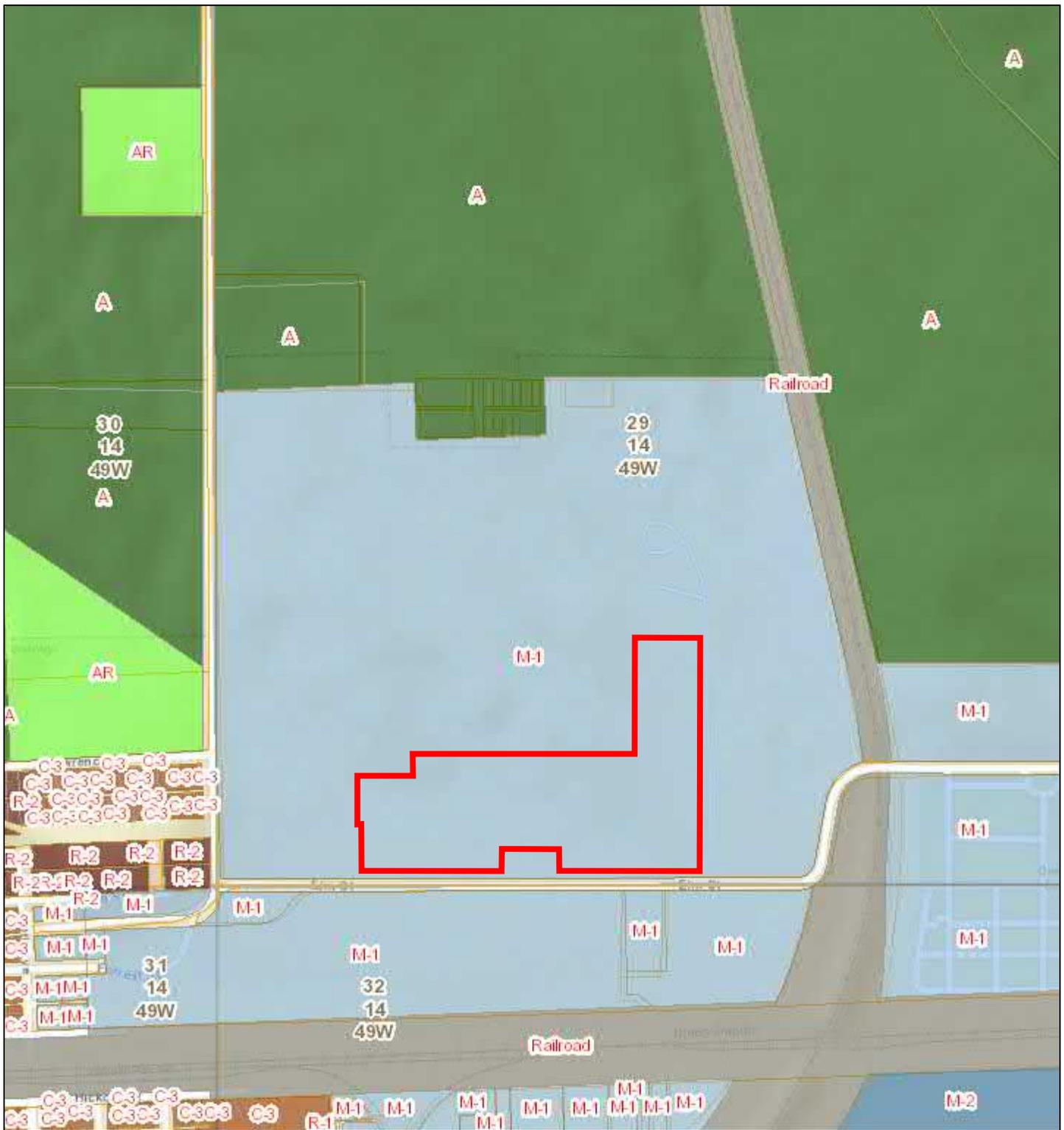


APPENDIX A
RESOURCE DOCUMENTATION



Legend

-  1% Annual Chance
-  0.2% Annual Chance



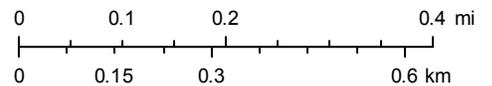
December 6, 2022

DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

Legend

Z - City Zoning	C-2	R-1	Railroad
Z - Zoning	C-3	R-1a	Unknown
	M-1	R-2	Parcels
A	M-2	R-3	Sections
AR	OP	R-4	
C-1			

1:11,700



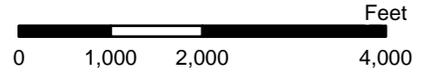
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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Legend:

- Project Boundary
- Local Park



DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	
Date:	Sep 2022
Drawn By:	KE
Reviewed By:	JTP

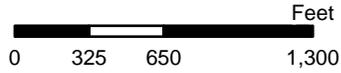
<p>Formally Classified Lands Map</p> <p>Sandhills Energy, LLC Sidney Cheyenne County, Nebraska</p>



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Legend:

- Project Boundary
- SSA



DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	
Date:	Sep 2022
Drawn By:	KE
Reviewed By:	JTP

<p>Sole Source Aquifers Map</p> <p>Sandhills Energy, LLC Sidney Cheyenne County, Nebraska</p>
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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Cheyenne, Nebraska**

Sidney Solar Project



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

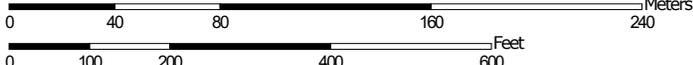
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:2,850 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cheyenne, Nebraska
 Survey Area Data: Version 22, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 10, 2022—Aug 29, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1326	Bayard fine sandy loam, 0 to 1 percent slopes	1.4	6.3%
1327	Bayard fine sandy loam, 0 to 3 percent slopes	11.2	50.7%
1506	Altvan-Dix complex, 3 to 9 percent slopes	7.1	31.9%
5155	Canyon-Bayard complex, 6 to 20 percent slopes	0.3	1.1%
9983	Gravel pit	2.2	10.0%
Totals for Area of Interest		22.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cheyenne, Nebraska

1326—Bayard fine sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2w5dy
Elevation: 2,590 to 4,530 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bayard and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bayard

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or colluvium

Typical profile

Ap - 0 to 7 inches: fine sandy loam
A - 7 to 10 inches: fine sandy loam
Bw - 10 to 19 inches: fine sandy loam
C - 19 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: R072XY107KS - Sandy Lowland
Hydric soil rating: No

1327—Bayard fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w5dz
Elevation: 2,590 to 4,590 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bayard and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bayard

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or colluvium

Typical profile

Ap - 0 to 7 inches: fine sandy loam
A - 7 to 13 inches: fine sandy loam
Bw - 13 to 22 inches: fine sandy loam
C - 22 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R067AY150WY - Sandy (Sy)
Hydric soil rating: No

Minor Components

Tripp

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY124WY - Loamy Lowland (LyL)
Hydric soil rating: No

Broadwater, occasionally flooded

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY152WY - Sandy Lowland (SyL)
Hydric soil rating: No

Seep

Percent of map unit: 1 percent
Landform: Seeps
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R067AY174WY - Subirrigated (Sb)
Hydric soil rating: Yes

1506—Altvan-Dix complex, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2tlq7
Elevation: 3,780 to 4,630 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 130 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Altvan and similar soils: 65 percent
Dix and similar soils: 32 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altvan

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit

Custom Soil Resource Report

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Eolian deposits over tertiary aged sandy and gravelly alluvium

Typical profile

Ap - 0 to 7 inches: loam

Bt1 - 7 to 17 inches: clay loam

Bt2 - 17 to 21 inches: clay loam

Bk - 21 to 24 inches: loam

2C - 24 to 80 inches: gravelly sand

Properties and qualities

Slope: 3 to 9 percent

Depth to restrictive feature: 24 to 25 inches to strongly contrasting textural stratification

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 13 percent

Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R072XY100KS - Loamy Tableland

Hydric soil rating: No

Description of Dix

Setting

Landform: Interfluves

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Tertiary aged sandy and gravelly alluvium

Typical profile

Ap - 0 to 6 inches: sandy loam

AC - 6 to 11 inches: sandy loam

2C1 - 11 to 19 inches: very gravelly loamy coarse sand

2C2 - 19 to 80 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R072XY113KS - Gravelly Hills
Hydric soil rating: No

Minor Components

Busher

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Ecological site: R072XY111KS - Sandy Plains
Hydric soil rating: No

5155—Canyon-Bayard complex, 6 to 20 percent slopes

Map Unit Setting

National map unit symbol: 1v0lw
Elevation: 3,000 to 5,000 feet
Mean annual precipitation: 16 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Canyon and similar soils: 55 percent
Bayard and similar soils: 45 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canyon

Setting

Landform: Hillslopes
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Calcareous loamy residuum weathered from limestone and sandstone

Custom Soil Resource Report

Typical profile

A - 0 to 6 inches: fine sandy loam
C - 6 to 11 inches: gravelly loam
Cr - 11 to 60 inches: weathered bedrock

Properties and qualities

Slope: 6 to 20 percent
Depth to restrictive feature: 6 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R067AY162WY - Shallow (Sw)
Forage suitability group: Shallow (G072XA003KS)
Other vegetative classification: Shallow (G072XA003KS)
Hydric soil rating: No

Description of Bayard

Setting

Landform: Hillslopes
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Colluvial-alluvial sediments from calcareous sandstone

Typical profile

A - 0 to 12 inches: fine sandy loam
C - 12 to 60 inches: fine sandy loam

Properties and qualities

Slope: 6 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A

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Ecological site: R067AY150WY - Sandy (Sy)
Forage suitability group: Loamy Coarse (G072XA120KS)
Other vegetative classification: Loamy Coarse (G072XA120KS)
Hydric soil rating: No

9983—Gravel pit

Map Unit Setting

National map unit symbol: 1v0m9
Elevation: 500 to 4,500 feet
Mean annual precipitation: 24 to 28 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 145 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Custom Soil Resource Report

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Custom Soil Resource Report

Prime and other Important Farmlands—Cheyenne, Nebraska		
Map Symbol	Map Unit Name	Farmland Classification
1326	Bayard fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
1327	Bayard fine sandy loam, 0 to 3 percent slopes	Prime farmland if irrigated
1506	Altvan-Dix complex, 3 to 9 percent slopes	Not prime farmland
5155	Canyon-Bayard complex, 6 to 20 percent slopes	Not prime farmland
9983	Gravel pit	Not prime farmland

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

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

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

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

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features

Custom Soil Resource Report

required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folist.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

Custom Soil Resource Report

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils—Cheyenne, Nebraska				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
1327—Bayard fine sandy loam, 0 to 3 percent slopes				
	Seep	1	Seeps	2

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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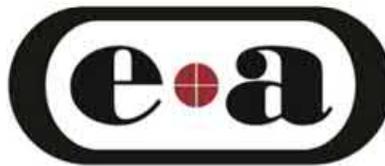
WETLAND AND WATERS OF THE U.S. DELINEATION
REPORT FOR
SANDHILLS ENERGY, LLC
SIDNEY, CHEYENNE COUNTY, NEBRASKA

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E&A PROJECT #P2023.206.001

AUGUST 29, 2023

INTRODUCTION

The project area was delineated for the presence of wetlands and waters of the U.S. (WOTUS) on August 22nd, 2023 by E & A Consulting Group, Inc. (E&A) in accordance with our proposal and general conditions. The scope of this investigation was to identify the presence/absence of wetlands and delineate the boundaries of potential jurisdictional wetlands within the project area that might be affected by the proposed project. In addition to wetlands, WOTUS, which include lakes, ponds, rivers, and streams, are included in the delineation. In order to be classified as a wetland, the area must have all three wetland indicators; hydric soils, hydrology, and hydrophytic vegetation. If one or more of these indicators are not present, the observation point is generally not considered a wetland.

Potential wetland areas located within the project area were identified and examined for wetland indicators using the Routine On-Site Determination Method as defined in the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Great Plains Regional Supplement*. Five (5) Wetland Delineation Data Forms were completed during the delineation. Data forms and ground-level photographs depicting existing conditions are included in the Appendix.

SITE DESCRIPTION

The site is located on approximately 22 acres of land to the northeast of the intersection of County Road 113 and Elm Street northeast of Sidney, Cheyenne County, Nebraska. The site consisted of vacant land during the field delineation. The wetland delineation area of investigation (AOI) consisted of 22 acres within the site area.

DELINEATION METHODS

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) as:

“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”¹

¹ Environmental Laboratory. 1987 Corps of Engineers Wetlands Delineation Manual. Vicksburg, MS: U.S. Army Corps of Engineers, 1987.

Wetlands generally include swamps, marshes, bogs, and similar areas. Initially, when providing wetland delineations, preliminary information is gathered to assist in identifying potential wetland areas. A U.S. Geological Survey (USGS) topographic map was utilized to identify streams, forests, and topography that may indicate the presence of wetlands. National Wetland Inventory (NWI) maps, originally prepared by the U.S. Fisheries and Wildlife Services (USFWS), were obtained from the Department of the Interior, and sites identified on these maps were field-checked. A soils map provided by the U.S. Department of Agriculture (USDA) was used to identify the approximate location of hydric soils. Aerial photographs dating back to 1953 were also utilized to examine the site area for wetland and WOTUS signatures.

Routine Wetland Delineation Procedures in the *1987 Corps of Engineers Wetland Delineation Manual* and the *Great Plains Regional Supplement* were followed in identifying and delineating wetlands in the field. For each wetland, boundaries were determined initially through analysis of vegetation, soil profiles, and hydrologic indicators. Subsequently, the boundary was completed by following changes in topography and/or vegetation that occurred at the established wetland margin. In order to be classified as a wetland, the area must have three wetland indicators: Hydric soils, hydrology, and hydrophytic vegetation. If one or more of these indicators are not present, the observation point is not considered a wetland.

A sample plot is taken to confirm that an area is a wetland or upland. Vegetation analysis is taken from a 30-foot radius for trees and woody vines, a 15-foot radius for woody shrubs, and a 5-foot radius for the herbaceous layer. Nomenclature of plants and their indicator status were obtained from the 2020 National Wetland Plant List².

A soil probe is used to extract a soil profile within the sample plot, and to confirm the presence or absence of hydric soils. Soils are sampled to a minimum depth of 18 inches (unless otherwise noted) and depending on the study area can be sampled to 36 inches. The color of the soil matrix and associated redox and/or depletion features were identified according to the Munsell Color Charts (Munsell Corp., New York). The boundaries of the wetlands and WOTUS identified were determined in the field using a Trimble DA2 geographic positioning system (GPS) device and then plotted using AutoCAD Civil 3D 2022.

USGS TOPOQUAD

E&A reviewed the United States Department of the Interior Geologic Survey (USGS), 7.5-Minute Series, *Sidney, Nebraska*, Topographic Quadrangle Map to identify potential wetlands and WOTUS within the site area. The topographic map indicated the site is gently sloping, with an

² U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html

elevation ranging from 4,090 feet to 4,130 feet above sea level. No wetlands or waters were shown on the topographic map. A portion of the *Sidney, Nebraska*, Quadrangle, which includes the site and surrounding area, is shown in Exhibit 2 in the Appendix.

NATIONAL WETLAND INVENTORY MAP

The National Wetland Inventory (NWI) aerial maps identify areas that may contain potential wetlands. It should be noted that wetlands identified on the NWI map may not have been field checked by the USFWS. The NWI Map should not be used as the sole basis for wetland determinations, but as guidance to determine where wetlands may exist within the project area. The NWI Map³ did not identify any wetlands or waters in the project area. A portion of the NWI map is shown in Exhibit 3.

It should be noted that the Federal Geographic Data Committee document Wetlands Mapping Standards⁴, which is the basis for the wetland determinations used in the USFWS NWI Map, lists numerous factors affecting the accuracy of the map, including:

- Scale of imagery
- Mapping scale or base map scale
- Quality of imagery
- Season of imagery (leaf-off or leaf-on)
- Type of imagery or emulsion of imagery
- Environmental conditions when imagery was captured
- Difficulty of identifying particular types of wetlands
- Availability and quality of ancillary or collateral data sources

It should also be noted that the USFWS Wetland Mapper internet site³ (used to locate/generate NWI maps) included the following disclaimer(s):

The map displays at this site show wetland type and extent using a biological definition of wetlands. There is no attempt to define the limits of proprietary jurisdiction of any Federal, state, or local government, or to establish the geographical scope of the regulatory programs of government agencies.

³ U.S. Fish and Wildlife Service. *National Wetlands Inventory Website*. U.S. Department of the Interior, Oct. 2009. Web. 17 Oct. 2013. <http://www.fws.gov/wetlands/>.

⁴ Federal Geographic Data Committee. 2013. *Classification of Wetlands and Deepwater Habitats of the United States*. FGDC-STD-004-2013. <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/wetlands/nvcs-2013>

Base cartographic information used as part of this Wetlands Mapper has been provided through third-party products. The FWS does not maintain and is not responsible for the accuracy or completeness of the base cartographic information.

Thus, field assessment of the NWI Map data is crucial to confirm or deny wetland presence and their respective boundaries.

USDA SOIL CONSERVATION MAP

Data from the U.S. Department of Agriculture Soil Conservation Service, now known as the Natural Resource Conservation Service (NRCS) Web Soil Survey were reviewed to identify soil types, including hydric soils for the site. As previously indicated, hydric soil is one of the three essential characteristics of a wetland according to the USACE. Soil types were then compared to the National List of Hydric Soils (NRCS, March 2014). Inclusion on the Hydric Soil List indicates that the soil series or one of its components contain characteristics which may be hydric and is not an unqualified indication of hydric soil for a specific location.

Hydric soils listed on the NRCS Hydric Soil List must meet one or more of the following NRCS hydric soil criteria codes:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
 - B. are poorly drained or very poorly drained and have either:
 - 1.) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
 - 2.) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
 - 3.) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for a long or very long duration during the growing season.
4. Soils that are frequently flooded for a long or very long duration during the growing season.

The following soil types were identified within the project area on the soil survey map:

Soil Name (Map Unit Symbol)	Drainage Description	Depth to Water	Flooding Frequency	Ponding Frequency	Listed Hydric Soil	Hydric Unit % *
Bayard fine sandy loam, 0 to 1 percent slopes (1326)	Well drained	> 80 in.	None	None	No	-
Bayard fine sandy loam, 0 to 3 percent slopes (1327)	Well drained	> 80 in.	None	None	Yes	1
Altvan-Dix complex, 3 to 9 percent slopes (1506)	Well drained	> 80 in.	None	None	No	-
Canyon-Bayard complex, 6 to 20 percent slopes (5155)	Well drained	> 80 in.	None	None	No	-
Gravel pit (9983)	Excessively drained	> 80 in.	None	None	No	-

* This rating indicates the percentage of map units that meet the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor non-hydric components in the higher positions on the landform, and map units that are made up dominantly of non-hydric soils may have small areas of minor hydric components in the lower positions on the landform. A portion of the NRCS soil survey map for the site area is shown in Exhibit 4 in the Appendix.

AERIAL PHOTOGRAPHS

E&A reviewed aerial photographs to indicate suspected wetland areas and linear surface water features on the site. Aerial photographs between the years 1953 to 2022 are shown in the Appendix

Historical Aerial Photographs

Aerial Year	Description
1953 – 1972	The site area is depicted as agricultural cropland, with a farmstead in the middle of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
1985 – 2014	The site area is depicted as agricultural cropland, with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
2016 – 2022	The site area is depicted vacant land with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the site area.

Wetlands in Agricultural Settings Review:

Using the methodology from Part 650.1903 of the Engineering Field Handbook – Supplemental data for remote sensing, 13 years of aerial photography obtained from EDR NET and Cheyenne County, NE GIS were reviewed for wetland hydrology and compared to the WETS table for Sidney Municipal Airport, NE. Sidney Municipal Airport, NE was chosen because it is the closest WETS station that had adequate data for review. Seven of the 13 years were chosen for review (three normal years, two dry years, and two wet years). Using Procedure 1 on page 19-24 of the Engineering Field Handbook, the seven photographs were reviewed for wetland signatures as defined in section 513.30 of the USDA National Food Security Act Manual. The following table summarizes the year, precipitation, and observed wetland signatures for each year:

Year	Precipitation	Wetland Signatures
1953	Wet	The site area is depicted as agricultural cropland, with a farmstead in the middle of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
1972	Normal	The site area is depicted as agricultural cropland, with a farmstead in the middle of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
1985	Normal	The site area is depicted as agricultural cropland, with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
2006	Dry	The site area is depicted as agricultural cropland, with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
2009	Wet	The site area is depicted as agricultural cropland, with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
2014	Normal	The site area is depicted as agricultural cropland, with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the farmed portions of the site.
2022	Dry	The site area is depicted vacant land with a structure located in the south-middle portion of the project area. No wetland signatures or waters were observed in the site area.

No wetland signatures or waters were observed in the farmed portions of the site. Unfarmed portions of the site, including swales, terraces, fallow ground, riparian areas, and perimeter areas, were investigated during site visit on August 22nd, 2023. Aerial photographs between the years 1953 and 2022 are shown in the Appendix.

THREATENED AND ENDANGERED SPECIES EVALUATION

In order to expedite the review, concurrence, and Nationwide Permit (NWP) issuance process by the USACE, E&A conducted agency file searches to identify state and federally listed threatened and endangered (T&E) species in the vicinity of the site. The search included information from the U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) and Nebraska Game and Parks Commission’s (NGPC) Range Maps for Nebraska’s Threatened and Endangered Species *White Papers, Conference Presentations, & Manuscripts 30* document accessed via <http://digitalcommons.unl.edu/nebgamewhitepap/30>. The USFWS and NGPC list five threatened and/or endangered species as having the potential to occur in Cheyenne County, Nebraska. The table below contains a brief description of the habitat conditions that are considered necessary for each species and the determination of suitable habitat for each species on site.

State and Federally Listed Threatened and Endangered Species Potentially Occurring in Cheyenne County, Nebraska

Common Name (Scientific Name)	Federal Status	State Status	Summarized Habitat Description	Is Suitable Habitat Present?
BIRDS				
Mountain Plover (<i>Charadrius montanus</i>)	-	T	Mountain plovers nest in four habitat types: 1) native short- and mixed-grass prairie, 2) semi-desert sites, 3) prairie dog colonies, and 4) agricultural land. One factor common to all breeding areas is that the land must include extensive bare ground.	No
Whooping Crane (<i>Grus americana</i>)	E	E	Nest sites are primarily located in shallow diatom ponds that contain bulrush. During migration, whooping cranes use a variety of habitat; however, wetland mosaics appear to be most suitable. For feeding, whooping cranes primarily use shallow, seasonally and Semipermanently flooded palustrine wetlands, various cropland, and emergent wetlands. In Nebraska, whooping cranes also often use riverine habitats.	No
MAMMALS				
Swift Fox (<i>Vulpes velox</i>)	-	E	Swift foxes require open shortgrass prairies with few shrubs and trees. They often use prairie dog and badger dens to raise their young. Swift foxes will often den in road ditches due to the fact that	No

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			coyotes do not typically inhabit this area.	
Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)	T	T	Summer roosts generally consist of cavities or bark crevices of living and dead trees. The northern long-eared bat is also known to roost in culverts with a height/diameter of greater than or equal to 4 feet and a length greater than 130 feet during the summer. In winter, the northern long-eared bat will hibernate in caves or mines.	No
Gray Wolf (<i>Canis lupus</i>)	E	E	A wide range of habitats including prairie, mountains, temperate forests, wetlands, tundra, and taiga. Wolves can survive anywhere there is plenty of food, water, shelter, and space. This is provided, however, they are also needing human acceptance.	No

As shown above, no potential habitat for any threatened and/or endangered species is located within the project area. E&A has submitted project information online via the Nebraska Conservation and Environmental Review Tool (Nebraska CERT) to obtain an opinion from the USFWS and NGPC with regards to potential T&E habitat and species at the site.

FIELD OBSERVATIONS

On August 22nd, 2023, E&A observed the site for wetlands and WOTUS and conducted the wetland delineation fieldwork. During the field observations, it was noted that the site mostly consisted of vacant land. No wetland areas or drainages were identified during the wetland delineation. The findings of the field delineation are summarized on the Wetland Delineation Data Forms in the Appendix. Ground photographs area also included in the Appendix.

Wetland and WOTUS Summary

This report details the procedures used to delineate wetlands on the site. In accordance with the field procedures described in this report, no wetland areas or drainages were identified at the site.

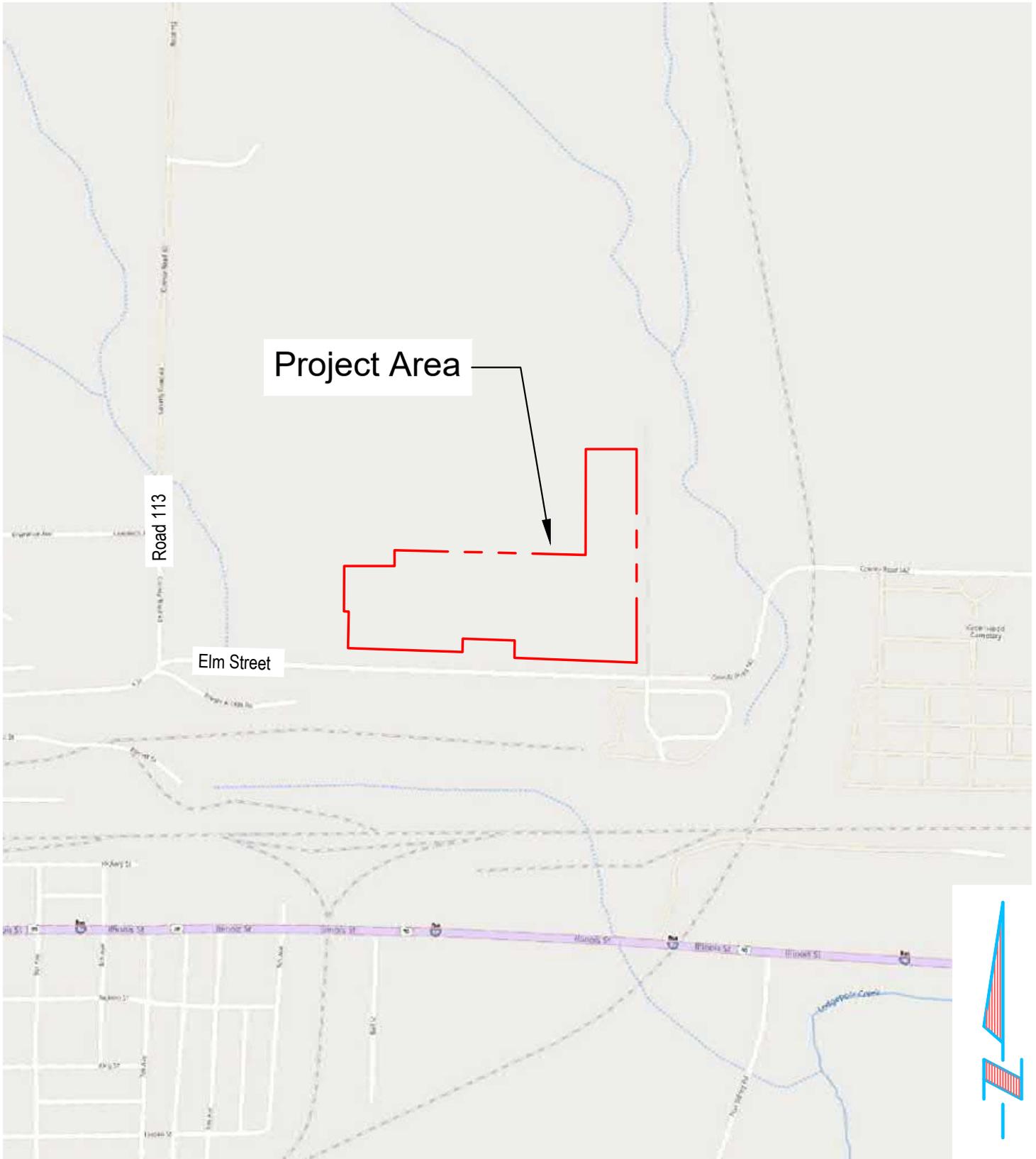
RECOMMENDATIONS

E&A has performed a Wetland Delineation in conformance with the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Great Plains Regional Supplement* of the land to the northeast of the intersection of County Road 113 and Elm Street northeast of Sidney, Cheyenne County, Nebraska. Based on the findings of the wetland field delineation, no wetland areas or drainages are present within the AOI.

GENERAL

The information and recommendations presented in this report are professional opinions based on visual observation, review of available data pertaining to the subject property, and our interpretation of available public records. The purpose of this study was to investigate the potential for jurisdictional wetlands, which would be apparent to professionals performing wetland delineations in accordance with the *1987 Corps of Engineers Wetlands Delineation Manual*. The opinions and recommendations presented herein apply to the subject property conditions at the time of our investigation.

Appendix



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Job No.: P2023.206.001

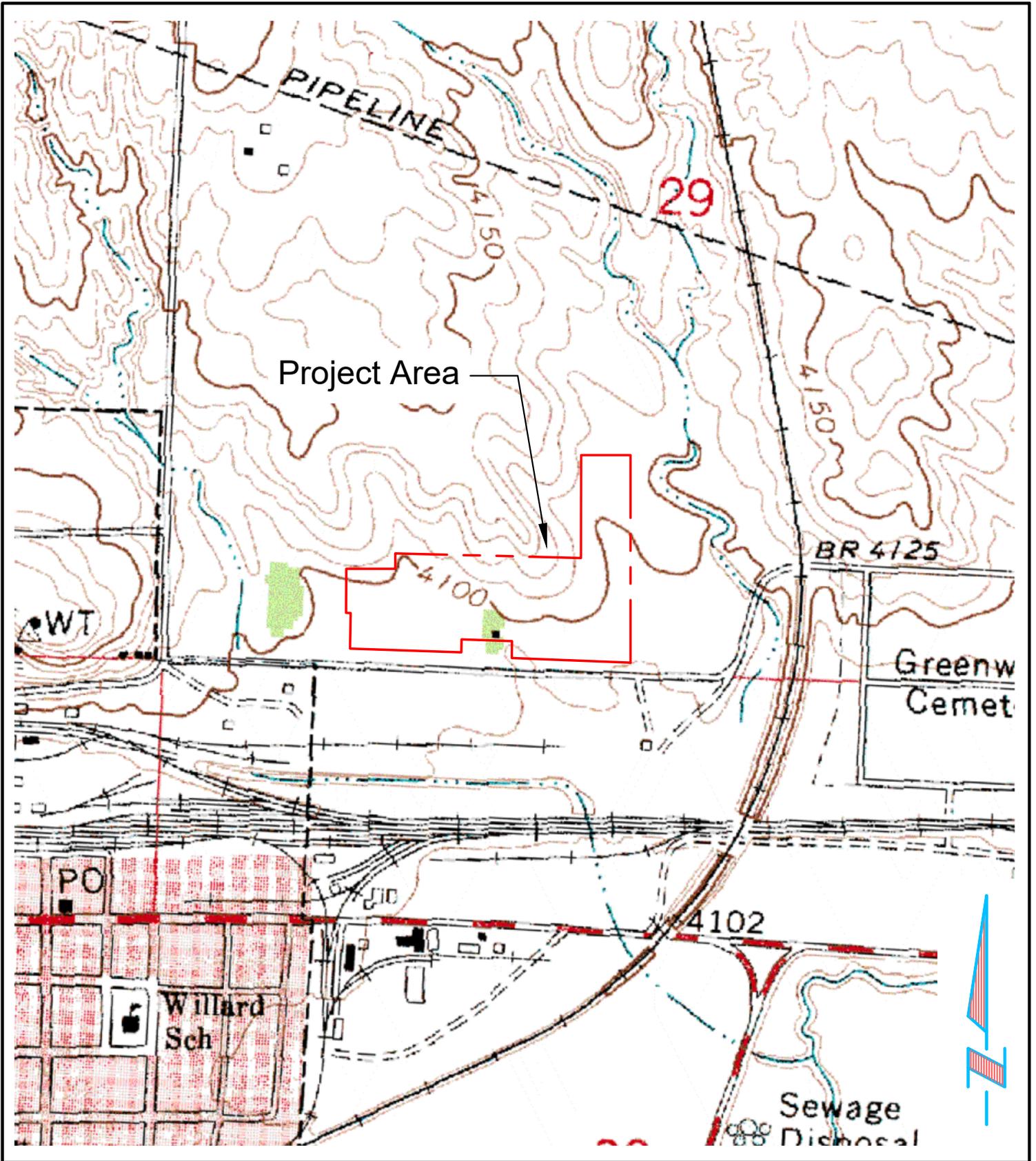
Date: 8/29/2023

Drawn by: JMM

Scale: 1" = 740'

Checked By: ZAJ

**Exhibit 1 - Vicinity Map
Sandhills Energy - Sidney,
NE**



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**Exhibit 2 - Topo Map
 Sandhills Energy - Sidney,
 NE**



U.S. Fish and Wildlife Service

National Wetlands Inventory

Exhibit 3



August 25, 2023

Wetlands

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Lake
-  Other
-  Riverine

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



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Cheyenne, Nebraska**

Sidney Solar Project



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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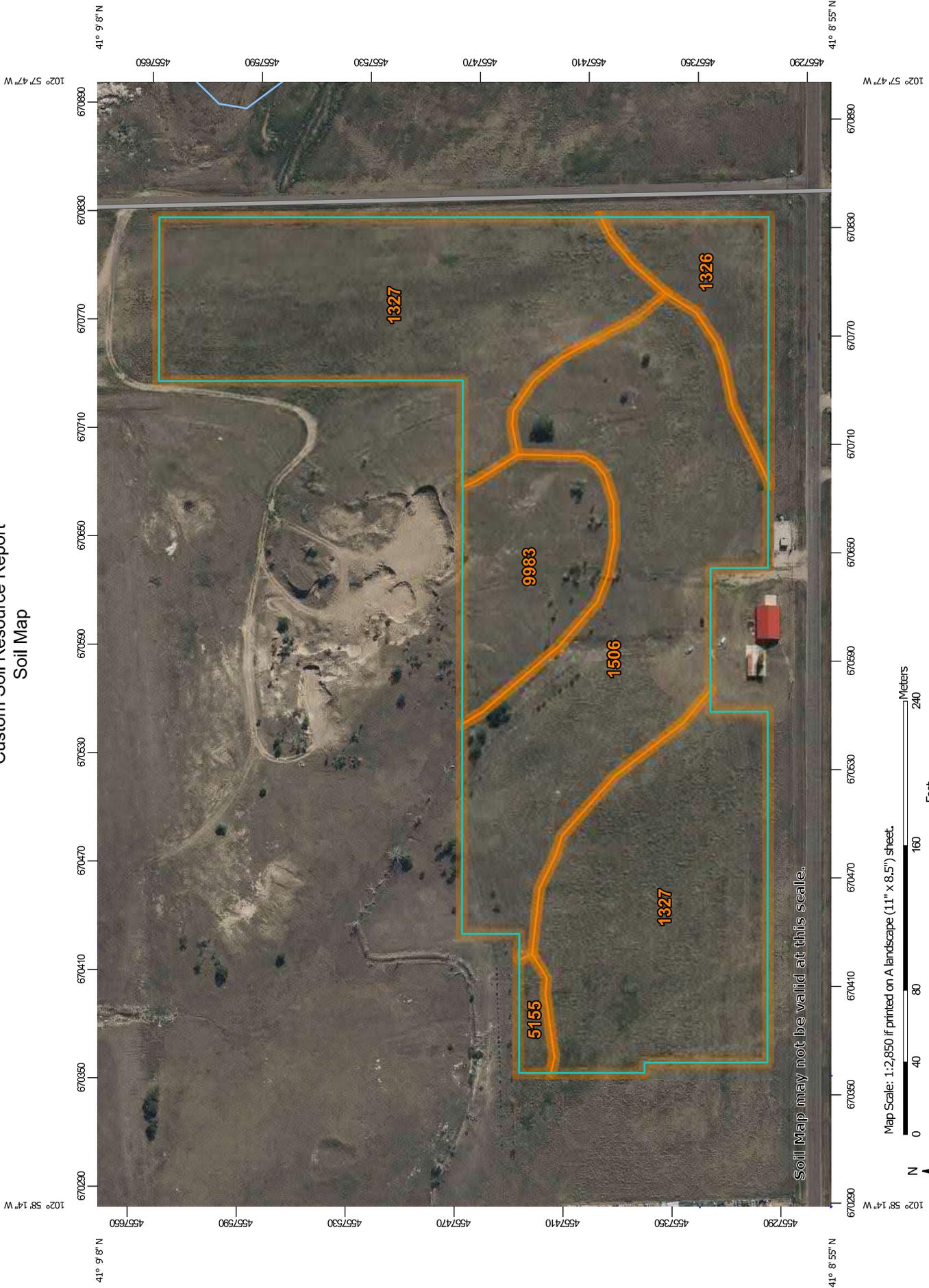
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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soils	 Stony Spot
 Soil Map Unit Polygons	 Very Stony Spot
 Soil Map Unit Lines	 Wet Spot
 Soil Map Unit Points	 Other
 Special Point Features	 Special Line Features
 Blowout	 Streams and Canals
 Borrow Pit	 Transportation
 Clay Spot	 Rails
 Closed Depression	 Interstate Highways
 Gravel Pit	 US Routes
 Gravelly Spot	 Major Roads
 Landfill	 Local Roads
 Lava Flow	 Background
 Marsh or swamp	 Aerial Photography
 Mine or Quarry	
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cheyenne, Nebraska
 Survey Area Data: Version 22, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 10, 2022—Aug 29, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1326	Bayard fine sandy loam, 0 to 1 percent slopes	1.4	6.3%
1327	Bayard fine sandy loam, 0 to 3 percent slopes	11.2	50.7%
1506	Altvan-Dix complex, 3 to 9 percent slopes	7.1	31.9%
5155	Canyon-Bayard complex, 6 to 20 percent slopes	0.3	1.1%
9983	Gravel pit	2.2	10.0%
Totals for Area of Interest		22.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cheyenne, Nebraska

