hill St.

The property at this location is a residence in the ranch style with a single car attached garage dating to approximately 1962 (Figure 54). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 8. XXX Hill St.

The property at this location is a single-story residence in the Minimal Traditional style with a gable and wing form (Figure 55). The residence has a two-car attached garage and dates to approximately 1956. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 9. St. Mary's Catholic Church

St. Mary's Catholic Church was considered by the Pierce County buildings survey performed by Mead and Hunt in 2001 (Figure 56). The church is a Gothic Revival brick structure, constructed in 1911 and dedicated in 1912 (St. Mary of the Seven Dolors 2024; Osmond Republican 1911a:1; Osmond Republican 1911b:1). The 1912 structure replaced an original church building that was originally established in the 1890s in association with a mission parish (St. Mary of the Seven Dolors 2024). The 1912 church originally had a slate roof (Osmond Republican 1911:1). The 2000 buildings survey conducted found the St. Mary's Church to be potentially eligible for the NRHP. Likewise, it is recommended that the church be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as an example of Gothic Revival architecture during Osmond's early period of growth.

Architectural Resource 10. Osmond Park

The Osmond ball park was established after 1920 (Ogle 1920). By the 1940s, park improvements such as stadium seating for 400 people were being made (Osmond Republican 1947:5; Figure IMG 0718). Subsequent improvements also were made in the 1950s (Osmond Republican 1951:1). Survey documented early park buildings, a storage shed/garage, and the original ball diamond improvements, as well as modern utilities (Figures 57-59). Research did not identify events or trends in history that would directly relate to the park structures to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that these structures were associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. Likewise, these structures do not contain any distinctive or unique characteristics and are recommended not eligible under Criterion C of the NRHP.

Architectural Resource 11. Truss Bridge

The bridge located adjacent to the Osmond city park is a Pony Pratt Truss Bridge dating to the late 1910s and is shown as crossing the North Fork of the Elkhorn in the 1920 atlas (Ogle 1920; Figures 60-62). The Pratt form is one of the earliest types of truss bridges (Holth 2010). This particular Pratt example has additional counters that form an “X” within its panels which deviates from the standard form.

Connections of the members within this bridge are completed with pins. Pinned connections appear on bridges in the first half of the use of truss bridges (Holth 2010). This bridge would be potentially eligible for the NRHP under Criterion A for patterns or trends in history that would directly relate to the construction of this bridge (i.e..the early automobile era).

Table 7. Properties assessed for NRHP eligibility in the Pierce Project Area.

Address	Year Built (Approx.)	≤ 50 years (Yes or No)	Potentially Eligible? (Yes or No)
201 5th St.	1986	N	N
204 3rd St.	1987	N	N
205 4th St.	1925	Y	N
206 3rd St.	1996	N	N
206 4th St.	1950	Y	N
208 4th St.	1948	Y	N
305 Hill St.	1908	Y	N
307 Hill St.	1910	Y	N
309 Hill St.	1980	N	N
403 Hill St.	1949	Y	N
405 Hill St.	1962	Y	N
406 Hill St.	1956	Y	N
407 Hill St.	1992	N	N
408 Hill St.	1997	N	N

Pierce Locality

A reconnaissance level survey of the built environment was conducted of properties in areas adjacent to areas of anticipated direct effects in the overall project APE where nearby structures might be indirectly affected by the nearby project (Figure 5; Figure 6; Figure 7; Figure 8; Table 8). Approximate age was determined by style and public parcel records maintained by Pierce County. Thirty-five residences were observed within these adjoining areas, and of those 35 structures, fifteen were less than 50 years old and

not further considered for NRHP eligibility. Residences considered greater than 50 years old represented growth in early Pierce extending into the mid-twentieth century. The earliest residences were primarily of indeterminate style or showed heavy modifications to their original structure over decades of use. Houses classified as “Modern” in this report are those given that designation in McAlester’s *Field Guide to American Houses* (2015). None of the residences documented in the Pierce vicinity as part of this survey were found to have potential for NRHP eligibility. Additional properties surveyed included the R-D Welding complex, the levee culvert, and structures and features at Gilman Park. Two previously recorded gas stations (NeSHPO# PC05-047 and PC05-059) from the earliest years of the Meridian Highway were located on the eastern side of Pierce but were no longer extant at the time of survey. These buildings were located at the intersection of Main and Mill Streets which was a center for automotive businesses known as “Oilville” (Mead and Hunt 2001). A NRHP listed section of the Meridian Highway is located to the south and west of Pierce (NeSHPO# PC05-188).

Architectural Resource 12. XXXXX 854th Rd.

The property at this location is a single-story residence with no determinate style (Figure 63; McAlester 2013). The house dates to approximately 1930. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 13. XXXXX 854th Rd.

The property at this location is a story and a half cross gabled home in the Prairie style with attached single car garage (Figure 5; Figure 64; McAlester 2013). The house dates to approximately 1915. A modern metal shed is the outbuilding at the property. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 14. XXXXX 550th Rd.

The property at this location is a single story, cross gabled home of indeterminate style (Figure 6; Figure 65). The house dates to approximately 1930. Outbuildings include a modified barn/shed of indeterminate age with multiple additions, a chicken coop and modern utility shed (Figure 66). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 15. XXX Mill St.

The property at this location is a residence that is in the National Folk style with a centered gable and enclosed front porch (Figure 6; Figure 7; Figure 67; McAlester 2013). Multiple additions are on the rear of the structure. The house dates to approximately 1915. Outbuildings include a modern two car garage of indeterminate age, a lean-to shed and modern prefabricated shed. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 16. XXX Lloyd St.

The property at this location is a residence in the Minimal Traditional style of indeterminate age and a detached two car attached garage (Figure 6; Figure 7; Figure 68; McAlester 2013). A detached two car garage is also located on the property. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 17. XXX Lloyd St.

The property at this location is a residence in the ranch style with a cross gabled roof and a two-car attached garage (Figure 6; Figure 7; IMG Figure 69). The house dates to approximately 1973. A detached

carport is also located on the property. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP.

Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 18. XXX 1st St.

The property at this location is a residence in the ranch style with an attached two car garage/addition (Figure 6; Figure 7; Figure 70; McAlester 2013). The house dates to approximately 1956. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 19. XXX Lloyd St.

The property at this location is a story and a half residence in the National Folk style with two gabled dormers and an addition on the rear of the home (Figure 6; Figure 7; Figure 71; McAlester 2013). The house dates to approximately 1909. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP).

Architectural Resource 20. XXX 1st St.

The property at this location is a residence that is of indeterminate style with an attached two car garage (Figure 6; Figure 7; Figure 72). The house dates to approximately 1958. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be

considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 21. XXX Mill St.

The property at this location is a residence in the ranch style with brick wall cladding beneath the window line (Figure 6; Figure 7; Figure 73; McAlester 2013). The house dates to approximately 1961. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 22. XXX Mill St.

The property at this location is a duplex residence created out of two Minimal Traditional homes dating to approximately 1961 joined by two single car garages (Figure 6; Figure 7; Figure 74; McAlester 2013). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 23. Gilman Park

The property, which now is the home to Gilman Park, was the site of the Pierce Milling Company owned by Stephen F. Gilman which had been established in 1880 (Figure 7; Figures 75-91). After a fire in 1932 destroyed the mill buildings, ownership of the Gilman property was transferred to the City of Pierce (Pierce Hist. Soc. 2021). The community of Pierce modified the property to contain Gilman Park and Dam which were established in 1935 with assistance from the Federal Emergency Relief Administration (FERA) (Pierce Hist. Soc. 2021). In 1937, the last of the mill buildings were razed and a public shelter house constructed by Works Progress Administration (WPA) workers (Pierce Hist. Soc. 2021). A footbridge from this era is still in existence (Figures 76-77). In 1963 and 1964, a levee was constructed along the North Fork of the Elkhorn and Willow Creek (Pierce Hist. Soc. 2021).

Ten years after the construction of the levee at Pierce, Gilman Park was redeveloped with an associated lake called “Bill Cox Lake” (Pierce Hist. Soc. 2021; Figure 78). The park eventually became the home of the Pierce County Historical Society Museum complex and Gilman Park Arboretum. The museum complex includes several historic buildings that have been moved into the park (Figures 79-81). Notable structures within the park are recreational facilities including play area and ball diamond, and pool (Figure 82-84). A memorial fountain dedicated in 1985 is located next to the lake (Figure 85). A severe storm in 2010 caused considerable damage to the buildings at the park leading to construction of modern facilities replacing the original structures (Pierce Hist. Soc. 2021).

Shortly after the park was established, a local man, Ralph Terry, became caretaker and initiated beautification projects at Gilman Park, including the construction of concrete sculptures that surround the shelter house (Pierce Co. Call 1943:4; Pierce Co. Leader 1959:8; Figures 87-91). These sculptures are still extant, and include a bear, giraffe, dinosaur, tiger, and a memorial to “Victory” in World War II. This sculpture preceded the rise in play sculpture in public parks in the 1950s (Burkhalter 2023). The park also retains some original tree plantings related to Terry’s park beautification efforts (Figure 86). It is recommended that the features of the park dating to the 1930s and 1940s be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as an example of recreational developments tied to the importance of the growth of the community of Pierce.

Architectural Resource 24. XXX Hall St.

The property at this location is a residence in the ranch style with a cross gabled roof and a two-car attached garage (Figure 7; Figure 92). The house dates to approximately 1969. A detached two car garage of indeterminate age is also located on the property. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 25. XXX Main St.

The property at this location is a story and a half residence with Prairie elements and has multiple additions (Figure 7; Figure 93; McAlester 2013). The house dates to approximately 1915. Outbuildings include a garage. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases

and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 26. XXX Main St.

The property at this location is a story and a half residence with Queen Anne elements and has multiple additions (Figure 7; Figure 94; McAlester 2013). The house dates to approximately 1900. Multiple outbuildings in ruins are located at the site (Figure 95). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 27. XXX Main St.

The property at this location is a two-story residence in the American Vernacular style with additions (Figure 7; Figure 96; McAlester 2013). Notable elements include fish scale shingles in the gable peaks and rock faced cement block on the first story. The house dates to approximately 1900. Outbuildings include a garage. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 28. XXX Willow St.

The property at this location is an American Vernacular gable and wing residence that has multiple additions (Figure 7; Figure 97; McAlester 2013). The house dates to approximately 1915. Outbuildings include a modern metal shed. Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP.

This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 29. Pierce Levee

Pierce has historically had problems with flooding and has progressively addressed the community's need through flood control methods. A dam associated with the mill pond was rebuilt in the 1930s by funds from the New Deal era program (Mead & Hunt 2001:13). Later dam modifications included ditches and concrete abutments in 1949 by the Bonge brothers of Plainview and draining the water to prevent high water from the spring thaw (Pierce Co. Leader 1949b:8; Pierce Co. Leader 1949a:1). In 1963 and 1964, the approval of the Pierce Flood Control Plan led to the construction of a levee along the North Fork of the Elkhorn and Willow Creek (Figure 7; Pierce Hist. Soc. 2021; USACE 1962). This levee modified the North Fork and initiated the straightening of Main Street and other community development (Pierce Hist. Soc. 2021). Features of the 1960s levee include two gates near Gilman Park and the southern end of Hall Street (Figure 6; Figure 7; Figures 90-100) as well as a station/shed (Figure 101) on the southern end on the east side of Highway 13 and a culvert. The culvert is of a concrete mold and lies on the northern end of the levee. It is recommended that the levee be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as it pertains to the growth of the community of Pierce and its association with Pierce's urban historic context.

Architectural Resource 30. XXX 1st St.

The property at this location is a two-story residence in the American Vernacular style with an end gable with shingle details in the gable (Figure 7; Figure 103; McAlester 2013). The house dates to approximately 1900. Outbuildings are of indeterminate age and include a shed/garage with multiple additions and a shed/barn which has also been modified (Figure 104). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Architectural Resource 31. XXXXX 853rd Rd.