1326—Bayard fine sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2w5dy
Elevation: 2,590 to 4,530 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bayard and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bayard

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or colluvium

Typical profile

Ap - 0 to 7 inches: fine sandy loam
A - 7 to 10 inches: fine sandy loam
Bw - 10 to 19 inches: fine sandy loam
C - 19 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: R072XY107KS - Sandy Lowland
Hydric soil rating: No

1327—Bayard fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w5dz
Elevation: 2,590 to 4,590 feet
Mean annual precipitation: 15 to 23 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Bayard and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bayard

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or colluvium

Typical profile

Ap - 0 to 7 inches: fine sandy loam
A - 7 to 13 inches: fine sandy loam
Bw - 13 to 22 inches: fine sandy loam
C - 22 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R067AY150WY - Sandy (Sy)
Hydric soil rating: No

Minor Components

Tripp

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY124WY - Loamy Lowland (LyL)
Hydric soil rating: No

Broadwater, occasionally flooded

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067AY152WY - Sandy Lowland (SyL)
Hydric soil rating: No

Seep

Percent of map unit: 1 percent
Landform: Seeps
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R067AY174WY - Subirrigated (Sb)
Hydric soil rating: Yes

1506—Altvan-Dix complex, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2tlq7
Elevation: 3,780 to 4,630 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 130 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Altvan and similar soils: 65 percent
Dix and similar soils: 32 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altvan

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit

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Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Eolian deposits over tertiary aged sandy and gravelly alluvium

Typical profile

Ap - 0 to 7 inches: loam

Bt1 - 7 to 17 inches: clay loam

Bt2 - 17 to 21 inches: clay loam

Bk - 21 to 24 inches: loam

2C - 24 to 80 inches: gravelly sand

Properties and qualities

Slope: 3 to 9 percent

Depth to restrictive feature: 24 to 25 inches to strongly contrasting textural stratification

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 13 percent

Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R072XY100KS - Loamy Tableland

Hydric soil rating: No

Description of Dix

Setting

Landform: Interfluves

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Tertiary aged sandy and gravelly alluvium

Typical profile

Ap - 0 to 6 inches: sandy loam

AC - 6 to 11 inches: sandy loam

2C1 - 11 to 19 inches: very gravelly loamy coarse sand

2C2 - 19 to 80 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

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Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R072XY113KS - Gravelly Hills
Hydric soil rating: No

Minor Components

Busher

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Ecological site: R072XY111KS - Sandy Plains
Hydric soil rating: No

5155—Canyon-Bayard complex, 6 to 20 percent slopes

Map Unit Setting

National map unit symbol: 1v0lw
Elevation: 3,000 to 5,000 feet
Mean annual precipitation: 16 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Canyon and similar soils: 55 percent
Bayard and similar soils: 45 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canyon

Setting

Landform: Hillslopes
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Calcareous loamy residuum weathered from limestone and sandstone

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Typical profile

A - 0 to 6 inches: fine sandy loam
C - 6 to 11 inches: gravelly loam
Cr - 11 to 60 inches: weathered bedrock

Properties and qualities

Slope: 6 to 20 percent
Depth to restrictive feature: 6 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R067AY162WY - Shallow (Sw)
Forage suitability group: Shallow (G072XA003KS)
Other vegetative classification: Shallow (G072XA003KS)
Hydric soil rating: No

Description of Bayard

Setting

Landform: Hillslopes
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Colluvial-alluvial sediments from calcareous sandstone

Typical profile

A - 0 to 12 inches: fine sandy loam
C - 12 to 60 inches: fine sandy loam

Properties and qualities

Slope: 6 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A

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Ecological site: R067AY150WY - Sandy (Sy)
Forage suitability group: Loamy Coarse (G072XA120KS)
Other vegetative classification: Loamy Coarse (G072XA120KS)
Hydric soil rating: No

9983—Gravel pit

Map Unit Setting

National map unit symbol: 1v0m9
Elevation: 500 to 4,500 feet
Mean annual precipitation: 24 to 28 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 145 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

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Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Custom Soil Resource Report

Prime and other Important Farmlands—Cheyenne, Nebraska		
Map Symbol	Map Unit Name	Farmland Classification
1326	Bayard fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
1327	Bayard fine sandy loam, 0 to 3 percent slopes	Prime farmland if irrigated
1506	Altvan-Dix complex, 3 to 9 percent slopes	Not prime farmland
5155	Canyon-Bayard complex, 6 to 20 percent slopes	Not prime farmland
9983	Gravel pit	Not prime farmland

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

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

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

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

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features

Custom Soil Resource Report

required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

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Report—Hydric Soils

Hydric Soils—Cheyenne, Nebraska				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
1327—Bayard fine sandy loam, 0 to 3 percent slopes				
	Seep	1	Seeps	2

References

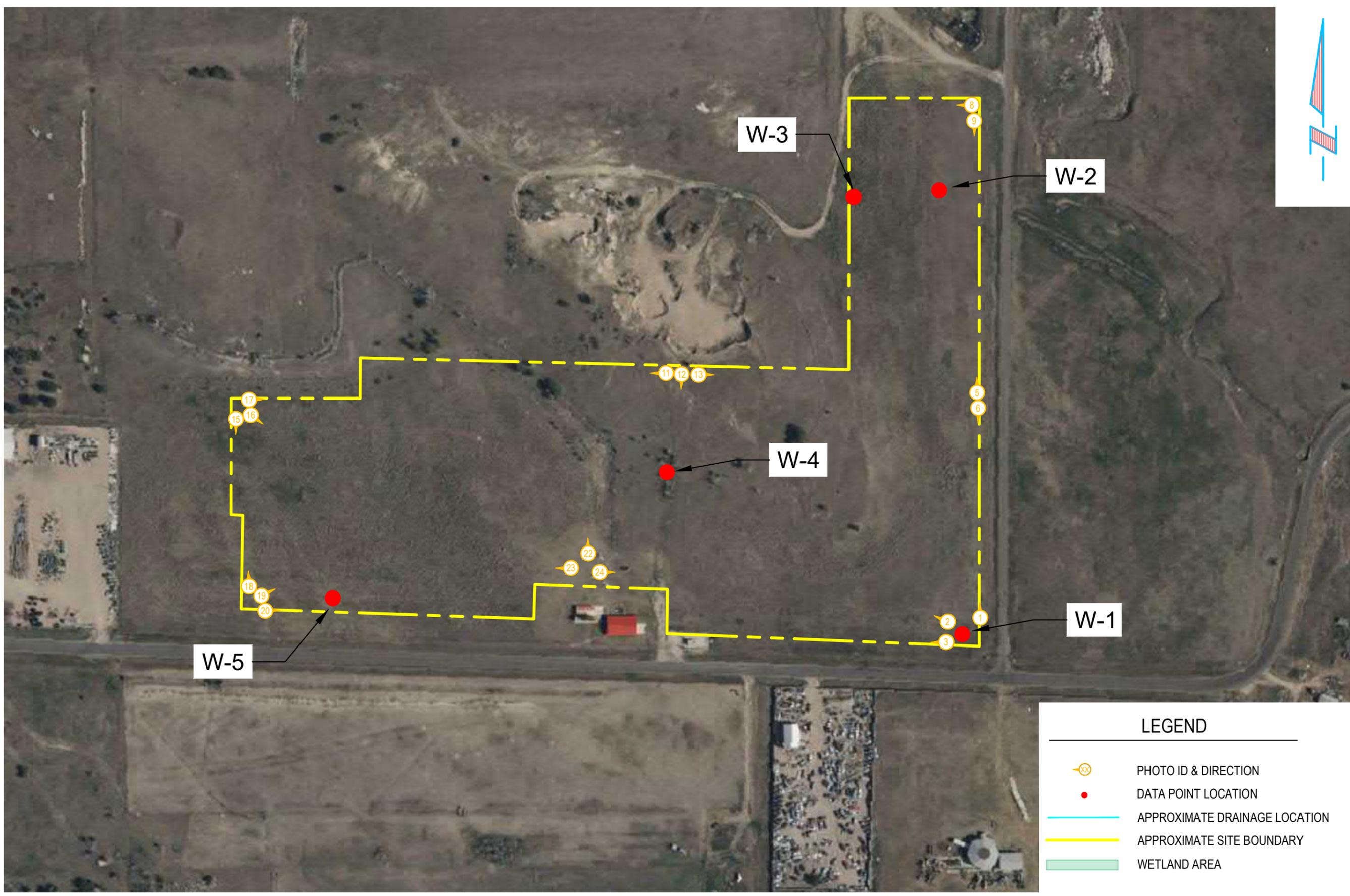
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- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
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- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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LEGEND

	PHOTO ID & DIRECTION
	DATA POINT LOCATION
	APPROXIMATE DRAINAGE LOCATION
	APPROXIMATE SITE BOUNDARY
	WETLAND AREA



Proj No: P2023.206.001 Date: 8/28/2023 Designed By: JMM Drawn By: JMM Scale: 1" = 100' Sheet: 1 of 1	Revisions <table border="1"> <thead> <tr> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Date	Description			Exhibit 5 Wetland Delineation Site Exhibit	Sandhills Energy - Sidney Cheyenne County, Nebraska	 E & A CONSULTING GROUP, INC. Engineering • Planning • Environmental & Field Services 10909 Mill Valley Road Suite 100 Omaha, NE 68154 Phone: 402.895.4700 Fax: 402.895.3599 www.eaag.com
Date	Description							



Photograph Number: 1
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: North
Description: North facing view of the project area from the southeast corner of the area of interest (AOI).



Photograph Number: 2
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: Northwest
Description: Northwest facing view of the project area from the southeast corner of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



Photograph Number: 3
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: West
Description: West facing view of the project area from the southeast corner of the AOI.



Photograph Number: 4
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: Down
Description: View of the W-1 data point sample location.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**

	Photograph Number: 5
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: North
	Description: North facing view of the project area from the middle of the eastern perimeter of the AOI.

	Photograph Number: 6
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: South
	Description: South facing view of the project area from the middle of the eastern perimeter of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**

	Photograph Number: 7
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: Down
	Description: View of the W-2 data point sample location.

	Photograph Number: 8
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: West
	Description: West facing view of the project area from the northeast corner of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**

	Photograph Number: 9
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: South
	Description: South facing view of the project area from the northeast corner of the AOI.

	Photograph Number: 10
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: Down
	Description: View of the W-3 data point sample location.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



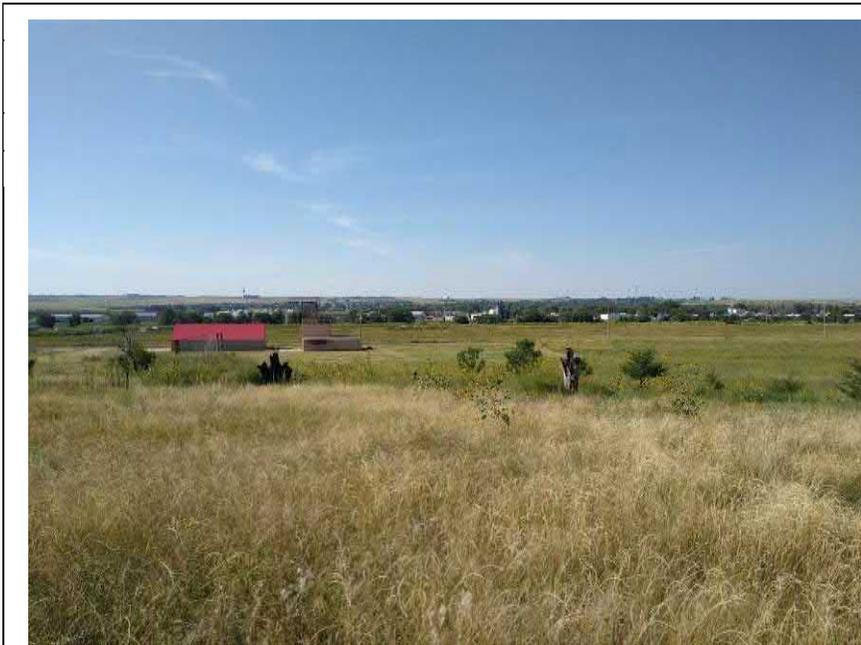
Photograph Number: 11

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: West

Description: West facing view of the project area from the middle of the northern perimeter of the AOI.



Photograph Number: 12

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: South

Description: South facing view of the project area from the middle of the northern perimeter of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**

	Photograph Number: 13
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: East
	Description: East facing view of the project area from the middle of the northern perimeter of the AOI.

	Photograph Number: 14
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: Down
	Description: View of the W-4 data point sample location.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



Photograph Number: 15
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: South
Description: South facing view of the project area from the northwest corner of the AOI.



Photograph Number: 16
Photographer: Joe Manning
Date: August 22, 2023
Photo Direction: Southeast
Description: Southeast facing view of the project area from the northwest corner of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**

	Photograph Number: 17
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: East
	Description: East facing view of the project area from the northwest corner of the AOI.

	Photograph Number: 18
	Photographer: Joe Manning
	Date: August 22, 2023
	Photo Direction: North
	Description: North facing view of the project area from the southwest corner of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



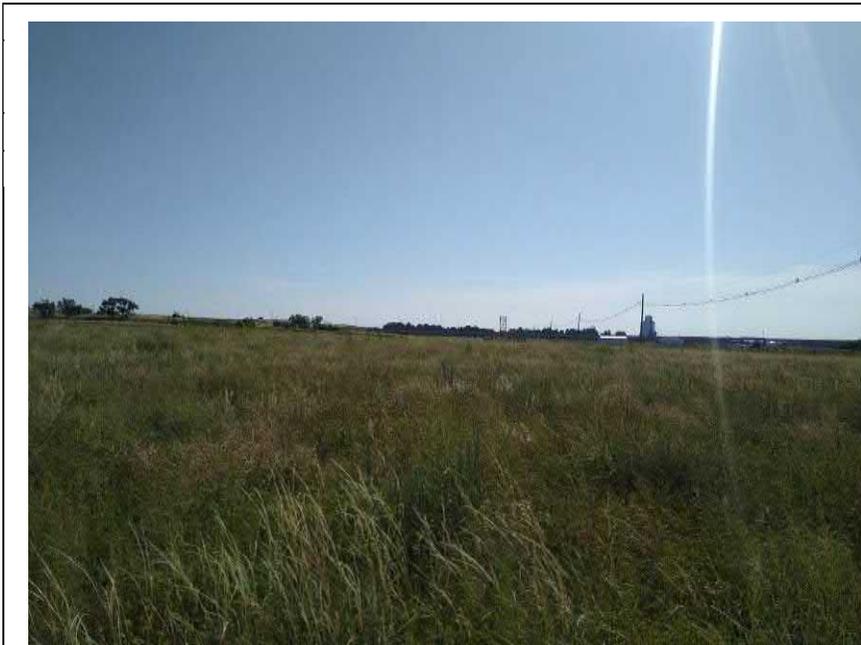
Photograph Number: 19

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: Northeast

Description: Northeast facing view of the project area from the southwest corner of the AOI.



Photograph Number: 20

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: East

Description: East facing view of the project area from the southwest corner of the AOI.

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



Photograph Number: 21

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: Down

**Description: View of the W-5
data point sample location.**



Photograph Number: 22

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: North

**Description: North facing view
of the project area from the
middle of the southern
perimeter of the AOI.**

**Wetland and Waters of the U.S. Delineation
Sandhills Energy – Sidney, NE**



Photograph Number: 23

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: West

Description: West facing view of the project area from the middle of the southern perimeter of the AOI.



Photograph Number: 24

Photographer: Joe Manning

Date: August 22, 2023

Photo Direction: East

Description: East facing view of the project area from the middle of the southern perimeter of the AOI.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Sandhills Energy, LLC (Sidney) City/County: Cheyenne County Sampling Date: 8/22/2023
 Applicant/Owner: Sandhills Energy State: Nebraska Sampling Point: W-1
 Investigator(s): Joe Manning Section, Township, Range: Section 29, Township 14N, Range 49W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1 - 2
 Subregion (LRR): Central High Tableland (H) Lat: 41.1491611 Long: -102.9642692 Datum: WGS 1984
 Soil Map Unit Name: Bayard fine sandy loam, 0 to 1 percent slopes (1326) NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>No</u>	Is the sampled area within a wetland?	<u>No</u>
Hydric soil present?	<u>No</u>		
Indicators of wetland hydrology present?	<u>No</u>		
		If yes, optional wetland site ID: _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Data point was taken in the southeast portion of the project area.

Tree Stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>707² - 15'R</u>)				Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>85</u> x 4 = <u>340</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>105</u> (A) <u>380</u> (B) Prevalence Index = B/A = <u>3.62</u>
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>78.5² - 5'R</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Bassia scoparia</u>	80	Y	FACU	
2	<u>Calamovilfa longifolia</u>	40	Y	NI	
3	<u>Muhlenbergia asperifolia</u>	20	N	FACW	
4	<u>Bouteloua dactyloides</u>	5	N	FACU	
5					
6					
7					
8					
9					
10					
		<u>145</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>2,827² - 30'R</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum		<u>0%</u>			

Remarks: (Include photo numbers here or on a separate sheet)

Dominant hydrophytic vegetation was not observed within the data point location.

SOIL

Sampling Point: W-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 10	10YR 4/2	100					Silt Loam	Dry

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR G)</p> <p><input type="checkbox"/> High Plains Depressions (F16)</p> <p>(LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16)</p> <p>(MLRA 72 & 73 of LRR H)</p>	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

<p>Restrictive Layer (if observed):</p> <p>Type: <u>Compaction</u></p> <p>Depth (inches): <u>10"</u></p>	<p>Hydric soil present? <u>N</u></p>
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Remarks:
 Hydric soils were not observed at the data point sample location. Due to soil compaction and a lack of moisture, only 10" of soil could be sampled during the field delineation. Based on the lack of hydrophytic vegetation and wetland hydrology indicators, it is assumed that hydric soils are not present at the data point sample location.

HYDROLOGY

Wetland Hydrology Indicators:	
<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Indicators of wetland hydrology present? <u>N</u></p>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No indicators of wetland hydrology were observed within the data point location.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Sandhills Energy, LLC (Sidney) City/County: Cheyenne County Sampling Date: 8/22/2023
 Applicant/Owner: Sandhills Energy State: Nebraska Sampling Point: W-2
 Investigator(s): Joe Manning Section, Township, Range: Section 29, Township 14N, Range 49W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0 - 1
 Subregion (LRR): Central High Tableland (H) Lat: 41.1516766 Long: -102.9645565 Datum: WGS 1984
 Soil Map Unit Name: Bayard fine sandy loam, 0 to 3 percent slopes (1327) NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>No</u>	Is the sampled area within a wetland?	<u>No</u>
Hydric soil present?	<u>No</u>		
Indicators of wetland hydrology present?	<u>No</u>		
		If yes, optional wetland site ID: _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Data point was taken in the northeast portion of the project area.

Tree Stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>95</u> x 4 = <u>380</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>105</u> (A) <u>400</u> (B) Prevalence Index = B/A = <u>3.81</u>
Sapling/Shrub stratum	(Plot size: <u>707² - 15'R</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>78.5² - 5'R</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Pascopyrum smithii</u>	<u>90</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Muhlenbergia asperifolia</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3	<u>Bassia scoparia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4					
5					
6					
7					
8					
9					
10					
		<u>105</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>2,827² - 30'R</u>)				
1					
2					
		<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>					
Hydrophytic vegetation present? <u>N</u>					

Remarks: (Include photo numbers here or on a separate sheet)

Dominant hydrophytic vegetation was not observed within the data point location.

SOIL

Sampling Point: W-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 4	10YR 3/2	100					Silt Loam	Dry

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR G)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)</p>	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

<p>Restrictive Layer (if observed):</p> <p>Type: <u>Compaction</u></p> <p>Depth (inches): <u>4"</u></p>	<p>Hydric soil present? <u>N</u></p>
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Remarks:
Hydric soils were not observed at the data point sample location. Due to soil compaction and a lack of moisture, only 4" of soil could be sampled during the field delineation. Based on the lack of hydrophytic vegetation and wetland hydrology indicators, it is assumed that hydric soils are not present at the data point sample location.

HYDROLOGY

Wetland Hydrology Indicators:	
<p>Primary Indicators (minimum of one is required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p>Secondary Indicators (minimum of two required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Indicators of wetland hydrology present? <u>N</u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No indicators of wetland hydrology were observed within the data point location.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Sandhills Energy, LLC (Sidney) City/County: Cheyenne County Sampling Date: 8/22/2023
 Applicant/Owner: Sandhills Energy State: Nebraska Sampling Point: W-3
 Investigator(s): Joe Manning Section, Township, Range: Section 29, Township 14N, Range 49W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 1 - 2
 Subregion (LRR): Central High Tableland (H) Lat: 41.1516230 Long: -102.9652833 Datum: WGS 1984
 Soil Map Unit Name: Bayard fine sandy loam, 0 to 3 percent slopes (1327) NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>No</u>	Is the sampled area within a wetland? <u>No</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>No</u>	
Indicators of wetland hydrology present?	<u>No</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Data point was taken in the northeast portion of the project area.

Tree Stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet
1					
2					Total Number of Dominant Species Across all Strata: <u>1</u> (B)
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
4					
5					
		<u>0</u>	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>707² - 15'R</u>)				Prevalence Index Worksheet
1					
2					OBL species <u>0</u> x 1 = <u>0</u>
3					FACW species <u>20</u> x 2 = <u>40</u>
4					FAC species <u>3</u> x 3 = <u>9</u>
5					FACU species <u>80</u> x 4 = <u>320</u>
		<u>0</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
					Column totals <u>103</u> (A) <u>369</u> (B)
					Prevalence Index = B/A = <u>3.58</u>
Herb stratum	(Plot size: <u>78.5² - 5'R</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Bromus inermis</u>	<u>80</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Muhlenbergia asperifolia</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
3	<u>Calystegia sepium</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
4					
5					
6					
7					
8					
9					
10					
		<u>103</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>2,827² - 30'R</u>)				
1					
2					
		<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0%</u>					Hydrophytic vegetation present? <u>N</u>

Remarks: (Include photo numbers here or on a separate sheet)

Dominant hydrophytic vegetation was not observed within the data point location.

SOIL

Sampling Point: W-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 4	10YR 3/2	100					Sandy Loam	Dry

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR G)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)</p>	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

<p>Restrictive Layer (if observed):</p> <p>Type: <u>Compaction</u></p> <p>Depth (inches): <u>4"</u></p>	<p>Hydric soil present? <u>N</u></p>
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Remarks:
Hydric soils were not observed at the data point sample location. Due to soil compaction and a lack of moisture, only 4" of soil could be sampled during the field delineation. Based on the lack of hydrophytic vegetation and wetland hydrology indicators, it is assumed that hydric soils are not present at the data point sample location.

HYDROLOGY

Wetland Hydrology Indicators:	
<p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Indicators of wetland hydrology present? <u>N</u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No indicators of wetland hydrology were observed within the data point location.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Sandhills Energy, LLC (Sidney) City/County: Cheyenne County Sampling Date: 8/22/2023
 Applicant/Owner: Sandhills Energy State: Nebraska Sampling Point: W-4
 Investigator(s): Joe Manning Section, Township, Range: Section 29, Township 14N, Range 49W
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 3 - 5
 Subregion (LRR): Central High Tableland (H) Lat: 41.1500239 Long: -102.9665358 Datum: WGS 1984
 Soil Map Unit Name: Gravel pit (9983) NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>Yes</u>	Is the sampled area within a wetland? <u>No</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>No</u>	
Indicators of wetland hydrology present?	<u>No</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Data point was taken in the middle portion of the project area.

Tree Stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1	<u>Cornus drummondii</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
2					Total Number of Dominant Species Across all Strata: <u>5</u> (B)
3					Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)
4					
5					
		<u>40</u>	<u>= Total Cover</u>		
Sapling/Shrub stratum	(Plot size: <u>707² - 15'R</u>)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet
1	<u>Cornus drummondii</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
2					OBL species <u>0</u> x 1 = <u>0</u>
3					FACW species <u>30</u> x 2 = <u>60</u>
4					FAC species <u>85</u> x 3 = <u>255</u>
5					FACU species <u>50</u> x 4 = <u>200</u>
		<u>15</u>	<u>= Total Cover</u>		UPL species <u>0</u> x 5 = <u>0</u>
					Column totals <u>165</u> (A) <u>515</u> (B)
					Prevalence Index = B/A = <u>3.12</u>
Herb stratum	(Plot size: <u>78.5² - 5'R</u>)	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:
1	<u>Setaria pumila</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2	<u>Muhlenbergia asperifolia</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance test is >50%
3	<u>Bromus inermis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> Prevalence index is ≤3.0*
4	<u>Helianthus annuus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
5	<u>Bassia scoparia</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)
6					
7					
8					
9					
10					
		<u>110</u>	<u>= Total Cover</u>		
Woody vine stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1					
2					
		<u>0</u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>5%</u>					

Remarks: (Include photo numbers here or on a separate sheet)

Dominant hydrophytic vegetation was observed within the data point location.

SOIL

Sampling Point: W-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 4	10YR 3/2	100					Sandy Loam	Dry

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR G)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)</p>	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

<p>Restrictive Layer (if observed):</p> <p>Type: <u>Compaction</u></p> <p>Depth (inches): <u>4"</u></p>	<p>Hydric soil present? <u>N</u></p>
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Remarks:
Hydric soils were not observed at the data point sample location. Due to soil compaction and a lack of moisture, only 4" of soil could be sampled during the field delineation. Based on the lack of wetland hydrology indicators, it is assumed that hydric soils are not present at the data point sample location.

HYDROLOGY

Wetland Hydrology Indicators:	
<p>Primary Indicators (minimum of one is required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>	<p>Secondary Indicators (minimum of two required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)</p>

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Indicators of wetland hydrology present? <u>N</u></p>
--	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No indicators of wetland hydrology were observed within the data point location.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Sandhills Energy, LLC (Sidney) City/County: Cheyenne County Sampling Date: 8/22/2023
 Applicant/Owner: Sandhills Energy State: Nebraska Sampling Point: W-5
 Investigator(s): Joe Manning Section, Township, Range: Section 29, Township 14N, Range 49W
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0 - 1
 Subregion (LRR): Central High Tableland (H) Lat: 41.1492423 Long: -102.9690181 Datum: WGS 1984
 Soil Map Unit Name: Bayard fine sandy loam, 0 to 3 percent slopes (1327) NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>No</u>	Is the sampled area within a wetland? <u>No</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>No</u>	
Indicators of wetland hydrology present?	<u>No</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Data point was taken in the western portion of the project area.

Tree Stratum	(Plot size: <u>2,827² - 30'R</u>)	Absolute % Cover	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>90</u> (A) <u>290</u> (B) Prevalence Index = B/A = <u>3.22</u>
Sapling/Shrub stratum	(Plot size: <u>707² - 15'R</u>)				
1					
2					
3					
4					
5					
		<u>0</u>	= Total Cover		
Herb stratum	(Plot size: <u>78.5² - 5'R</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Calamovilfa longifolia</u>	<u>40</u>	<u>Y</u>	<u>NI</u>	
2	<u>Bromus inermis</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Muhlenbergia asperifolia</u>	<u>25</u>	<u>N</u>	<u>FACW</u>	
4	<u>Panicum virgatum</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
5	<u>Melilotus officinalis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6					
7					
8					
9					
10					
		<u>130</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>2,827² - 30'R</u>)				
1					
2					
		<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>5%</u>					
Hydrophytic vegetation present? <u>N</u>					

Remarks: (Include photo numbers here or on a separate sheet)

Dominant hydrophytic vegetation was not observed within the data point location.

SOIL

Sampling Point: W-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0 - 4	10YR 4/2	100					Sandy Loam	Dry

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains. **Location: PL = Pore Lining, M = Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR F)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR G)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)</p>	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

<p>Restrictive Layer (if observed):</p> <p>Type: <u>Compaction</u></p> <p>Depth (inches): <u>4"</u></p>	<p>Hydric soil present? <u>N</u></p>
--	--------------------------------------

Remarks:
Hydric soils were not observed at the data point sample location. Due to soil compaction and a lack of moisture, only 4" of soil could be sampled during the field delineation. Based on the lack of hydrophytic vegetation and wetland hydrology indicators, it is assumed that hydric soils are not present at the data point sample location.

HYDROLOGY

Wetland Hydrology Indicators:		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

<p>Field Observations:</p> <p>Surface water present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Indicators of wetland hydrology present? <u>N</u></p>
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Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No indicators of wetland hydrology were observed within the data point location.



Environmental Review Report

Project Information

Report Generation Date: 8/29/2023 02:40:01 PM
Project Title: Sandhills Energy
User Project Number(s):
System Project ID: NE-CERT-010584
Project Type: Development (ex: construction, housing, land development, CSW/ISW Permits, etc.; Does NOT include Mining), New construction within existing municipality - previously disturbed habitat
Project Activities: None Selected
Project Size: 24.20 acres
County(s): Cheyenne
Watershed(s): South Platte
Watershed(s) HUC 8: Lower Lodgepole
Watershed(s) HUC 12: City of Sidney
Biologically Unique Landscape(s): None
Township/Range and/or Section(s): T14R49WS29
Latitude/Longitude: 41.150108 / -102.966824

Contact Information

Organization: E & A Consulting Group, Inc.
Contact Name: Joe Manning
Contact Phone: 402-895-4700
Contact Email: jmanning@eacg.com
Contact Address: 10909 Mill Valley Road, Suite 100 Omaha NE 68154
Prepared By:
Submitted On Behalf Of:

Project Description

Completing Wetland Delineation in association with NEPA process

Introduction

The Nebraska Game and Parks Commission (Commission) and the U.S. Fish and Wildlife Service (Service) have special concerns for endangered and threatened species, migratory birds, and other fish and wildlife and their habitats. Habitats frequently used by fish and wildlife species are wetlands, streams, riparian areas, woodlands, and grasslands. Special attention is given to proposed projects which modify wetlands, alter streams, result in loss of riparian habitat, convert/remove grasslands, or contaminate habitats. When this occurs, the Commission and Service recommend ways to avoid, minimize, or compensate for adverse effects to fish and wildlife and their habitats.

CONSULTATION PURSUANT TO THE NEBRASKA NONGAME AND ENDANGERED SPECIES CONSERVATION ACT (NESCA)

The Commission 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 37-811). Pursuant to § 37-807 (3) 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 proponents agree to implement conservation conditions, as outlined in the report and applicable to the project type, then this document serves as documentation of consultation and the following actions can be taken to move forward with the project:
 - Sign the report in the designated areas.
 - Upload the signed PDF as part of their "final" project submittal.
 - By agreeing to and implementing the conservation conditions as outlined (if applicable), then further consultation with the Commission is not required.
- If the report indicates the project may have impacts on state-listed species, then the following actions must be taken:
 - Project proponent is required to contact and consult with the Commission. Contact information can be found within this document.

TECHNICAL ASSISTANCE AND CONSULTATION PURSUANT TO THE ENDANGERED SPECIES ACT (ESA)

The 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 of 1973 (ESA); 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act. The National Environmental Policy Act (NEPA) requires compliance with all of these statutes and regulations.

Pursuant to section 7(a)(2) of ESA, every federal agency, shall in consultation with the Service, ensure that an action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

If a proposed project may affect federally listed species or designated critical habitat, Section 7 consultation is required with the Service. It is the responsibility of the lead federal action agency to fully evaluate all potential effects (direct and indirect) that may occur to federally listed species and critical habitat in the action area. The lead federal agency provides their effect determination to the Service for concurrence. If federally listed species and/or designated/proposed critical habitat would be adversely affected by implementation of the project, the lead federal agency will need to formally request further section 7 consultation with the Service prior to making any irretrievable or

irreversible commitment of federal funds (section 7(d) of ESA), or issuing any federal permits or licenses.

The information generated in this report DOES NOT satisfy consultation obligations between the lead federal agency and the Service pursuant to ESA. For the purposes of ESA, the information in this report should be considered as TECHNICAL ASSISTANCE, and does not serve as the Service's concurrence letter, even if the user signs and agrees to implement conservation conditions in order to satisfy the consultation requirements of NESCA.

Overall Results

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

- It is unlikely this project will negatively impact listed species or their designated critical habitat. Please review all the information provided in this document. Then, sign and date the "Certification" section and upload the signed document as "Final" in CERT. No additional correspondence with the Nebraska Game and Parks Commission is required unless otherwise indicated in the "Additional Information" section below. If the project involves a federal permit, action or funding, the lead federal agency should review the information provided in this report and make an "effect determination" pursuant to their obligations under ESA. Depending on the determination made by the lead federal agency, further consultation with the U.S. Fish and Wildlife Service may or may not be required.

Certification

I certify that ALL of 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, or if any of the answers to any questions asked in this report change, then this information is no longer valid and we recommend running the revised project through CERT to get an updated report.



8/29/2023

Applicant/project proponent signature

Date

Additional Considerations

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."

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 May 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.

Agency Contact Information

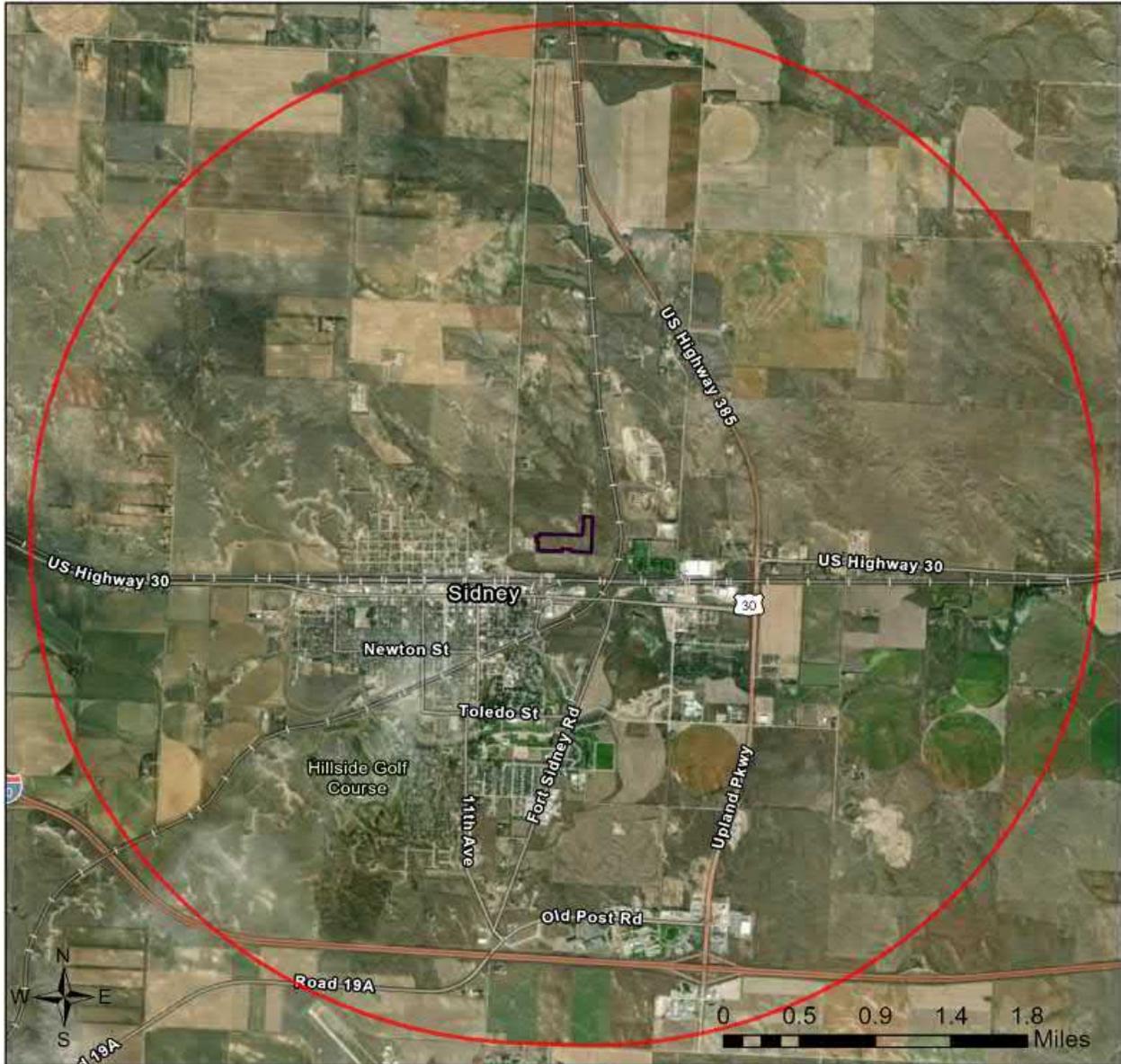
Nebraska Game and Parks Commission

Environmental Review Team
2200 North 33rd 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

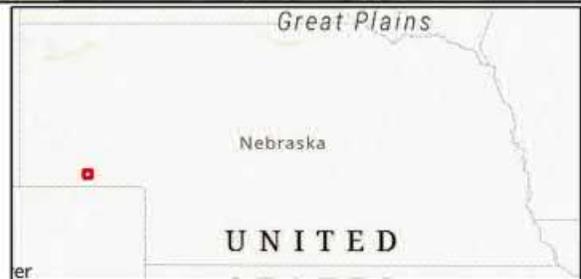
Sandhills Energy Aerial Image Basemap With Locator Map



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

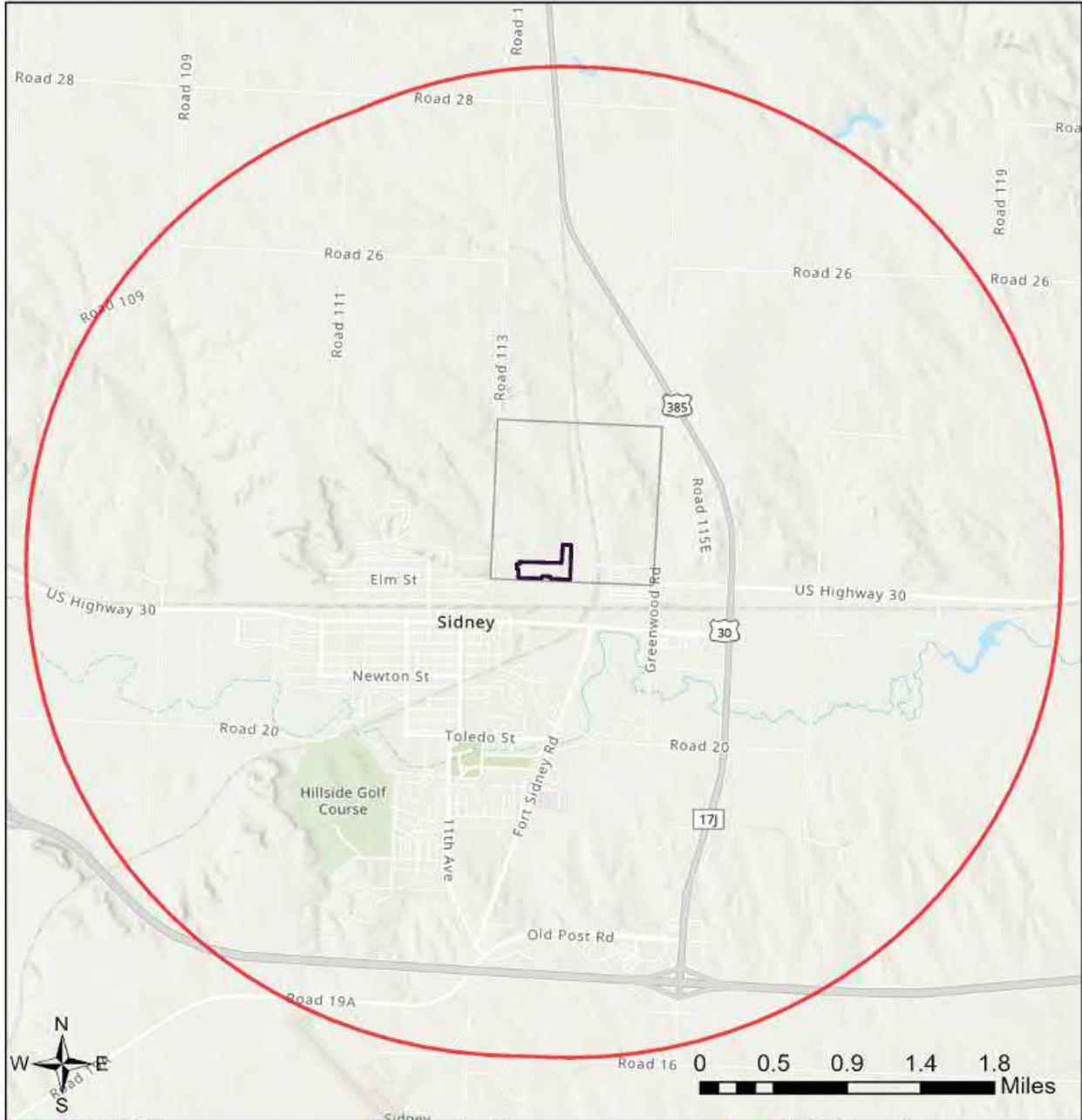
Project Size (acres): 24.20
 Lat/Long (DD): 41.1501 / -102.9668
 County(s): Cheyenne
 BUL(s):
 Township/Range/Section(s): T14R49WS29

Earthstar Geographics
 Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
 Esri, USGS



Sandhills Energy

Topographic Basemap With Sections and Protected Areas



- | | | |
|--------------------------------|-----------------------|------------------------------------|
| 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) | |

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

Sandhills Energy

Web Map As Submitted By User



-  Project Review Boundary
-  Project Boundary

Maxar

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

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
<i>Athene cucularia</i>	Burrowing Owl			Tier 1	S2	G4	Vertebrate Animal - Birds
<i>Cygnus buccinator</i>	Trumpeter Swan			Tier 2	S2	G4	Vertebrate Animal - Birds
<i>Hesperia uncas</i>	Uncas Skipper			Tier 2	S2	G4G5	Invertebrate Animal - Butterflies and Skippers
<i>Hesperia viridis</i>	Green Skipper			Tier 2	S1	G5	Invertebrate Animal - Butterflies and Skippers
<i>Linum puberulum</i>	Plains Flax			S2S4		G5	Vascular Plant - Dicots
<i>Phyciodes pratensis</i>	Field Crescentspot			Tier 2	S1	G5	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
Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	Vertebrate Animal - Birds
Athene cucularia	Burrowing Owl	Range			Tier 1	S2	G4	Vertebrate Animal - Birds
Boloria selene sabulocollis	Kohler's Fritillary	Range			Tier 1	S1S2	G5T3	Invertebrate Animal - Butterflies and Skippers
Buteo regalis	Ferruginous Hawk	Range			Tier 1	S2	G4	Vertebrate Animal - Birds
Charadrius montanus	Mountain Plover	Range		T	Tier 1	S2B	G3	Vertebrate Animal - Birds
Cicindela limbata limbata	Sandy Tiger Beetle	Range			Tier 1	S4	G5T3T4	Invertebrate Animal - Beetles
Coccinella novemnotata	Nine-spotted Ladybird Beetle	Range			Tier 1	S1	G5	Invertebrate Animal - Beetles

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
Dalea cylindriceps	Large-spike Prairie-clover	Range			Tier 1	S2	G3	Vascular Plant - Flowering Plants
Danaus plexippus	Monarch	Range			Tier 1	S2	G4	Invertebrate Animal - Butterflies and Skippers
Euphilotes rita coloradensis	Colorado Rita Dotted Blue	Range			Tier 1	S1	G3G4T3	Invertebrate Animal - Butterflies and Skippers
Fundulus sciadicus	Plains Topminnow	Range			Tier 1	S3	G4	Vertebrate Animal - Fishes
Haliaeetus leucocephalus	Bald Eagle	Range			Tier 2	S3	G5	Vertebrate Animal - Birds
Hesperia ottoe	Ottoo Skipper	Range			Tier 1	S2	G3	Invertebrate Animal - Butterflies and Skippers
Lanius ludovicianus	Loggerhead Shrike	Range			Tier 1	S3	G4	Vertebrate Animal - Birds
Lasiurus borealis	Eastern Red Bat	Range			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lasiurus cinereus	Hoary Bat	Range			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lethe eurydice fumosus	Smoky-eyed Brown	Range			Tier 1	S3	G5T3T4	Invertebrate Animal - Butterflies and Skippers
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G2G3	Vertebrate Animal - Mammals
Pica hudsonia	Black-billed Magpie	Range			Tier 1	S2	G5	Vertebrate Animal - Birds
Speyeria idalia	Regal Fritillary	Range			Tier 1	S3	G3?	Invertebrate Animal - Butterflies and Skippers
Thomomys talpoides cheyennensis	Cheyenne Northern Pocket Gopher	Range			Tier 1	S2S3	G5T3T4	Vertebrate Animal - Mammals
Trimerotropis saxatilis	Lichen Grasshopper	Range			Tier 1	S1	G3	Invertebrate Animal - Grasshoppers
Vulpes velox	Swift Fox	Range	E		Tier 1	S2	G3	Vertebrate Animal - Mammals



SE Municipal Solar - Sidney

Section 29 Township 14 Range 49W

Sidney, NE 69162

Inquiry Number: 6986132.45

May 20, 2022

The EDR Aerial Photo Decade Package



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

EDR Aerial Photo Decade Package

05/20/22

Site Name:

SE Municipal Solar - Sidney
Section 29 Township 14 Range
Sidney, NE 69162
EDR Inquiry # 6986132.45

Client Name:

Terracon
15080 A Circle
Omaha, NE 68144
Contact: Andrew Herman



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1999	1"=500'	Acquisition Date: January 01, 1999	USGS/DOQQ
1993	1"=500'	Acquisition Date: August 09, 1993	USGS/DOQQ
1985	1"=500'	Flight Date: September 13, 1985	USDA
1972	1"=500'	Flight Date: April 24, 1972	USGS
1953	1"=500'	Flight Date: September 25, 1953	USGS

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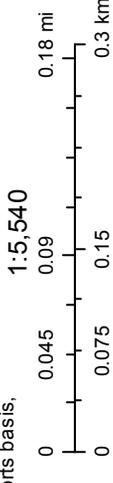
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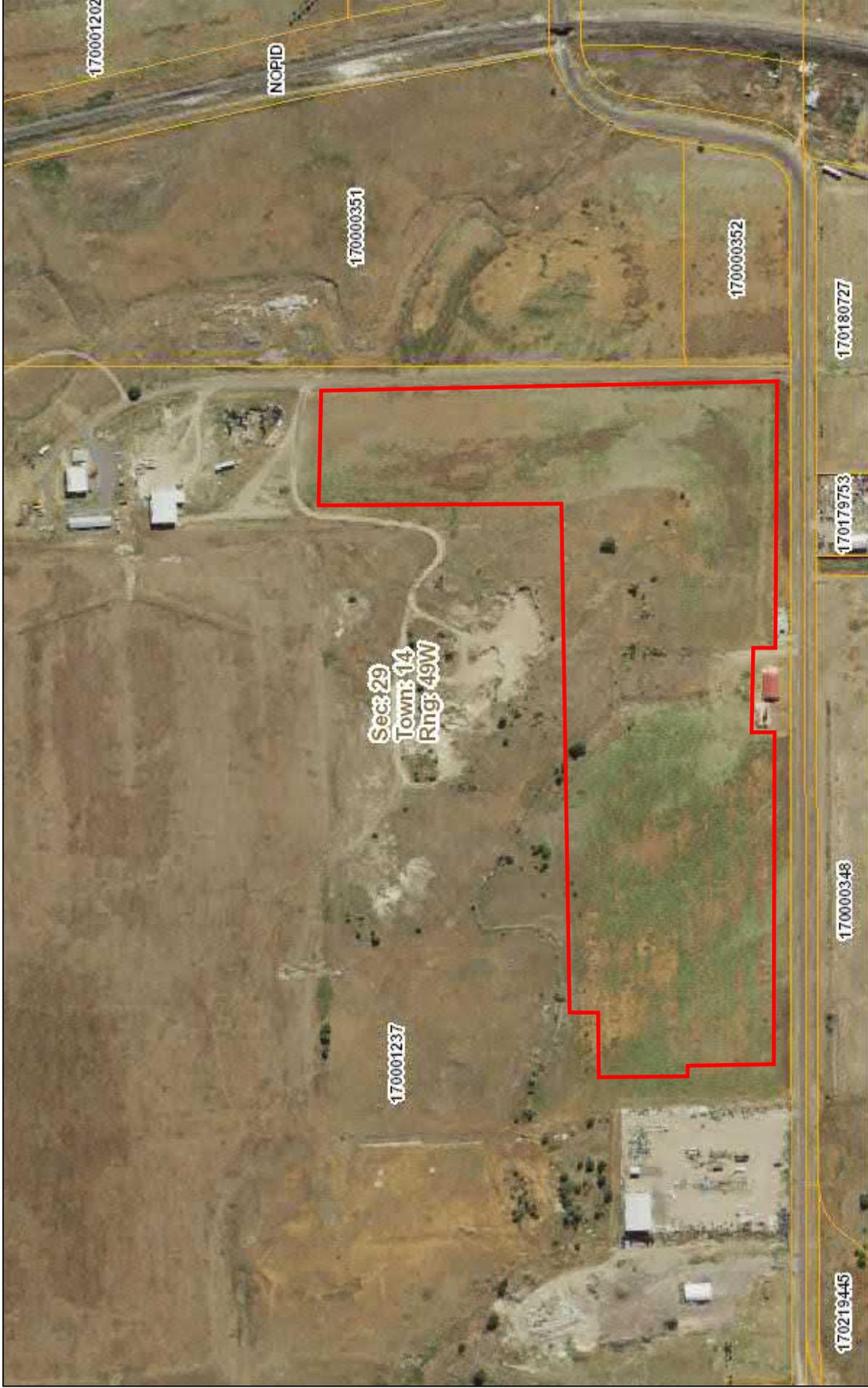
DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

Municipal Boundaries Sections

- Lot Line

Parcels





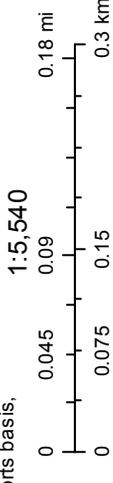
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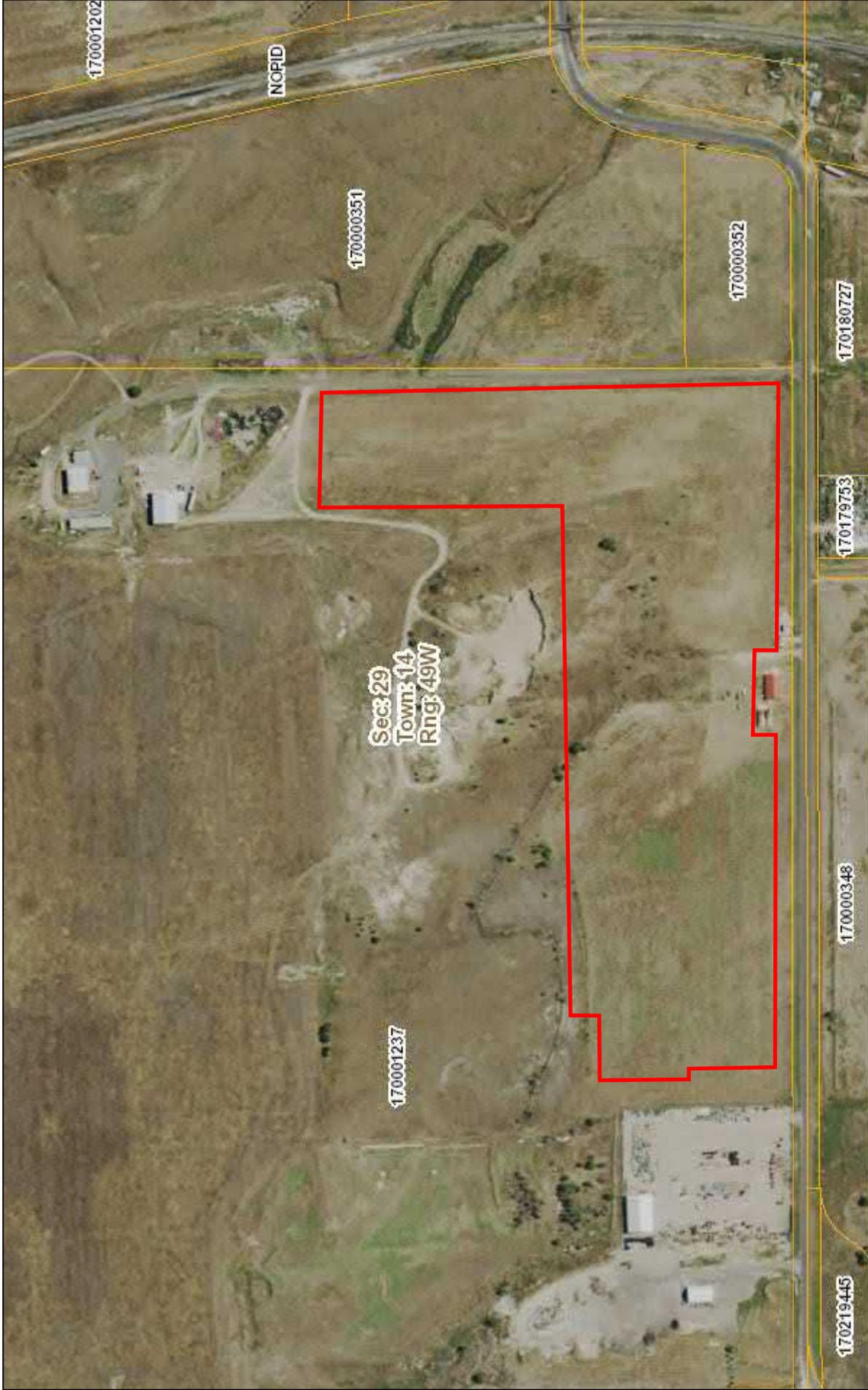
DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

Municipal Boundaries Sections

- Lot Line

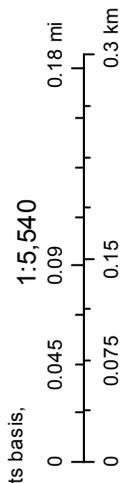
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August 29, 2023
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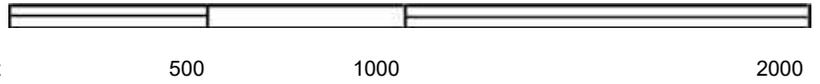
DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.



- Municipal Boundaries
- Sections
- Lot Line
- Parcels



SITE

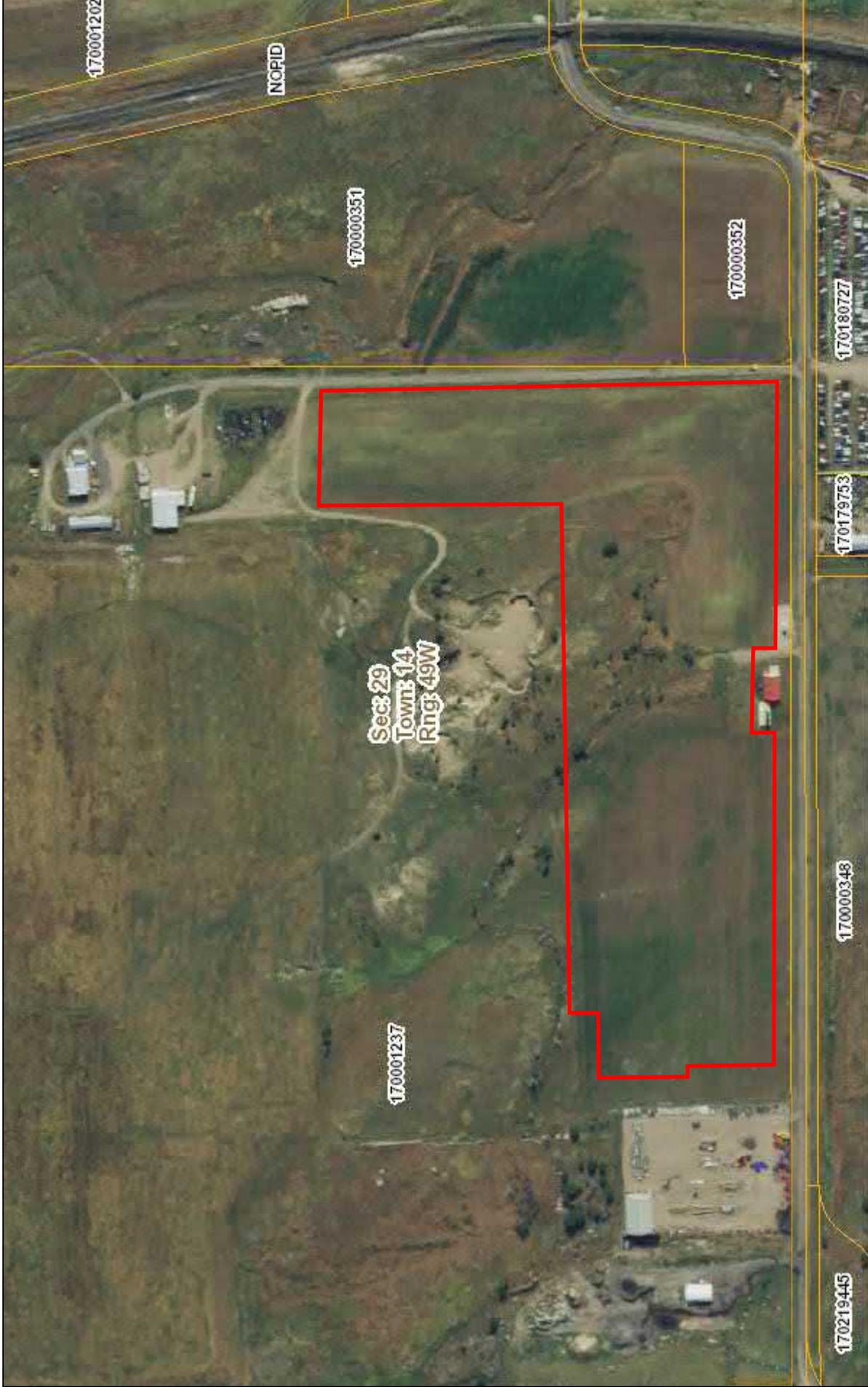


Project Manager:	Project No: 0522P061 Task 1
Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 2016

15080 A Circle
Omaha, NE 68144

2016 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

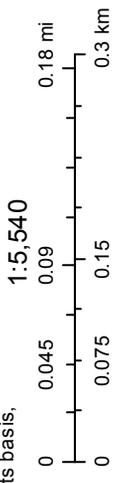
Appendix
C

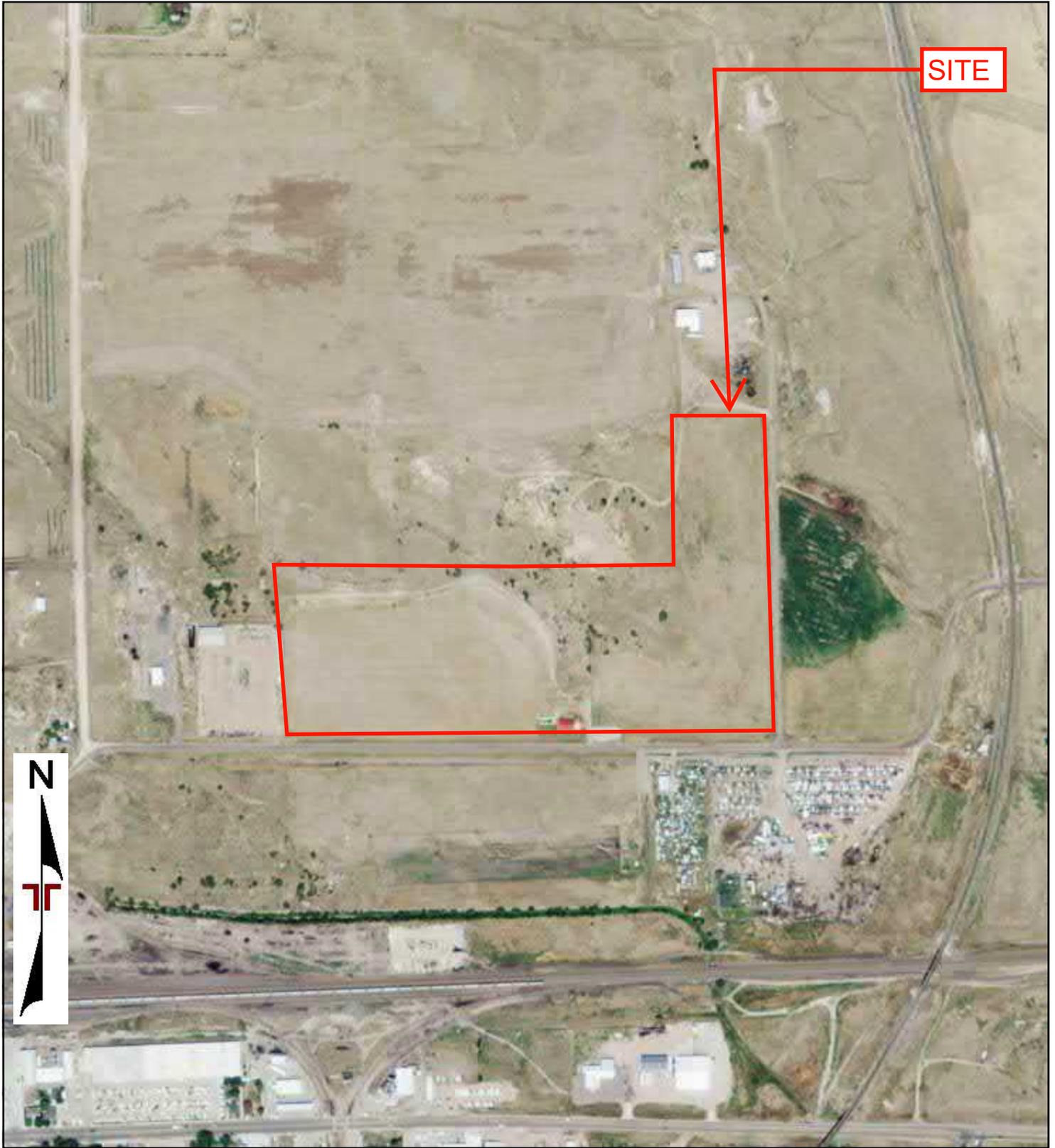


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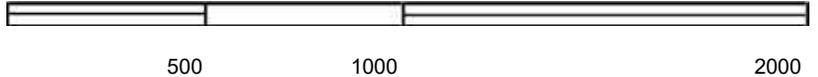
DISCLAIMER: This map is not intended for conveyances, nor is it a legal survey. The information is presented on a best-efforts basis, and should not be relied upon for making financial, survey, legal or other commitments.

- Municipal Boundaries
- Sections
- Lot Line
- Parcels





SITE

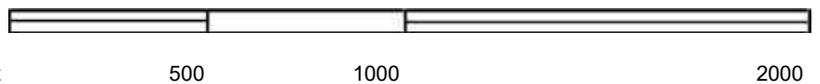
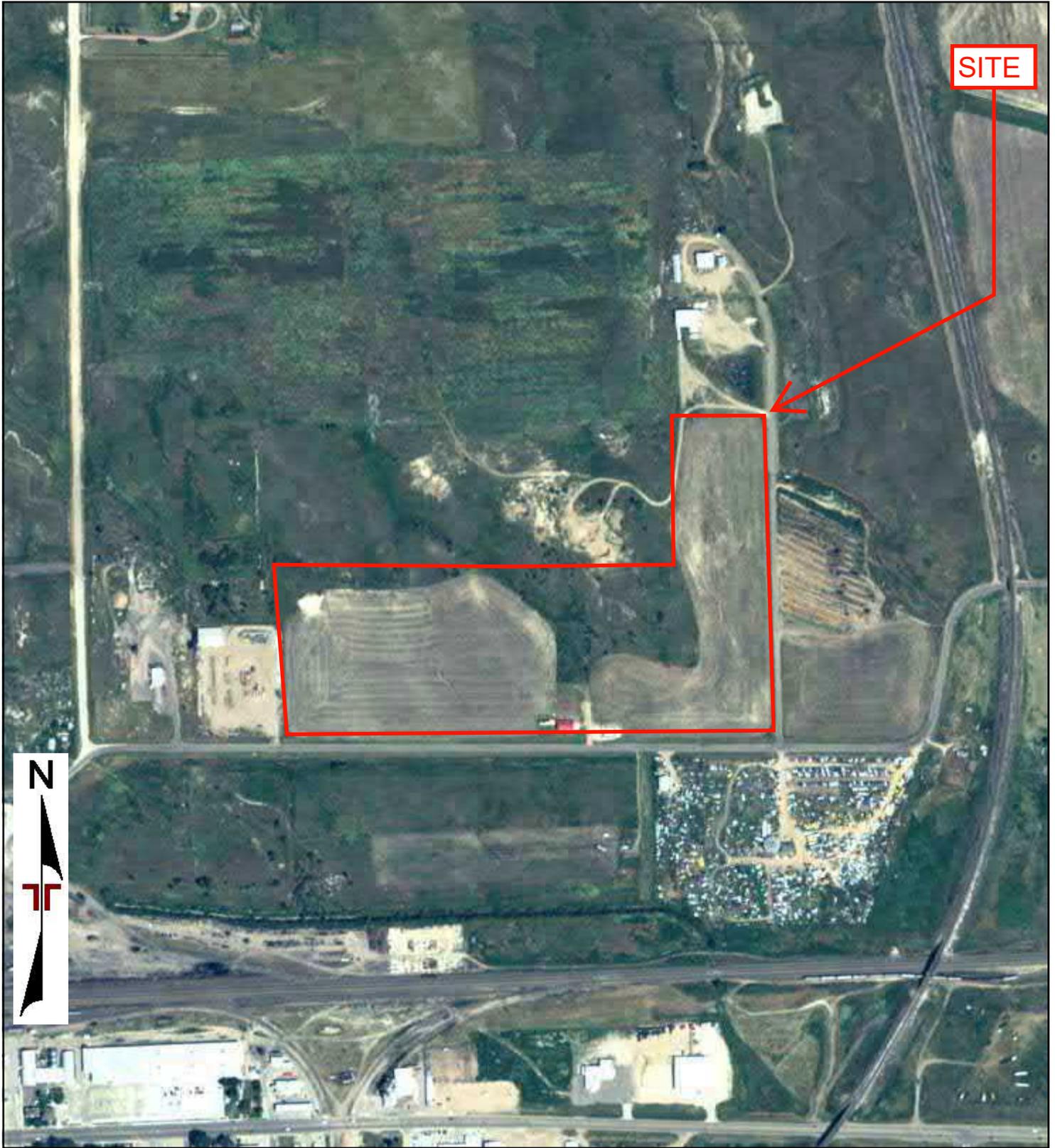


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Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 2012

15080 A Circle
Omaha, NE 68144

2012 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Appendix
C



Project Manager:	Project No: 0522P061 Task 1
Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 2009

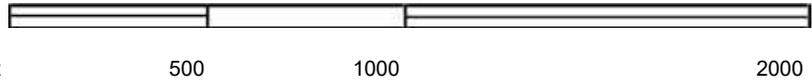
15080 A Circle
Omaha, NE 68144

2009 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Appendix
C



SITE



0 Feet 500 1000 2000

Project Manager:	Project No: 0522P061 Task 1
Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 2006

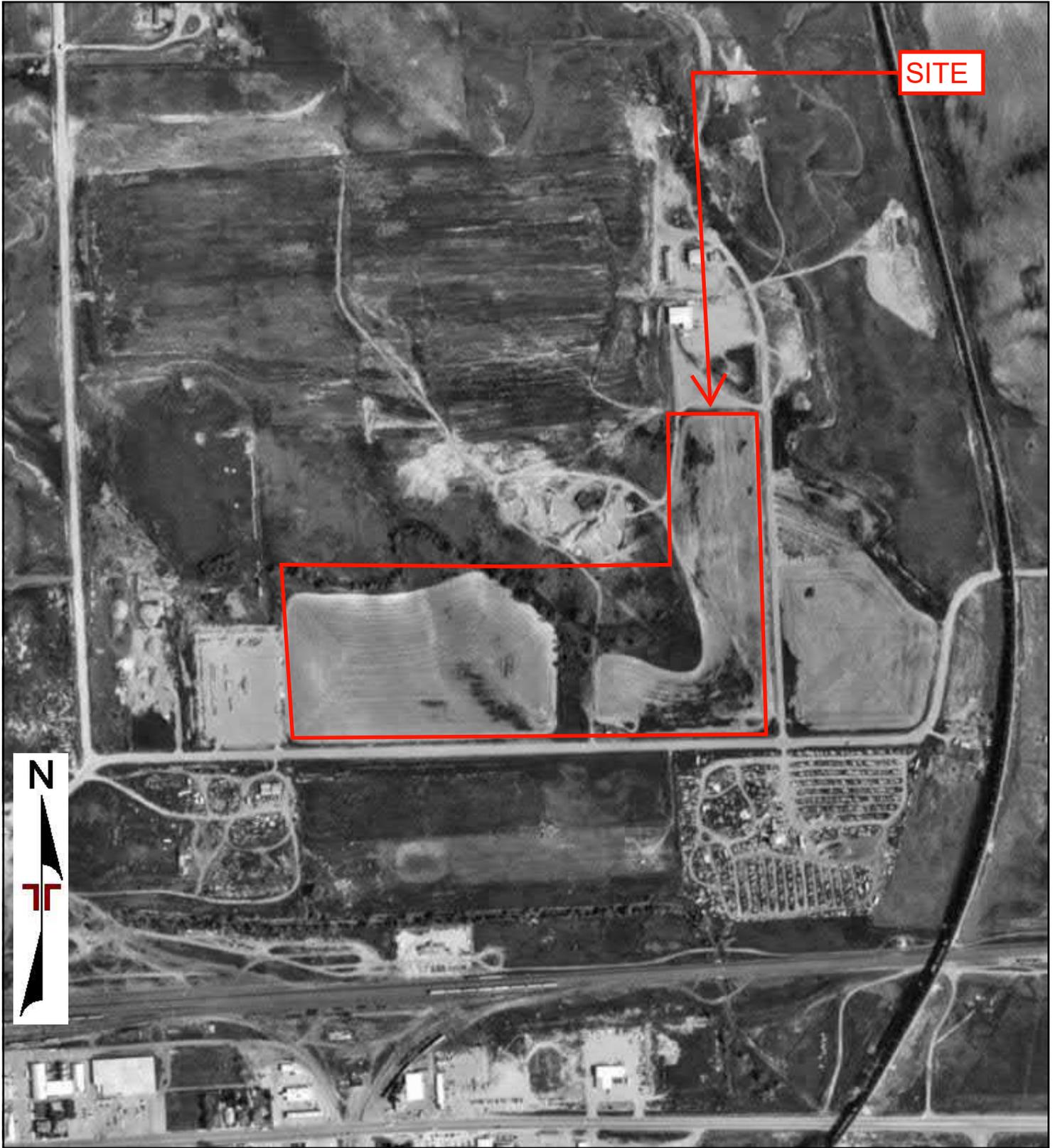


15080 A Circle
Omaha, NE 68144

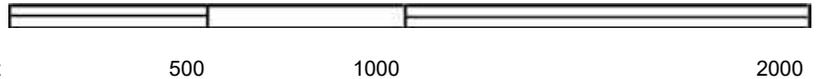
2006 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Appendix

C



SITE



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Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 1999

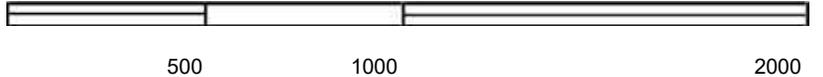
15080 A Circle
Omaha, NE 68144

1999 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Appendix
C



SITE



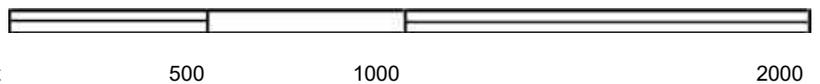
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Drawn By:	Scale: As Shown
Checked By:	File Name:
Approved By:	Date: 1993