The property at this location is a story and a half bungalow (Figure 7; Figure 105; McAlester 2013). The house dates to approximately 1910. Outbuildings are of indeterminate age and small barn, wood

garage/shed and two metal buildings (Figure 106). Research did not identify events or trends in history that would directly relate to the construction of this house to be considered under Criterion A of the NRHP. Historical research of atlases and newspapers did not determine information that would show that this structure was associated with lives of persons significant in our past to be considered under Criterion B of the NRHP. This house does not contain any distinctive or unique characteristics and is recommended not eligible under Criterion C of the NRHP.

Table 8. Properties assessed for NRHP eligibility in the Pierce Project Area.

Address	Year Built (Approx.)	≤ 50 years (Yes or No)	Potentially Eligible (Yes or No)
XXX Hall St.	1969	Y	N
XXX Hall St.	1996	N	N
XXX Lloyd St.	1973	Y	N
XXX Lloyd St.	1909	Y	N
XXX Hall St.	2013	N	N
XXX Lloyd St.	1900	Y	N
XXX Hall St.	1975	N	N
XXX Mill St.	1961	Y	N
XXX Mill St.	1961	Y	N
XXX 1st St.	1958	Y	N
XXX 1st St.	1956	Y	N
XXX 1st St.	1977	N	N
XXX Lloyd	1909	Y	N
XXX 1st St.	1977	N	N
XXX Mill St.	1915	Y	N
XXX 1st St.	1976	N	N
XXX 1st St.	1900	Y	N
XXX 1st St.	1975	N	N
XXX Willow St.	1915	Y	N
XXX Florence St.	1983	N	N
XXX Main St.	1915	Y	N
XXX Main St.	1900	Y	N
XXX Main St.	1900	Y	N
XXX Main St.	2004	N	N
XXXXX 854th Rd.	1975	N	N
XXXXX 854th Rd.	1930	Y	N
XXXXX 853 RD Rd.	1910	Y	N
XXXXX 854 TH Rd.	2012	N	N
XXXXX 854 th Rd.	1975	N	N
XXXXX 854 th Rd.	1915	Y	N
XXXXX 550 th Rd.	Indeterminate	Indeterminate	N
XXXXX 549 th Rd.	2017	N	N
XXXXX 549 th Rd.	2007	N	N
XXXXX 549 th Rd.	2004	N	N
XXXXX 549 th Rd.	2008	N	N
XXXXX 550 th Rd.	1930	Y	N
XXXXX 549 th Ave.	Indeterminate	Indeterminate	N

6.0 CONCLUSIONS AND RECOMMENDATIONS

This section presents a summary of the investigation, including conclusions and recommendations based on the NRHP criteria of significance (36 CFR 60.4) as well as adhering to requirements of NHPA Section 106 and 36 CFR 800.

An intensive cultural resource survey of a WFPO flood control project to serve the communities of Osmond and Pierce, Pierce County, Nebraska was completed. Totalling over 227.1 hectares (561.1 acres), the Osmond vicinity APE encompassed approximately 12.8 hectares (31.6 acres) on the east side of that community while survey efforts in the Pierce vicinity covered approximately 214.3 hectares (529.5 acres) in three areas surrounding the town. Project planning has identified a variety of improvements including efforts to augment existing levee infrastructure and drainage channels as well as introduce new elements as needed to provide adequate flood protection to the two communities. Ground disturbance will include modification of existing infrastructure and creation of new infrastructure with adjacent areas providing settings for equipment and materials storage, spoil disposal from excavations, and general workspace during construction. Fieldwork was carried out between late July and early August 2024 by means of pedestrian visual inspection of project landscapes for cultural resources supplemented by subsurface testing via shovel excavation to investigate soil stratigraphy and potential for deeply buried cultural deposits in settings where surface visibility was more limited. Besides areas investigated for cultural resources as part of a direct effects to portions of the Project Areas, architectural and historic properties in each community adjacent to the Project Area were assessed for potential indirect effects to the built environment.

Pedestrian survey of project APEs encountered a variety of ground conditions. Cultivated fields consisted of maturing corn which ranged from 6-10 feet tall and commonly good to excellent ground surface visibility. The Osmond Project Area included the environs of Osmond Park including ballfields and mowed greenspace where areas of grass outside the ballfields having limited surface visibility. Survey was supplemented with a total of 27 subsurface tests which documented wide areas of disturbance even in settings that appeared to be relatively intact. The Pierce Project Area offered more abundant areas of mowed/maintained pastures and grassy corridors along the extensive levee system with patches of livestock pasture contributing to the acreage there as well. A total of 342 tests in various settings commonly encountered silt loam, loam, and loamy sand soils with a variably thick topsoil overlying deep, variably sandy subsoil deposits of alluvial and eolian origin. No cultural resources were encountered through pedestrian survey and subsurface testing efforts.

A reconnaissance level survey of the built environment was conducted of properties in the buffer areas surrounding the project APE, adjacent areas where nearby structures might be indirectly affected by the project. Fourteen residences were surveyed within this area at Osmond. About 40 percent of the structures were less than 50 years old. The residences older than 50 years represented post turn of the twentieth century growth in Osmond but were lacking in characteristics that would be considered eligible for NRHP status (Table 9). Potentially eligible properties in the Osmond locale included St. Mary's Church and the Pony Pratt Truss Bridge adjacent to the city park (Table 9). St. Mary's Church is recommended to be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as an example of Gothic Revival architecture during Osmond's early period of growth. The Pony Pratt Truss Bridge is recommended to be potentially eligible for the NRHP also under Criterion A for patterns or trends in history that would directly relate to the construction of this bridge (i.e. the early automobile era).

Within the community of Pierce, thirty-five residences within the buffer surrounding the Project Area were visually assessed. Fifteen of these residences were less than 50 years old and not considered eligible for the NRHP. Residences more than 50 years old represented growth in Pierce in the earliest decades of the twentieth century but were lacking in characteristics that would be considered eligible for NRHP status (Table 9). Potentially eligible properties in the Pierce locale included WPA era park features at Gilman Park and the Pierce levee. Gilman Park was established in 1932 (Table 9). While modified due to a major storm that destroyed some structures, it contains period art and features and can be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as an example of recreation tied to the importance of the growth of the community of Pierce. The levee at Pierce was constructed along the North Fork of the Elkhorn and Willow Creek in the early 1960s to aid with flood control for the town. It is recommended that the levee be considered potentially eligible for the NRHP under Criterion A for patterns or trends in history as it pertains to the growth of the community of Pierce.

Table 9. Summary of properties assessed for NRHP eligibility in the Project Area.

Findings	NRHP Recommendations
<i>OSMOND</i>	
Architectural Resource 1, XXX 4th	Not eligible under Criteria A, B, or C No further work
Architectural Resource 2, XXX 4th	Not eligible under Criteria A, B, or C No further work
Architectural Resource 3, XXX 4th	Not eligible under Criteria A, B, or C No further work
Architectural Resource 4, XXX Hill	Not eligible under Criteria A, B, or C No further work
Architectural Resource 5, XXX Hill	Not eligible under Criteria A, B, or C No further work
Architectural Resource 6, XXX Hill	Not eligible under Criteria A, B, or C No further work
Architectural Resource 7, XXX Hill	Not eligible under Criteria A, B, or C No further work
Architectural Resource 8, XXX Hill	Not eligible under Criteria A, B, or C No further work
Architectural Resource 9, St. Mary's Catholic Church	Potentially eligible under Criteria A.
Architectural Resource 10, Osmond Park	Potentially eligible under Criteria A.
Architectural Resource 11, Truss Bridge	Potentially eligible under Criteria A.
<i>PIERCE</i>	
Architectural Resource 12, XXXXX 854 th Rd.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 13, XXXXX 854 th Rd.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 14, XXXXX 550 th Rd.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 15, XXX Mill St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 16, XXX Lloyd St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 17, XXX Lloyd St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 18, XXX 1 st St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 19, XXX Lloyd St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 20, XXX 1 st St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 21, XXX Mill St.	Not eligible under Criteria A, B, or C No further work

Table 9. Summary of properties assessed for NRHP eligibility in the Project Area.

Findings	NRHP Recommendations
<i>PIERCE cont'd</i>	
Architectural Resource 22, XXX Mill St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 23, Gilman Park	Potentially eligible under Criteria A.
Architectural Resource 24, XXX Hall St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 25, XXX Main St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 26, XXX Main St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 27, XXX Main St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 28, XXX Willow St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 29, Levee	Potentially eligible under Criteria A.
Architectural Resource 30, XXX 1 st St.	Not eligible under Criteria A, B, or C No further work
Architectural Resource 31, XXXXX 853 rd Rd.	Not eligible under Criteria A, B, or C No further work

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**PROGRAMMATIC AGREEMENT AMONG THE
US DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE NEBRASKA STATE OFFICE,
THE NEBRASKA STATE HISTORIC PRESERVATION OFFICE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE LOWER ELKHORN NATURAL RESOURCES DISTRICT,
REGARDING
THE PHASED IDENTIFICATION OF HISTORIC PROPERTIES FOR
THE NORTH FORK ELKHORN RIVER WATERSHED PLAN,
PIERCE COUNTY, NEBRASKA**

WHEREAS, NRCS Nebraska, as authorized by the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012), provides technical and financial assistance to States, local governments, and Tribal organizations to help plan and implement authorized watershed projects; and

WHEREAS, under this authorization NRCS Nebraska is providing financial assistance to the Lower Elkhorn Natural Resources District to develop a watershed plan-environmental assessment (Plan-EA) to identify methods to provide watershed protection for the North Fork Elkhorn River (Project) including improvements to existing levees in the City of Pierce, improved interior drainage in the City of Pierce, road improvements in the City of Osmond, and residential floodproofing in the City of Osmond; and

WHEREAS, the Lower Elkhorn Natural Resources District (LENRD) is the non-Federal sponsor for the Project, and has roles and responsibilities in this Programmatic Agreement (Agreement), and has been invited to be an Invited Signatory to this Agreement; and

WHEREAS, NRCS Nebraska has determined that the Project activities constitute an undertaking, as defined in 36 C.F.R. § 800.16(y), and therefore is subject to Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. § 306108 ((formerly 16 U.S.C. § 470f), referred to hereafter as Section 106); and

WHEREAS, NRCS Nebraska has determined that the Project may have an effect on properties that are either listed or eligible for listing in the National Register of Historic Places (NRHP) and has consulted with the Nebraska State Historic Preservation Office/Nebraska Historic Preservation Program (SHPO) and federally recognized Tribes associated with Nebraska pursuant to Section 106. The federally recognized Tribes consulted for this Agreement are the Apache Tribe of Oklahoma; Cheyenne and Arapaho Tribes of Oklahoma; the Northern Arapaho Tribe of the Wind River Reservation, Wyoming; the Northern Cheyenne Tribe, of the Northern Cheyenne Reservation, Montana; the Omaha Tribe of Nebraska; the Pawnee Nation of Oklahoma; the Ponca Tribe of Indians of Oklahoma; the Ponca Tribe of Nebraska; the Santee Sioux Nation of Nebraska; and the Yankton Sioux Tribe; and

WHEREAS, NRCS Nebraska cannot fully determine the effects of the Project on historic properties before approval of the Project, therefore NRCS Nebraska is phasing the identification of historic properties and their evaluation (36 CFR 800.4(b)(2)) and application of the adverse

effects criteria (36 CFR 800.5(a)(3)) and will comply with Section 106 of the NHPA for the Project through the execution and implementation of this Agreement [36 C.F.R. § 800.14(b)(1)(ii)]; and

WHEREAS, NRCS has determined through consultation with SHPO (HP# 2502-011-01) that the Project will have no adverse effect on the Pierce Levee and Gilman Park, but Section 106 cannot be completed prior to approval of the Project because of National Environmental Policy Act review deadlines and landowner restrictions to access 198 acres of the Project Area of Potential Effect; and

WHEREAS, in accordance with 36 C.F.R. § 800.2(c)(2)(ii)(A), 800.3(f)(2), NRCS Nebraska is responsible for conducting Native American Tribal consultation on a government to government level and has invited the federally recognized Tribes listed above to consult on this Project and to participate as Concurring Parties to this Agreement, and NRCS Nebraska will continue consultation with all consulting parties throughout the duration of this agreement; and

WHEREAS, NRCS Nebraska notified and invited the Advisory Council on Historic Preservation (ACHP) per 36 C.F.R. § 800.6(a)(1)(C) to participate in consultation to develop this Agreement. The ACHP notified NRCS Nebraska of its decision to **[participate/not participate in a letter dated** ; and

WHEREAS, in accordance with 36 CFR 800.2(d) and in conjunction with public involvement efforts conducted during the Project's planning process and National Environmental Policy Act (NEPA) review, NRCS Nebraska has held public meetings regarding the Project and its potential effects on historic properties through in-person public meetings held November 6, 2023, and November 8, 2023; and

NOW, THEREFORE, the NRCS Nebraska, SHPO, and LENRD agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties and to satisfy NRCS Nebraska's NHPA Section 106 responsibilities for all individual aspects of the Project.

STIPULATIONS

NRCS Nebraska shall ensure that the following stipulations are met and carried out:

I. Roles and Responsibilities

- a. The definitions set forth in 36 C.F.R. § 800.16 are incorporated herein by reference and apply throughout this Agreement.
- b. NRCS Nebraska shall ensure that the following stipulations are completed consistent with the requirements of 36 CFR 800.2(a).
 - i. Refine and document the APE in consultation with the SHPO and consulting parties as project design progresses, pursuant to Stipulation III of this Agreement. The APE may be modified to account for project changes without requiring amendment to this Agreement.

NRCS Nebraska will make any necessary changes to the APE in accordance with Stipulation III and notify all consulting parties to this Agreement within 14 days as required.

- ii. Complete the Section 106 process for the Project including identification and evaluation of historic properties, consultation with all consulting parties, and mitigation of any adverse effects to historic properties working to resolve adverse effects. Disputes resulting from disagreements with determinations and findings made by NRCS Nebraska will be resolved following Stipulation VIII.e – Dispute Resolution.
 - iii. Ensure all technical work required for Section 106 review activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for archeology, architectural history, or history, as appropriate (48 CFR 44739).
 - iv. NRCS Nebraska State Conservationist shall provide a Notice to Proceed to the LENRD after the conclusion of consultation for each portion of the project. A Notice to Proceed will include, at a minimum, a map of the approved APE and a Follow-up Comment issued by the NRCS Nebraska Cultural Resources Specialist (CRS).
 - v. Prepare treatment plans to govern the resolution of adversely affected historic properties identified within the APE, as necessary. Development of treatment plans will follow the process outline in Stipulation VI.b of the Agreement.
 - vi. Prepare an annual letter report pursuant to Stipulation VIII(c) summarizing work undertaken pursuant to the terms of this Agreement. This letter report will be circulated to the Signatories, Invited Signatories, concurring parties, and consulting parties via email.
 - vii. Circulate draft documents, annual letter reports, comments on documents, and final documents among the consulting parties as appropriate. All documents shall meet the reasonable and good faith effort for identification set forth in 36 CFR 800. If comments from consulting parties are not received by NRCS Nebraska within twenty-five (25) days of receipt by the consulting party, NRCS Nebraska will contact the consulting parties via their preferred method of contact—either by telephone call or email—to seek their intent to comment. If no objections are received by the thirty-first (31st) day, NRCS Nebraska will move to the next step in the Section 106 process.
- c. SHPO shall:
- i. Provide review of and comment on NRCS Nebraska's area of potential effects; cultural resource identification efforts; National Register

eligibility determinations for cultural resources pursuant to this Agreement; assessment of effects for actions carried out under this Agreement; and proposed mitigation actions to resolve adverse effects to historic properties.

- ii. Review of and, if appropriate, comment on the annual progress letter in accordance with Stipulation VIII.c.

d. LENRD:

- i. Notify NRCS Nebraska of all proposed activities related to this Project and changes of contractors within fourteen (14) days.
- ii. The LENRD shall, prior to the start of the Project, submit to NRCS Nebraska, in writing, that they are aware that NRCS Nebraska reserves the right, based on NRCS Policy in 420 GM 401.23, to withdraw all funds if project work commences prior to the completion of Section 106.
- iii. Ensure all contractors conducting technical work on behalf of the LENRD on actions for Section 106 review activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for archeology, architectural history, or history, as appropriate (48 CFR 44739).
 - 1. In the event of encountering human remains of any age or cultural affiliation, the LENRD shall retain the services of a qualified bioarchaeologist approved by NRCS Nebraska. Tribal monitors do not need specialized training in bioarchaeology.
- iv. Ensure contractors will not begin construction activities prior to the NRCS Nebraska State Conservationist having issued a Notice to Proceed for each portion of the Project after completion of the Section 106 process.
- v. Submit, or have their contractor submit, shapefiles of 60% design drawings of the Project to the NRCS Nebraska Cultural Resource Specialist/Archaeologist to aid in the development of the APE.
- vi. Include a stop work order in all construction contracts that includes the provisions of Appendix C per Stipulation VII of this Agreement.

e. Concurring Parties

- i. Consulting parties wishing to act as a Concurring Party to this Agreement shall provide NRCS Nebraska with a formal request in writing to act in this capacity.
- ii. Upon receipt of documents, Concurring Parties shall review and provide comments, if they have any, within the designated review times pursuant to Stipulation II of this Agreement.
- iii. Concurring Parties agree to send communications regarding compliance with this Agreement as outlined in Stipulation VIII.b, if they sign the

Agreement.

II. Time Frames and Review Procedures

- a. Unless stipulated otherwise, days refers to calendar days.
- b. Unless stipulated otherwise, for all documents produced in compliance with this Agreement, NRCS Nebraska shall provide documents for review via email to all consulting parties in accordance with Stipulation VIII.b. Any written comments provided by consulting parties within thirty (30) days from the date of receipt, shall be considered in the revision of the document or deliverable.

III. Area of Potential Effects (APE)

- a. All proposed Project improvements will be constructed on privately owned or municipal property—outside the external boundaries of Tribal lands (36 CFR Part 800.16(x)).
- b. The Project Area (Appendix A) includes all potential footprints for the NEPA required alternatives, as well as a 15-meter (m) (50-foot (ft.)) buffer. As project design evolves, a preliminary APE will be defined from the Project Area to include all geographic areas that may be directly or indirectly affected by the construction of the Project. The APE will be further revised through continued consultation with all consulting parties.
- c. Once a preliminary APE is defined, NRCS Nebraska will submit maps of the preliminary APE to the SHPO and the Tribal consulting parties for review prior to completing cultural resources inventories. The sharing of information will be done in accordance with Stipulation VIII.d.i. Upon receipt, consulting parties will have thirty (30) days to review and provide comments to NRCS Nebraska on the preliminary APE. If comments from consulting parties are not received by NRCS Nebraska within twenty-five (25) days of receipt by the consulting party, NRCS Nebraska will contact the consulting parties via their preferred method of contact—either by telephone call or email—to seek their intent to comment. NRCS Nebraska will take into account any comments on the APE and finalize the APE based on comments received. If no objections or requests for review extension are received by the thirty-first (31st) day, NRCS Nebraska will move to finalize the APE. NRCS Nebraska is responsible for distributing the final APE to all consulting parties.
- d. As the Project progresses, design changes may be necessary. If any such changes would necessitate modification of an APE that has already been agreed to, pursuant to Stipulation III.c, NRCS Nebraska will submit a modified APE to all consulting parties for review and comment as outlined above and all stipulations in this Agreement will apply. The APE may be changed as described herein without requiring amendment to this Agreement proper.

IV. Identification and Evaluation of Historic Properties

- a. NRCS Nebraska is responsible for identifying historic properties present within the APE prior to any activity that has the potential to cause effects to historic properties, refer to Stipulation I.b.
- b. In accordance with 36 CFR Part 800.4(a) and (b), NRCS Nebraska, with input from the consulting parties regarding the APE per Stipulation III, will identify the appropriate scope and level of effort needed to identify historic properties, including those to which Tribes attach traditional religious and cultural significance. The scope and level of effort for the identification effort shall meet the reasonable and good faith regulatory standard (36 CFR Part 800.4(b)(1)). If requested, Tribal surveys should be completed prior to onset of construction activities.
- c. Identification of Historic Properties: After NRCS Nebraska finalizes the APE, an archaeological field investigation will be conducted utilizing the guidelines set forth in the Nebraska State Historic Preservation Office National Historic Preservation Act Archeological Properties Section 106 Guidelines (2017) along with the Secretary of Interior's Standards and Guidelines for archaeological work. A Viewshed Analysis will be performed once the visual APE is defined to assess the potential effects. A Geographic Information System viewshed analysis will be used to evaluate the visual effects of this Project on historic properties within a 200 m (656 ft) radius of proposed project measures. If any historic properties are located within that radius, NRCS will consult with all consulting parties regarding potential adverse visual effects.
- d. Historic Property Identification during Construction: This phase will include archaeological and architectural surveys as needed, of any modifications and/or additions to the Project that are outside the currently defined APE (including changes in construction rights of-way, access roads, borrow pits, staging areas, and ancillary areas). Newly proposed additions to the APE(s) shall be assessed as per Stipulation III.d. No ground disturbance shall occur within the newly proposed APE until the Section 106 process has been completed and a Notice to Proceed is issued in accordance with Stipulation I.b.iv. A. NRCS Nebraska will determine where construction may continue while the additional work is being completed.

V. Reports

- a. All archaeological and architectural resources identified during surface and/or subsurface surveys will be recorded on the appropriate State Archeologist's Office (SAO) site forms. The results of such field investigations shall be documented in stand-alone reports or in combined archaeological, architectural, and/or ethnographic technical reports that meet the standards set forth in [State fieldwork and reporting guidelines, if applicable]. All archaeological technical reports shall include a Shovel Test Log and Shovel Test map that clearly depicts each labeled Shovel Test location, which shall be appended to the document. As archaeological and architectural survey efforts may be non- concurrent, based on project phase, access to land, and availability of funding, multiple technical archaeological and

architectural survey reports may be produced. If cultural resources can be evaluated for National Register eligibility based on survey-level identification efforts alone, the resulting archaeological and architectural survey report(s) may also include the National Register evaluation(s) of those resources; as required in 36 CFR 800.11 and specified in Stipulation I.b.vii.

- b. NRCS Nebraska will provide completed technical reports to consultation parties for review. The review period shall be thirty (30) days from date of receipt by the consulting party. If comments from consulting parties are not received by NRCS Nebraska within twenty-five (25) days of receipt by the consulting party, NRCS Nebraska will contact the consulting parties via their preferred method of contact—either by telephone call or email—to seek their intent to comment. If no objections or requests for review extension are received by the thirty-first (31st) day, NRCS Nebraska will move to the next step in the process.
- c. If numerous technical reports are completed throughout the project, a single, final report summarizing work, recommendations, and findings—incorporating any comments obtained during each document’s review period—will be generated and distributed to all consulting parties.