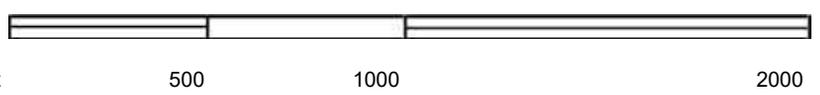
15080 A Circle
Omaha, NE 68144

1993 AERIAL PHOTOGRAPH
SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

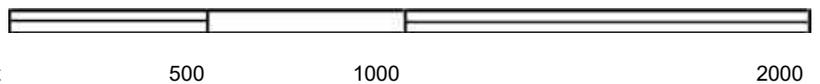
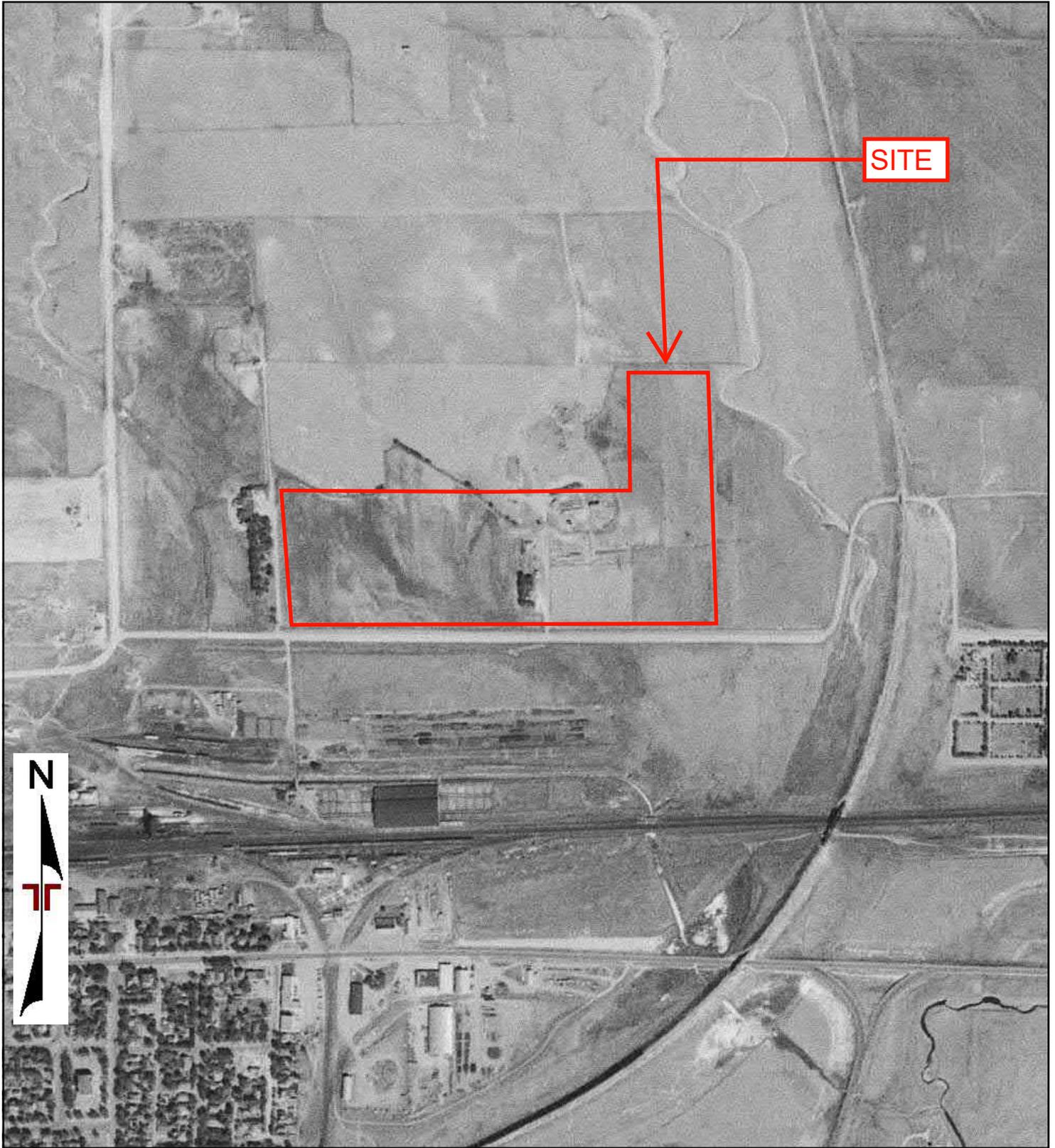
Appendix
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Project Manager:	Project No: 0522P061 Task 1	 15080 A Circle Omaha, NE 68144	1985 AERIAL PHOTOGRAPH	Appendix
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Checked By:	File Name:		Section 29 Township 14 Range 49W	
Approved By:	Date: 1985		Sidney, NE 69162	

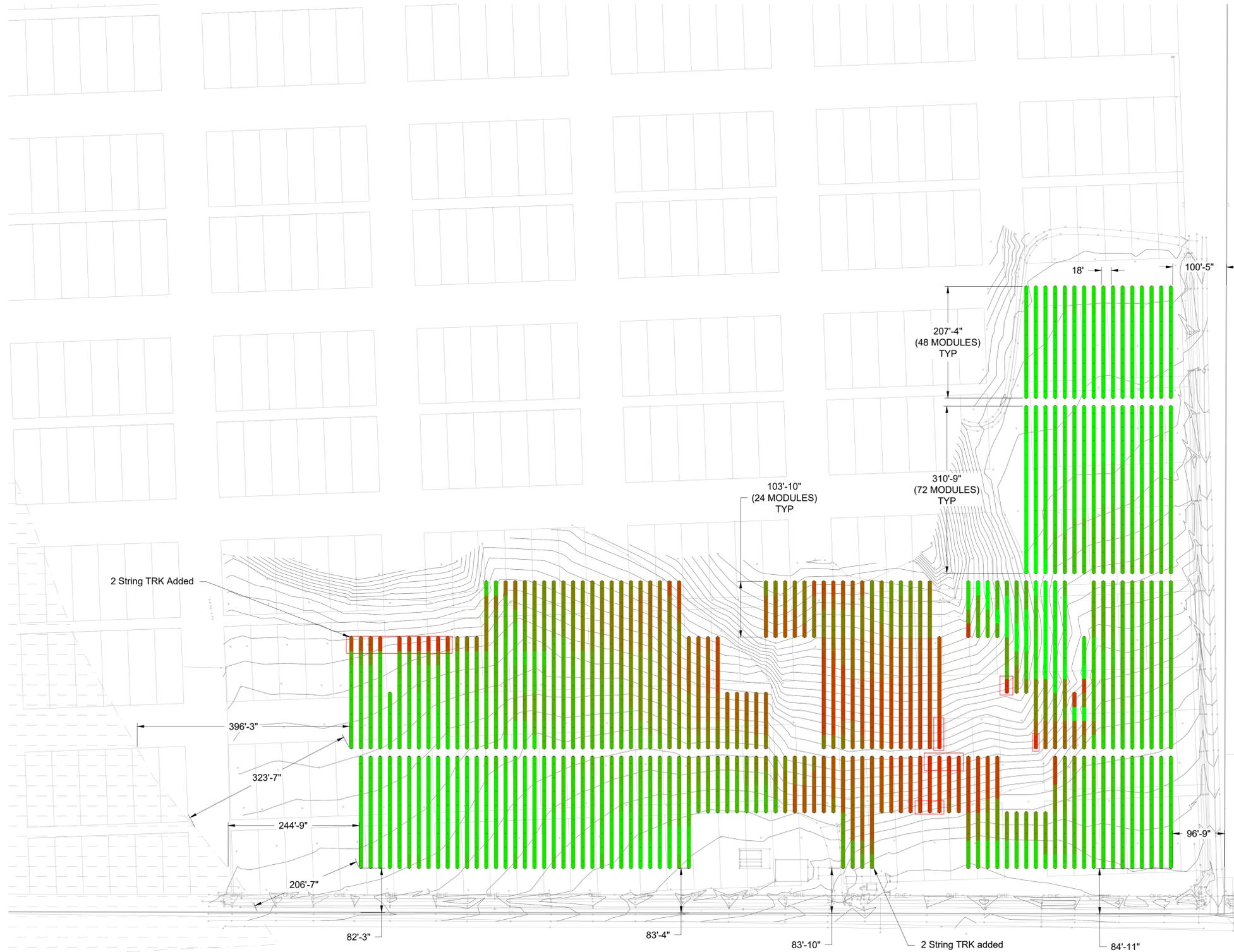


Project Manager:	Project No: 0522P061 Task 1	 15080 A Circle Omaha, NE 68144	1972 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		SE Municipal Solar - Sidney	C
Checked By:	File Name:		Section 29 Township 14 Range 49W	
Approved By:	Date: 1972		Sidney, NE 69162	



Project Manager:	Project No: 0522P061 Task 1	 15080 A Circle Omaha, NE 68144	1953 AERIAL PHOTOGRAPH	Appendix
Drawn By:	Scale: As Shown		SE Municipal Solar - Sidney	C
Checked By:	File Name:		Section 29 Township 14 Range 49W	
Approved By:	Date: 1953		Sidney, NE 69162	

APPENDIX B
SITE PLANS

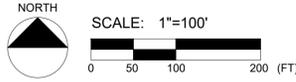


Above 7% Grade: Areas where longer posts are needed. Approx. 50 total Posts

PROJECT SPECIFICATIONS

SYSTEM SIZE MW DC	4.4856 MW
MODULE	FIRST SOLAR S6+ 445W
MODULE QTY	10080
MODULES/STRING	24
ROW SPACING	18'-0"
GCR	36.9%
MODULES PER TRACKER	24, 48, 72
QTY 24 MODULE TABLES	46
QTY 48 MODULE TABLES	94
QTY 72 MODULE TABLES	62

Total Posts: 1882



Issue	Date	Drawn By	Checked By	Engineer's Stamp
PR-1 PROPSAL LAYOUT	10/26/22	SS	-	
PR-2 INCLUDE GRADE ANALYSIS	11/14/22	SS	-	
PR-3 Updating to 36.9% GCR, avoiding areas of steep grade.	02/07/23	CL	-	
PR-4 Updating with First Solar Series 6+ 445W, adding 2 2-String Tracker Tables to reach 4.48 MW	02/15/23	CL	-	

PRELIMINARY - NOT FOR CONSTRUCTION

valmont  SOLAR

VALMONT CORPORATION
28800 Ida Street
Valley, NE 68064
(T) 402-963-1000
www.valmont.com

Customer	SANDHILLS
Project	SIDNEY SOLAR
Location	---- SIDNEY, NE

Sheet Title	
-------------	--

Issue	PR-4
Sheet Number	



SIDNEY PV PROJECT 3800 KWAC/4485.6 KWDC GROUND MOUNT TRACKER PHOTOVOLTAIC PROJECT

ELM STREET, SIDNEY, NE 69162

CONTRACTOR: SANDHILLS ENERGY
ADDRESS: 1209 HARNEY STREET STE 400 OMAHA, NE 68102
CONTACT: ANTHONY LEFEBER
PHONE: (712)-254-6299

PROJECT:

SIDNEY PV PROJECT

3800 KWAC
4485.6 KWDC STC

NE 69162

MARK	DATE	DESCRIPTION
0	2/28/23	30% IFP
1	3/9/23	90% IFP

MARK	DATE	DESCRIPTION
ISSUE:	3/9/23	90% IFP

PROJECT NO.:

DRAWN BY: JL

CHECKED BY: DA

SHEET TITLE:

COVER SHEET

SHEET

G-1

GENERAL NOTES

SCOPE OF WORK:

SCOPE OF WORK:
THIS PROJECT ENTAILS THE INSTALLATION OF SOLAR PHOTOVOLTAIC (PV) MODULES, GRID-INTERACTIVE INVERTERS AND ASSOCIATED EQUIPMENT TO SUPPLY POWER DIRECTLY TO THE EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM.

SYSTEM DESCRIPTION:
SYSTEM AC CAPACITY IS 3800 KWAC RATED AT MAXIMUM COMBINED OUTPUT AT THE INVERTER(S) TERMINALS. UNGROUNDED DC SYSTEM WITH PV CAPACITY OF 4485.6 KWDC RATED AT STANDARD TEST CONDITIONS (STC).

(10080) 445W FIRST SOLAR FS-6445-P PHOTOVOLTAIC MODULES IEC 61215 CERTIFIED AND UL 1703 LISTED

MODULES SHALL BE MOUNTED TO A SINGLE AXIS TRACKER RACKING WITH MODULES IN PORTRAIT ORIENTATION. RACKING COMPLYING WITH UL 2703.

(19) SOLECTRIA XGI-1500-200 (480V) SOLAR INVERTER 1500VDC RATED, 480 VAC, 3Φ, 99% CEC EFF. OUTPUT.

INTERCONNECTION:
THIS PV SYSTEM SHALL CONNECT WITH THE EXISTING ELECTRICAL SYSTEM AT ONE PLACE SPECIFIED AS THE POINT OF INTERCONNECTION.

THE PV SYSTEM IS INTENDED TO OPERATE IN PARALLEL WITH THE UTILITY COMPANY. ANTI-ISLANDING PROTECTION AND HARMONIC LIMITS SHALL COMPLY WITH UL 1471, IEEE 1547 AND IEEE 519.

PERMISSION TO OPERATE THE PV SYSTEM IS NOT AUTHORIZED UNTIL FINAL INSPECTIONS AND APPROVALS ARE OBTAINED FROM THE AUTHORITY HAVING JURISDICTION AND THE ELECTRIC UTILITY SERVICE PROVIDER.

- DESIGN CRITERIA:**
- ASHRAE CLIMATE DATA SOURCE: SIDNEY MUNICIPAL AP, NE, USA
 - AVE. HIGH TEMPERATURE: 37 °C
 - LOW TEMPERATURE: -26.6 °C
 - WIND SPEED: 110 MPH
 - EXPOSURE CATEGORY: C
 - ARRAY AZIMUTH: 180°
 - SNOW LOAD: 20 PSF
 - TAXLOT #:
 - ZONE CODE:
 - AHJ: SIDNEY CITY

CODES AND STANDARDS

APPLICABLE CODES AND STANDARDS:

2017 NATIONAL ELECTRICAL CODE
 CURRENT NEBRASKA BUILDING CODE
 NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 70)
 UNDERWRITERS' LABORATORIES, INC. (UL)
 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
 NATIONAL BUREAU OF STANDARDS
 RULES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS
 LOCAL ORDINANCES OF THE STATE
 LOCAL ORDINANCES OF THE COUNTY OR CITY

DEFERRED SUBMITTALS:
 VALMONT
 ALSO ENERGY

PROJECT INFORMATION

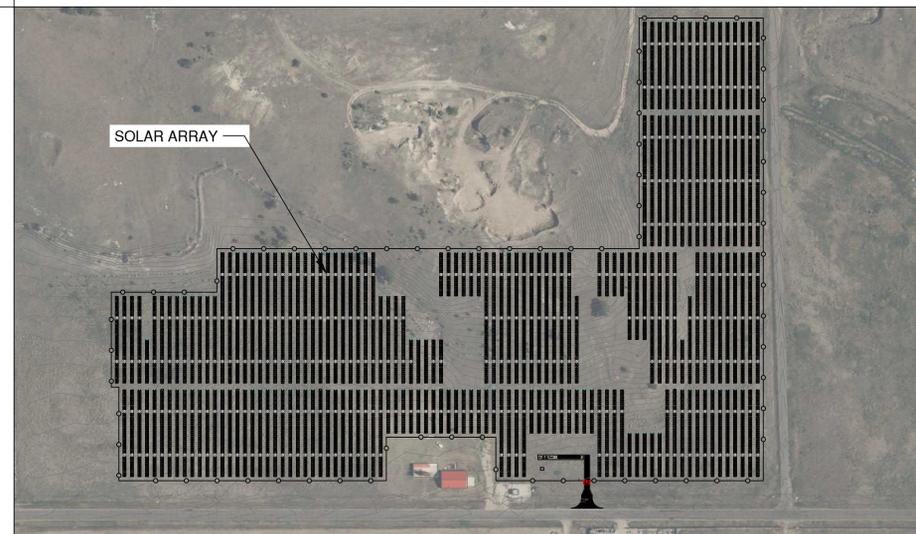
PROJECT OWNER:

PROJECT MANAGER: SANDHILLS ENERGY
 ADDRESS: 1209 HARNEY ST #200, OMAHA, NE 68102
 CONTACT: ANTHONY LEFEBER
 PHONE: (563) 542 5725

CONSTRUCTION MANAGER: INTERCONNECTION SYSTEMS INC.
 ADDRESS: 1814 18TH ROAD, CENTRAL CITY, NE 68826
 LICENSE: EC-5102
 CONTACT: TRENT VARLEY
 PHONE: (308)-946-3974

ELECTRICAL DESIGNER: AVILA SOLAR DRAFTING SERVICES.
 ADDRESS: 12725 SW MILLIKAN WAY, STE 300, BEAVERTON, OR 97005
 CONTACT: DOUGLAS AVILA, E.I.T.
 PHONE: (971)-240-7102

KEY PLAN



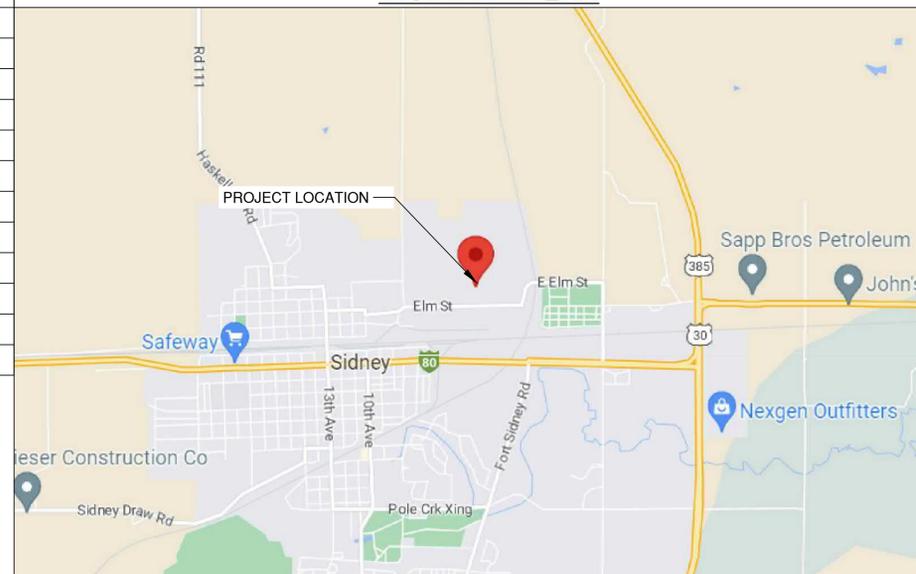
PLAN VIEW

Scale: 1/64" = 1'-0"

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
G-1	COVER SHEET
E-100	SITE PLAN
E-200	SUB STRING PLAN
E-500	DETAILS
E-600	ONE LINE DIAGRAM
E-601	ONE LINE DIAGRAM
E-602	GROUNDING
E-800	SCHEDULES
E-801	LABELS
E-802	DATASHEETS
E-803	DATASHEETS

VICINITY PLAN





First Solar Series 6 Plus

ADVANCED THIN FILM SOLAR TECHNOLOGY

MODULE DATASHEET

HIGH-POWER PV MODULES

First Solar Series 6 Plus photovoltaic (PV) modules set the industry benchmark for reliable energy production, optimized design and environmental performance. The advanced design is optimized for every stage of your application, significantly reducing balance of system, shipping, and operating costs.

PROVEN PERFORMANCE

- With superior temperature coefficient, spectral response and shading behavior, Series 6 Plus modules generate up to 8% more energy per watt than conventional crystalline silicon solar modules
- Unlike crystalline silicon modules, First Solar's thin film technology does not experience the losses associated with LID and LeTID
- Anti-reflective coated glass enhances energy production

INNOVATIVE MODULE DESIGN

- Under-mount frame provides the cleaning and snow-shedding benefits of a frameless module while protecting edges against breakage
- Innovative SpeedSlots™ combine the robustness of bottom mounting with the speed of top clamping while utilizing fewer fasteners to achieve the industry's fastest installation times and lowest mounting hardware costs
- Dual junction box design optimizes module-to-module connections and eliminates the need for wire management

BEST IN-CLASS RELIABILITY & DURABILITY

- Manufactured under one roof with 100% traceable QA/QC
- Independently tested and certified for reliable performance that exceeds IEC standards in high temperature, high humidity, extreme desert and coastal applications
- Inherently immune to and warranted against power loss from cell cracking
- Durable glass/glass construction

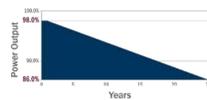
BEST ENVIRONMENTAL PROFILE

- Fastest energy payback time in the industry
- Carbon footprint that is 2.5X lower and a water footprint that is 3X lower than mono crystalline silicon panels on a life cycle basis
- Global PV module recycling services available through First Solar or customer-selected third-party

430-460 Watts
Up to 18.3% Efficiency

INDUSTRY-LEADING MODULE WARRANTY

98% WARRANTY START POINT
0.5% WARRANTED ANNUAL DEGRADATION RATE



- 25-Year Linear Performance Warranty
- 10-Year Limited Product Warranty
- Industry's first and only Cell Cracking Warranty

First Solar, Inc. | firstsolar.com | info@firstsolar.com

MFD-00540-06-P-N | MAY 2021

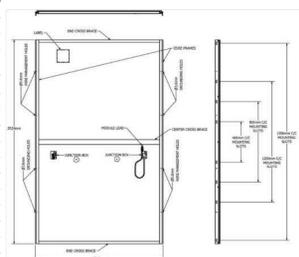
FIRST SOLAR SERIES 6 PLUS

MODEL TYPES: FS-6XXX-P / FS-6XXX-P1 / FS-6XXX-P1 / FS-6XXX-P1 (XXX = NOMINAL POWER)		CERTIFICATIONS AND TESTS	
RATINGS AT STANDARD TEST CONDITIONS (1000W/m² AM 1.5, 25°C)			
Nominal Power ¹ (P _{max})	P _{max} (W)	430	435
Efficiency (%)	%	17.1	17.3
Voltage at P _{max}	V _{max} (V)	182.6	183.6
Current at P _{max}	I _{max} (A)	2.36	2.37
Open Circuit Voltage	V _{oc} (V)	219.2	219.6
Short Circuit Current	I _{sc} (A)	2.54	2.55
Maximum System Voltage	V _{max} (V)	1500 ²	
Limiting Reverse Current	I _r (A)	5.0	
Maximum Series Fuse	I _f (A)	5.0	
RATINGS AT NOMINAL OPERATING CELL TEMPERATURE OF 45°C (100W/m², 20°C at temperature, AM 1.5, 1m/s wind speed)			
Nominal Power	P _{max} (W)	324.7	328.5
Voltage at P _{max}	V _{max} (V)	170.9	172.0
Current at P _{max}	I _{max} (A)	1.90	1.91
Open Circuit Voltage	V _{oc} (V)	207.0	207.3
Short Circuit Current	I _{sc} (A)	2.05	2.06
TEMPERATURE CHARACTERISTICS			
Module Operating Temperature Range	(°C)	-40 to +85	
Temperature Coefficient of P _{max}	T _p (P _{max})	-0.32%/°C (Temperature Range: 25°C to 75°C)	
Temperature Coefficient of V _{oc}	T _p (V _{oc})	-0.28%/°C	
Temperature Coefficient of I _{sc}	T _p (I _{sc})	+0.04%/°C	

MECHANICAL DESCRIPTION

Length	2024mm
Width	1245mm
Area	2.52m ²
Module Weight	34.9kg (FS-6XXX-P / FS-6XXX-P1) 34.2kg (FS-6XXX-P1 / FS-6XXX-P1)
Leadwire ⁶	2.5mm ² , 733mm (+) & Bulkhead (+)
Connectors	TE Connectivity PV4-S, MC4-EVD 2, or alternate
Junction Box	IP68 Rated
Bypass Diode	N/A
Cell Type	Thin film CdTe semiconductor, up to 254 cells
Frame Material	Anodized Aluminum
Front Glass	Heat strengthened
Back Glass	Heat strengthened
Encapsulation	Laminate material with edge seal
Frame to Glass Adhesive	Silicone
Load Rating ⁸	2400Pa

MECHANICAL DRAWING



PACKAGING INFORMATION		
Model Type	Modules Per Pack	Packs per 40' Container
FS-6XXX-P / FS-6XXX-P1	27	18
FS-6XXX-P1 / FS-6XXX-P1	29	18

Disclaimer: The information included in this Module Datasheet is subject to change without notice and is provided for informational purposes only. No contractual rights are established or should be inferred because of user's reliance on the information contained in this Module Datasheet. Please refer to the appropriate Module User Guide and Module Product Specification document for more detailed technical information regarding module performance, installation and use. First Solar and the First Solar logo are trademarks of First Solar, Inc., registered in the U.S. and other countries. Series 6 and Series 6 Plus are trademarks of First Solar, Inc.

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SOLECTRIA® XGI 1500-250 SERIES

PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

FEATURES

- NEW and MORE POWERFUL!
 - XGI 1500-250/250-600
 - XGI 1500-225-600 (Selectable: 225kW/225kVA or 225kW/250kVA)
 - XGI 1500-200/200-480
 - XGI 1500-175-480 (Selectable: 175kW/175kVA or 175kW/200kVA)
- Industry-leading maximum DC/AC Ratio of 2.0
- Accepts two Input PV Output Circuits, with no overcurrent protection required
- Made in the USA with global components
- Buy American Act (BAA) compliant
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SB
- Robust, dependable and built to last
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- SunSpec Modbus Certified
- Tested compatible with the TESLA PowerPack Microgrid System

OPTIONS

- PV Source Circuit Combiners
- Web-based monitoring
- Extended warranty



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Yaskawa Solectria Solar is pleased to introduce its most powerful XGI 1500 inverters, with the XGI 1500-250 models at 600 Vac, and the XGI 1500-200 models for 480 Vac service.



The XGI 1500-250 and XGI 1500-200 feature SiC technology, high power and high efficiency that places them at the top end of the utility-scale string inverters in the market.

Yaskawa Solectria Solar designs all XGI 1500 utility-scale string inverters for high reliability and builds them with the highest quality components – selected, tested and proven to last beyond their warranty. The XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL 1741 standards for safety.

The XGI 1500 inverters provide ideal solutions for ground-mounted utility-scale PV systems, with models available for service connections at 600 Vac and 480 Vac. Designed and engineered in Lawrence, MA, the SOLECTRIA XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. The XGI 1500 inverters are Made in the USA with global components, and are compliant with the Buy American Act.

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SOLECTRIA® XGI 1500 PV COMBINERS

INCREASED DESIGN FLEXIBILITY FOR SOLECTRIA XGI 1500 INVERTERS

FEATURES

- Designed for use with SOLECTRIA XGI 1500 inverters
- Models with a 250 A DC disconnect switch:
 - Remote Combiner, with both polarities fused
 - Remote Combiner, with positive polarity fused
 - Remote Combiner, with positive polarity fused and fused output
 - Attached Combiner, with both polarities fused
 - 250 A DC disconnect switch
- Models with a 400 A DC disconnect switch:
 - Remote Combiner, with positive polarity fused
 - Remote Combiner, with positive polarity fused and fused output
 - 400 A DC disconnect switch
- 16, 20, 24 and 28 fuse positions
- Fuse options: 20 A, 25 A, 30 A, 32 A (not all fuse size options available for all models; see technical specs)
- Surge arrester, both polarities (see technical specs)
- Made in the USA with global components
- Buy American Act (BAA) compliant



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Yaskawa Solectria Solar offers its 1500 V Combiners for exclusive use with SOLECTRIA XGI 1500 inverters



Yaskawa Solectria Solar's 1500 V Combiners feature the highest quality and durability in the industry today. The Combiners match the XGI 1500 inverters in quality and appearance, and satisfy the National Electrical Code for systems with ungrounded PV source circuits.

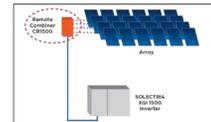
The 1500 V Attachable Combiner is designed to mate to the XGI 1500-166 family of inverters. This combiner has fuses on the positive and negative poles, and a 250A disconnect switch.

The 1500 V Remote Combiners come in three versions for the XGI 1500 inverters, providing flexibility to meet different code and project requirements. Models are available with both polarities fused, or just the positive polarity fused. The newest models also include a fused output, to take advantage of the maximum current calculation using NEC 690.8(A)(2).

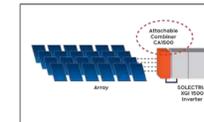
Yaskawa Solectria Solar provides a full line of Remote Combiners, with models featuring a 250 A disconnect switch, and additional models with a 400 A disconnect switch, for compatibility with all XGI 1500-166 series and XGI 1500-250 series inverters.

All Yaskawa Solectria Solar XGI Inverters and Combiners are Made in the USA, with global components, and are compliant with the Buy American Act.

CENTRALIZED OR CLUSTERED PV SYSTEM



DISTRIBUTED PV SYSTEM



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SOLECTRIA® XGI 1500-250 SERIES TECHNICAL DATA

SPECIFICATIONS

PRODUCT SPECIFICATION	XGI 1500 INVERTER MODEL			
	XGI 1500 250/225-600	XGI 1500 225-600	XGI 1500 200/200-480	XGI 1500 175-480
DC Input	1500 VDC			
Absolute Maximum Input Voltage	860-1250 VDC			
Maximum Power Voltage Range (MPPT)	860-1450 VDC			
Operating Voltage Range (MPPT)	750-1450 VDC			
Number of MPPT Trackers	1 MPPT			
Maximum Operating Input Current	296.7 A	267 A	237.3 A	207.6 A
Maximum Operating PV Power	255 kW	230 kW	204 kW	179 kW
Maximum DC/AC Ratio Max Rated PV Power	2.0 500 kW	2.22 500 kW	2.5 500 kW	2.86 500 kW
Max Rated PV Short-Circuit Current (I _{sc} x 1.25)	800 A			
Nominal Output Voltage	600 VAC, 3-Phase			
AC Voltage Range	480 VAC, 3-Phase			
Continuous Real Output Power	250 kW	225 kW	200 kW	175 kW
Continuous Apparent Output Power (kVA)	250	225	200	175
Maximum Output Current	240.6 A	216.5 A	240.6 A	210.5 A
Fault Current Contribution (1 cycle RMS)	390 A	390 A	351 A	312 A
Conductor Compatibility	800 kcmil max, Cu or Alum, 1 or 2 conductors with lugs			
Nominal Output Frequency	60 Hz			
Power Factor (Unity default)	+/- 0.80 Adjustable			
Total Harmonic Distortion (THD) @ Rated Load	< 5%			
Grid Connection Type	3-Ph + N/GND			
Efficiency	99.0%			
CEC Average Efficiency	98.5%			
Tare Loss	< 1 W			
Ambient Temperature Range	-40°F to 140°F (-40°C to 60°C)			
De-Rating Temperature	113°F (45°C)	127°F (53°C)	113°F (45°C)	131°F (55°C)
Storage Temperature Range	-40°F to 167°F (-40°C to 75°C)			
Relative Humidity (non-condensing)	0 - 95%			
Operating Altitude	9840 Ft (3 km)			
Advanced Graphical User Interface	Ethernet			
Communication Interface	SunSpec Modbus TCP/IP			
Third-Party Monitoring Protocol	Optional			
Web-Based Monitoring	Remote and Local			
Firmware Updates	UL 1741, IEEE 1547, UL 1998			
Safety Listings & Certifications	Rule 21, UL 1741SB			
Advanced Grid Support Functionality	ETI			
Testing Agency	FCC Part 15 (Subpart B, Class A)			
FCC Compliance	5 Years Standard; Option for 10 Years			
Standard and Options	73 dBA @ 1 m; 67 dBA @ 3 m			
Acoustic Noise Rating	Integrated 2-Pole 400 A DC Disconnect			
DC Disconnect	Vertical only			
Mounting Angle	Height: 29.5 in. (750 mm) Width: 44.3 in. (1125 mm) Depth: 19.4 in. (390 mm)			
Enclosure	290 lbs (131.5 kg)			
Dimensions	NEMA 4X, IEC IP66, Type 3R, Polyester Powder-Coated Aluminum			
Weight				
Enclosure Rating and Finish				



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SOLECTRIA® XGI 1500 PV COMBINERS TECHNICAL DATA

SPECIFICATIONS

Specification	MODELS WITH 250 A DISCONNECT SWITCH						
	ATTACHABLE COMBINER BOTH POLES FUSED	REMOTE COMBINER BOTH POLES FUSED	REMOTE COMBINER POS. POLE FUSED	REMOTE COMBINER POS. POLE FUSED OUTPUT FUSED	REMOTE COMBINER POS. POLE FUSED	REMOTE COMBINER POS. POLE FUSED OUTPUT FUSED	
Model Format	CR1500-xx-yy(S)	CR1500-xx-yy(S)	CR1500-xx-yy(S)	CR1500-xx-yy-250S	CR1500-xx-yy-400	CR1500-xx-yy-400S	
Fuse Configuration	xx = # source circuits / yy = fuse rating (Amps) / (S) optional surge protection / S: Standard surge protection / P: positive fuse only / 250S: Standard surge protection, 250 A DC switch and 3/16" output fuse / 400S: Standard surge protection, 400 A DC switch and 4/8" output fuse / 400 A DC disconnect switch / * Attachable Combiner only compatible with XGI 1500-166 series inverters.						
Input Wire Compatibility	14 - 4 AWG, PV-Rated, Copper Wire Only	POSITIVE Pole Fused OUTPUT Fused	14 - 6 AWG, PV-Rated, Copper Wire Only	14 - 4 AWG, PV-Rated, Copper Wire Only	14 - 4 AWG, PV-Rated, Copper Wire Only	14 - 6 AWG, PV-Rated, Copper Wire Only	
Maximum Output Voltage	Compression Lugs Required, Cu or Aluminum Conductors						
Wire Compatibility	1 or 2 Conductors at 500 kcmil						
Maximum Voltage	1500 VDC						
DC Disconnect	DC Disconnect Located on XGI 1500 Inverter	2-Pole Integrated DC Disconnect Positive and Negative Poles Switched				400 A	
DC Disconnect Current Rating	250 A						
Input PV Source Circuit Configuration	Ungrounded PV Source Circuits Only						
Temperature Range	-40°F to 122°F (-40°C to 150°C)	-40°F to 140°F (-40°C to 150°C)		-40°F to 122°F (-40°C to 150°C)		-40°F to 140°F (-40°C to 150°C)	
Mounting Positions	Attaches to Inverter Structure, Vertical Orientation	Indoor, Outdoor, Wall Army Structure, Vertical, Horizontal, or Angled					
Standard Listing and Listing	UL 1741 / Intertek	UL 1741 / TÜV		UL 1741 / Intertek		UL 1741 / TÜV	
Standard Warranty	5 Years						
Overall	Height	29.5 in. (750 mm)	30.0 in. (762 mm)		30.0 in. (762 mm)		
	Width	15 in. (380 mm)	18 in. (460 mm)	24 in. (610 mm)		30 in. (762 mm)	
Enclosure Material and Rating	Depth	19.4 in. (390 mm)	20 in. (508 mm)		20 in. (508 mm)		
	Material	Polyester Powder Coated Aluminum NEMA Type 4X	Polyester Powder Coated Steel NEMA Type 4				
Surge Protection	Optional, Protects Positive and Negative Poles			Standard, Protects Positive and Negative Poles			
# Fuse Positions	Fuse Options						
	16	MODELS WITH 250 A DISCONNECT SWITCH			MODELS WITH 400 A DISCONNECT SWITCH		
	20	15 A / 20 A / 30 A	N/A		20 A / 25 A / 30 A / 32 A	N/A	
	24	15 A / 20 A	N/A		20 A / 25 A / 30 A / 32 A	N/A	
	28	15 A / 20 A	N/A		20 A / 25 A / 30 A / 32 A	N/A	
Output Fuse Rating	N/A			315 A		450 A	



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CONTACT: ANTHONY LEFEBER
PHONE: (712)-254-6299

PROJECT:
SIDNEY
PV PROJECT
3800 KWAC
4485.6 KWDC STC

NE 69162

MARK	DATE	DESCRIPTION
0	2/28/23	30% IFF
1	3/9/23	90% IFF

ISSUE: 3/9/23 90% IFF

PROJECT NO:

DRAWN BY: JL

CHECKED BY: DA

SHEET TITLE:

DATASHEETS

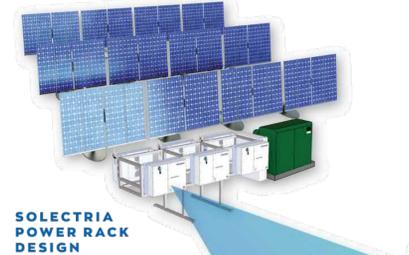
SHEET

E-802

SOLECTRIA® XGI 1500 POWER RACK

0.5 - 2 MWAC FACTORY INTEGRATED AND TESTED

The Solectria® XGI 1500 Power Rack is the most robust, scalable building-block for state-of-the-art multi-MW solar plants.



SOLECTRIA POWER RACK DESIGN

Based around the Solectria XGI 1500 utility-scale string inverters, the Power Rack is designed for high reliability, rapid deployment, and built to the highest standards of quality.

The modular design provides multiple independent MPPT zones per megawatt for improved power-point tracking and improves system up time with a simplified maintenance plan.

The XGI 1500 inverters provide advanced grid-support functionality and boost a true peak efficiency above 99%. The XGI 1500 inverters are the most powerful 1500V string inverters in the PV market. Designed and engineered in Lawrence, MA, the new Solectria Power Rack features the XGI 1500 utility-scale string inverters that are Made in the USA with global components and compliant with the Buy American Act.