VI. Assessment of Effects

- a. In accordance with 36 CFR 800.5, NRCS Nebraska will apply the criteria of adverse effects within the area of potential effect in consultation with all consulting parties. NRCS remains responsible for all determinations of effects. Disputes resulting from disagreements with determinations and findings made by NRCS Nebraska will be resolved following Stipulation VIII.e – Dispute Resolution.
- b. Resolution of adverse effects to historic properties shall occur in accordance with the treatment plan (Stipulation VI.b.i-ii), which shall be developed in consultation and concurrence with all participating consulting parties. Mitigation efforts can include avoidance of identified or potential historic properties. Disputes resulting from disagreements with the proposed mitigation and treatment plan by NRCS Nebraska will be resolved following Stipulation VIII.e – Dispute Resolution.
 - i. Before construction begins, NRCS, in consultation and concurrence with the SHPO and any Federally Recognized Tribe(s) that attaches religious and cultural significance to identified historic properties, will prepare a Treatment Plan designed to resolve adverse effects on eligible Historic Properties within the APE. NRCS will consider any views concerning such effects which have been provided by consulting parties and Tribes.
 - 1. All information pertaining to archaeological historic properties associated with Tribes shall be kept confidential pursuant Stipulation VIII.d.i.
 - ii. The treatment plan will be appended to this Agreement, if needed, and will not require an amendment under Stipulation VIII.f. It will list all historic properties located within the APE that have been identified and are subject to adverse effects. The treatment plan will address all characteristics contributing to the Properties' eligibility to the NRHP and will identify the

specific mitigation strategies proposed to address the direct, indirect, and cumulative effects of the Project. The treatment plan will be consistent with the *Secretary of Interior's Standards for the Treatment of Historic Properties* (36 CFR 68) and the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-42).

VII. Post-Review Discoveries

- a. Prior to project implementation, NRCS Nebraska shall provide the post-review discovery process and the contact information of all individuals named in the process to LENRD. NRCS Nebraska will provide updated contact information as needed, minimally once each year. LENRD shall provide this information to all contractors and ensure that the contractors understand and comply with the post-review discovery process. A copy of the post-review discovery process and the contact information of the specified individuals will be included in Appendix E.
- b. When a post-review discovery of cultural resources of any type occurs, but construction in that project segment has yet to begin, NRCS Nebraska shall notify all consulting parties within forty-eight (48) hours of the discovery and follow the procedures of the Agreement beginning at Stipulation IV. The sharing of information will be done in accordance with Stipulation VIII.d.i.
- c. When a post-review discovery of cultural artifacts/features/structures—that does not or is unlikely to include human remains and/or associated funerary objects—occurs, the contractor shall immediately cease all work within a fifty (50) m buffer (165 ft.) and notify the NRCS Nebraska State Conservationist's Office, Assistant State Conservationist for Water Resources, NRCS Cultural Resources Specialist (CRS), supervisory NRCS personnel for the area, and the LENRD. Any post-review discovery that includes or is likely to include human remains and/or associated funerary objects shall follow Stipulation VII.d
 1. All work shall halt within the fifty (50) m buffer area until the NRCS Nebraska CRS inspects the discovery within forty-eight (48) hours, if weather permits.
 2. NRCS Nebraska CRS shall notify all consulting parties no later than forty-eight (48) hours of the post review discovery of cultural artifacts/features/structures. In consultation with all consulting parties, the NRCS Nebraska Assistant State Conservationist for Water Resources and Easements, the LENRD, and the contractor, the CRS shall establish a protective buffer zone (at least 50 m) surrounding the discovery. This action may require inspection by consulting Tribal cultural resources experts in addition to the CRS.
 3. NRCS Nebraska employees, contractors, and applicants or their agents, representatives, and employees shall not contact or interact with members of the print, broadcast, digital, or other media or post, upload, or otherwise communicate via digital or social media matters or details concerning post-review discoveries absent prior consultation and concurrence with the affiliated Tribe(s) with the historic property and SHPO. Access to these areas

by unapproved visitors and media will not be permitted. Any inquiries related to the human remains will follow the process in Stipulation VII.d.8. Any communications shall occur only under the direction of the NRCS Public Affairs Officer, as appropriate, and the State Conservationist.

4. Security shall be established to protect the resources/historic properties, workers, and private property. Local law enforcement authorities will be notified in accordance with applicable State law and NRCS policy in order to protect the resources. Construction and/or work may resume outside the fifty (50) m (165 ft.) buffer only when the State Conservationist, in consultation with participating consulting parties, determines it is appropriate and safe for the resources and workers.
 5. The NRCS Nebraska CRS, in consultation with participating consulting parties, will assess the property for National Register eligibility, as well as feasible and proposed actions to resolve any adverse effects to historic properties, within 14 days unless a reasonable extension is requested. The eligibility determination may require the assessment and advice of all consulting parties as well as technical experts (such as historic landscape architects) not employed by NRCS. Disputes resulting from disagreements with determinations and findings made by NRCS Nebraska will be resolved following Stipulation VIII.e – Dispute Resolution.
 6. Consulting parties shall respond within forty-eight (48) hours from receipt of the notification with any comments on the discovery and proposed actions.
 7. Only after the process in Stipulation VII.c.1–6 has been carried out will NRCS Nebraska take appropriate actions to resolve any adverse effects. NRCS Nebraska shall provide a report to all consulting parties of the actions when they are completed.
- d. When a post-review discovery of human remains and/or funerary objects occurs, all work within 100 meters (330 feet) of the discovery shall cease immediately and local law enforcement shall be notified by the on-site supervisor within forty-eight (48 hours). The on-site supervisor will also notify the NRCS Cultural Resources Specialist (CRS) of the discovery. Once law enforcement has determined the discovery is not the site of an active homicide, NRCS Nebraska and LENRD shall follow all applicable state burial laws and ordinances (Nebraska Revised Statute 12-1201 to 12-1212), and related human rights and health statutes, where appropriate. NRCS Nebraska shall also refer to the ACHP's Policy Statement regarding *Treatment of Burial Sites, Human Remains and Funerary Objects* and the ACHP's Section 106 Archaeology Guidance. NRCS Nebraska shall also follow USDA and NRCS policy on treatment of human remains and consultation.
1. NRCS Nebraska shall notify SHPO, all Tribal consulting parties, and the ACHP no later than forty-eight (48) hours of the post review discovery of human remains and/or funerary objects. Telephone notification will be followed by written notification that contains all the information regarding

the status of the discovery.

2. Per Nebraska Revised Statute 12-1207 and 12-1208, disposition of the human remains and/or funerary objects shall be the responsibility of the Nebraska State Historical Society.
3. Ground-disturbing project activities will not continue inside the 100 m (330 ft.) buffer zone until clearance is provided by the NRCS Nebraska State Conservationist as a Notice to Proceed (Stipulation I.b.iv).
4. NRCS Nebraska employees, contractors, and applicants or LENRD agents, representatives, and employees shall not contact or interact with members of the print, broadcast, digital, or other media or post, upload, or otherwise communicate via digital or social media matters or details concerning human graves or locations containing, or that are likely to contain, human graves and/or remains. Access to these areas by unapproved visitors and media will not be permitted.

VIII. Administrative Stipulations

- a. Agreement Duration: This Agreement will expire in its terms are not carried out within ten (10) years from the date of its execution. Prior to such time, NRCS Nebraska may consult with the other Signatories and Invited Signatories to reconsider the terms of the Agreement and amend in accordance with Stipulation VIII.f below.
- b. Communication Among the Parties of this Agreement: Electronic mail (email) will serve as the official correspondence method for all communications, unless otherwise noted, regarding this Agreement and its provisions. See Appendix E for a list of contacts, email addresses, and telephone numbers. Contact information in Appendix E may be updated as needed without an amendment to this Agreement. It is the responsibility of each Signatory, Invited Signatory, concurring party, and consulting party to immediately inform NRCS Nebraska of any change in name, address, email address, or telephone number of any point-of- contact. NRCS Nebraska will forward this information to all consulting parties by email.
- c. Monitoring and Reporting: Each year following the execution of this Agreement until it expires, is terminated, or all stipulations are met, NRCS Nebraska shall submit to all parties to this Agreement a letter summarizing the work undertaken pursuant to its terms. Such letter shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in NRCS Nebraska's efforts to carry out the terms of this Agreement. Communications for this letter will be submitted in accordance with Stipulation VIII.b.
- d. Confidentiality
 - i. All consulting parties will ensure that shared data, including data concerning the precise location and nature of archaeological historic properties and properties of religious and cultural significance, are protected from public disclosure to the greatest extent permitted by law,

including conformance to Section 304 of the NHPA, as amended (54 U.S.C. § 307103) and implementing regulations under 36 CFR § 800.6(a)(5) and 36 CFR § 800.11(c); FOIA; E.O. 13007, and FR 61-104, dated May 24, 1996.

- ii. NRCS Nebraska shall ensure that the LENRD understands the requirements of the federal laws applicable to confidentiality and historic properties.

e. Dispute Resolution

- i. Should any Signatory, Invited Signatory, or concurring party to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, NRCS Nebraska shall consult with the objecting party(ies) to resolve the objection. If NRCS Nebraska determines that such objection(s) cannot be resolved, NRCS Nebraska will:

1. Forward all documentation relevant to the dispute, including NRCS Nebraska's proposed resolution, to the ACHP in accordance with 36 CFR 800.2(b)(2). Upon receipt of adequate documentation, the ACHP shall review and advise NRCS on the resolution of the objection within thirty (30) days. Any comment provided by the ACHP, and all comments from the Signatories, Invited Signatories, and concurring parties to the Agreement, will be taken into account by NRCS in reaching a final decision regarding the dispute. Prior to reaching a final decision on the dispute, NRCS Nebraska shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, Invited Signatories, and concurring parties, and provide them with a copy of this written response. NRCS Nebraska will then proceed according to its final decision.
2. If the ACHP does not provide its advice regarding the dispute within thirty (30) days, NRCS Nebraska may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, NRCS Nebraska shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories, Invited Signatories, and concurring parties to the Agreement and provide them and the ACHP with a copy of such written response.
3. NRCS Nebraska's responsibility to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged.

f. Amendments

- i. Any Signatory or Invited Signatory to this Agreement may request, in

writing, to the other Signatories and Invited Signatories that it be amended, whereupon the Signatories and Invited Signatories will consult for a period of no more than thirty (30) days to consider such amendment. The amendment will be effective on the date a copy signed by all the Signatories and Invited Signatories is filed with the ACHP.

g. Withdrawal

- i. If any Invited Signatory wishes to withdraw from the Agreement, they may do so upon written notice to all Signatories and Invited Signatories. Upon withdrawal, the NRCS Nebraska and the withdrawing Invited Signatory will comply with Section 106 in accordance with 36 CFR 800.3 through 800.7, or the execution of an agreement in accordance with 36 CFR 800.14(b). Withdrawal does not constitute termination of the Agreement for the remaining Signatories and Invited Signatories.

h. Termination

- i. If any Signatory or Invited Signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other Signatories and Invited Signatories to attempt to develop an amendment per Stipulation VIII.f. If within thirty (30) days (or another time period agreed to by all Signatories and Invited Signatories) an amendment cannot be reached, any Signatory or Invited Signatory may:
 1. Terminate the Agreement upon written notification to the other Signatories and Invited Signatories. Once the Agreement is terminated, and prior to work continuing on the undertaking, NRCS Nebraska must either (a) execute an Agreement pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. NRCS Nebraska shall notify the Signatories and Invited Signatories as to the course of action it will pursue; or
 2. Invited Signatories may withdraw from the Agreement pursuant to Stipulation VIII.g - Withdrawal.
- ii. In the event of termination, if work remains to be completed under the Agreement, then NRCS Nebraska will consult in accordance with 36 CFR § 800.14(b) to develop a new Agreement. Beginning with the date of termination, NRCS Nebraska will ensure that until and unless a new Agreement is executed for the actions covered by this Agreement, Undertakings will be reviewed individually for Section 106 compliance in accordance with 36 CFR § 800.4 – 800.6.

IX. Anti-Deficiency Act

The NRCS Nebraska's obligations under this Programmatic Agreement are subject to the availability of appropriated funds, and the stipulations of this Agreement are subject to the

provisions of the Anti- Deficiency Act. The NRCS Nebraska shall make reasonable and good faith efforts to secure the necessary funds to implement this Agreement in its entirety. If compliance with the Anti-Deficiency Act alters or impairs the NRCS Nebraska's ability to implement the stipulations of this agreement, the NRCS Nebraska' shall consult in accordance with the amendment, withdrawal, and termination procedures found at Stipulation VIII of this agreement

X. Coordination with other federal reviews

In the event that another federal agency not initially a party to or subject to this Agreement receives an application for funding/license/permit for the undertaking as described in this Agreement, that agency may fulfill its Section 106 responsibilities by stating in writing it concurs with the terms of this Agreement and notifying NRCS Nebraska, the ACHP, SHPO, Invited Signatories, and consulting parties that it intends to do so. Such agreement shall be evidenced by implementation of the terms of this Agreement and its Appendices.

XI. Execution in counterpart

This Agreement may be executed in counterparts, with a separate page for each Signatory and Invited Signatory. NRCS Nebraska shall ensure that each party is provided with a copy of the fully executed Agreement.

EXECUTION of this Agreement among NRCS Nebraska, SHPO, [SPONSOR], and [INVITED SIGNATORIES], and implementation of its terms, evidence that NRCS Nebraska has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

Signatures:

In witness whereof, the Signatories and Invited Signatories to this Agreement through their duly authorized representatives have executed this Agreement on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this Agreement as set forth herein.

**PROGRAMMATIC AGREEMENT AMONG THE
US DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE NEBRASKA STATE OFFICE,
THE NEBRASKA STATE HISTORIC PRESERVATION OFFICE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE LOWER ELKHORN NATURAL RESOURCES DISTRICT,
REGARDING
THE PHASED IDENTIFICATION OF HISTORIC PROPERTIES FOR
THE NORTH FORK ELKHORN RIVER WATERSHED PLAN,
PIERCE COUNTY, NEBRASKA**

SIGNATORY

NRCS NEBRASKA

By: _____

ROBERT D. LAWSON
State Conservationist

Date: _____

**PROGRAMMATIC AGREEMENT AMONG THE
US DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE NEBRASKA STATE OFFICE,
THE NEBRASKA STATE HISTORIC PRESERVATION OFFICE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE LOWER ELKHORN NATURAL RESOURCES DISTRICT,
REGARDING
THE PHASED IDENTIFICATION OF HISTORIC PROPERTIES FOR
THE NORTH FORK ELKHORN RIVER WATERSHED PLAN,
PIERCE COUNTY, NEBRASKA**

SIGNATORY

Nebraska State Historic Preservation Office (SHPO)

By: _____

Daryl Bohac

State Historic Preservation Officer

Date: _____

**PROGRAMMATIC AGREEMENT AMONG THE
US DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE NEBRASKA STATE OFFICE,
THE NEBRASKA STATE HISTORIC PRESERVATION OFFICE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE LOWER ELKHORN NATURAL RESOURCES DISTRICT,
REGARDING
THE PHASED IDENTIFICATION OF HISTORIC PROPERTIES FOR
THE NORTH FORK ELKHORN RIVER WATERSHED PLAN,
PIERCE COUNTY, NEBRASKA**

INVITED SIGNATORY

Lower Elkhorn Natural Resources District

By: _____

Brian Bruckner
General Manager

Date: _____

**PROGRAMMATIC AGREEMENT AMONG THE
US DEPARTMENT OF AGRICULTURE,
NATURAL RESOURCES CONSERVATION SERVICE NEBRASKA STATE OFFICE,
THE NEBRASKA STATE HISTORIC PRESERVATION OFFICE,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE LOWER ELKHORN NATURAL RESOURCES DISTRICT,
REGARDING
THE PHASED IDENTIFICATION OF HISTORIC PROPERTIES FOR
THE NORTH FORK ELKHORN RIVER WATERSHED PLAN,
PIERCE COUNTY, NEBRASKA**

CONCURRING PARTY

[CONCURRING PARTY]

By: _____

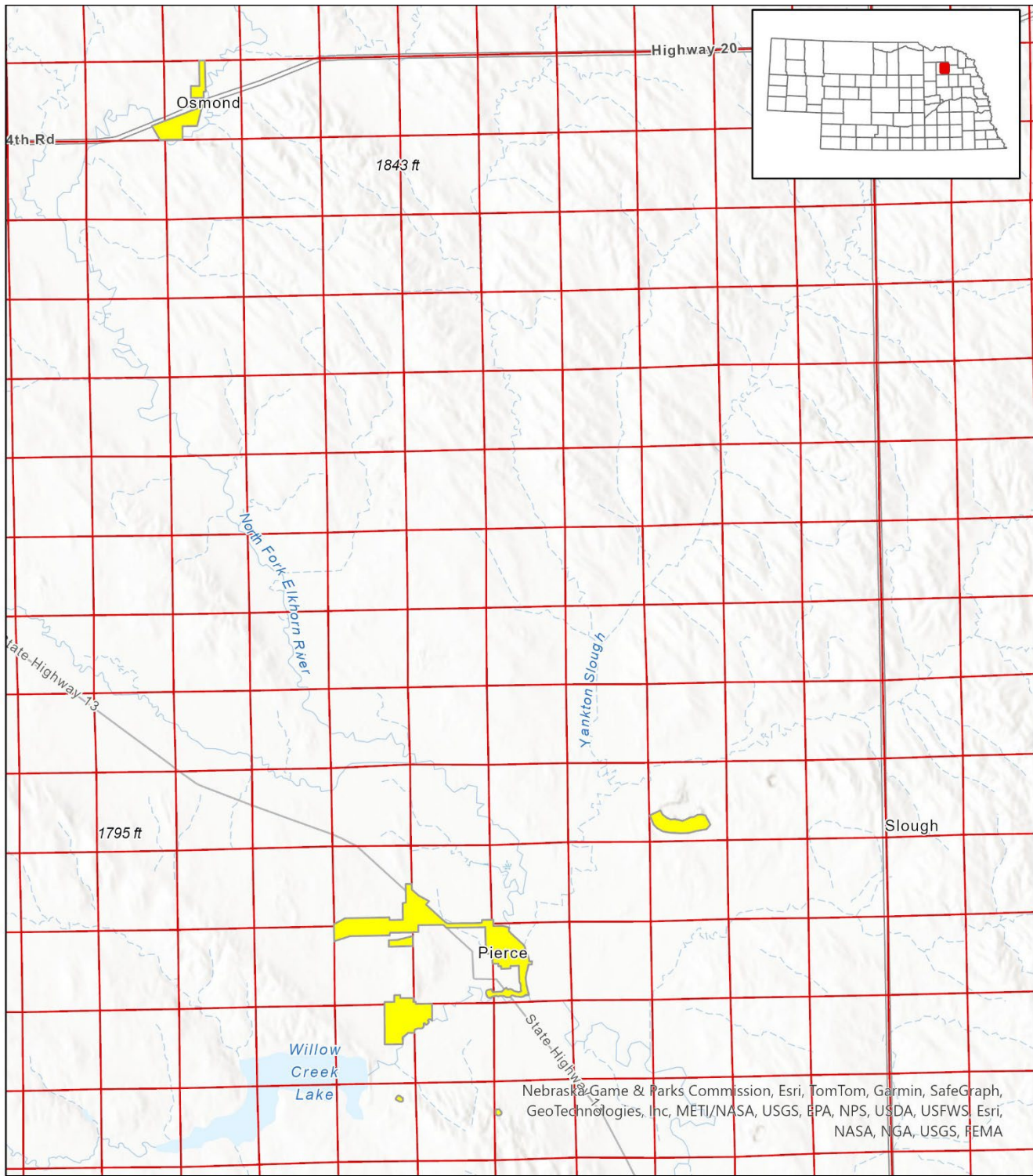
Name

Title

Date: _____

APPENDIX A:

Project Area and Area(s) of Potential Effects Maps



North Fork Elkhorn River WFPO
Area of Potential Effect
Pierce County, Nebraska

Scale: 1:110,000

- Area of Potential Effect
- Section

0 1 2 3 4 Miles

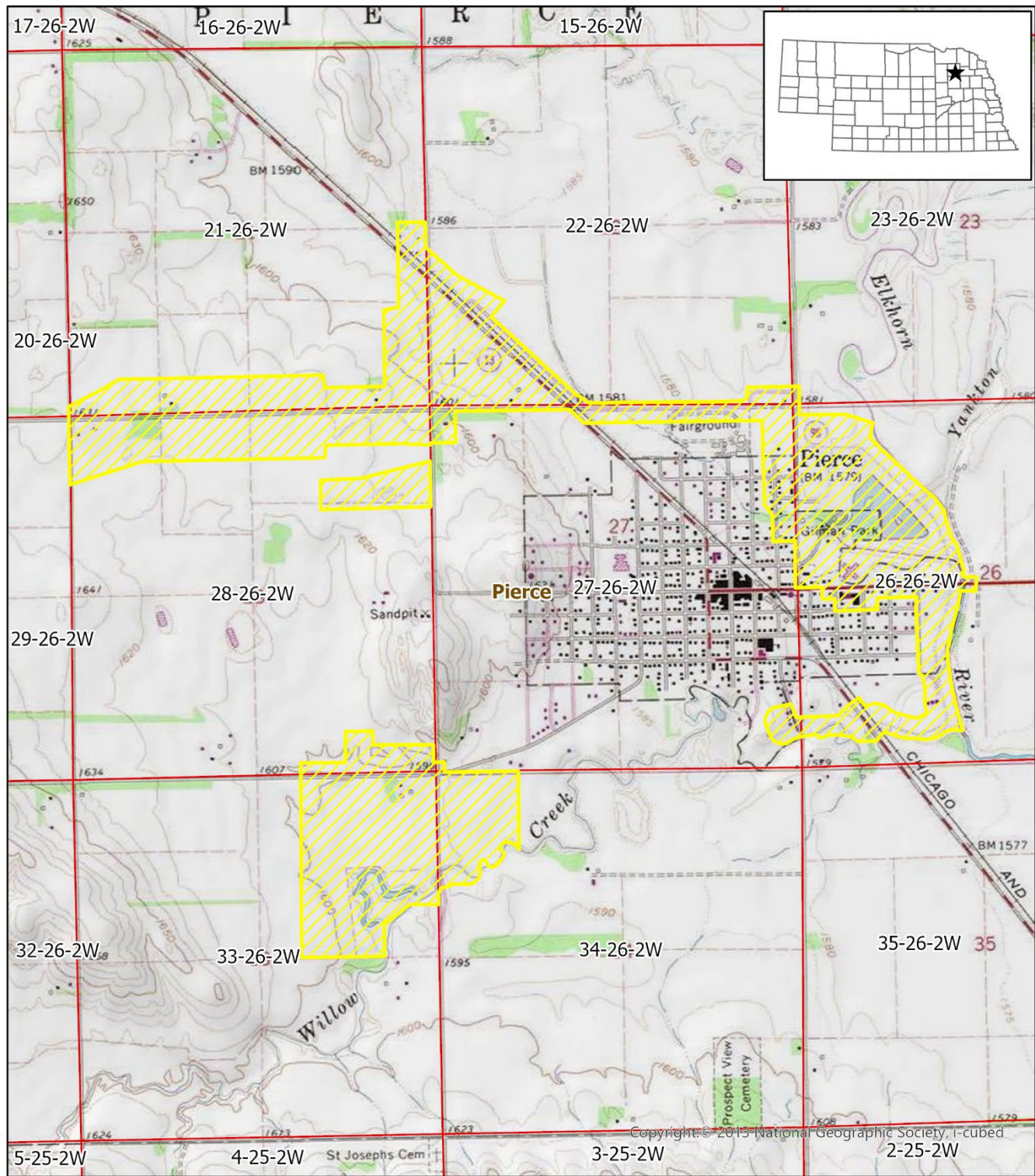


Maps are for graphical purposes only. They do not represent a legal survey. While every effort has been made to ensure that these data are accurate and reliable within the limits of the current state of the art, NRCS cannot assume liability for any damages caused by any errors or omissions in the data, nor as a result of the failure of the data to function on a particular system. NRCS makes no warranty, expressed or implied, nor does the fact of distribution constitute such a warranty. Archaeological site location information is protected by Section 304 of the National Historic Preservation Act of 1966 (as amended) and Nebraska Revised Statute 84-712.05(14) and (15) and is not intended for public distribution. Created by NRB on 3/24/2025

USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

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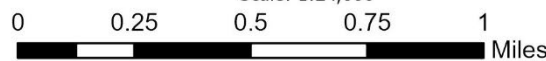
Figure 1. Map showing the location of the proposed project areas in Osmond and Pierce for the North Fork Elkhorn Watershed Plan-EA.