FEATURES

- Racks designed for up to four, six or eight XGI 1500 utility-scale string inverters, achieving up to 2 MWac in total, pre-mounted and pre-wired on a custom fabricated, robust, painted, structural-steel rack
- Fused AC combiner for the output from the XGI 1500 inverters, with a load-break AC disconnect switch
- Pre-assembled and pre-wired AC and communications cabling
- Designed for rapid deployment
- Scalable alternative to central inverters with convenient access for maintenance and service
- True 99.0% peak efficiency
- Advanced grid-support functionality Rule21/UL1741SA
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- XGI 1500 utility-scale string inverters are Made in the USA with global components and Buy American Act (BAA) compliant

OPTIONS

- PV Source Circuit Combiners: 16, 20, 24, 28, 28 position
- Configurations available using XGI 1500 models at 600Vdc (125kW, 150kW, 166kW, 225kW, 250kW), and 480Vdc (200kW and 175kW)
- Web-based monitoring
- Extended Warranty



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CONVERT-1P SINGLE-AXIS SOLAR TRACKER | 1-IN-PORTRAIT



Easy to Install. Easy to Own.

The modular design and superior engineering of Valmont® Solar Convert-1P Trackers make them simple to install, easy to maintain and built for long-term performance.

Simple, Robust Table Structure Design | Short rows provide best-in-class terrain following and layout density while enabling a stiff structure that minimizes failures and decreases long-term costs.

Innovative, Hybrid Controller Architecture | The wireless controller utilizes existing DC infrastructure to enable backup capabilities instead of failure-prone batteries or the need for auxiliary modules.

Global Supply Chain, Highest Quality | With 85 manufacturing facilities on six continents, Valmont has the footprint and capability to ship the highest-quality product while offering unmatched price stability and availability.

International, Bankable Product Portfolio | The Convert-1P Single-Axis Solar Trackers have been deployed in 11 countries on four continents, generating nearly 3GW for leading customers, financiers and partners.



THE IDEAL SOLUTION FOR:
Distributed Generation Projects
Utility-Scale Projects

POWERED BY CONVERT TECHNOLOGY

SOLECTRIA® XGI 1500 POWER RACK TECHNICAL DATA

DESIGN DETAILS

SOLECTRIA POWER RACK	
Inverters	POWER RACK™ models designed for four, six or eight XGI 1500 inverters, for flexibility in overall rating. The flagship POWER RACKs use the XGI 1500-250/250-600 for overall ratings of 1MW, 1.5MW and 2MW. Options to use any other XGI 1500 models at 600Vdc (225kW, 166kW, 150kW, and 125kW) or 480Vdc (200kW and 175kW)
AC Combiner	AC Combiner with fused terminations for XGI 1500 Inverter AC output and fused load-break disconnect for fused AC output. Does not include GFP equipment, available as an option. Consult Yaskawa Solectria Solar for further details.
Rack	Custom fabricated, rugged structural steel rack, welded, with powder-coat paint finish
Factory Assembly, Test & Quality Control	XGI 1500 inverters and AC Combiner secured to the POWER RACK™. AC output wiring run from the inverters to the AC Combiner, communications wiring run between the inverters. Tested in the factory to ensure the POWER RACK™ is ready to go in the field.



SPECIFICATIONS

Specification Date	POWER RACK MODELS					
	XGI 1500-250-P14	XGI 1500-250-P16	XGI 1500-250-P18	XGI 1500-166-P14	XGI 1500-166-P16 / XGI 1500-166-P18	XGI 1500-166-P17 / XGI 1500-166-P19
Configuration	(4) XGI 1500-250/250-600	(6) XGI 1500-250/250-600	(8) XGI 1500-250/250-600	(4) XGI 1500-166/166/166	(5) XGI 1500-166/166/166 / (6) XGI 1500-166/166/166	(7) XGI 1500-166/166/166 / (8) XGI 1500-166/166/166
DC Input to Inverters (field wired)	PV Output Circuits field-wired to each XGI 1500 Inverter from Solectria CR500-xy-yy-400 PV Source Circuit Combiners (see Options)					
AC Connections	Inverter Output Circuits factory-wired to SOLECTRIA AC Combiner, Combined AC output available for field wiring			Inverter Output Circuits factory-wired to the SOLECTRIA AC Combiner, Combined AC output available for field wiring		
DC Input to Inverters (factory wired)	Absolute Max DC Input Voltage: 1500 Vdc					
DC Input to Inverters (factory wired)	Full Power Voltage Range (MPPT): 860 Vdc - 1350 Vdc		860 Vdc - 1350 Vdc		860 Vdc - 1350 Vdc	
DC Input to Inverters (factory wired)	Operating Voltage Range (MPPT): 860 Vdc - 1450 Vdc		860 Vdc - 1450 Vdc		860 Vdc - 1450 Vdc	
DC Input to Inverters (factory wired)	Number of MPPT Trackers: Single MPPT Zone					
DC Input to Inverters (factory wired)	Max Operating PV Current: 296.7 Adc (per XGI 1500-250/250-600 Inverter)		197.7 Adc (per XGI 1500-166/166 Inverter)			
DC Input to Inverters (factory wired)	Max Operating PV Power: 295 kWdc (per XGI 1500-250/250-600 Inverter)		170 kWdc (per XGI 1500-166/166 Inverter)			
DC Input to Inverters (factory wired)	Max DC/AC Ratio: 2.0:1 500 kWdc (per XGI 1500-250/250-600 Inverter)		2.0:1 332 kWdc (per XGI 1500-166/166 Inverter)			
DC Input to Inverters (factory wired)	Max Rated PV Power: 800 Adc (per XGI 1500-250/250-600 Inverter)		500 Adc (per XGI 1500-166/166 Inverter)			
DC Input to Inverters (factory wired)	Max Rated PV Short-Circuit Current (Isc @ 1.25): 800 Vdc, 3-Phase (-12% to +10%)		600 Vdc, 3-Phase (-12% to +10%)			
DC Input to Inverters (factory wired)	Continuous Real AC Output Power: 1 MWac total / 1.5 MWac total / 2.0 MWac total		0.86 MWac total / 0.83 MWac total / 1.0 MWac total		1.33 MWac total / 1.33 MWac total / 1.7 MWac total	
DC Input to Inverters (factory wired)	Continuous Apparent Output Power: 1 MVA total / 1.5 MVA total / 2.0 MVA total		0.68 MVA total / 0.63 MVA total / 1.0 MVA total		1.17 MVA total / 1.33 MVA total / 1.7 MVA total	
DC Input to Inverters (factory wired)	Maximum AC Output Current: 982.4 A total / 1444 A total / 1925 A total		(4) 640 A total		(5) 800 A total / (6) 960 A total / (7) 1120 A total / (8) 1440 A total	
DC Input to Inverters (factory wired)	Power Factor Adjustable Range (unity default): ±0.80 Adjustable		±0.80 Adjustable			
DC Input to Inverters (factory wired)	Total Harmonic Distortion (THD) @ Rated Power: < 5%		< 5%			
DC Input to Inverters (factory wired)	Grid Connection Type: Fault Current Contribution (1 cycle RMS): 144 A (per XGI 1500-250/250-600 Inverter)		34% + N/GND		192 A (per XGI 1500-166/166 Inverter)	

CONVERT-1P | SINGLE-AXIS SOLAR TRACKER



STRUCTURAL/MECHANICAL FEATURES

Tracking Technology	Horizontal, balanced single-axis tracker with independently driven rows and backtracking
Maximum Tracking Error	± 2°
Rotation Angle	± 55 (Up to 60°)
Module Compatibility	Adaptable to all available PV modules types on market. Monofacial and Bifacial (thin film, framed and frameless)
Ground Cover Ratio	Fully configurable; typical range from 25% to 50%
Land Slope	Up to 7% N-S (extended options available); Unlimited E-W
Configurations	1 module in portrait

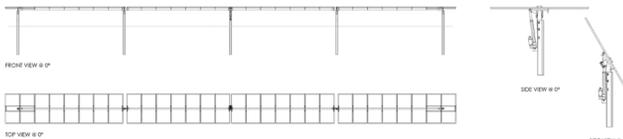
ELECTRONIC SPECIFICATIONS

Motor	Linear actuator with induction AC motor (lubrication free) with integrated encoder
System	Electronic control boards for multiple system architectures (two solutions 10 or 100 actuators in closed loop with encoder)
Power Supply	<ul style="list-style-type: none"> • AC power supply from auxiliary service • Self-powered from PV string (patented backup solution without batteries) • Smart power integration with string inverters
Operating Temperature Range	-20°/50° C (-4°/122° F) extended range available
Solar Tracking Method	Astronomical clock with GPS input, self-configuring; no irradiation or tilt sensor required
Monitoring & Data Stream	Wireless or wired (RS485, Ethernet, Fiber)
Communication	Real-time local or remote communication data provided via Modbus

INSTALLATION

Foundation	Compatible with all foundation types (driven pile, ground screw, concrete)
Installation Method	Requires no specialized personnel or equipment; no in-field welding
Module Installation Method	Rivets, bolts or clamps
Grounding Method	Self-ground structure; no separate materials or labor
Warranty	10 years on structural components; 5 years on motors and electronic components (extended warranty available)

EXAMPLE OF TYPICAL TRACKER TABLE WITH 56 MODULES



QUALIFICATIONS & CERTIFICATES:

UL 2703	ISO 14001	ISO 9001	ISO 45001	ISO 50001
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C-1P-v1_0422



Product filer

Data Aggregation System hardware

AlsoEnergy's vertically-integrated, edge-to-cloud platform includes a Data Aggregation System (DAS). Enabling remote monitoring for O&M optimization, our DAS solution is preconfigured to your specifications for fast, plug-and-play installation. The hardware enclosure is rated for both indoor and outdoor installation. While our edge solutions and PowerTrack, our SaaS application for portfolio optimization, can be delivered independently, asset managers, and EPCs appreciate the reduced risk of using a single point of accountability from edge to cloud and from bid throughout the asset's lifetime.



DAS Assembly

- Complete with all necessary DAS system hardware
- Preconfigured for plug-and-play capability with the PowerTrack
- Hardware mounted and pre-wired
- NEMA 4 rated enclosures for exterior mounting
- Indoor mounting hardware included
- Built to your specifications
- ETL listed

End-to-end DAS from AlsoEnergy are tested, configured, assembled, and wired in our ETL listed facility in Boulder, CO.

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sales@alsoenergy.com



Product filer

Hardware components

AlsoEnergy DataLogger



- 1 pre-configured for use with PowerTrack, accepts data from RS-485, RS-232, or Ethernet connected devices
- Includes internal storage capacity and a touch screen LCD display
- 20% continuous (voltage & current) maintaining full accuracy 100% momentary current overload

Energy meter



- Revenue grade accuracy
- Accepts single-phase, split-phase, and three-phase loads
- Includes LCD display

Weather stations and environmental sensors



- 1 High-quality weather stations accommodate any solar or wind metric requirements
- Fit into the main monitoring communications enclosure or dedicated enclosure
- Anemometers
- Pyranometers (Hukseflux, Apogee, Kipp and Zonen)
- Ambient temperature sensors
- Module temperatures sensors
- High-temperature weather stations
- Basic and full weather station packages
- Remote and portable stations

Cellular modem



- 4G network
- Low power consumption
- Remote management and configuration
- Works with most major North American cellular providers

Wireless communications



- Ethernet radio
- Suitable for outdoor mounting
- Intra site communication
- Integrated antenna
- Remote oversight



CONTRACTOR: SANDHILLS ENERGY
ADDRESS: 1209 HARNEY STREET STE 400 OMAHA, NE 68102
CONTACT: ANTHONY LEFEBER
PHONE: (712)-254-6299

PROJECT:

SIDNEY PV PROJECT
3800 KWAC
4485.6 KWDC STC

NE 69162

MARK	DATE	DESCRIPTION
0	2/28/23	30% IFP
1	3/9/23	90% IFP

MARK	DATE	DESCRIPTION
ISSUE:	3/9/23	90% IFP
PROJECT NO:		
DRAWN BY:	JL	
CHECKED BY:	DA	
SHEET TITLE:		

MARK	DATE	DESCRIPTION
ISSUE:	3/9/23	90% IFP

MARK	DATE	DESCRIPTION
PROJECT NO:		
DRAWN BY:	JL	
CHECKED BY:	DA	
SHEET TITLE:		

MARK	DATE	DESCRIPTION
ISSUE:	3/9/23	90% IFP

MARK	DATE	DESCRIPTION
PROJECT NO:		
DRAWN BY:	JL	
CHECKED BY:	DA	
SHEET TITLE:		

MARK	DATE	DESCRIPTION
ISSUE:	3/9/23	90% IFP

MARK	DATE	DESCRIPTION
PROJECT NO:		
DRAWN BY:	JL	
CHECKED BY:	DA	
SHEET TITLE:		



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APPENDIX C
BIOLOGICAL RESOURCES



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:
Project Code: 2023-0067564
Project Name: SE Municipal Solar Farm

April 11, 2023

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" at: <https://www.fws.gov/media/endangered-species-consultation-handbook> or at our Nebraska Field Office webpage (<https://www.fws.gov/office/nebraska-ecological-services/project-planning-and-review-under-endangered-species-act>).

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), 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, intentional or unintentional, 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>

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. 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 avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

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>

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

(YEAR-XXXXXXX) in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - 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: 2023-0067564
Project Name: SE Municipal Solar Farm
Project Type: Power Gen - Solar
Project Description: Solar arrays
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.1506554,-102.96646353543505,14z>



Counties: Cheyenne County, Nebraska

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 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.

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
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

FISHES

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

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

CRITICAL HABITATS

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
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)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list 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.	Breeds Oct 15 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.	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Ferruginous Hawk <i>Buteo regalis</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/6038	Breeds Mar 15 to Aug 15
Long-billed Curlew <i>Numenius americanus</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/5511	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

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 and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

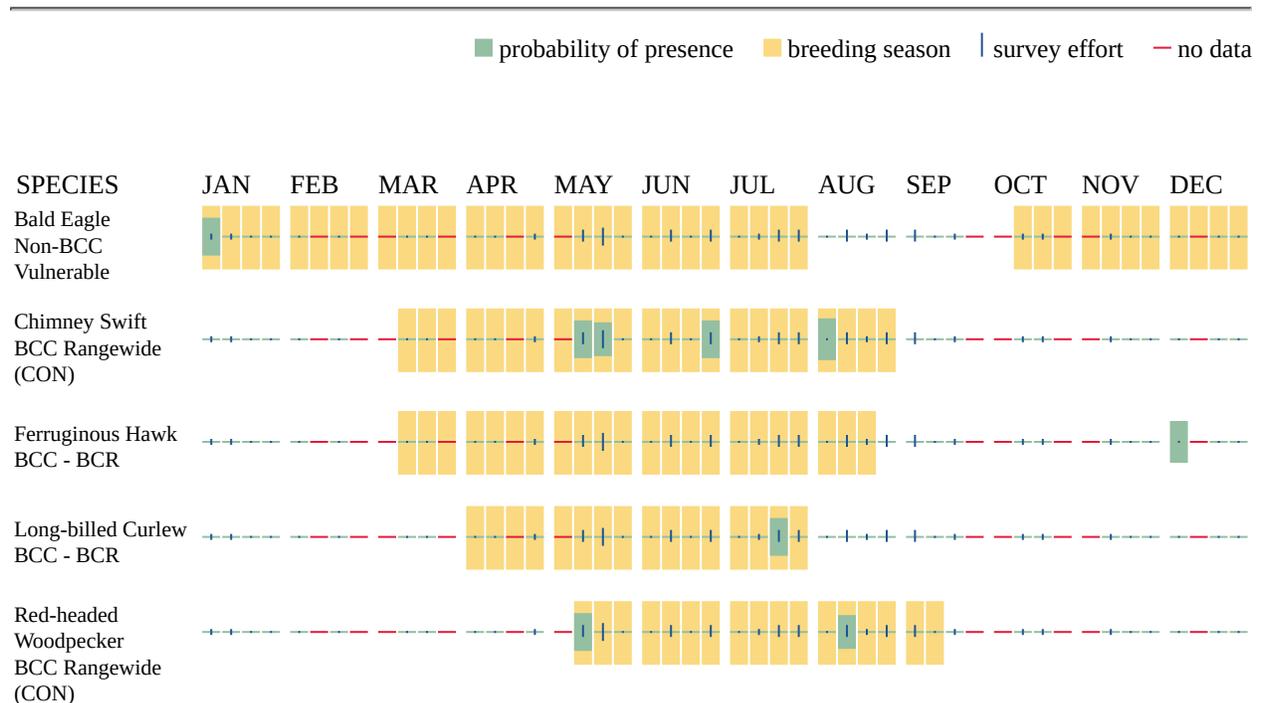
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

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

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point

within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no

data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Terracon Consultants, Inc.

Name: Jean Ramer

Address: 15080 A Circle

City: Omaha

State: NE

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Estimated Current Ranges of Threatened and Endangered Species: List of Species by County
 Nebraska Natural Heritage Program
 Nebraska Game and Parks Commission
 Version: December 2017

This table of species by county is based on the data product "Range maps for listed species in Nebraska, compiled and edited by the Nebraska Natural Heritage Program, December 2017." The map product was based on documented occurrences of listed species and expert knowledge about the distribution of species and suitable habitat. This information is subject to change. For a given county-species combination, the range of the given species covers some portion of the county (from all to very little). The individual species range map would need to be reviewed to determine if a particular location within the county is within the species's range. Because range maps are by their nature approximate, a given county-species combination was excluded from this table if the area covered was very small (less than 20 square kilometers). Included in the list are all federal and state listed species. Species Status: FE=Federal Endangered, FT=Federal Threatened, SE=State Endangered, ST=State Threatened.



County	Common Name	Scientific Name	Status
Adams	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Antelope	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Arthur	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Banner	Mountain Plover	<i>Charadrius montanus</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
Blaine	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Boone	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Box Butte	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST

	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Swift Fox	Vulpes velox	SE
Boyd	American Burying Beetle	Nicrophorus americanus	FE, SE
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Whooping Crane	Grus americana	FE, SE
Brown	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Buffalo	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Whooping Crane	Grus americana	FE, SE
Burt	American Ginseng	Panax quinquefolium	ST
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	River Otter	Lontra canadensis	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
Butler	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Whooping Crane	Grus americana	FE, SE
Cass	American Ginseng	Panax quinquefolium	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Southern Flying Squirrel	Glaucomys volans	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
Cedar	Interior Least Tern	Sternula antillarum athalassos	FE, SE

	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	Scaleshell Mussel	Leptodea leptodon	FE, SE
	Sturgeon Chub	Macrhybopsis gelida	SE
Chase	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Cherry	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blacknose Shiner	Notropis heterolepis	SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Swift Fox	Vulpes velox	SE
	Topeka Shiner	Notropis topeka	FE, SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Cheyenne	Mountain Plover	Charadrius montanus	ST
	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Clay	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Whooping Crane	Grus americana	FE, SE
Colfax	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Western Massasauga	Sistrurus tergeminus	ST
	Whooping Crane	Grus americana	FE, SE
Cuming	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
Custer	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Dakota	American Ginseng	Panax quinquefolium	ST
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	River Otter	Lontra canadensis	ST
	Sturgeon Chub	Macrhybopsis gelida	SE

Dawes	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Dawson	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Deuel	Swift Fox	<i>Vulpes velox</i>	SE
Dixon	American Ginseng	<i>Panax quinquefolium</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Scaleshell Mussel	<i>Leptodea leptodon</i>	FE, SE
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
Dodge	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
	Western Massasauga	<i>Sistrurus tergeminus</i>	ST
Douglas	American Ginseng	<i>Panax quinquefolium</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
Dundy	Swift Fox	<i>Vulpes velox</i>	SE
Fillmore	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Franklin	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Frontier	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Furnas	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Gage	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Western Massasauga	<i>Sistrurus tergeminus</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
Garden	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST

	River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Garfield	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Gosper	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Grant	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Greeley	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Hall	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Hamilton	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Harlan	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Hayes	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Hitchcock	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Holt	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Hooker	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE

	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Howard	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Whooping Crane	Grus americana	FE, SE
Jefferson	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	River Otter	Lontra canadensis	ST
	Western Massasauga	Sistrurus tergeminus	ST
	Whooping Crane	Grus americana	FE, SE
Johnson	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	River Otter	Lontra canadensis	ST
	Western Massasauga	Sistrurus tergeminus	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Kearney	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Whooping Crane	Grus americana	FE, SE
Keith	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Redbelly Dace	Phoxinus eos	ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Keya Paha	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blacknose Shiner	Notropis heterolepis	SE
	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Whooping Crane	Grus americana	FE, SE
Kimball	Colorado Butterfly Plant	Gaura neomexicana ssp. coloradensis	FT, SE
	Mountain Plover	Charadrius montanus	ST
	Swift Fox	Vulpes velox	SE
Knox	American Burying Beetle	Nicrophorus americanus	FE, SE
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Sturgeon Chub	Macrhybopsis gelida	SE

	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Lancaster	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Salt Creek Tiger Beetle	Cicindela nevadica lincolniana	FE, SE
	Saltwort	Salicornia rubra	SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Lincoln	American Burying Beetle	Nicrophorus americanus	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Redbelly Dace	Phoxinus eos	ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Logan	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Loup	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	River Otter	Lontra canadensis	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Madison	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Topeka Shiner	Notropis topeka	FE, SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
McPherson	American Burying Beetle	Nicrophorus americanus	FE, SE
	Blowout Penstemon	Penstemon haydenii	FE, SE
	Finescale Dace	Phoxinus neogaeus	ST
	Northern Redbelly Dace	Phoxinus eos	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Merrick	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Whooping Crane	Grus americana	FE, SE
Morrill	Blowout Penstemon	Penstemon haydenii	FE, SE
	River Otter	Lontra canadensis	ST
	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Nance	Finescale Dace	Phoxinus neogaeus	ST
	Interior Least Tern	Sternula antillarum athalassos	FE, SE

	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Whooping Crane	Grus americana	FE, SE
Nemaha	American Ginseng	Panax quinquefolium	ST
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	River Otter	Lontra canadensis	ST
	Southern Flying Squirrel	Glaucomys volans	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
Nuckolls	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Whooping Crane	Grus americana	FE, SE
Otoe	American Ginseng	Panax quinquefolium	ST
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	River Otter	Lontra canadensis	ST
	Southern Flying Squirrel	Glaucomys volans	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
Pawnee	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	River Otter	Lontra canadensis	ST
	Western Massasauga	Sistrurus tergeminus	ST
Perkins	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE
Phelps	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Whooping Crane	Grus americana	FE, SE
Pierce	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
	Whooping Crane	Grus americana	FE, SE
Platte	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Lake Sturgeon	Acipenser fulvescens	ST
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Pallid Sturgeon	Scaphirhynchus albus	FE, SE
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Small White Lady's Slipper	Cypripedium candidum	ST
	Sturgeon Chub	Macrhybopsis gelida	SE
	Western Prairie Fringed Orchid	Platanthera praeclara	FT, ST
Whooping Crane	Grus americana	FE, SE	
Polk	Interior Least Tern	Sternula antillarum athalassos	FE, SE
	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Piping Plover	Charadrius melodus	FT, ST
	River Otter	Lontra canadensis	ST
	Whooping Crane	Grus americana	FE, SE
Red Willow	Northern Long-eared Bat	Myotis septentrionalis	FT, ST
	Swift Fox	Vulpes velox	SE
	Whooping Crane	Grus americana	FE, SE

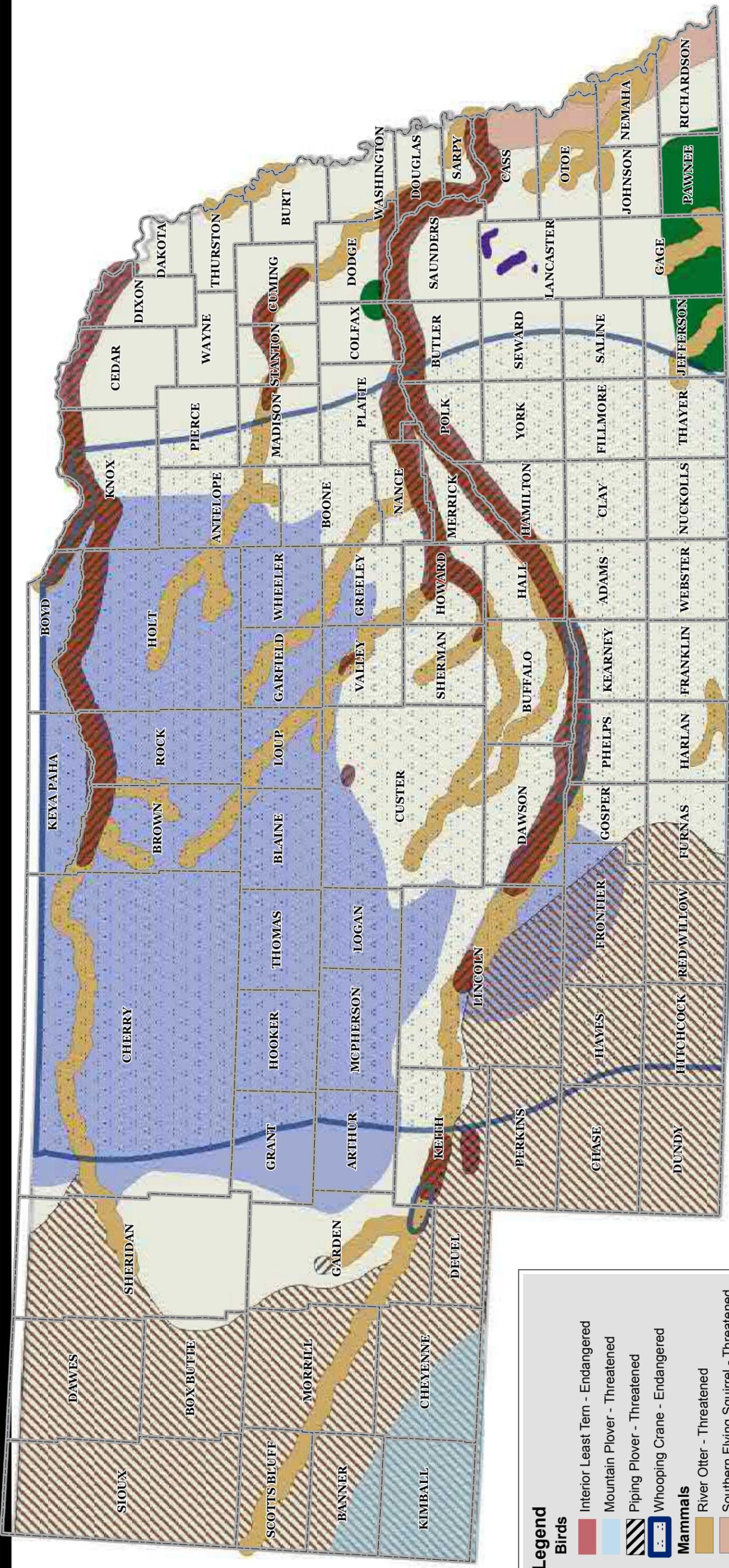
Richardson	American Ginseng	<i>Panax quinquefolium</i>	ST
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	River Otter	<i>Lontra canadensis</i>	ST
	Southern Flying Squirrel	<i>Glaucomys volans</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
	Western Massasauga	<i>Sistrurus tergeminus</i>	ST
Rock	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Saline	Northern Long-eared Bat	<i>Myotis septentrionalis</i>
Western Prairie Fringed Orchid		<i>Platanthera praeclara</i>	FT, ST
Whooping Crane		<i>Grus americana</i>	FE, SE
Sarpy	American Ginseng	<i>Panax quinquefolium</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
Saunders	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Salt Creek Tiger Beetle	<i>Cicindela nevadica lincolniana</i>	FE, SE
	Saltwort	<i>Salicornia rubra</i>	SE
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST	
Scotts Bluff	River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
Seward	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Sheridan	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE

Sherman	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Sioux	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	SE
	Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Stanton	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE, SE
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
Thayer	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Thomas	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Blowout Penstemon	<i>Penstemon haydenii</i>	FE, SE
	Finescale Dace	<i>Phoxinus neogaeus</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Northern Redbelly Dace	<i>Phoxinus eos</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
Thurston	American Ginseng	<i>Panax quinquefolium</i>	ST
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	River Otter	<i>Lontra canadensis</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
Valley	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
Whooping Crane	<i>Grus americana</i>	FE, SE	
Washington	American Ginseng	<i>Panax quinquefolium</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Lake Sturgeon	<i>Acipenser fulvescens</i>	ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	SE
Wayne	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Small White Lady's Slipper	<i>Cypripedium candidum</i>	ST
Webster	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST

	Whooping Crane	<i>Grus americana</i>	FE, SE
Wheeler	American Burying Beetle	<i>Nicrophorus americanus</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	River Otter	<i>Lontra canadensis</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
York	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE

THREATENED AND ENDANGERED ANIMALS IN NEBRASKA

ESTIMATED RANGES



Legend

Birds

- Interior Least Tern - Endangered
- Mountain Plover - Threatened
- Piping Plover - Threatened
- Whooping Crane - Endangered

Mammals

- River Otter - Threatened
- Southern Flying Squirrel - Threatened
- Swift Fox - Endangered

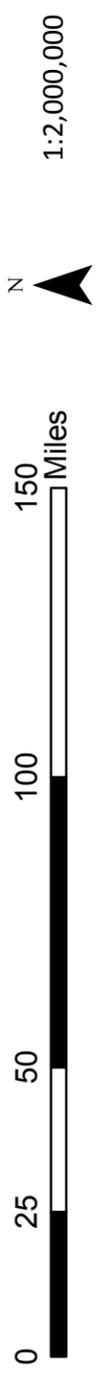
Reptiles

- Massasauga - Threatened

Insects

- American Burying Beetle - Endangered
- Salt Creek Tiger Beetle - Endangered

State
County Boundary

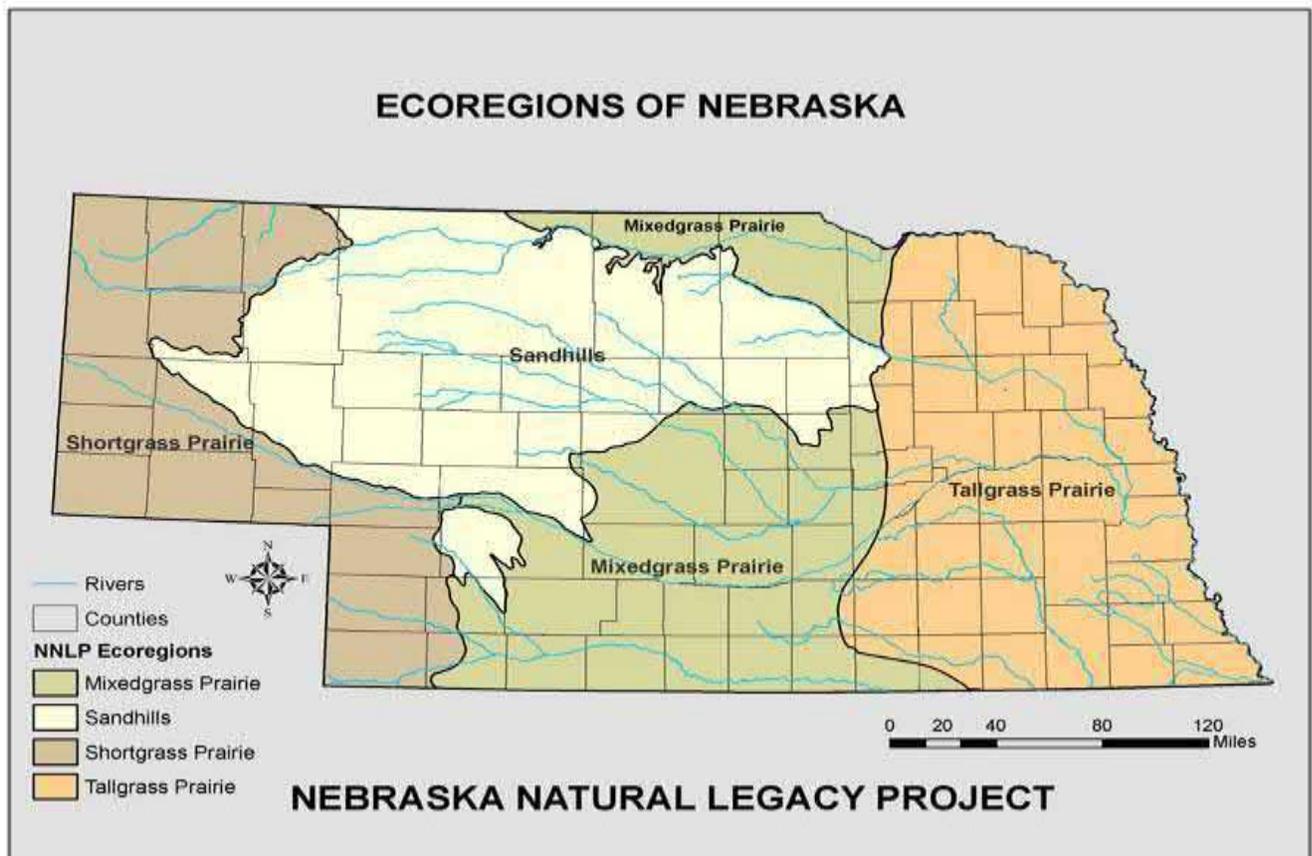


The threatened and endangered species on this map represent Nebraska state classifications. The map shows the estimated current habitat ranges of the endangered species in Nebraska. The area denoted as whooping crane habitat is primarily flyway; however, a section of the Platte River in Dawson, Buffalo, Gosper, Phelps, and Kearney counties is considered 'critical habitat' for the whooping crane. A 'critical habitat' is a geographic area that contains biological, landscape, and climate features considered imperative for a species to thrive.

The ranges specified for the other species, as identified by the Nebraska Natural Heritage Program, do not include a specified 'critical habitat'.

Invasive Plants Watch List: 2022

The purpose of the weed watch list is to collect data on the distribution of invasive plants found in various Nebraska counties. Counties were divided up into ‘ecoregions’ based on the Nebraska Game & Parks Commission’s Legacy Plan (map of regions below). The plants in the watch list have been identified based on their invasiveness in surrounding states and their increasing range in Nebraska. Data collected on watch list plant species distribution has been used to support the listing or delisting of noxious weeds. Plant species in the weed watch list are categorized based on early detection and rapid response potential. These Categories are: **Category 1 plants** - species not known to exist in each ecoregion, but pose a significant risk if introduced; **Category 2 plants** – species are top priority for eradication of new and existing populations; and **Category 3 plants**-species established and prevention of spread to new areas is a priority. An asterisk (*) denotes a plant that is listed as a county noxious weed in one or more counties in an ecoregion. New plant species added in 2022 are highlighted in yellow. Complete lists of invasive plants and noxious weeds can be accessed at the Nebraska Invasive Species Program website: <https://neinvasives.com/plants>.



Shortgrass Prairie Ecoregion: Weed Watch List

Banner, Box Butte, Chase, Cheyenne, Dawes, Deuel, Dundy, Keith, Kimball, Morrill, Perkins,
Scotts Bluff and Sioux counties

Terrestrial Plant Species

Scientific Name	Common Name(s)
Category 1: Future Invasive Species	
<i>Arundo donax</i> L.	Giant Reed
<i>Bromus diandrus</i>	Ripgut Brome
<i>Butomus umbellatus</i>	Flowering Rush
<i>Celastrus orbiculatus</i>	Oriental Bittersweet
<i>Taeniatherum caput-medusae</i>	Medusahead
<i>Ventenata dubia</i>	Ventenata
Category 2: Priority Species	
<i>Acroptilon repens</i>	Russian Knapweed
<i>Artemisia absinthium</i> L.	Absinth Wormwood
<i>Bothriochloa bladhii and ischaemum</i>	Caucasian and Yellow Bluestem
<i>Cynoglossum officinale</i> *	Houndstongue
<i>Hyoscyamus niger</i>	Henbane
<i>Iris pseudacorus</i>	Yellow Flag Iris
<i>Linaria dalmatica</i>	Dalmatian Toadflax
<i>Rhamnus cathartica</i>	Common Buckthorn, European Buckthorn
Floating Aquatic Plant Species	
Category 1: Future Invasive Species	
<i>Egeria densa</i>	Brazilian Elodea
<i>Eichhornia crassipes</i>	Water Hyacinth
<i>Hydrilla verticillata</i>	Hydrilla
<i>Ludwigia peploides</i>	Creeping Water Primrose, Floating Primrose-Willow
<i>Myriophyllum aquaticum</i>	Parrot's Feather
<i>Nitellopsis obtusa</i>	Starry Stonewort
<i>Nymphiodes peltata</i>	Yellow Floating Heart
<i>Pistia stratiotes</i>	Water Lettuce
<i>Salvinia molesta</i>	Giant Salvinia
Category 2: Priority Invasive Species	
<i>Myriophyllum spicatum</i>	Eurasian Watermilfoil
<i>Najas minor</i>	Brittle Naiad
Category 3: Established Invasive Species	
<i>Potamogeton crispus</i>	Curly-Leaf Pondweed

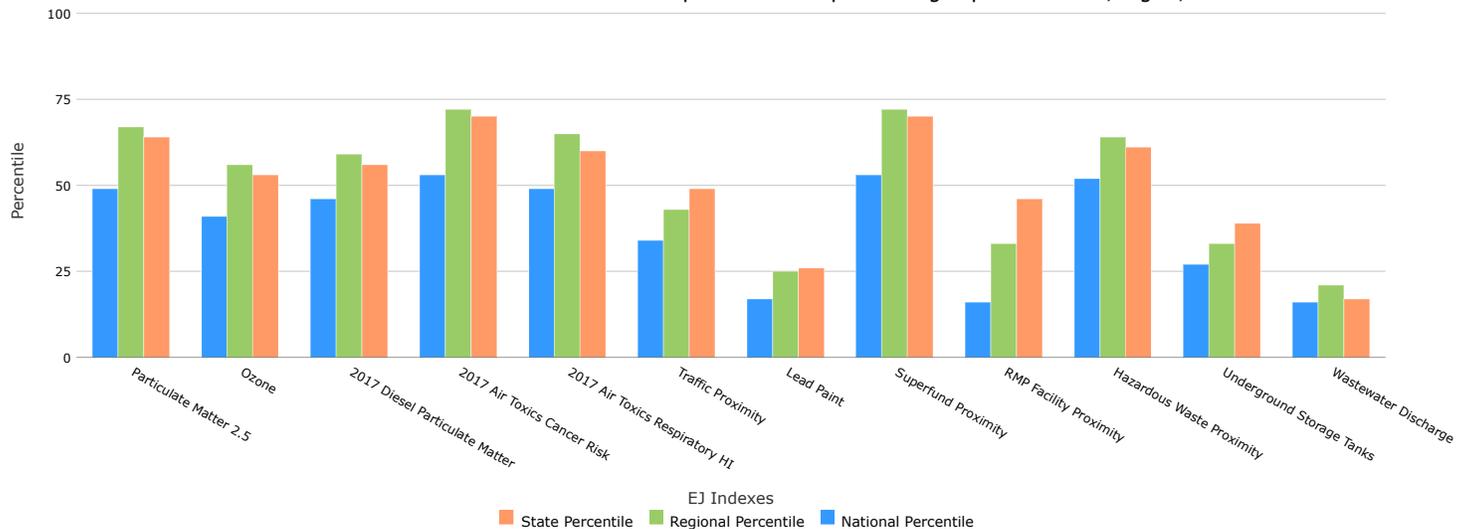
APPENDIX D
CENSUS INFORMATION



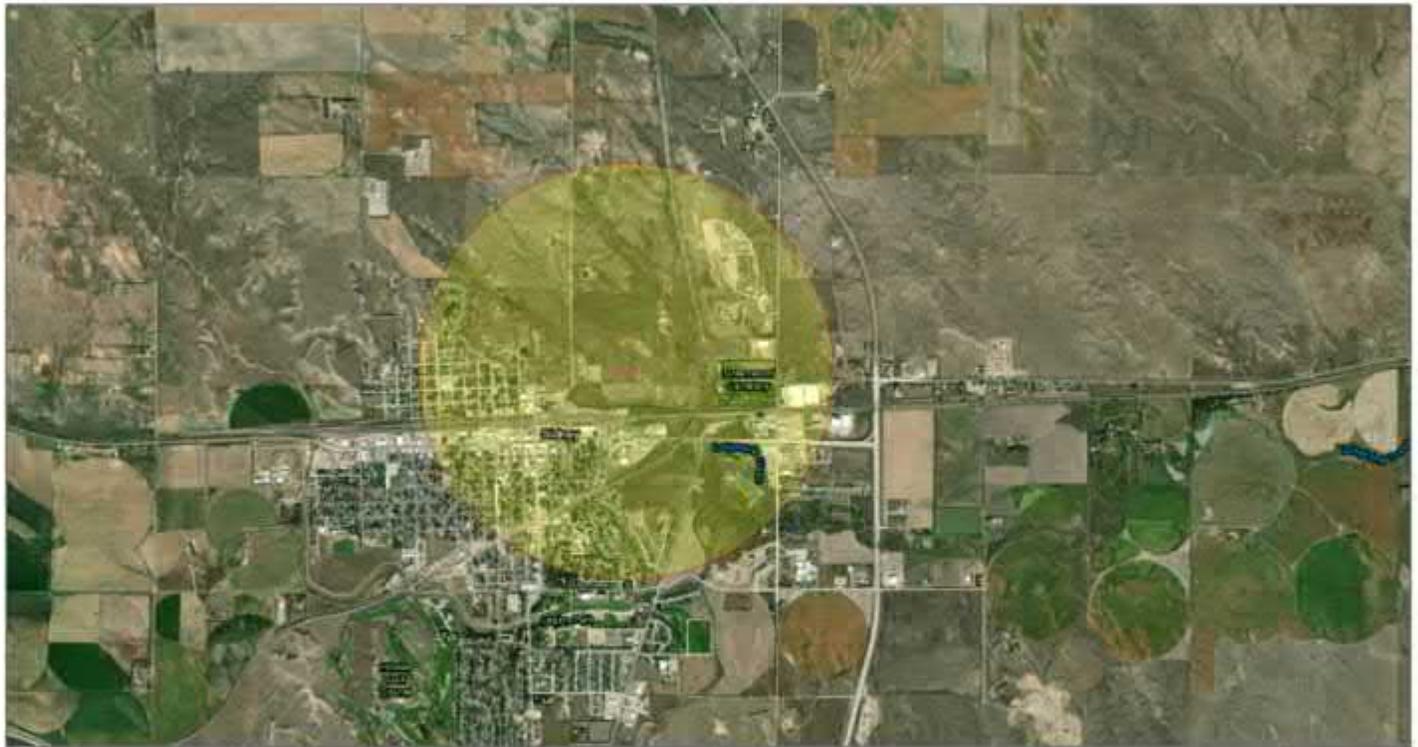
EJScreen Report (Version 2.0)
1 mile Ring Centered at 41.149706,-102.968416
NEBRASKA, EPA Region 7
Approximate Population: 2,199
Input Area (sq. miles): 3.14
 Sidney Solar Facility

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	64	67	49
EJ Index for Ozone	53	56	41
EJ Index for 2017 Diesel Particulate Matter*	56	59	46
EJ Index for 2017 Air Toxics Cancer Risk*	70	72	53
EJ Index for 2017 Air Toxics Respiratory HI*	60	65	49
EJ Index for Traffic Proximity	49	43	34
EJ Index for Lead Paint	26	25	17
EJ Index for Superfund Proximity	70	72	53
EJ Index for RMP Facility Proximity	46	33	16
EJ Index for Hazardous Waste Proximity	61	64	52
EJ Index for Underground Storage Tanks	39	33	27
EJ Index for Wastewater Discharge	17	21	16

EJ Index for the Selected Area Compared to All People's Blockgroups in the State/Region/US



This report shows the values for environmental and demographic indicators and EJScreen indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports.



September 20, 2022

◆ Sidney Solar Facility



Sites reporting to EPA

Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

Selected Variables	Value	State		EPA Region		USA	
		Avg.	%tile	Avg.	%tile	Avg.	%tile
Pollution and Sources							
Particulate Matter 2.5 (µg/m³)	5.2	7.77	4	8.26	0	8.74	1
Ozone (ppb)	47.2	41.9	97	44.1	87	42.6	84
2017 Diesel Particulate Matter* (µg/m³)	0.13	0.18	28	0.221	<50th	0.295	<50th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	10	22	6	26	<50th	29	<50th
2017 Air Toxics Respiratory HI*	0.2	0.26	40	0.33	<50th	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	170	720	40	410	54	710	44
Lead Paint (% Pre-1960 Housing)	0.59	0.35	77	0.33	80	0.28	83
Superfund Proximity (site count/km distance)	0.0096	0.13	8	0.1	3	0.13	3
RMP Facility Proximity (facility count/km distance)	1	1.5	51	0.95	67	0.75	76
Hazardous Waste Proximity (facility count/km distance)	0.061	0.73	23	1	19	2.2	9
Underground Storage Tanks (count/km²)	0.97	4.8	46	2.5	53	3.9	45
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.015	0.17	80	2.9	75	12	72
Socioeconomic Indicators							
Demographic Index	25%	25%	63	25%	62	36%	41
People of Color	12%	21%	46	20%	49	40%	24
Low Income	38%	28%	73	30%	69	31%	67
Unemployment Rate	4%	3%	71	4%	62	5%	47
Linguistically Isolated	0%	3%	58	2%	65	5%	45
Less Than High School Education	7%	9%	56	9%	50	12%	40
Under Age 5	6%	7%	48	6%	55	6%	58
Over Age 64	14%	15%	47	16%	41	16%	47

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>. (<https://www.epa.gov/haps/air-toxics-data-update>)

For additional information, see: www.epa.gov/environmentaljustice (<https://www.epa.gov/environmentaljustice>)

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.



Location: User-specified point center at 41.149706, -102.968416
 Ring (buffer): 1-miles radius
 Description: Sidney Solar Facility

Summary of ACS Estimates		2015 - 2019
Population		2,199
Population Density (per sq. mile)		649
People of Color Population		263
% People of Color Population		12%
Households		975
Housing Units		1,149
Housing Units Built Before 1950		478
Per Capita Income		28,514
Land Area (sq. miles) (Source: SF1)		3.39
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		0%

	2015 - 2019 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	2,199	100%	269
Population Reporting One Race	2,158	98%	453
White	2,097	95%	277
Black	18	1%	46
American Indian	17	1%	35
Asian	16	1%	58
Pacific Islander	0	0%	10
Some Other Race	10	0%	27
Population Reporting Two or More Races	41	2%	116
Total Hispanic Population	209	10%	108
Total Non-Hispanic Population	1,990		
White Alone	1,936	88%	260
Black Alone	18	1%	46
American Indian Alone	9	0%	35
Non-Hispanic Asian Alone	16	1%	58
Pacific Islander Alone	0	0%	10
Other Race Alone	0	0%	10
Two or More Races Alone	11	0%	36
Population by Sex			
Male	1,113	51%	148
Female	1,086	49%	151
Population by Age			
Age 0-4	141	6%	56
Age 0-17	595	27%	119
Age 18+	1,605	73%	179
Age 65+	303	14%	91

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2015 - 2019



EJSCREEN ACS Summary Report



Location: User-specified point center at 41.149706, -102.968416
 Ring (buffer): 1-miles radius
 Description: Sidney Solar Facility

	2015 - 2019 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	1,391	100%	169
Less than 9th Grade	27	2%	32
9th - 12th Grade, No Diploma	68	5%	45
High School Graduate	453	33%	90
Some College, No Degree	318	23%	120
Associate Degree	169	12%	80
Bachelor's Degree or more	356	26%	107
Population Age 5+ Years by Ability to Speak English			
Total	2,059	100%	253
Speak only English	1,964	95%	222
Non-English at Home ¹⁺²⁺³⁺⁴	95	5%	62
¹ Speak English "very well"	88	4%	62
² Speak English "well"	5	0%	17
³ Speak English "not well"	0	0%	10
⁴ Speak English "not at all"	2	0%	12
³⁺⁴ Speak English "less than well"	2	0%	12
²⁺³⁺⁴ Speak English "less than very well"	7	0%	17
Linguistically Isolated Households*			
Total	0	0%	10
Speak Spanish	0	0%	10
Speak Other Indo-European Languages	0	0%	10
Speak Asian-Pacific Island Languages	0	0%	10
Speak Other Languages	0	0%	10
Households by Household Income			
Household Income Base	975	100%	109
< \$15,000	132	14%	62
\$15,000 - \$25,000	100	10%	55
\$25,000 - \$50,000	261	27%	70
\$50,000 - \$75,000	214	22%	67
\$75,000 +	268	28%	102
Occupied Housing Units by Tenure			
Total	975	100%	109
Owner Occupied	542	56%	87
Renter Occupied	432	44%	91
Employed Population Age 16+ Years			
Total	1,652	100%	210
In Labor Force	1,177	71%	158
Civilian Unemployed in Labor Force	47	3%	34
Not In Labor Force	475	29%	135

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of anyrace.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.



EJSCREEN ACS Summary Report



Location: User-specified point center at 41.149706, -102.968416

Ring (buffer): 1-miles radius

Description: Sidney Solar Facility

	2015 - 2019 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	1,098	100%	191
English	1,053	96%	189
Spanish	25	2%	38
French	0	0%	47
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	0	0%	10
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	20	2%	47
Chinese	0	0%	10
Japanese	N/A	N/A	N/A
Korean	0	0%	10
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	0	0%	10
Other Asian	0	0%	10
Tagalog	0	0%	10
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	0	0%	10
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	0	0%	3
Total Non-English	45	4%	269

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
 N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2015 - 2019.
 *Population by Language Spoken at Home is available at the census tract summary level and up.



EJSCREEN Census 2010 Summary Report



Location: User-specified point center at 41.149706, -102.968416

Ring (buffer): 1-miles radius

Description: Sidney Solar Facility

Summary	Census 2010
Population	2,147
Population Density (per sq. mile)	634
People of Color Population	287
% People of Color Population	13%
Households	957
Housing Units	1,081
Land Area (sq. miles)	3.39
% Land Area	100%
Water Area (sq. miles)	0.00
% Water Area	0%

Population by Race	Number	Percent
Total	2,147	-----
Population Reporting One Race	2,114	98%
White	1,959	91%
Black	4	0%
American Indian	25	1%
Asian	47	2%
Pacific Islander	0	0%
Some Other Race	80	4%
Population Reporting Two or More Races	33	2%
Total Hispanic Population	198	9%
Total Non-Hispanic Population	1,949	91%
White Alone	1,860	87%
Black Alone	4	0%
American Indian Alone	19	1%
Non-Hispanic Asian Alone	47	2%
Pacific Islander Alone	0	0%
Other Race Alone	2	0%
Two or More Races Alone	17	1%

Population by Sex	Number	Percent
Male	1,060	49%
Female	1,087	51%

Population by Age	Number	Percent
Age 0-4	164	8%
Age 0-17	520	24%
Age 18+	1,627	76%
Age 65+	297	14%

Households by Tenure	Number	Percent
Total	957	
Owner Occupied	570	60%
Renter Occupied	387	40%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

Source: U.S. Census Bureau, Census 2010 Summary File 1.



QuickFacts

Nebraska; Cheyenne County, Nebraska; Sidney city, Nebraska

QuickFacts provides statistics for all states and counties, and for cities and towns with a **population of 5,000 or more**.

Table

All Topics	Nebraska	Cheyenne County, Nebraska	Sidney city, Nebraska
Total employment, 2020	866,139	2,919	X
PEOPLE			
Population			
Population Estimates, July 1 2021, (V2021)	△ 1,963,692	△ 9,529	△ 6,439
Population estimates base, April 1, 2020, (V2021)	△ 1,961,504	△ 9,468	△ 6,400
Population, percent change - April 1, 2020 (estimates base) to July 1, 2021, (V2021)	△ 0.1%	△ 0.6%	△ 0.6%
Population, Census, April 1, 2020	1,961,504	9,468	6,410
Population, Census, April 1, 2010	1,826,341	9,998	6,757
Age and Sex			
Persons under 5 years, percent	△ 6.4%	△ 6.1%	△ 6.5%
Persons under 18 years, percent	△ 24.6%	△ 23.4%	△ 23.5%
Persons 65 years and over, percent	△ 16.4%	△ 21.8%	△ 18.6%
Female persons, percent	△ 49.7%	△ 49.7%	△ 50.3%
Race and Hispanic Origin			
White alone, percent	△ 87.7%	△ 94.9%	△ 93.6%
Black or African American alone, percent (a)	△ 5.3%	△ 0.9%	△ 0.9%
American Indian and Alaska Native alone, percent (a)	△ 1.6%	△ 1.0%	△ 0.5%
Asian alone, percent (a)	△ 2.8%	△ 1.0%	△ 1.0%
Native Hawaiian and Other Pacific Islander alone, percent (a)	△ 0.1%	△ 0.1%	△ 0.0%
Two or More Races, percent	△ 2.4%	△ 2.1%	△ 3.2%
Hispanic or Latino, percent (b)	△ 12.0%	△ 8.6%	△ 8.6%
White alone, not Hispanic or Latino, percent	△ 77.4%	△ 87.4%	△ 87.4%
Population Characteristics			
Veterans, 2016-2020	113,567	626	422
Foreign born persons, percent, 2016-2020	7.4%	1.3%	1.8%
Housing			
Housing units, July 1, 2021, (V2021)	854,328	4,884	X
Owner-occupied housing unit rate, 2016-2020	66.2%	66.0%	59.7%
Median value of owner-occupied housing units, 2016-2020	\$164,000	\$98,700	\$101,800
Median selected monthly owner costs -with a mortgage, 2016-2020	\$1,412	\$1,201	\$1,237
Median selected monthly owner costs -without a mortgage, 2016-2020	\$539	\$462	\$472
Median gross rent, 2016-2020	\$857	\$804	\$786
Building permits, 2021	10,723	8	X
Families & Living Arrangements			
Households, 2016-2020	766,663	4,403	3,062
Persons per household, 2016-2020	2.44	2.12	2.07
Living in same house 1 year ago, percent of persons age 1 year+, 2016-2020	84.7%	89.0%	86.1%
Language other than English spoken at home, percent of persons age 5 years+, 2016-2020	11.8%	2.6%	3.5%
Computer and Internet Use			
Households with a computer, percent, 2016-2020	91.5%	90.8%	92.0%
Households with a broadband Internet subscription, percent, 2016-2020	85.6%	81.5%	82.6%
Education			
High school graduate or higher, percent of persons age 25 years+, 2016-2020	91.6%	94.6%	95.2%
Bachelor's degree or higher, percent of persons age 25 years+, 2016-2020	32.5%	25.5%	25.9%

Health			
With a disability, under age 65 years, percent, 2016-2020	7.7%	10.7%	11.8%
Persons without health insurance, under age 65 years, percent	△ 8.3%	△ 8.3%	△ 5.9%
Economy			
In civilian labor force, total, percent of population age 16 years+, 2016-2020	69.0%	66.1%	67.0%
In civilian labor force, female, percent of population age 16 years+, 2016-2020	64.6%	60.9%	61.3%
Total accommodation and food services sales, 2017 (\$1,000) (c)	3,957,818	23,599	D
Total health care and social assistance receipts/revenue, 2017 (\$1,000) (c)	16,060,437	75,052	75,052
Total transportation and warehousing receipts/revenue, 2017 (\$1,000) (c)	7,483,576	42,732	14,429
Total retail sales, 2017 (\$1,000) (c)	31,214,697	646,382	D
Total retail sales per capita, 2017 (c)	\$16,283	\$66,955	NA
Transportation			
Mean travel time to work (minutes), workers age 16 years+, 2016-2020	18.9	14.4	11.4
Income & Poverty			
Median household income (in 2020 dollars), 2016-2020	\$63,015	\$52,270	\$51,880
Per capita income in past 12 months (in 2020 dollars), 2016-2020	\$33,205	\$30,145	\$29,398
Persons in poverty, percent	△ 10.8%	△ 10.0%	△ 10.3%
BUSINESSES			
Businesses			
Total employer establishments, 2020	54,791	275	X
Total employment, 2020	866,139	2,919	X
Total annual payroll, 2020 (\$1,000)	41,198,526	127,759	X
Total employment, percent change, 2019-2020	1.2%	-32.2%	X
Total nonemployer establishments, 2019	140,567	739	X
All employer firms, Reference year 2017	43,344	299	218
Men-owned employer firms, Reference year 2017	23,470	S	S
Women-owned employer firms, Reference year 2017	6,340	S	S
Minority-owned employer firms, Reference year 2017	2,101	S	S
Nonminority-owned employer firms, Reference year 2017	37,399	S	S
Veteran-owned employer firms, Reference year 2017	2,656	S	S
Nonveteran-owned employer firms, Reference year 2017	35,247	S	S
GEOGRAPHY			
Geography			
Population per square mile, 2020	25.5	7.9	856.4
Population per square mile, 2010	23.8	8.4	975.2
Land area in square miles, 2020	76,817.87	1,196.01	7.49
Land area in square miles, 2010	76,824.17	1,196.29	6.93
FIPS Code	31	31033	3145295

[About datasets used in this table](#)

Value Notes

 Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info  icon to the row in TABLE view to learn about sampling error.

The vintage year (e.g., V2021) refers to the final year of the series (2020 thru 2021). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2016-2020 ACS 5-year estimates to other ACS estimates. For more information, please visit the [2020 5-year ACS Comparison Guidance](#) page.

Fact Notes

- (a) Includes persons reporting only one race
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data
- (b) Hispanics may be of any race, so also are included in applicable race categories

Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper in open ended distribution.
- F Fewer than 25 firms
- D Suppressed to avoid disclosure of confidential information
- N Data for this geographic area cannot be displayed because the number of sample cases is too small.
- FN Footnote on this item in place of data
- X Not applicable
- S Suppressed; does not meet publication standards
- NA Not available
- Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

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APPENDIX E
PHASE I ENVIRONMENTAL
SITE ASSESSMENT

Phase I Environmental Site Assessment

MEAN Solar Sites Portfolio

SE Municipal Solar - Sidney

Section 29 Township 14 Range 49W

Sidney, Cheyenne County, Nebraska

July 6, 2022

Terracon Project No. 0522P061 Task 10



Prepared for:

Sandhills Energy LLC

Omaha, Nebraska

Prepared by:

Terracon Consultants, Inc.

Omaha, Nebraska

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials



July 6, 2022

Sandhills Energy LLC
1209 Harney St, #400
Omaha, NE 68102

Attn: Mr. Michael Knapp
P: (402) 389-1668
E: michael@sandhillsenergyco.com

Re: Phase I Environmental Site Assessment
MEAN Solar Sites Portfolio
SE Municipal Solar - Sidney
Section 36 Township 14 Range 16W
Sidney, Holt County, Nebraska
Terracon Project No. 0522P061 Task 10

Dear Mr. Knapp:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in accordance with Terracon Proposal No. P05227217 dated May 10, 2022 and Master Services Agreement dated January 7, 2022.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide geotechnical, environmental, construction materials, and facilities services on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at www.terracon.com. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

for Jamie M. Murphy, PG
Project Manager

Megan R. Hughes
Senior Associate

Attachments

Terracon Consultants Inc. 15080 A Cir Omaha, NE 68144-5558

P 402-330-2202 F 402-330-7606 terracon.com



Environmental

Facilities

Geotechnical

Materials

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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Terracon Proposal No. P05227217 dated May 10, 2022 and Master Services Agreement dated January 7, 2022, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Megan R. Hughes, Environmental Professional. Matthew A. Harbeck performed the site reconnaissance on May 31, 2022.

Findings and Opinions

A summary of findings is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Site Description and Use

The site is located within an approximate 30.5-acre plot of land in Sidney, Nebraska, corresponding to a portion of Cheyenne County Parcel ID 170001237. The site is mainly grassland.

Historical Information

The site was historically vacant and unimproved since at least 1899. Since at least 1953, several buildings are apparent east of the site. Most of the buildings were razed since at least 1985, a warehouse building is still present (since at least 2006). To the north was historically agricultural land and a municipal landfill and sand borrow pit since at least 1985. The area to the south was developed with a road since at least 1899 followed by railroad tracks. Livestock holding pens were apparent since approximately 1972 to 1985. To the southeast, a junkyard was apparent since at least 1985. The area to the west has been developed with a road and several structures since at least 1899. The adjoining lot was expanded in 1999 with a parking/storage area and a new warehouse building constructed since at least 2006 used by the City of Sidney for electrical equipment storage.

Records Review

Selected federal and state environmental regulatory databases, as well as responses from state regulatory agencies, were reviewed. The site was not identified in the environmental regulatory database report. The facilities listed in the database report do not appear to represent recognized environmental conditions (RECs) to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Site Reconnaissance

At the time of the site reconnaissance, the site was vacant grassland. The adjoining property consisted of a warehouse building east of the site with metal storage containers and four wrecked vehicles sitting in the grass near the building. A small electrical building also sits just east of the site unknown warehouse building. A monitoring well was observed to be located north of the site to monitor for the Sidney Public Water Supply site. Observations at the site do not represent a REC.

Adjoining Properties

The adjoining property to the north was historically used as a municipal landfill and sand borrow pit since at least 1985. This site was not listed in the government records review, although is registered as an inactive Municipal Solid Waste Landfill, transfer station, and yard waste compost facility on the Nebraska Department of Environment and Energy's Interactive Map Server. Landfills have potential for leachate to form from the waste breakdown and impact groundwater. However, based on the cross-gradient topographic location, distance from the landfill to the site boundary, depth to groundwater in the area of the site, and our understanding of the potential development activities (shallow footings) the landfill does not represent a REC to the site at this time.

Significant Data Gaps

No significant data gaps were identified.

Conclusions

We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 1527-13 for the SE Municipal Solar - Sidney site located within Section 29 Township 14 Range 49W, Sidney, Cheyenne County, Nebraska, the site. Terracon did not identify RECs or Controlled RECs (CRECs) were not identified in connection with the site.

Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, Terracon did not identify RECs or CRECs. As such, no additional investigation is warranted at this time.

1.0 INTRODUCTION

1.1 Site Description

Site Name	SE Municipal Solar - Sidney
Site Location/Address	Section 29 Township 14 Range 49W, Sidney, Cheyenne County, Nebraska
Land Area	Located within an approximate 30.5-acre parcel of land
Site Improvements	none
Anticipated Future Site Use	Redevelopment for commercial use (solar farm)
Reason for the ESA	Due diligence

The location of the site is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. The site and adjoining properties are depicted on the Site Diagram, which is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix F.

1.2 Scope of Services

This Phase I ESA was performed in accordance with Terracon Proposal No. P05227217 dated May 10, 2022 and Master Services Agreement dated January 7, 2022, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

ASTM E1527-13 contains a new definition of "migrate/migration," which refers to "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." By including this explicit reference to migration in ASTM E1527-13, the Standard clarifies that the potential for vapor migration should be addressed as part of a Phase I ESA. This Phase I ESA has considered vapor migration in evaluation of RECs associated with the site.

1.3 Standard of Care

This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations, ASTM Deviations and Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder. This ESA was further limited by the following:

- At the time this report was issued, Terracon has not received a response from Sidney Fire Department. Based on other information reviewed, this is not considered a significant data gap.

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data

gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of Sandhills Energy LLC. Use or reliance by any other party is prohibited without the written authorization of Sandhills Energy LLC and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Master Services Agreement. The limitation of liability defined in the Master Services Agreement is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of this report is subject to ASTM E1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-13.

1.6 Client Provided Information

Prior to the site visit, Mr. Michael Knapp, client's representative, was asked to provide the following user questionnaire information as described in ASTM E1527-13 Section 6. His responses were provided via email.

Client Questionnaire Responses

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Specialized Knowledge or Experience that is material to a REC in connection with the site.			X
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.			X
Actual Knowledge of a Lower Purchase Price because contamination is known or believed to be present at the site.			X
Commonly Known or Reasonably Ascertainable Information that is material to a REC in connection with the site.			X
Obvious Indicators of Contamination at the site.		X	

Mr. Knapp indicated there is a landfill adjacent to the project site. The landfill is considered a REC in connection to the site. Additional details can be found in Section 6.0.

2.0 PHYSICAL SETTING

Physical Setting Information		Source
Topography		
Site Elevation	Approximately 4,100 feet above sea level	USGS Topographic Map, Sidney, Nebraska 2022 (Appendix A)
Topographic Gradient	Sloping toward the southeast	
Closest Surface Water	Unnamed tributary to Lodgepole Creek located approximately 0.02 miles to the east and unnamed tributary to Lodgepole Creek located approximately 0.11 miles to the west.	
Soil Characteristics		
Soil Type	Bayard series; Altvan-Dix complex; Canyon-Bayard complex; Gravel Pit	Cheyenne County, NE USDA-NRCS Web Soil Survey issued Site accessed June 3, 2022
Description	Bayard series: consists of very deep well drained soils on foot slopes and stream terraces formed in colluvial-alluvial sediments. Altvan-Dix complex: consists of moderately deep to sand or gravelly sand, well drained soils formed in	

Physical Setting Information		Source
	loamy sediments on uplands hillslopes and valley terraces. Canyon-Bayard complex: consists of well drained soils that are shallow to weakly cemented limestone or very fine grain sandstone.	
Geology/Hydrogeology		
Formation	Tertiary White River	Geologic Highway Map of the Northern Great Plains Region, 1984
Description	Tertiary-aged White River group is composed of clay, some claystone, silt, and siltstone and is approximately 195 feet in thickness.	Geologic Bedrock Map of Nebraska, Nebraska Geological Survey Conservation and Survey Division, 1986
Estimated Depth to First Occurrence of Groundwater	Approximately 65 to 85 feet	Nebraska Department of Natural Resources Database Online Registered Groundwater Wells Data Retrieval
*Hydrogeologic Gradient	Not known - may be inferred to be parallel to topographic gradient (primarily to the south).	

* The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, in order to help identify RECs associated with past uses. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps, Aerial Photographs, Sanborn Maps

Readily available historical USGS topographic maps and selected historical aerial photographs (at approximately 10 to 15 year intervals) were reviewed to evaluate land development and obtain information concerning the history of development on and near the site. Reviewed historical topographic maps and aerial photographs are summarized below.

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. Based upon inquiries to the above-listed Sanborn provider, Sanborn maps were not available for the site.

- Topographic map: Sidney, Nebraska, published in 1899 (1:125,000)

- Topographic map: Sidney, Nebraska, published in 1972, 2014, and 2017 (1:24,000)
- Aerial photograph: USGS 1953, 1972 (1"=500')
- Aerial photograph: USDA 1985 (1"=500')
- Aerial photograph: USGS/DOQQ 1993, 1999 (1"=500')
- Aerial photograph: USDA/NAIP 2006, 2009, 2012, 2016 (1"=500')

Direction	Description
Site	<p>Topographic Maps: 1899-2017:</p> <p>Aerial Maps: 1953-2016: The property appears to be utilized as agricultural land.</p>
North	<p>Topographic Maps: 1899-2017: The area to the north appears vacant and unimproved.</p> <p>Aerial Maps: 1953-1972: The area to the north appears to be utilized as agricultural land. 1985: There appears to be a gravel pit with road access and new buildings apparent to the northeast . 1993-2016: More earthwork apparent to the northeast in conjunction with landfill.</p>
East	<p>Topographic Maps: 1899: The area to the east appears to be mostly vacant and unimproved land followed by a stream feature and railroad tracks. 1972: A small structure is located to the east. 2014-2017: A road is developed to the east of the site. No building features are depicted.</p> <p>Aerial Maps: 1953-1972: Several buildings resembling residential structures are apparent to the east of the site followed by agricultural land, a stream feature, and railroad tracks. 1985-1999: The structures to the east have been razed. 2006-2016: One warehouse structure is located to the east of the site.</p>
South	<p>Topographic Maps: 1899-2017: The area to the south appears to be mostly vacant and unimproved followed by a road and railroad tracks.</p> <p>Aerial Maps: 1953: The area to the south appears to be developed with a road, followed by vacant land used for agricultural purposes and a railroad. 1972: Livestock holding pens are now apparent to the south. 1985-2016: The livestock holding pens are no longer present. The area to the southeast has many vehicles present and appears to be a junkyard.</p>

West	<p>Topographic Maps:</p> <p>1899: The area to the west appears to be developed with a road and structures to the southwest.</p> <p>1972-2017: The area to the west appears to be mostly vacant with a stream feature followed by a road.</p> <p>Aerial Maps:</p> <p>1953-1993: The area to the west appears to be developed with a road, followed by several buildings.</p> <p>1999: The lot is expanded into a parking/storage area.</p> <p>2006-2016: New warehouse building is constructed.</p>
------	--

3.2 Historical City Directories

The EDR Digital Archive city directories used in this study were made available through EDR (selected years reviewed: 1992-2017) and were reviewed at approximate five-year intervals, if readily available. The site property does not have a current street address.

Historical City Directories

Direction	Description
Site	Not listed.
North	The properties to the north consist of mainly individual property owner listings from 2000 to 2014.
East	The properties to the east mainly individual property owner listings and occupant unknown listings from 1992 to 2017.
South	The properties to the south are mainly individual property owner listings and occupant unknown listings from 1992 to 2017.
West	The properties to the west consist of mostly individual property owner listings and several commercial business and individual property owner listings from 1992 to 2017.

3.3 Site Ownership

Based on a review of information obtained from the Cheyenne County assessor’s records, the current site owner is the City of Sidney.

3.4 Title Search

A title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.5 Environmental Liens and Activity and Use Limitations

The EDR regulatory database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases. Based on a review of the database report, the site was not listed on the EC or IC databases. Please note that in addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Environmental lien and activity and use limitation records recorded against the site were not provided by the client.

3.6 Interviews Regarding Current and Historical Site Uses

The following individual was interviewed regarding the current and historical use of the site.

Interviews

Interviewer	Name / Phone #	Title	Date/Time
Ms. Jamie Murphy	Mike Palmer / 308-254-6345	Electric Superintendent	June 3, 2022

Terracon interviewed Mr. Mike Palmer, owner representative of the site, via phone call. Mr. Robert Sieghartner provided the following information.

- Mr. Mike Palmer was not aware of pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the site.
- Mr. Mike Palmer was not aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site.
- Mr. Mike Palmer was not aware of notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.
- Mr. Mike Palmer indicated that no hazardous substances or petroleum products are used or stored at the site.
- Mr. Mike Palmer was not aware of releases of petroleum products or hazardous substances related to the property or immediate surrounding area.

3.7 Prior Report Review

Terracon requested the client provide any previous environmental reports, permits, registrations, and geotechnical reports they are aware of for the site. Previous reports were not provided by the client to Terracon for review.

4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company. The purpose of the records review was to identify RECs in connection with the site. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated. The scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words up-gradient, cross-gradient and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.

Federal Databases

Database	Description	Distance (miles)	Listings
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System	0.5	3
CERCLIS / NFRAP	Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned	0.5	0
ERNS	Emergency Response Notification System	Site	0
IC / EC	Institutional Control/Engineering Control	Site	0
NPL	National Priorities List	1	0
NPL (Delisted)	National Priorities Delisted List	0.5	0
RCRA CORRACTS/ TSD	RCRA Corrective Action Activity	1	0
RCRA Generators	Resource Conservation and Recovery Act	Site and adjoining properties	0
RCRA Non-CORRACTS/ TSD	RCRA Non-Corrective Action Activity	0.5	0

State/Tribal Databases

Database	Description	Distance (miles)	Listings
Brownfields	Brownfields Inventory Listing	0.5	0
IC	Institutional Control Registry	Site	0
LUST	Leaking Underground Storage Tanks	0.5	10
SHWS	State Hazardous Waste Sites	1	2
SWF/LF	Solid Waste Facilities/Landfills	0.5	0
UST	Underground Storage Tank	Site and adjoining properties	0
VCP	Voluntary Cleanup Program	0.5	0

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D.

The following table summarizes the site-specific information provided by the database and/or gathered by this office for sites within the ASTM search radius that have been deemed by the Environmental Professional to have the potential to impact the subject property based on the type of facility, distance, and anticipated gradient relative to the site. Facilities are listed in order of proximity to the site.

Listed Facilities

Facility Name and Location	Estimated Distance / Direction/Gradient	Database Listings	Is a REC, CREC, or HREC to the Site
Alta Convenience #62 440 Illinois Avenue	Approximately 0.257 miles south-southwest/ cross-gradient	LUST, UST, Hist UST	No

Alta Convenience #62

A listing for Alta Convenience #62 was under the following databases, a leaking underground storage tank (LUST), underground storage tank (UST), and historical UST appears in the regulatory database report at 440 Illinois Avenue. This facility reportedly contains a 12,000-gallon #2 diesel UST, 12,000-gallon gasoline UST, and two 6,000-gallon gasoline USTs. A diesel, gasoline, and waste oil release was discovered in 1998 and the facility is listed as a no further action (incident closed status). Based on the regulatory status and distance to the facility, the reported release is not considered a REC.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed two facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, these facilities were not identified as the site or adjacent properties. These facilities are listed in the database report in Appendix D.

4.2 Local Agency Inquiries

Agency Contacted/ Contact Method	Response
Nebraska State Fire Marshall by online request	The Nebraska State Fire Marshall Office was contacted via online form regarding environmental records for the site on June 3, 2022. On June 15, 2022, Ms. Regina Shields with the Nebraska State Fire Marshall responded indicating there were no records found for the site.
Nebraska Department of Environment and Energy by email ndee.records@nebraska.gov	The Nebraska Department of Environment and Energy was contacted regarding environmental records for the site on June 3, 2022. On June 6, 2022, Joe Thiesfeld responded indicating there were no records found for the site. Mr. Thiesfeld indicated there were facilities found near the site and could be viewed on Nebraska Department of Environment and Energy's Interactive Map Server .
Sidney Fire Department by phone 308-254-5523	The Sidney Fire Department was contacted via phone regarding environmental records for the site on June 3, 2022. To date, a response has not been received by the Sidney Fire Department.
Panhandle Public Health District by email kengel@pphd.org	The Panhandle Public Health District was contacted regarding environmental records for the site on June 3, 2022. Ms. Melissa Hass responded on June 6, 2022 indicating the Panhandle Public Health District does retain records of environmental assessments for properties and does not have any records for the property.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. The site and adjoining properties are depicted on the Site Diagram, which is included in Exhibit 2 of Appendix A. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix B. Credentials of the individuals planning and conducting the site visit are included in Appendix E.