North Fork Elkhorn River WFPO
Pierce Area of Potential Effect
USGS Quadrangle: Pierce (1976)

Scale: 1:24,000

- Area of Potential Effect
- Section
- USGS Quadrangle

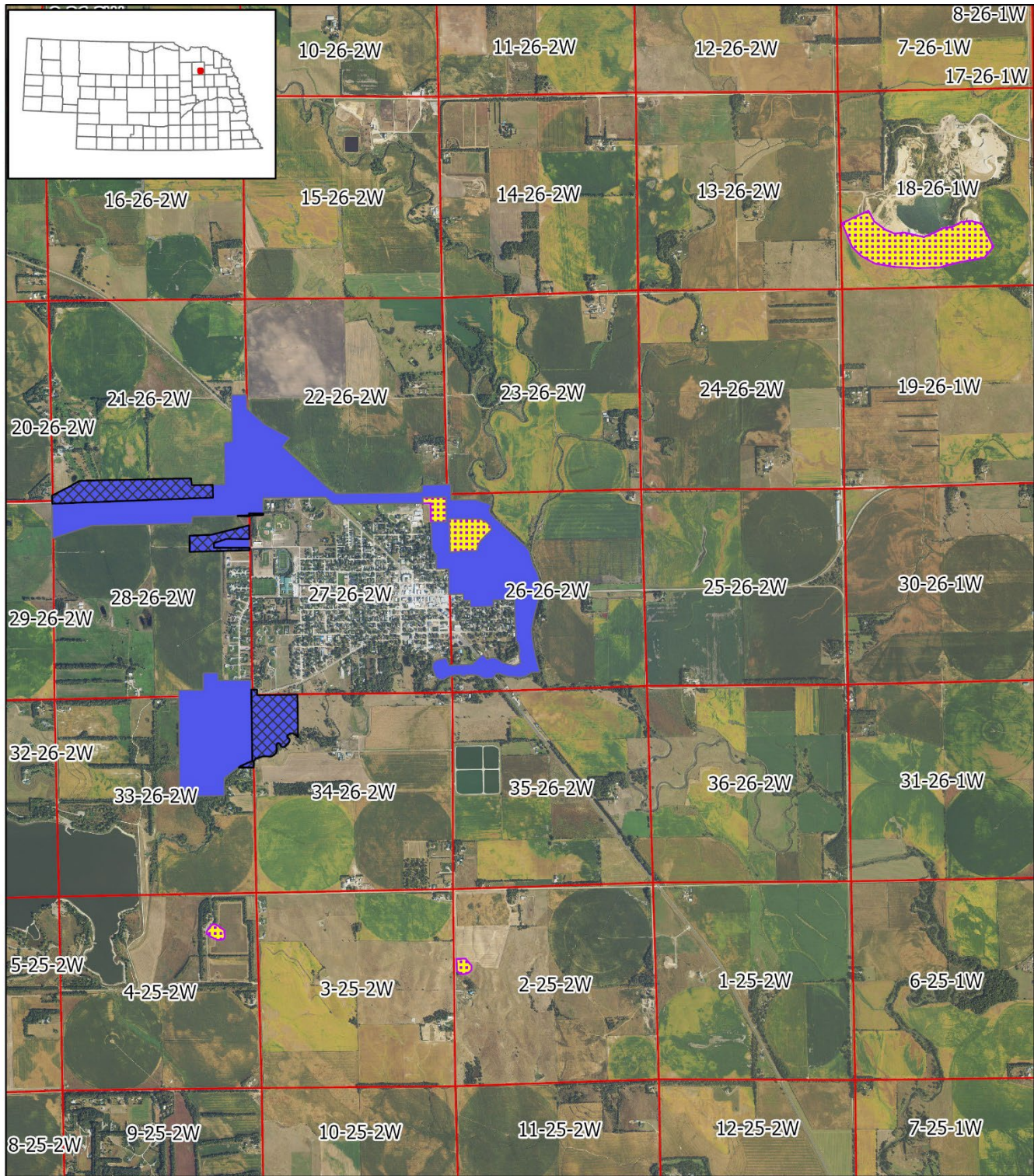


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Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

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Figure 2. 1:24,000 USGS quadrangle showing the APE of the proposed actions in Pierce, Nebraska.



- Section
- Needs Investigation
- Investigated in 2024
- Visual effects only - No Investigation Needed

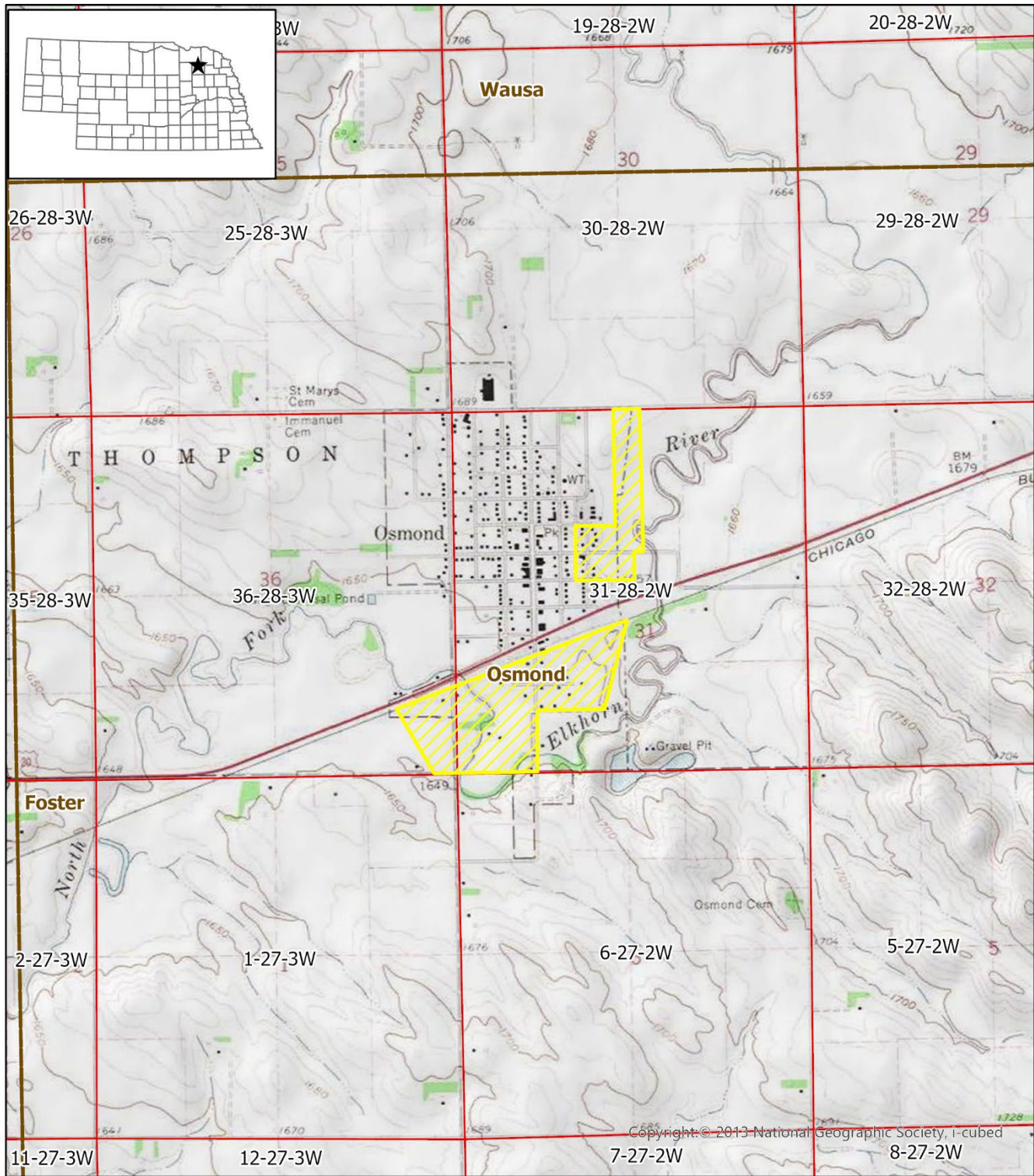
North Fork Elkhorn River WFPO
Cultural Resource Investigation Needs
Pierce, Nebraska
Scale: 1:44,000
0 0.25 0.5 0.75 1
Miles

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Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

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Figure 3. 2024 aerial photograph showing the areas that have been investigated for cultural resources and those areas still needing investigation.



North Fork Elkhorn River WFPO
Osmond Area of Potential Effect
USGS Quadrangle: Osmond (1963)