General Site Information

Site Reconnaissance	
Field Personnel	Matthew A. Harbeck
Reconnaissance Date	May 31, 2022
Weather Conditions	Partly cloudy, warm
Site Contact/Title	Mike Palmer / Electric Superintendent
Site	
Drinking Water	City of Sidney
Wastewater	City of Sidney
Electric	City of Sidney
Natural Gas	Black Hills Energy

5.2 Overview of Current Site Occupants

The site is located within an approximate 30.5-acre plot of land in Sidney, Nebraska, corresponding to a portion of Cheyenne County Parcel ID 170001237. The site is mainly grassland.

5.3 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an “X”) are discussed in more detail following the table.

Site Characteristics

Category	Item or Feature	Observed or Identified
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Ventilation hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	
	Paint booths	

Category	Item or Feature	Observed or Identified
	Sub-grade mechanic pits	
	Wash-down areas or carwashes	
	Pesticide/herbicide production or storage	
	Printing operations	
	Metal finishing (e.g., electroplating, chrome plating, galvanizing, etc.)	
	Salvage operations	
	Oil, gas or mineral production	
	Other processes or equipment	
Aboveground Chemical or Waste Storage	Aboveground storage tanks	
	Drums, barrels and/or containers ≥ 5 gallons	
	MSDS or SDS	
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, French drains, catch basins and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	
	Oil/water separators, clarifiers, sand traps, triple traps, interceptors	
	Pipeline markers	
	Interior floor drains	
Electrical Transformers/PCBs	Transformers and/or capacitors	
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	
	Quarries or pits	

Category	Item or Feature	Observed or Identified
	Wastewater lagoons	
	Wells	

Features listed in the table above were not observed during the site reconnaissance.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North/Northeast	Sand borrow pit, groundwater monitoring well, and Sidney Landfill.
East	Warehouse building, four (4) wrecked vehicles, and a pump house followed by a driveway to the Sidney landfill, followed by grassland.
South/Southeast	Elm Street followed by vehicle impound lot and agricultural land. Several pole mounted transformers were observed to be located south and southeast of the site boundary.
West	Sidney Power District facility

A sand borrow pit and a groundwater monitoring well (associated with the Sidney Public Water Supply) is located adjacent to the north of the site. The borrow pit appears to be utilized in the landfill operations located to the northeast of the site.

A recycling facility is located adjacent to the northeast of the site and is affiliated with the Sidney Landfill. This site was not listed in the government records, but is registered as an inactive Municipal Solid Waste Landfill, transfer station, and yard waste compost facility on the [Nebraska Department of Environment and Energy's Interactive Map Server](#). Historical groundwater and methane monitoring work plans and a site map are available; however, no other documentation for this site was uploaded at the time the report was written. However, based on the cross-gradient topographic location, distance from the landfill to the site boundary, depth to groundwater in the area of the site, and our understanding of the potential development activities (shallow footings) the landfill does not represent a REC to the site at this time.

Terracon observed four (4) wrecked vehicles east of the site. Wrecked automotive vehicles have the potential to leak petroleum and other automotive liquid wastes onto the ground surface. Staining could not be observed due to the tall vegetation. Based on the location of the vehicles they do not represent a REC.

During the site reconnaissance, Terracon observed five pole-mounted transformers located south and southeast of the site; however, information with regard to PCB content of the transformer fluids were not observed. Some transformers contain mineral oil which may contain PCBs.

The City of Sidney maintains responsibility for the transformers, and if the transformers were “PCB containing,” the City of Sidney is not required to replace the transformer fluids until a release is identified. However, evidence of current or prior releases was not observed in the vicinity of the transformers during the site reconnaissance. Due to the lack of observed staining and releases, the presence of the pole-mounted transformers at the site is not considered a REC at this time.

A vehicle impound lot is located adjacent to the south of the site. Facilities where vehicles are stored have the potential to leak petroleum products and vehicle fluids. Due to the groundwater flow direction and the location of this facility, the facility operations are not considered to be a REC.

The Sidney Power District facility is located adjacent to the west of the site. This facility stores transformers and additional equipment outside on a gravel lot. This facility is not considered to be a REC.

7.0 ADDITIONAL SERVICES

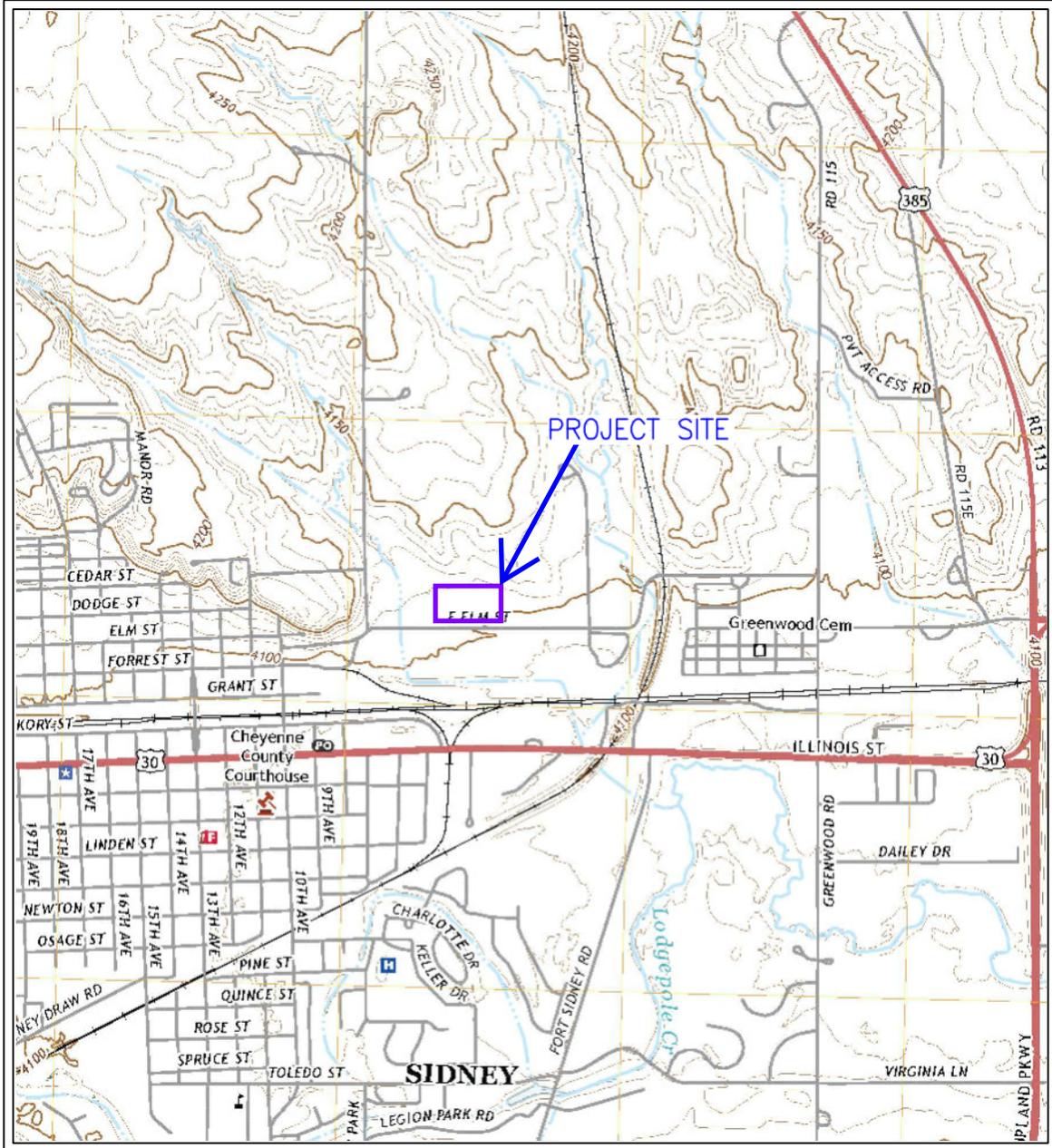
Per the agreed scope of services specified in the proposal, additional services (e.g. asbestos sampling, lead-based paint sampling, wetlands evaluation, lead in drinking water testing, radon testing, vapor encroachment screening, etc.) were not conducted.

8.0 DECLARATION

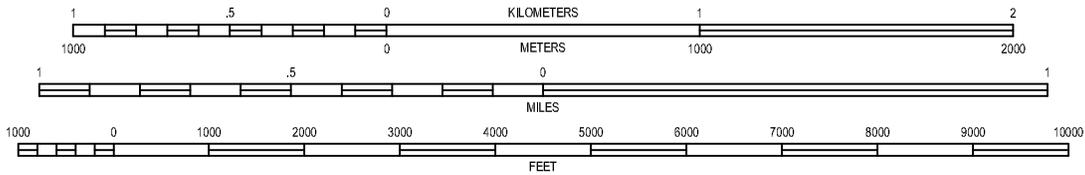
I, Megan R. Hughes, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Megan R. Hughes
Senior Associate

APPENDIX A
EXHIBIT 1 – TOPOGRAPHIC MAP
EXHIBIT 2 – SITE DIAGRAM



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SIDNEY, NEBRASKA
QUADRANGLE
2022

7.5 MINUTE SERIES (TOPOGRAPHIC)



Project Mngr: MRH	Project No. 0522P061	 Consulting Engineers and Scientists 15080 A CIRCLE OMAHA, NE 68144 PH. (402) 330-2202 FAX. (402) 330-7606	TOPOGRAPHIC / LOCATION MAP	EXHIBIT
Drawn By: PAI	Scale: AS SHOWN		SE MUNICIPAL SOLAR – SIDNEY ELM STREET SIDNEY, CHEYENNE COUNTY NEBRASKA	1
Checked By: MRH	File No. 0522P061T10			
Approved By: MRH	Date: 5/25/22			

**APPENDIX B
SITE PHOTOGRAPHS**

Project Name: SE Municipal Solar - Sidney
Terracon Project No. 0522P061
Date Photos Taken: May 31, 2022



Photo #1 View of site looking southeast from the middle of the site.



Photo #2 View of unnamed building on the adjacent eastern property.



Photo #3 View of northern portion of the site from the middle of the site.



Photo #4 View of eastern portion of the site from the middle of the site.



Photo #5 View of southern adjoining property looking south from the site.



Photo #6 View of adjoining property to the west of the site.

Project Name: SE Municipal Solar - Sidney
Terracon Project No. 0522P061
Date Photos Taken: May 31, 2022



Photo #7 View of sand borrow pit northeast of the site.



Photo #8 View of decrepit vehicles east of the site.



Photo #9 View of unnamed building to the east of the site.



Photo #10 View of burn barrel to the east of the site.



Photo #11 View of the inside of the burn barrel.



Photo #12 View of wood pile to the east of the site.

Project Name: SE Municipal Solar - Sidney
Terracon Project No. 0522P061
Date Photos Taken: May 31, 2022



Photo #13 View of electrical building to the east of the site.



Photo #14 View of southeast adjoining property (vehicle impound lot) looking south.



Photo #15 View of concrete stockpile on the eastern adjoining property, looking northeast.



Photo #16 View of recycling facility on the northeastern property, looking northwest.



Photo #17 View of large trash bins on the recycling facility to the northeast, looking west.



Photo #18 View of Elm Street, looking west from the entrance to the site.

Project Name: SE Municipal Solar - Sidney
Terracon Project No. 0522P061
Date Photos Taken: May 31, 2022



Photo #19 View of entrance to site from Elm Street, looking west.



Photo #20 View of Sidney Power District Facility, the western adjoining property.



Photo #21 View of Sidney Power District facility, the western adjoining property.



Photo #22 View of transformer caps on the western adjoining property.



Photo #23 View of piping on the western adjoining property.

APPENDIX C
HISTORICAL DOCUMENTATION AND USER QUESTIONNAIRE

SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Inquiry Number: 6986132.40

May 18, 2022

EDR Historical Topo Map Report

with QuadMatch™



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

EDR Historical Topo Map Report

05/18/22

Site Name:

SE Municipal Solar - Sidney
Section 29 Township 14 Range
Sidney, NE 69162
EDR Inquiry # 6986132.40

Client Name:

Terracon
15080 A Circle
Omaha, NE 68144
Contact: Andrew Herman



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

Coordinates:

P.O.#	NA	Latitude:	41.149927 41° 9' 0" North
Project:	0522P061 Task 10	Longitude:	-102.9667 -102° 58' 0" West
		UTM Zone:	Zone 13 North
		UTM X Meters:	670620.43
		UTM Y Meters:	4557393.22
		Elevation:	4107.08' above sea level

Maps Provided:

2017
2014
1972
1899

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2017 Source Sheets



Sidney
2017
7.5-minute, 24000

2014 Source Sheets



Sidney
2014
7.5-minute, 24000

1972 Source Sheets

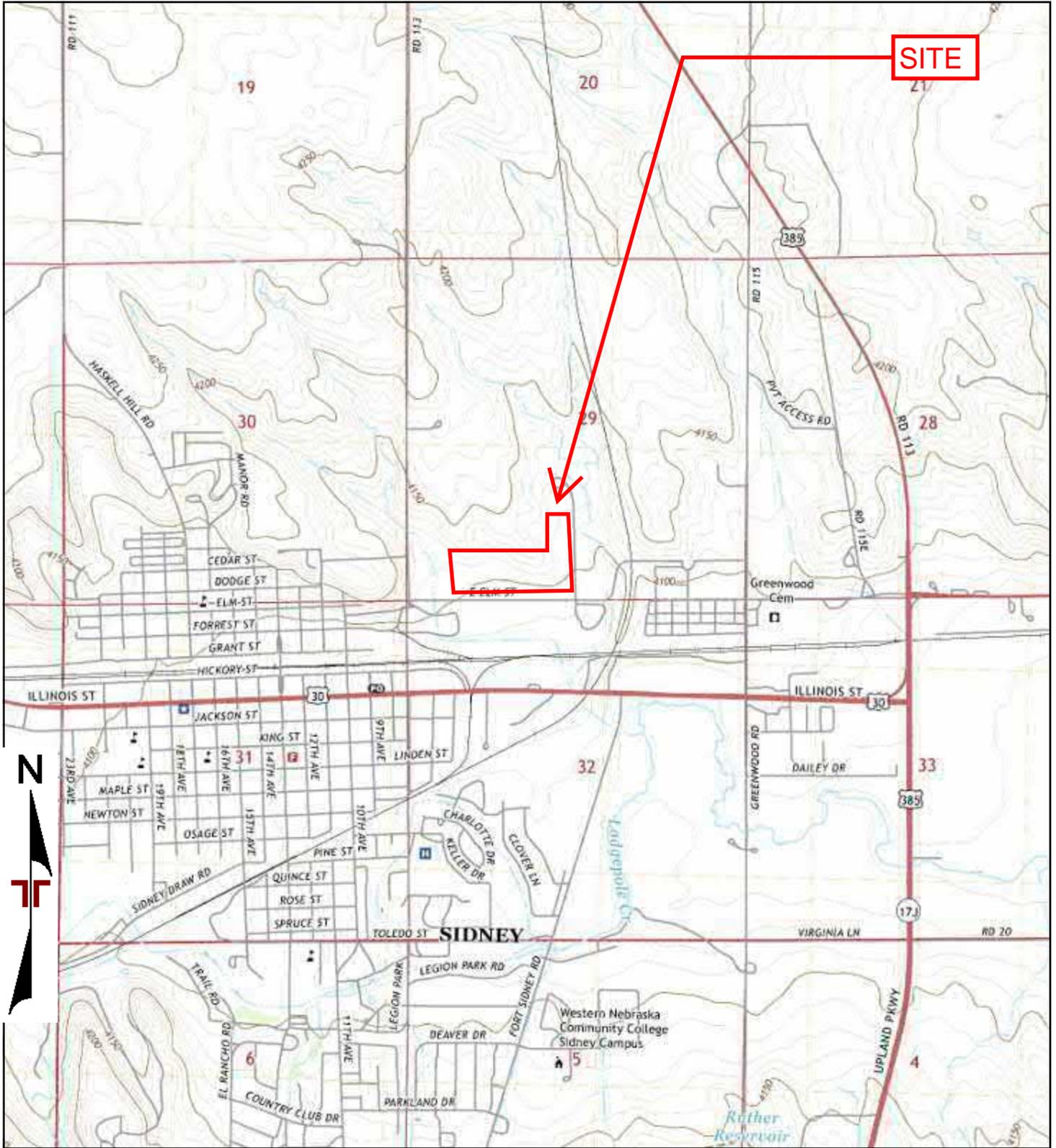


Sidney
1972
7.5-minute, 24000
Aerial Photo Revised 1972

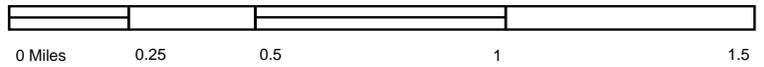
1899 Source Sheets



Sidney
1899
30-minute, 125000



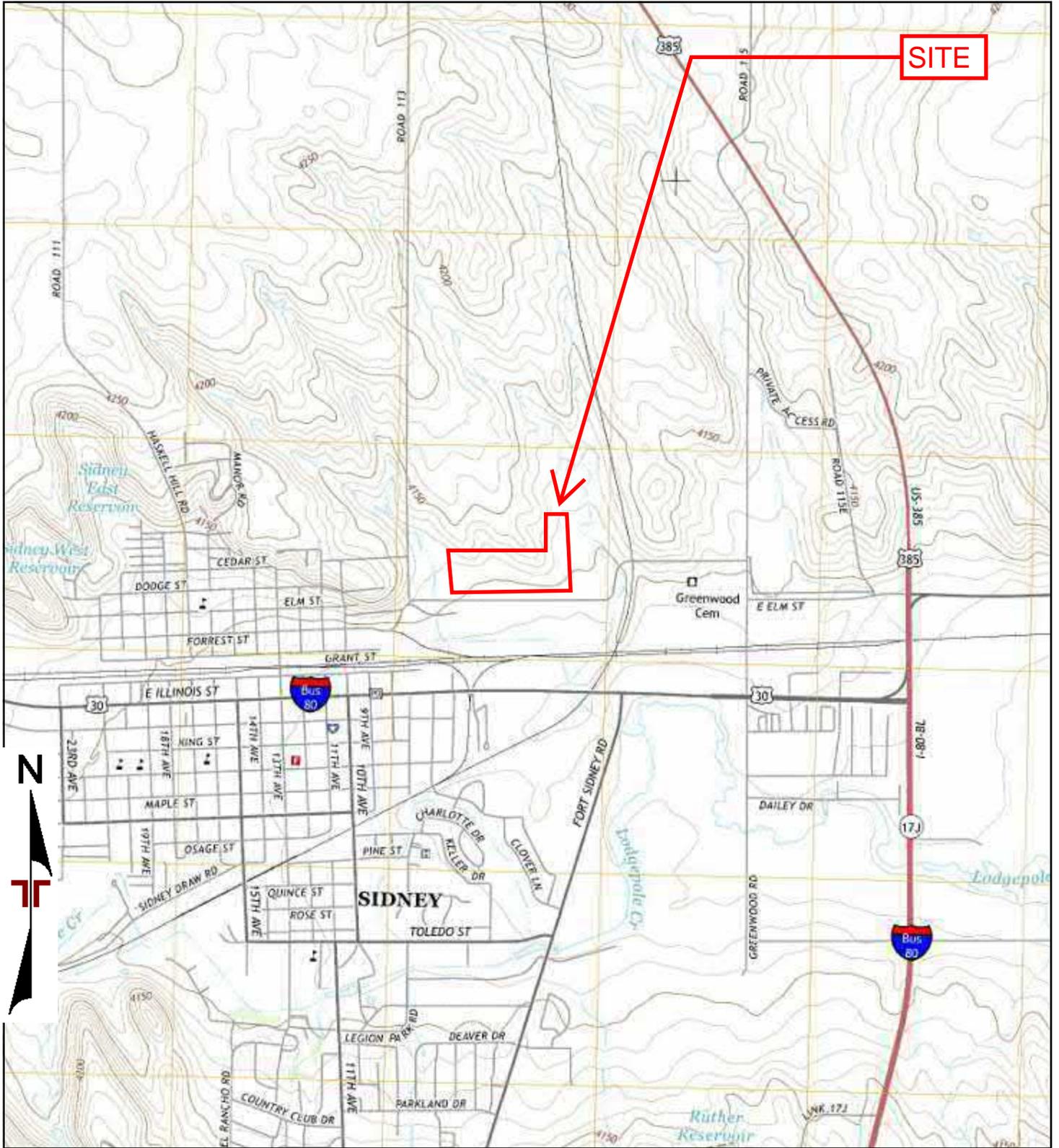
TP, Sidney, 2017, 7.5-minute



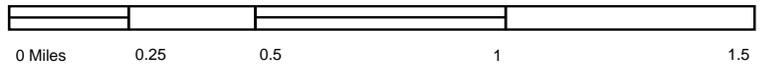
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Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2017



2017 TOPOGRAPHIC MAP	



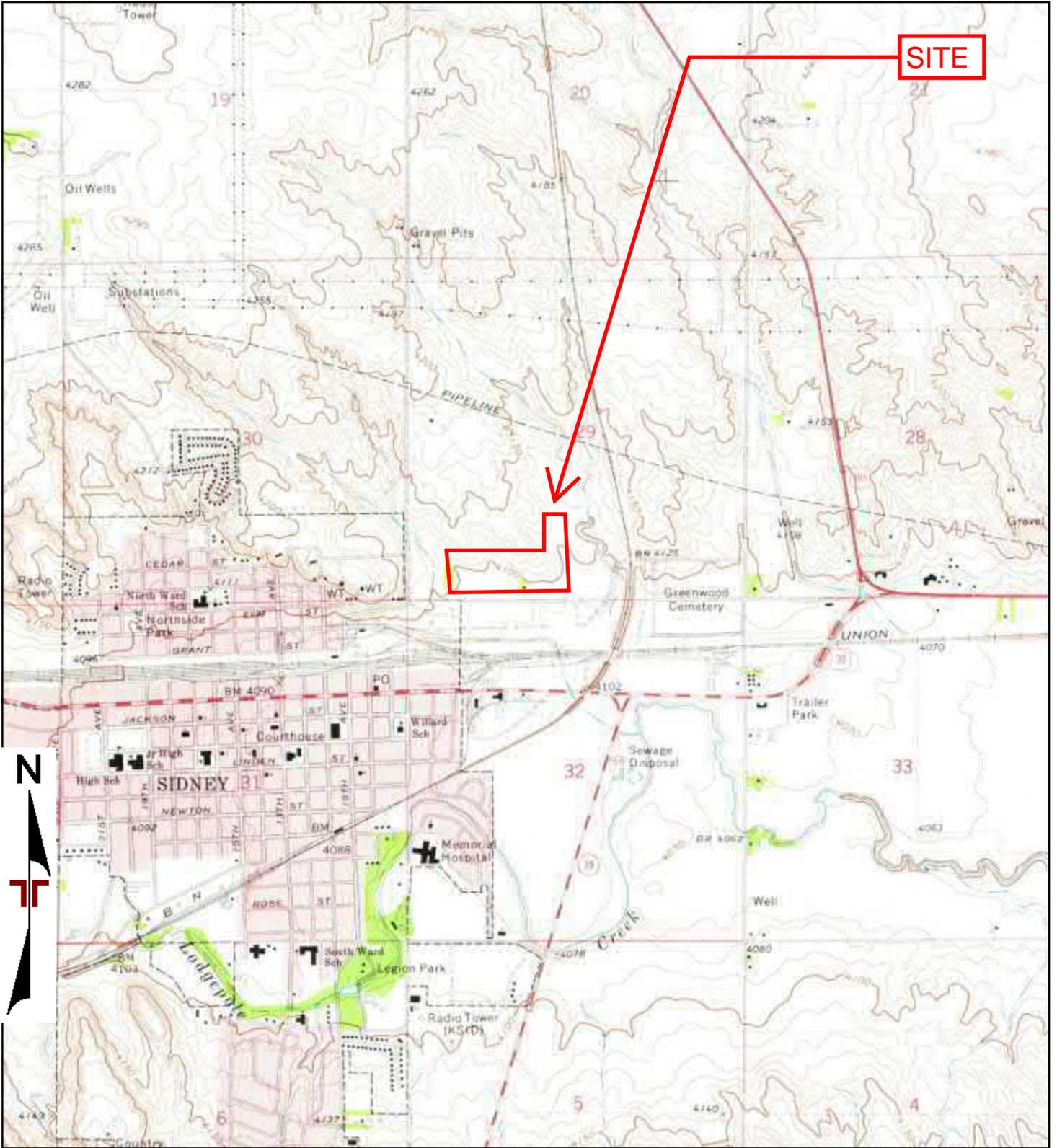
TP, Sidney, 2014, 7.5-minute



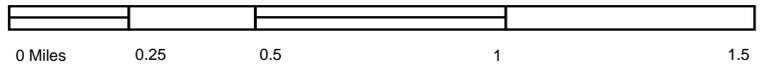
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 2014



2014 TOPOGRAPHIC MAP	



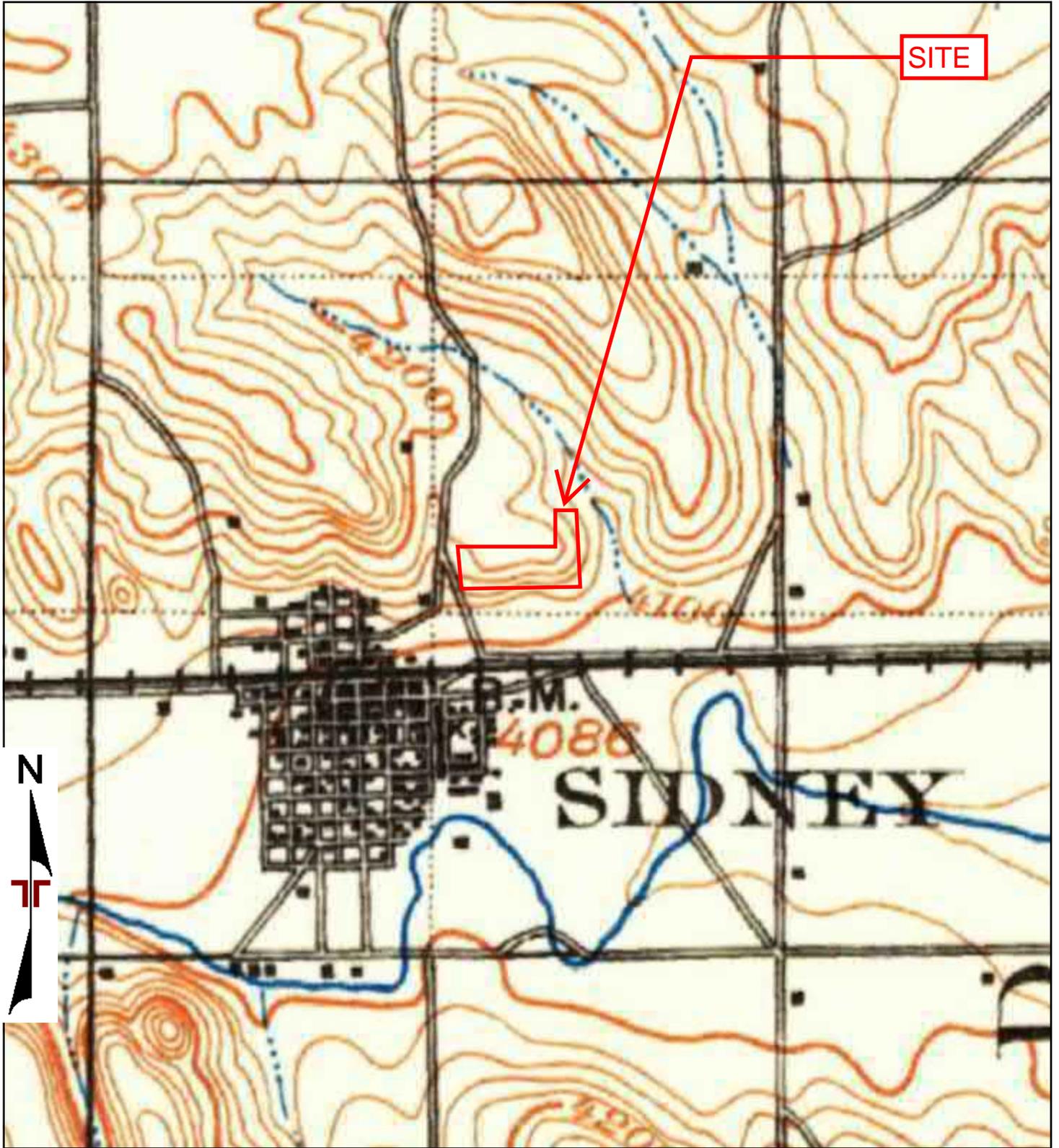
TP, Sidney, 1972, 7.5-minute



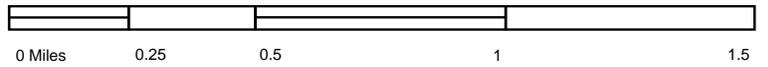
Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1972



1972 TOPOGRAPHIC MAP	



TP, Sidney, 1899, 30-minute



Project Manager:	Project No.
Drawn by:	Scale:
Checked by:	File Name:
Approved by:	Date: 1899

1899 TOPOGRAPHIC MAP



SE Municipal Solar - Sidney

Section 29 Township 14 Range 49W

Sidney, NE 69162

Inquiry Number: 6986132.45

May 20, 2022

The EDR Aerial Photo Decade Package



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

EDR Aerial Photo Decade Package

05/20/22

Site Name:

SE Municipal Solar - Sidney
Section 29 Township 14 Range
Sidney, NE 69162
EDR Inquiry # 6986132.45

Client Name:

Terracon
15080 A Circle
Omaha, NE 68144
Contact: Andrew Herman



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Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1999	1"=500'	Acquisition Date: January 01, 1999	USGS/DOQQ
1993	1"=500'	Acquisition Date: August 09, 1993	USGS/DOQQ
1985	1"=500'	Flight Date: September 13, 1985	USDA
1972	1"=500'	Flight Date: April 24, 1972	USGS
1953	1"=500'	Flight Date: September 25, 1953	USGS

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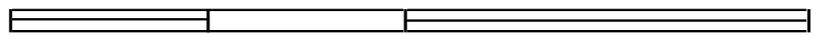
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SITE



0 Feet

500

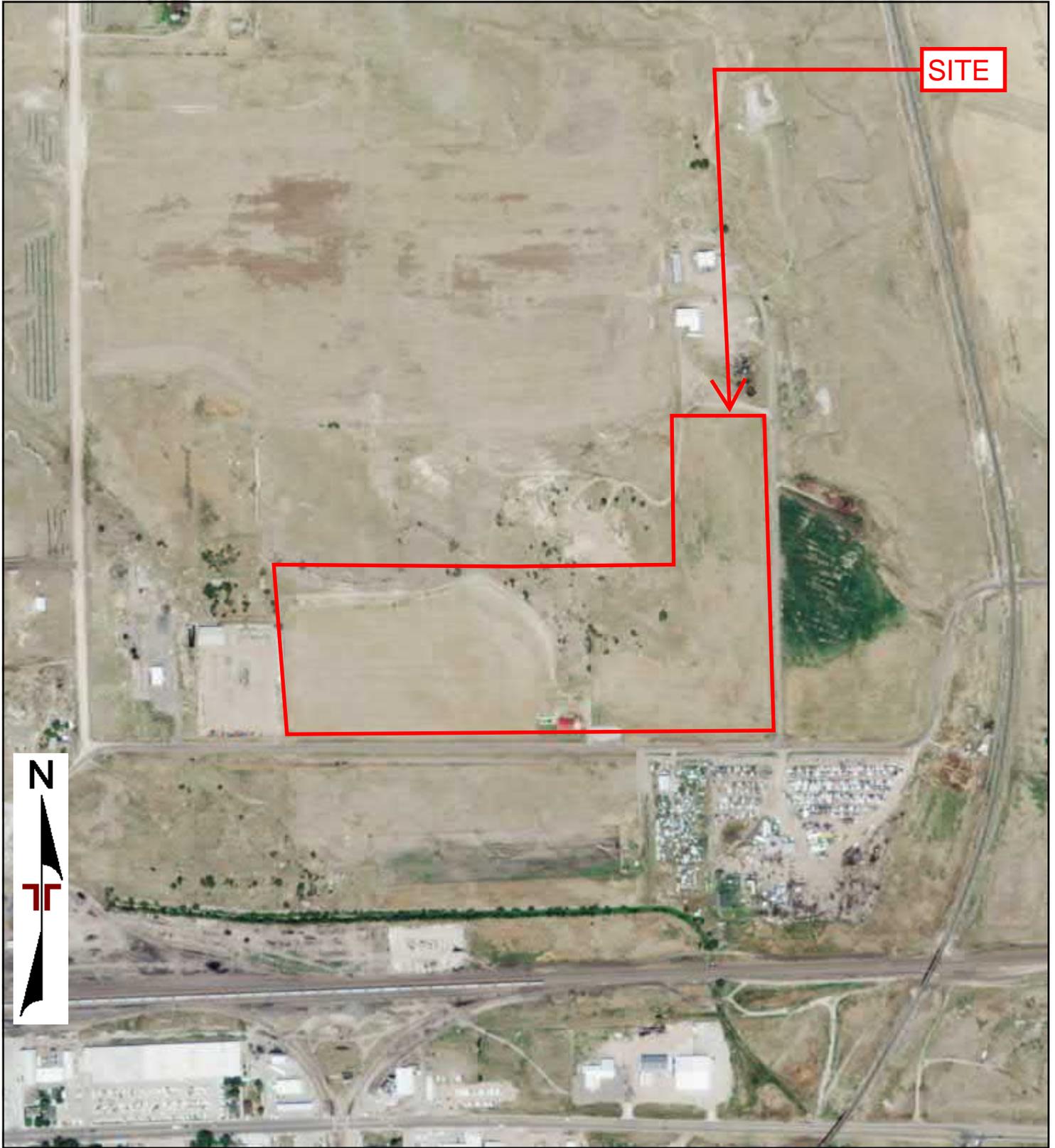
1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2016



2016 AERIAL PHOTOGRAPH	



SITE



0 Feet

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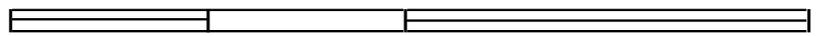
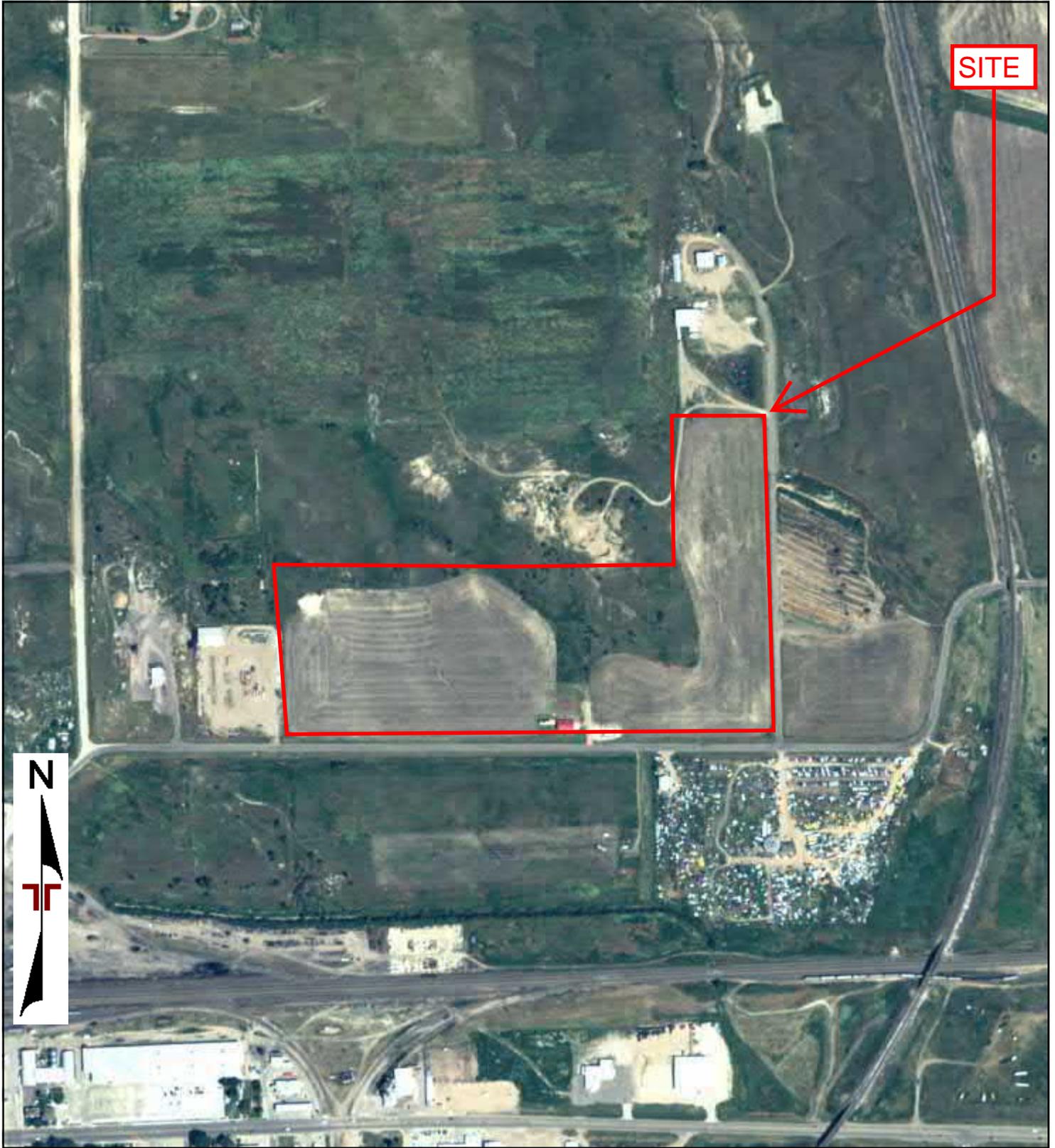
1000