Scale: 1:24,000

0 0.25 0.5 0.75 1 Miles

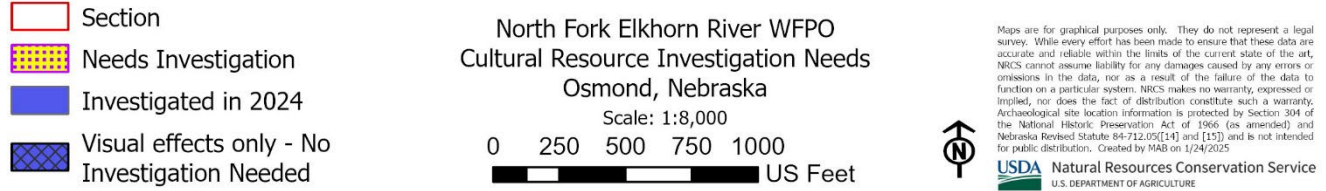
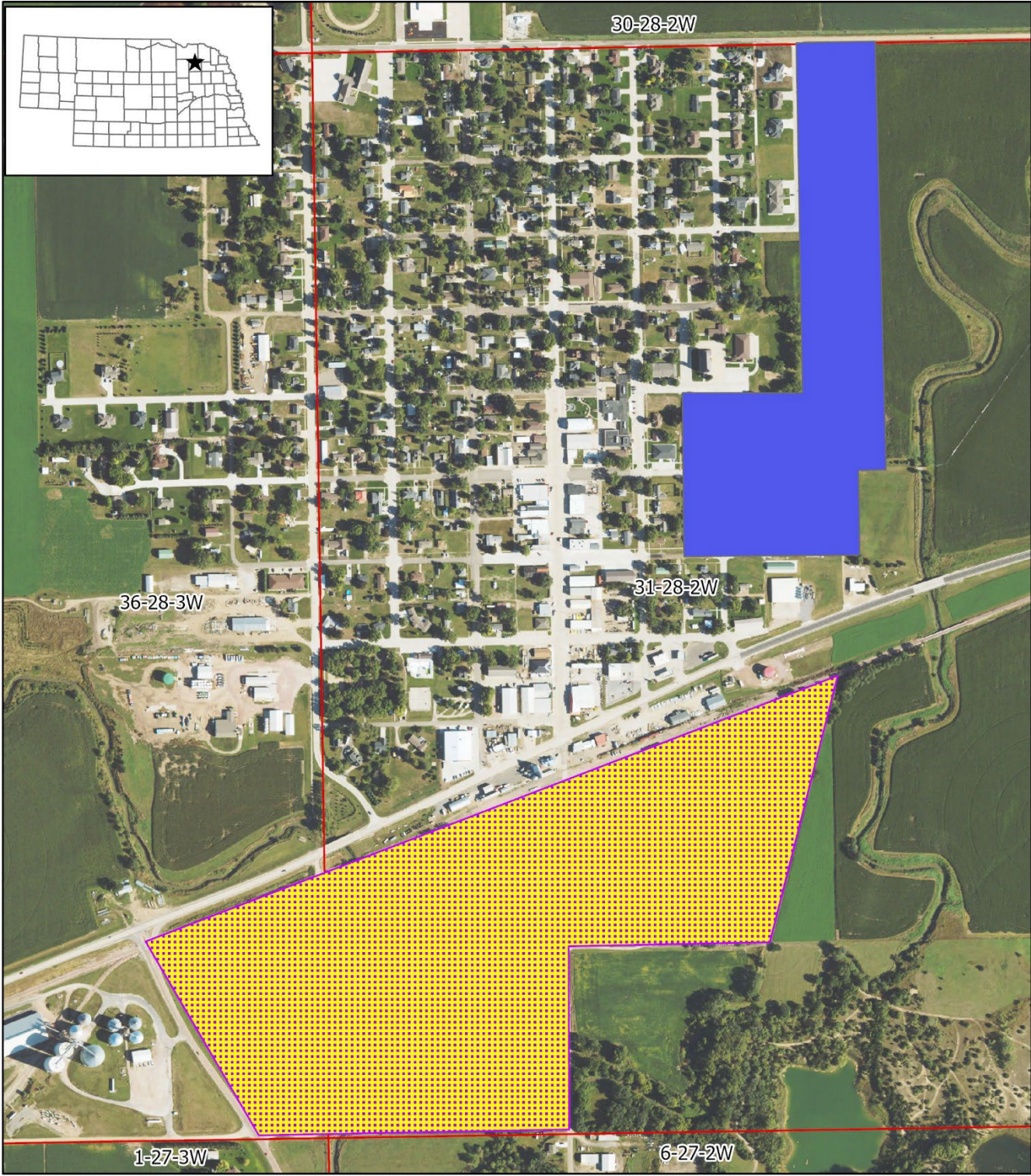
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Figure 4. 1:24,000 USGS quadrangle showing the area of potential effect (APE) for the structural and non-structural projects proposed in Osmond, Nebraska.



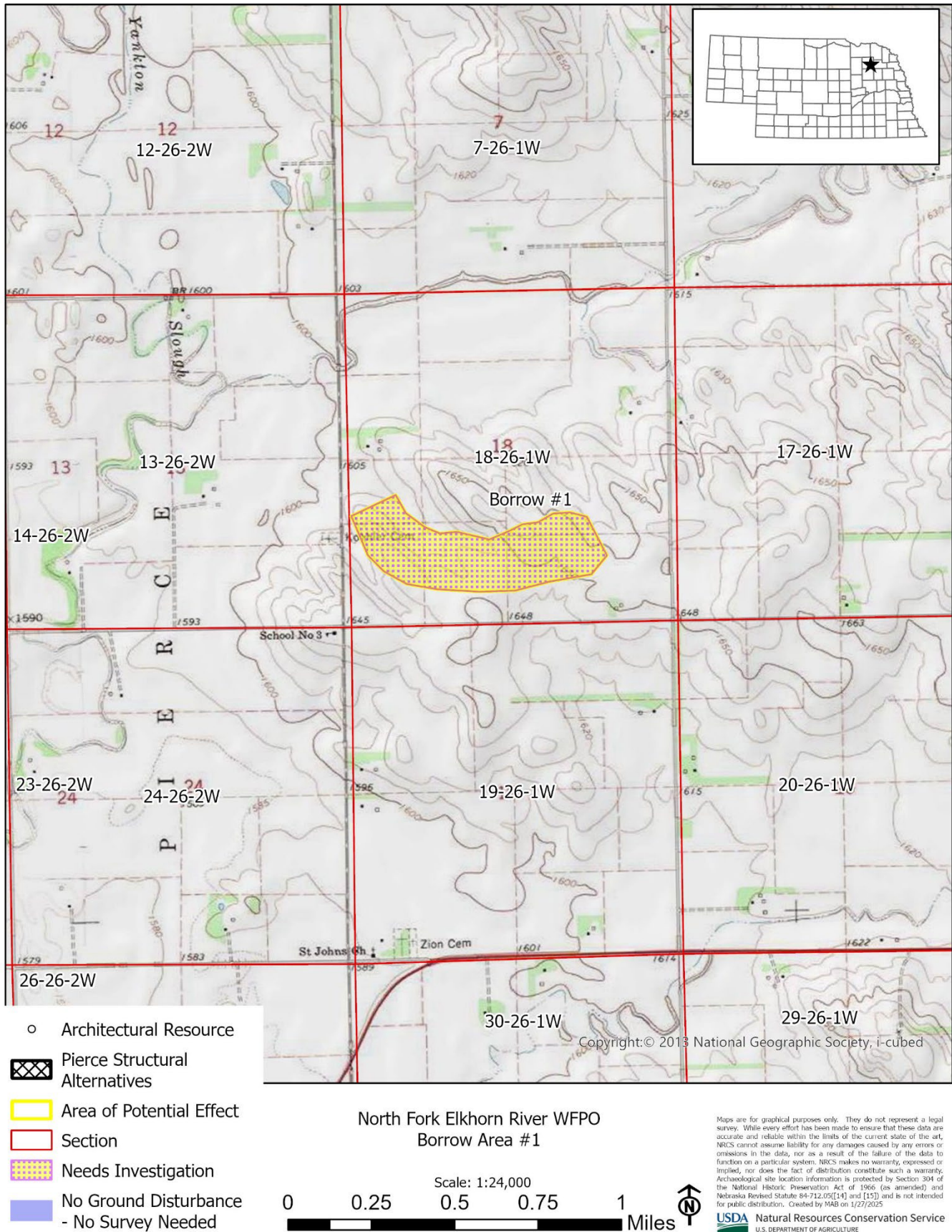
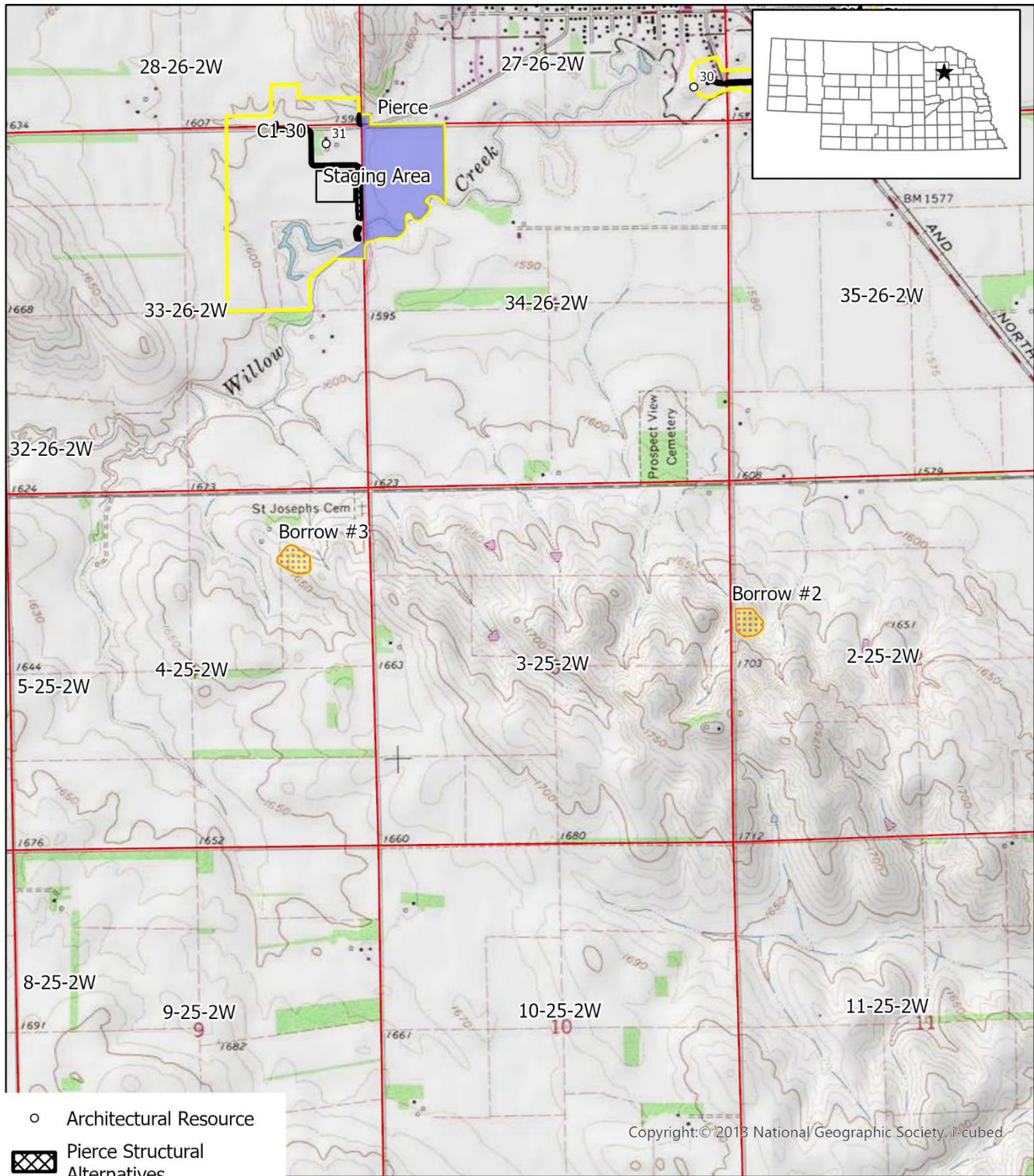


Figure 6. 1:24,00 USGS quadrangle showing the APE of Borrow Area #1.



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Figure 7. 1:24,000 USGS quadrangle showing the APE of Borrow Areas #2 and #3.

APPENDIX B:
EXAMPLE NOTICE TO PROCEED



Natural Resources Conservation Service

U.S. DEPARTMENT OF AGRICULTURE

Nebraska State Office

1121 Lincoln Mall
Room 360
Lincoln, NE 68508

Month XX, 20XX

First & Last Name
Street Address
City, ST ZIP

RE: <Undertaking Name, Specific Segment>

Dear Contractor & Sponsor:

The Natural Resources Conservation Service (NRCS) is committed to assisting communities through the Public Law 83-566 program. NRCS has completed its responsibilities associated with the National Historic Preservation Act (NHPA) within <UNDERTAKING NAME, SPECIFIC SEGMENT>. Enclosed with this letter is a map detailing constraints and environmentally sensitive areas that must be avoided during construction. Construction activities may proceed.

If, during the normal course of construction, cultural resources are identified, all construction work shall stop within a 100-meter (m) (330-foot (ft.)) buffer zone around this find. The contractor shall follow the procedures detailed in Appendix C of this undertaking's Programmatic Agreement.

If you have questions regarding this letter, please contact Melissa Baier, Assistant State Conservationist-Water Resources and Easements at melissa.baier@usda.gov or 402-437-4065 and/or Michael Chodoronek, Cultural Resources Specialist at michael.chodoronek@usda.gov or 402-437-4120.

Sincerely,

ROBERT D. LAWSON
State Conservationist

APPENDIX C:
POST-REVIEW DISCOVERY PROCESS

This plan applies to post-review discoveries of cultural resources or historic properties and unanticipated effects to cultural resources or historic properties. If any evidence of cultural resources is encountered during project construction, all activities will be halted immediately and NRCS will proceed in accordance with the regulation on post-review discoveries (36 CFR § 800.13) by following the procedures outlined below.

- a) Where construction has not yet begun and a cultural resource is discovered after Section 106 review is complete, the NRCS shall consult to seek avoidance or minimization strategies in consultation and concurrence with the SHPO and Consulting Tribes, and/or to resolve adverse effects in accordance with 36 CFR Part 800.6.
- b) The NRCS shall ensure that every contract for project implementation includes provisions for halting work/construction in the area when potential historic properties are discovered or when unanticipated effects to historic properties are found after implementation, installation, or construction has begun. When such a discovery is made, the Lower Elkhorn Natural Resources District (LENRD) or their contractor shall immediately notify the NRCS State Conservationist's Office, NRCS Cultural Resource Specialist (CRS), and supervisory NRCS personnel for the area. The NRCS CRS shall immediately notify the SHPO and Consulting Parties (contact information for all parties is provided in Appendix E).
 1. The NRCS CRS shall inspect the discovery by the end of the next business day, if weather permits. In consultation with the local NRCS Supervisory District Conservationist, the NRCS State Conservation Engineer, Consulting Tribes, the SHPO, and LENRD, the CRS shall establish a protective buffer zone of 50 meters (165 feet) surrounding the discovery.
 2. NRCS Nebraska employees, contractors, applicants or their agents, representatives, and employees shall not contact or interact with members of the print, broadcast, digital, or other media or post, upload, or otherwise communicate via digital or social media matters or details concerning post-review discoveries absent prior consultation and concurrence with the affiliated Tribe/s with the historic property and SHPO. Access to these areas by unapproved visitors and media will not be permitted.
 3. Security shall be established to protect the resources/historic properties, workers, and private property. Local law enforcement authorities will be notified in accordance with applicable State law and NRCS policy to protect the resources. Construction work may resume outside the buffer only when the State Conservationist determines it is appropriate and safe for the resources and workers.
 4. NRCS CRS shall notify the SHPO, Consulting Tribes, and the ACHP no later than 2 business days after the discovery and describe the NRCS assessment of the National Register eligibility of the property and the proposed actions to resolve any adverse effects to historic properties. Eligibility determination may require the assessment and advice of Consulting Tribes, the SHPO, and technical experts (such as historic landscape architects) not employed by NRCS.
 5. The SHPO, Consulting Tribes, and the ACHP shall respond within 48 hours from receipt of the notification with any comments on the discovery and proposed actions.

6. NRCS shall consider all responses and carry out appropriate actions to resolve any adverse effects.
 7. NRCS shall provide a report to the SHPO, Consulting Tribes, and the ACHP of the actions when they are completed.
- c) When human remains are discovered, the NRCS shall follow all applicable federal, tribal, and state burial laws and ordinances, and related human rights and health statutes, where appropriate. NRCS shall refer to the ACHP's Policy Statement regarding Treatment of Burial Sites, Human Remains and Funerary Objects and the ACHP's Section 106 Archaeology Guidance. NRCS shall also follow USDA and NRCS policy on treatment of human remains and consultation.
1. All measures proposed in the North Fork Elkhorn River Watershed Plan will be installed on non-federal, non-Tribal land. Therefore, any human remains discovered during construction will be subject to protection under the Unmarked Human Burial Sites and Skeletal Remains Protection Act (Nebraska Revised Statutes 12-1201 to 12-1212).
 - i. All ground disturbing activities within 100 meters (330 feet) of the area shall stop immediately. The remains shall be covered and/or protected in place in such a manner that minimizes further exposure of and damage to the remains.
 - ii. LENRD or its contractor shall contact local law enforcement within 48 hours of the discovery of the remains or funerary goods. The local Sheriff must be notified in the event human remains are encountered. The Sheriff will contact the State Archeologist and the County Coroner to assess the remains.
 - iii. Per Nebraska Revised Statute 12-1207 and 12-1208, disposition of the human remains shall be the responsibility of the county attorney and/or the NSHS State Archeologist's Office. If the remains are determined to be recent human remains and/or associated with a crime through consultation with the district coroner or deputy district coroner, law enforcement will assume complete control of the effort. Upon notification the remains are not of criminal interest, the NSHS State Archeologist's Office shall assume jurisdiction over the human skeletal remains, and any goods interred with such remains.
 2. LENRD or its Contractor shall contact the notify, via telephone, the NRCS Cultural Resources Specialist within twenty-four (24) hours of discovery.
 3. The NRCS Cultural Resources Specialist will notify Consulting Tribes within forty-eight (48) hours of discovery. This telephone notification will be followed by written notification that contains all the information regarding the status of the discovery within forty-eight (48) hours after initial notification.
 4. Construction may resume once NSHS State Archeologist's Office and/or the County Coroner have confirmed that all human remains and/or burial goods have been removed from the project area, and the State Conservationist has provided a written Notice to Proceed to the Contractor and Sponsor.
 5. NRCS Nebraska employees, LENRD employees, contractors, and applicants or their agents, representatives, and employees shall not contact or interact with members of the print, broadcast, digital, or other media or post, upload, or otherwise

communicate via digital or social media matters or details concerning human graves or locations containing, or that are likely to contain, human graves and/or remains. Access to these areas by unapproved visitors and media will not be permitted.

APPENDIX D:

Treatment Plan(s)

No Treatment Plans have been developed. They will be developed in consultation, as needed.

APPENDIX E:

Contact Information Tables

Table 1. Contact information for Programmatic Agreement participants.

To be updated throughout the undertaking, as needed

Name	Agency	Title	Email	Phone Number
Melissa Baier	NRCS	Assistant State Conservationist-Water Resources and Easements	<u>Melissa.baier@usda.gov</u>	402-437-4065
Michael Chodoronek	NRCS	Cultural Resources Specialist	<u>Michael.Chodoronek@usda.gov</u>	402-437-4120
	Nebraska State Historical Society	Section 106 Reviews	<u>NSHS.S106@nebraska.gov</u>	
Daryl Bohac	Nebraska State Historical Society	State Historic Preservation Officer	<u>daryl.bohac@nebraska.gov</u>	531-350-9567
Dave Williams	Nebraska State Historical Society	State Archeologist	<u>Dave.Williams@nebraska.gov</u>	402-219-2759
Brian Bruckner	LENRD	General Manager	<u>bbruckner@lenrd.org</u>	(402) 371-7313
Curt Becker	LENRD	Assistant Manager	<u>cbecker@lenrd.org</u>	(402) 371-7313

Table 2. Consulting Parties Contact List (current as of 8/8/2025).

Tribe	Leader	CC
Apache Tribe of Oklahoma	The Honorable Durell Cooper III Chairman Apache Tribe of Oklahoma P.O. Box 1330 Anadarko, OK 73005 Phone: 405-247-9493 Fax: 405-247-2942 Email: durell.cooper@apachetribe.org	Darrin Cisco NAGPRA contact Apache Tribe of Oklahoma Cultural Department P.O. Box 1330 Anadarko, OK 73005 Phone: 405-247-7494 Email: apachendnvcisco@yahoo.com
Arapaho Tribe of the Wind River Reservation, Wyoming (Northern Arapaho Tribe)	The Honorable Keenan Groesbeck Chairman Northern Arapaho Tribe PO Box 396 Ft. Washakie, WY 82514 Phone: 307-332-6120 Fax: 307-332-7543 Email: keenan.groesbeck@northernarapaho.com	Crystal C'Bearing Director Northern Arapaho Tribal Historic Preservation Office P.O. Box 273 Riverton, WY 82501 307-856-1628 Fax: 307-856-1974 Send emails to both: alvoniamcelroy@northernarapaho.com (Deputy Director) crystal.cbearing@northernarapaho.com
Cheyenne and Arapaho Tribes of Oklahoma	The Honorable Reggie Wassana Governor Cheyenne and Arapaho Tribes of Oklahoma P.O. Box 38 Concho, OK 73022 Phone: 405-422-7720 Fax: 405-262-8224 Email: rwassana@c-a-tribes.org	Max Bear Tribal Historic Preservation Officer Cheyenne and Arapaho Tribes of Oklahoma P.O. Box 167 Concho, OK 73022 Phone: (o) 405-422-7714; (405) 422-7482 (c) 405-443-9304 Email: mbear@cheyenneandarapaho-nsn.gov

Northern Cheyenne Tribe	The Honorable Gene Small President Northern Cheyenne Tribe PO Box 128 Lame Deer, MT 59043 Phone: 406-477-6284 Fax: 406-477-6201 Email: gene.small@cheyennenation.com	Gary LaFranier 106 Coordinator Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana P.O. Box 128 Lame Deer, MT 59043 Email: gary.lafranier@cheyennenation.com phone (406) 477-8114 Alfonzo Spang (Office Manager) phone (406) 477-4838 e-mail alfonzo.spang@cheyennenation.com Teanna Limpy Tribal Historic Preservation Officer Phone: (o) 406-477-4839 Fax: 406-477-6210 (c) 406-477-4838 Email: teanna.limpy@cheyennenation.com
Omaha Tribe of Nebraska	The Honorable Jason Sheridan Chairman Omaha Tribe of Nebraska P.O. BOX 368 Macy, Nebraska 68039 jason.sheridan@theomahatribe.com	Jarell Grant Tribal Historic Preservation Officer Omaha Tribe of Nebraska PO Box 368 Macy, NE 68039 Tel: 402.837.5391? Fax: 402.837.5239 Email: jarell.grant@theomahatribe.com
Pawnee Nation of Oklahoma	The Honorable Misty M. Nuttle President Pawnee Nation of Oklahoma P.O. Box 470 Pawnee, OK 74058 Phone: 918-762-3621 Fax: 918-762-6446 mnuttle@pawneenation.org	Matt Reed Tribal Historic Preservation Officer Repatriation Committee Pawnee Nation of Oklahoma P.O. Box 470 Pawnee, OK 74058 Phone: 918-762-2180 Email: jreed@pawneenation.org

Ponca Tribe of Indians of Oklahoma	The Honorable Oliver Little Cook Chairman Ponca Tribe of Indians of Oklahoma 101 White Eagle Drive Ponca City, OK 74601 (580) 762-8104 oliver.littlecook@ponca-nsn.gov	Staci Hesler Tribal Historic Preservation Officer Ponca Tribe of Indians of Oklahoma 20 White Eagle Drive Ponca City, OK 74601 (580) 382-6633 106notifications@ponca-nsn.gov (For Section 106 notifications)
Ponca Tribe of Nebraska	The Honorable Candace Schmidt Chairwoman Ponca Tribe of Nebraska P.O. Box 288 Niobrara NE 68760 candaces@poncatribes-ne.org	Theresa Foley Tribal Historical Preservation Officer Ponca Tribe of Nebraska 5701 S. 85TH CIRCLE Omaha, NE 68127 Office: (402) 315-2760 x-4106 Cell: (402) 860-9262 Theresa Foley <tfoley@PoncaTribe-ne.Gov>
Santee Sioux Nation of Nebraska	The Honorable Alonzo Denney Chairman Santee Sioux Nation of Nebraska 108 Spirit Lake Avenue West Niobrara, NE, 68760-7219 alonzo.denney@ssndakota.com	Larry Thomas Tribal Historic Preservation Officer Santee Sioux Nation of Nebraska 52948 Hwy 12 Niobara, NE 68760 Tel: 402-358-6161 Fax: Email: ssn.thpo@gmail.com and larrythomas71.lt@gmail.com
Yankton Sioux Tribe	The Honorable Robert Flying Hawk Chairman Yankton Sioux Tribe P.O. Box 1153 Wagner, South Dakota 57380 robertflyinghawk@gmail.com	Colten Archambeau Tribal Historic Preservation Officer Yankton Sioux Tribe PO Box 1153 Wagner, SD 57380 Phone: 605-384-3641 Email: yst.thpo@gmail.com