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Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2012



2012 AERIAL PHOTOGRAPH	



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2009

2009 AERIAL PHOTOGRAPH



0 Feet

500

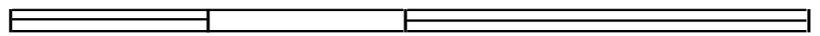
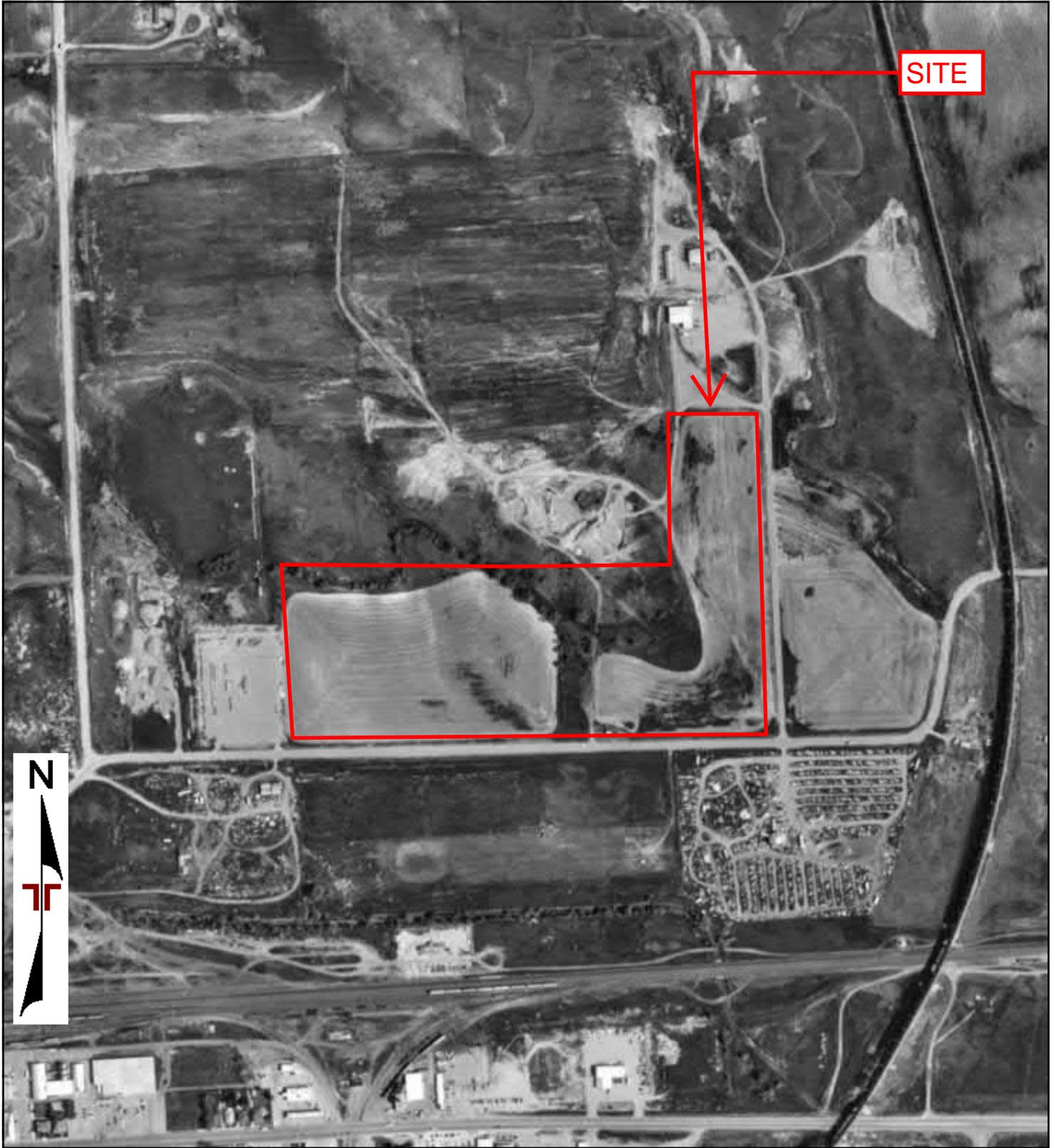
1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 2006



2006 AERIAL PHOTOGRAPH	



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1999



1999 AERIAL PHOTOGRAPH	



SITE



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1993



1993 AERIAL PHOTOGRAPH



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1985



1985 AERIAL PHOTOGRAPH	



SITE



0 Feet

500

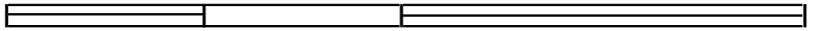
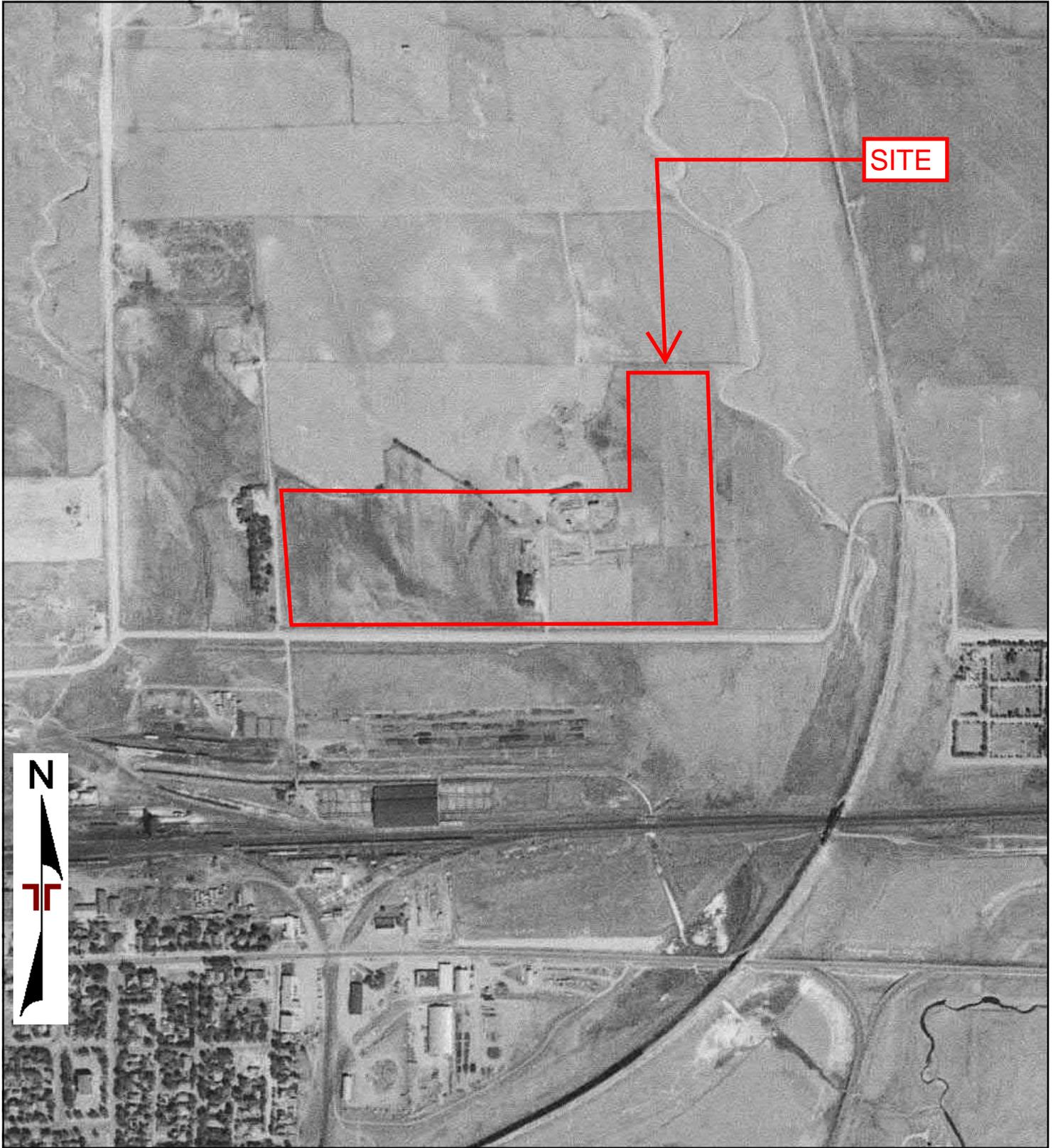
1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1972



1972 AERIAL PHOTOGRAPH	



0 Feet

500

1000

2000

Project Manager:	Project No:
Drawn By:	Scale:
Checked By:	File Name:
Approved By:	Date: 1953



1953 AERIAL PHOTOGRAPH	

SE Municipal Solar - Sidney
Section 29 Township 14 Range 49W
Sidney, NE 69162

Inquiry Number: 6986132.39

May 18, 2022

Certified Sanborn® Map Report



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

Certified Sanborn® Map Report

05/18/22

Site Name:

SE Municipal Solar - Sidney
Section 29 Township 14 Range
Sidney, NE 69162
EDR Inquiry # 6986132.39

Client Name:

Terracon
15080 A Circle
Omaha, NE 68144
Contact: Andrew Herman



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 947C-4E6D-BE66
PO # NA
Project 0522P061 Task 10



Sanborn® Library search results

Certification #: 947C-4E6D-BE66

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX D
ENVIRONMENTAL DATABASE INFORMATION

SE Municipal Solar - Sidney

Section 29 Township 14 Range 49W

Sidney, NE 69162

Inquiry Number: 6986132.38s

May 18, 2022

The EDR Radius Map™ Report



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

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Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

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

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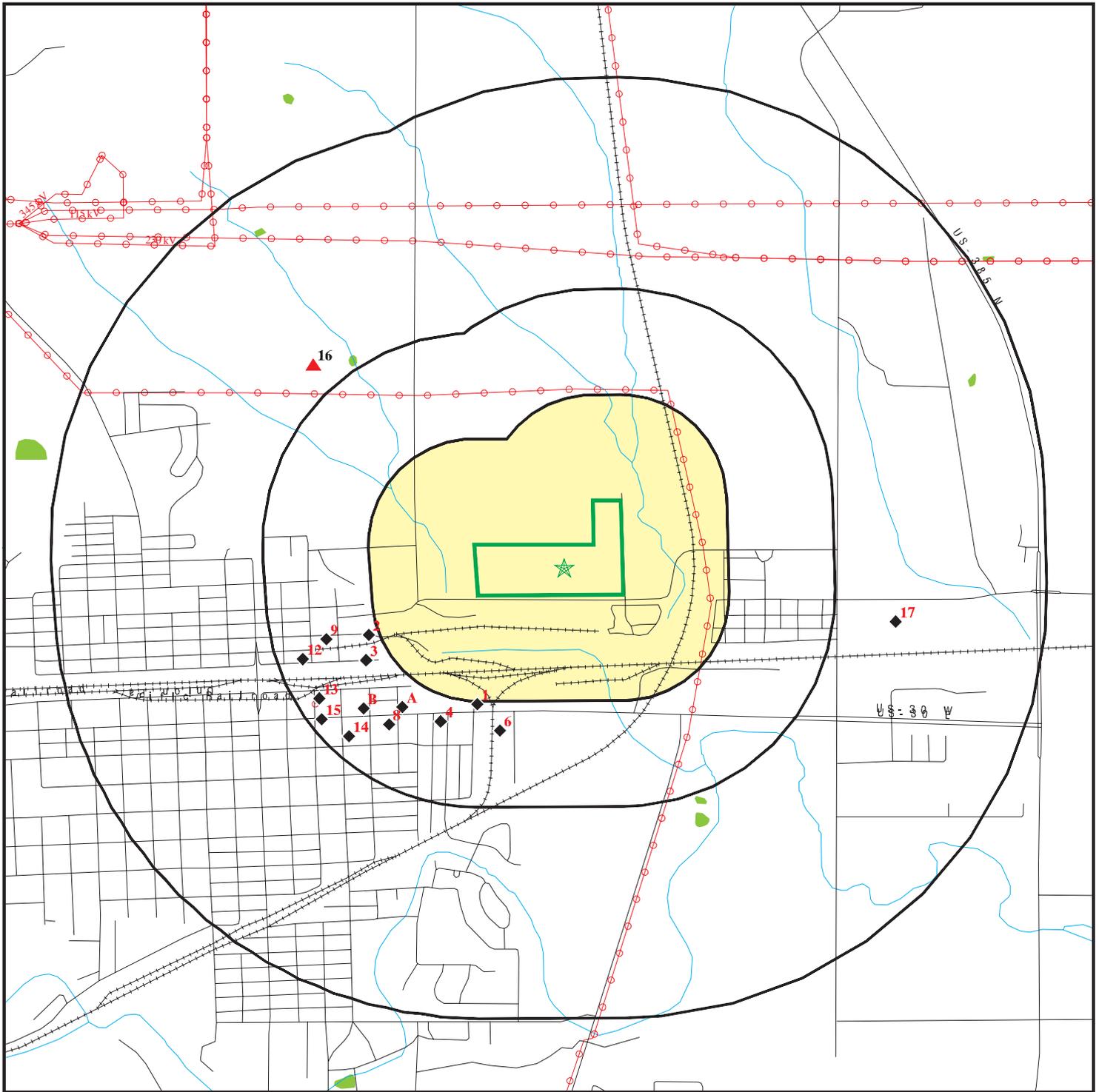
MAPPED SITES SUMMARY

Target Property Address:
SECTION 29 TOWNSHIP 14 RANGE 49W
SIDNEY, NE 69162

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	ALTA CONVENIENCE #62	440 ILLINOIS AVE	LUST, UST, HIST UST	Lower	1355, 0.257, SSW
2	WALTER PETROLEUM	9TH & FORREST STS	LAST	Lower	1446, 0.274, WSW
3	UNION PACIFIC RAILRO	9TH & GRANT STREETS	LUST, RCRA NonGen / NLR	Lower	1608, 0.305, WSW
4	SINCLAIR PRO MARKET	601 ILLINOIS ST	LUST, TIER 2	Lower	1637, 0.310, SW
A5	SIDNEY'S GREAT TRASH	740 ILLINOIS STREET	SWRCY	Lower	1680, 0.318, SW
6	SIDNEY PUBLIC WATER	JACKSON ST BETWEEN 1	SEMS	Lower	1687, 0.320, SSW
A7	PRO OIL	801 ILLINOIS ST	LUST	Lower	1720, 0.326, SW
8	FIRST NATIONAL BANK	809 ILLINOIS ST	SHWS, LUST, FINDS	Lower	1953, 0.370, SW
9	UNITED PARCEL SERVIC	1027 FORREST	LUST	Lower	1963, 0.372, WSW
B10	ZALESKY STANDARD	840 9TH AVE	LUST, UST	Lower	2003, 0.379, SW
B11	EWELL MOTORS LEASE &	909 ILLINOIS	LUST	Lower	2152, 0.408, SW
12	SIDNEY LAUNDRY & DRY	1106 GRANT STREET (C	SEMS	Lower	2321, 0.440, WSW
13	SIDNEY POWER PLANT	801 11TH AVE	LUST, AIRS, NPDES	Lower	2356, 0.446, WSW
14	FORMER MODEL CLEANER	933 10TH AVENUE	SEMS	Lower	2380, 0.451, SW
15	UNKNOWN - CABELAS	1115 ILLINOIS	LUST	Lower	2485, 0.471, WSW
16	FE WAR AFB AF FAC C-		FUDS	Higher	3013, 0.571, NW
17	LUKJAN GREAT PLAINS	1 GREENWOOD RD	SHWS, AIRS, ASBESTOS, NPDES, TIER 2	Lower	3413, 0.646, East

OVERVIEW MAP - 6986132.38S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  Power transmission lines
-  National Wetland Inventory
-  State Wetlands

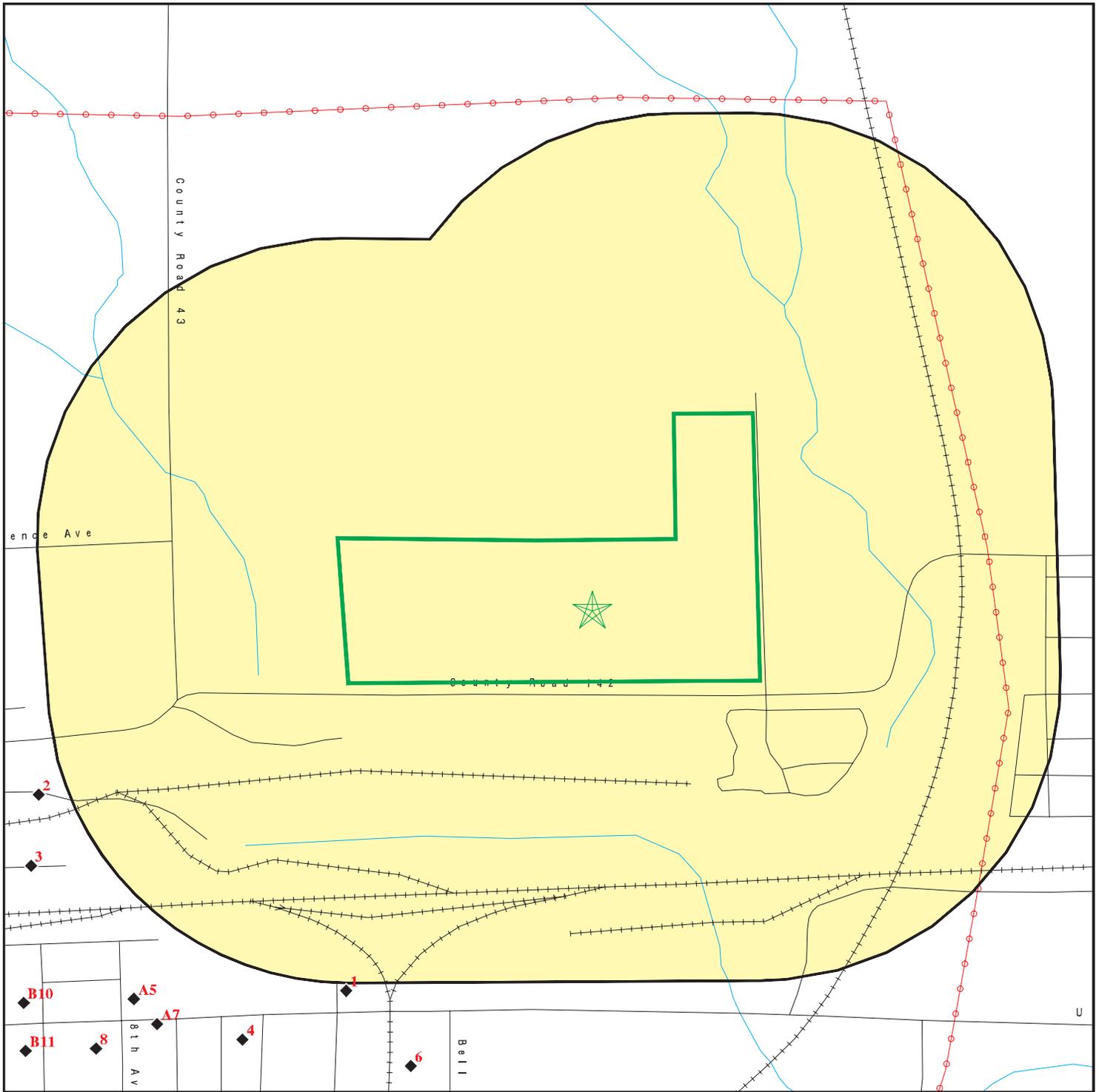


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: SE Municipal Solar - Sidney
 ADDRESS: Section 29 Township 14 Range 49W
 Sidney NE 69162
 LAT/LONG: 41.149927 / 102.9667

CLIENT: Terracon
 CONTACT: Andrew Herman
 INQUIRY #: 6986132.38s
 DATE: May 18, 2022 7:40 pm

DETAIL MAP - 6986132.38S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  Power transmission lines
-  National Wetland Inventory
-  State Wetlands

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

SITE NAME: SE Municipal Solar - Sidney
 ADDRESS: Section 29 Township 14 Range 49W
 Sidney NE 69162
 LAT/LONG: 41.149927 / 102.9667

CLIENT: Terracon
 CONTACT: Andrew Herman
 INQUIRY #: 6986132.38s
 DATE: May 18, 2022 7:42 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Lists of Federal NPL (Superfund) sites</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Lists of Federal Delisted NPL sites</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	3	NR	NR	3
<i>Lists of Federal CERCLA sites with NFRAP</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA facilities undergoing Corrective Action</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Lists of Federal RCRA TSD facilities</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA generators</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>Lists of state- and tribal hazardous waste facilities</i>								
SHWS	1.000		0	0	1	1	NR	2
<i>Lists of state and tribal landfills and solid waste disposal facilities</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal leaking storage tanks</i>								
LUST	0.500		0	0	10	NR	NR	10

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LAST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal registered storage tanks</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal institutional control / engineering control registries</i>								
INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal voluntary cleanup sites</i>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal brownfield sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
SWRCY	0.500		0	0	1	NR	NR	1
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
HIST UST	0.250		0	0	NR	NR	NR	0
HIST AST	TP		NR	NR	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<i>Other Ascertainable Records</i>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	1	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
---------	-------	--	---	---	---	---	----	---

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<u>EDR RECOVERED GOVERNMENT ARCHIVES</u>								
<i>Exclusive Recovered Govt. Archives</i>								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	16	2	0	18

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

1
SSW
1/4-1/2
0.257 mi.
1355 ft.

ALTA CONVENIENCE #6232
440 ILLINOIS AVE
SIDNEY, NE 69162

LUST U003882318
UST N/A
HIST UST

Relative:
Lower
Actual:
4086 ft.

LUST:
Name: SAPP BROTHERS INC.
Address: 440 ILLINOIS
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 042399-99-0002
Owner/RP: SAPP BROTHERS INC.
SFM Num: 680
Owner Mailing Address: 1130 EAST 1ST
Owner Mailing City: OGALLALA
Owner Mailing State: NE
Owner Mailing Zip: 69155
Discovery Date: 09/14/1998
Material Released: DIESEL, GAS & WASTE OIL

UST:
Name: ALTA CONVENIENCE #6232
Address: 440 ILLINOIS AVE
City: SIDNEY
Zip: 69162

Facility:
Facility ID: 680
Owner Name: CF ALTITUDE LLC
Owner Address: 8400 E PRENTICE AVE STE 400
Owner City,St,Zip: GREENWOOD VILLAGE, CO 80111
Tanks Currently In Use: 4
Tanks Temp Out Of Use: 0
Tanks Perm Out Of Use: 0
Tanks Closed In Place: 0
Tanks Removed: 5

Owner: CF ALTITUDE LLC
Owner Address: 8400 E PRENTICE AVE STE 400
Owner City,St,Zip: GREENWOOD VILLAGE, CO 80111
Tank Id/Tank Status: 6 / Currently in Use
Tank Contents: #2 Diesel
Tank Size: 12000
Tank Date Installed: 1998
Tank Type: Federally Regulated
Tank Construction: Fiberglass Reinforced Plastic
Tank Internal Protection: None
Tank External Protection: None

Tank Id/Tank Status: 7 / Currently in Use
Tank Contents: Regular Unleaded
Tank Size: 12000
Tank Date Installed: 1998
Tank Type: Federally Regulated
Tank Construction: Fiberglass Reinforced Plastic
Tank Internal Protection: None
Tank External Protection: None

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ALTA CONVENIENCE #6232 (Continued)

U003882318

Tank Id/Tank Status: 8 / Currently in Use
Tank Contents: Premium Unleaded
Tank Size: 6000
Tank Date Installed: 1998
Tank Type: Federally Regulated
Tank Construction: Fiberglass Reinforced Plastic
Tank Internal Protection: None
Tank External Protection: None

Tank Id/Tank Status: 9 / Currently in Use
Tank Contents: Regular Unleaded
Tank Size: 6000
Tank Date Installed: 1998
Tank Type: Federally Regulated
Tank Construction: Fiberglass Reinforced Plastic
Tank Internal Protection: None
Tank External Protection: None

HIST UST:

Facility ID: 680
Owner: SAPP BROS PETROLEUM
Owner Address: 1130 EAST 1ST ST
Owner City,St,Zip: OGALLALA, NE 691530000
Tank Number: 6
Tank Usage Status: Currently in Use
Tank Size (Gal): 12000
Tank Construction Material: Fiberglass Reinforced Plastic
Tank Content(s): #2 Diesel
Tank Installed: 1998

Facility ID: 680
Owner: SAPP BROS PETROLEUM
Owner Address: 1130 EAST 1ST ST
Owner City,St,Zip: OGALLALA, NE 691530000
Tank Number: 7
Tank Usage Status: Currently in Use
Tank Size (Gal): 12000
Tank Construction Material: Fiberglass Reinforced Plastic
Tank Content(s): Gasoline
Tank Installed: 1998

Facility ID: 680
Owner: SAPP BROS PETROLEUM
Owner Address: 1130 EAST 1ST ST
Owner City,St,Zip: OGALLALA, NE 691530000
Tank Number: 8
Tank Usage Status: Currently in Use
Tank Size (Gal): 6000
Tank Construction Material: Fiberglass Reinforced Plastic
Tank Content(s): Gasoline
Tank Installed: 1998

Facility ID: 680
Owner: SAPP BROS PETROLEUM
Owner Address: 1130 EAST 1ST ST
Owner City,St,Zip: OGALLALA, NE 691530000

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ALTA CONVENIENCE #6232 (Continued)

U003882318

Tank Number: 9
Tank Usage Status: **Currently in Use**
Tank Size (Gal): 6000
Tank Construction Material: Fiberglass Reinforced Plastic
Tank Content(s): Gasoline
Tank Installed: 1998

2
WSW
1/4-1/2
0.274 mi.
1446 ft.

WALTER PETROLEUM
9TH & FORREST STS
SIDNEY, NE

LAST S105529176
N/A

Relative:
Lower
Actual:
4094 ft.

LAST:
Name: WALTER PETROLEUM
Address: 9TH & FORREST STS
City,State,Zip: SIDNEY, NE
File Number: 052202-JB-1400
Owner/RP: WALTER PETROLEUM
Facility Status: **NO FURTHER ACTION (INCIDENT CLOSED)**
Incident Type: ABOVEGROUND STORAGE TANK
SFM Num: NONE
Owner Mailing Address: 2665 ALVERADO DR
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69120
Discovery Date: 03/26/2002
Material Released: FUEL OIL

3
WSW
1/4-1/2
0.305 mi.
1608 ft.

UNION PACIFIC RAILROAD
9TH & GRANT STREETS
SIDNEY, NE 69162

LUST 1000869567
RCRA NonGen / NLR NED986387785

Relative:
Lower
Actual:
4091 ft.

LUST:
Name: UNION PACIFIC RAILROAD
Address: 9TH & GRANT RAILROAD
City,State,Zip: SIDNEY, NE
Facility Status: **NO FURTHER ACTION (INCIDENT CLOSED)**
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 062990-99-0005
Owner/RP: UNION PACIFIC RAILROAD
SFM Num: 6352
Owner Mailing Address: 1416 DODGE RM 1000
Owner Mailing City: OMAHA
Owner Mailing State: NE
Owner Mailing Zip: 68179
Discovery Date: 12/18/1989
Material Released: GASOLINE

RCRA NonGen / NLR:
Date Form Received by Agency: 19970321
Handler Name: UNION PACIFIC RAILROAD
Handler Address: 9TH & GRANT STREETS
Handler City,State,Zip: SIDNEY, NE 69162

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

UNION PACIFIC RAILROAD (Continued)

1000869567

EPA ID:	NED986387785
Contact Name:	BOB ANDERSON
Contact Address:	1416 DODGE STREET ROOM 930
Contact City,State,Zip:	SIDNEY, NE 69179
Contact Telephone:	402-271-2255
EPA Region:	07
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Mailing Address:	DODGE STREET ROOM 930
Mailing City,State,Zip:	SIDNEY, NE 69179
Owner Name:	UNION PACIFIC RAILROAD
Owner Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Hazardous Secondary Material Indicator:	NN
Commercial TSD Indicator:	No
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
TSDs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Handler Date of Last Change:	20000916
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:	
Owner/Operator Indicator:	Owner
Owner/Operator Name:	UNION PACIFIC RAILROAD
Legal Status:	Private

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

UNION PACIFIC RAILROAD (Continued)

1000869567

Owner/Operator Address: 1416 DODGE STREET
Owner/Operator City,State,Zip: OMAHA, NE 68179
Owner/Operator Telephone: 402-271-2255

Historic Generators:

Receive Date: 19970321
Handler Name: UNION PACIFIC RAILROAD
Federal Waste Generator Description: Not a generator, verified
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes

Receive Date: 19940325
Handler Name: UNION PACIFIC RAILROAD
Federal Waste Generator Description: Large Quantity Generator
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

List of NAICS Codes and Descriptions:

NAICS Code: 482111
NAICS Description: LINE-HAUL RAILROADS

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

4
SW
1/4-1/2
0.310 mi.
1637 ft.

SINCLAIR PRO MARKET
601 ILLINOIS ST
SIDNEY, NE

LUST S107691281
TIER 2 N/A

Relative:
Lower
Actual:
4085 ft.

LUST:
Name: FRONTIER MINI MART
Address: 601 ILLINOIS AVE
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 032999-TH-1114
Owner/RP: SAPP BROS PETROLEUM
SFM Num: 5660
Owner Mailing Address: 440 ILLINOIS ST
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 03/18/1999

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SINCLAIR PRO MARKET (Continued)

S107691281

Material Released: GASOLINE, USED OIL

Name: BRADY OIL COMPANY
Address: 601 ILLINOIS ST
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 07050-JHB-0850
Owner/RP: BRADY OIL COMPANY
SFM Num: 5660
Owner Mailing Address: 920 VALLEYVIEW RD
Owner Mailing City: FT COLLINS
Owner Mailing State: CO
Owner Mailing Zip: 80524
Discovery Date: 07/05/1990
Material Released: GASOLINE

TIER 2:

Name: SINCLAIR PRO MARKET
Address: 601 ILLINOIS ST
City,State,Zip: SIDNEY, NE
Facility ID: 60482

Year: 2006

Chemical:

Facid: 60482
Year: 2006
Case Number: 68476302
Max. Amount: 4
Average Amount: 3
Chemical ID: 4519
Chemical Reporting Name(Active Ingredient): FUEL OIL #1 & #2
Chemical Reporting Name(Trade Name): LIGHT FUEL OILS

Facid: 60482
Year: 2006
Case Number: 8006619
Max. Amount: 4
Average Amount: 3
Chemical ID: 3850
Chemical Reporting Name(Active Ingredient): GASOLINE
Chemical Reporting Name(Trade Name): GASOLINE

Facid: 60482
Year: 2006
Case Number: 74986
Max. Amount: 4
Average Amount: 3
Chemical ID: 4251
Chemical Reporting Name(Active Ingredient): PROPANE
Chemical Reporting Name(Trade Name): PROPANE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SIDNEY PUBLIC WATER SUPPLY (Continued)

1003877242

EPA ID: NE0000182394
Site Name: SIDNEY PUBLIC WATER SUPPLY
NPL: N
FF: N
OU: 00
Action Code: HR
Action Name: HAZRANK
SEQ: 1
Start Date: 2003-07-25 04:00:00
Finish Date: 9/24/2004 4:00:00 AM
Qual: W
Current Action Lead: EPA Perf

Region: 07
Site ID: 0702845
EPA ID: NE0000182394
Site Name: SIDNEY PUBLIC WATER SUPPLY
NPL: N
FF: N
OU: 00
Action Code: RS
Action Name: RV ASSESS
SEQ: 1
Start Date: 2002-11-01 05:00:00
Finish Date: 9/14/2007 4:00:00 AM
Current Action Lead: EPA Perf

Region: 07
Site ID: 0702845
EPA ID: NE0000182394
Site Name: SIDNEY PUBLIC WATER SUPPLY
NPL: N
FF: N
OU: 00
Action Code: RV
Action Name: RMVL
SEQ: 1
Start Date: 2003-04-09 04:00:00
Finish Date: 9/14/2007 4:00:00 AM
Qual: C
Current Action Lead: EPA Perf

Region: 07
Site ID: 0702845
EPA ID: NE0000182394
Site Name: SIDNEY PUBLIC WATER SUPPLY
NPL: N
FF: N
OU: 00
Action Code: CR
Action Name: CI
SEQ: 1
Start Date: 2002-12-04 05:00:00
Finish Date: 12/4/2002 5:00:00 AM
Current Action Lead: EPA Perf

Region: 07

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

SIDNEY PUBLIC WATER SUPPLY (Continued)

1003877242

Site ID: 0702845
 EPA ID: NE0000182394
 Site Name: SIDNEY PUBLIC WATER SUPPLY
 NPL: N
 FF: N
 OU: 00
 Action Code: OO
 Action Name: SITE REASS
 SEQ: 1
 Start Date: 2010-09-29 04:00:00
 Finish Date: 2/4/2014 5:00:00 AM
 Current Action Lead: EPA Perf

Region: 07
 Site ID: 0702845
 EPA ID: NE0000182394
 Site Name: SIDNEY PUBLIC WATER SUPPLY
 NPL: N
 FF: N
 OU: 00
 Action Code: DS
 Action Name: DISCVRY
 SEQ: 1
 Start Date: 1994-01-10 05:00:00
 Finish Date: 1/10/1994 5:00:00 AM
 Current Action Lead: St Perf

Region: 07
 Site ID: 0702845
 EPA ID: NE0000182394
 Site Name: SIDNEY PUBLIC WATER SUPPLY
 NPL: N
 FF: N
 OU: 00
 Action Code: PA
 Action Name: PA
 SEQ: 1
 Start Date: 1994-02-16 05:00:00
 Finish Date: 9/30/1994 4:00:00 AM
 Qual: N
 Current Action Lead: St Perf

A7
SW
 1/4-1/2
 0.326 mi.
 1720 ft.

PRO OIL
801 ILLINOIS ST
SIDNEY, NE
 Site 2 of 2 in cluster A

LUST S102420832
N/A

Relative:
Lower
Actual:
4087 ft.

LUST:
 Name: PRO OIL
 Address: 801 ILLINOIS ST
 City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
 Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
 File Number: 102891-NM-1020
 Owner/RP: PRO OIL
 SFM Num: 679

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PRO OIL (Continued)

S102420832

Owner Mailing Address: 1130 E 1ST ST
Owner Mailing City: OGALLALA
Owner Mailing State: NE
Owner Mailing Zip: 69153
Discovery Date: 08/20/1991
Material Released: GASOLINE WASTE OIL

8
SW
1/4-1/2
0.370 mi.
1953 ft.

FIRST NATIONAL BANK
809 ILLINOIS ST
SIDNEY, NE 69162

SHWS 1005823730
LUST N/A
FINDS

Relative:
Lower
Actual:
4087 ft.

SHWS:
Name: FIRST NATIONAL BANK
Address: 809 ILLINOIS ST
City,State,Zip: SIDNEY, NE 69162
DEQ ID: 5453
Program Acronym: SF
Directions to Facility: NE cnr Illinois St(Hwy 30) & 8th Ave

LUST:
Name: SIDNEY TELEGRAPH
Address: 809 ILLINOIS STREET
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 070500-DB-1030
Owner/RP: UNKNOWN
SFM Num: NONE
Discovery Date: 02/17/2000
Material Released: LEAD, ARSENIC, BARIUM

FINDS:
Registry ID: 110006593819

Click Here:

Environmental Interest/Information System:
STATE MASTER

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

9
WSW
1/4-1/2
0.372 mi.
1963 ft.

UNITED PARCEL SERVICE
1027 FORREST
SIDNEY, NE

LUST S104738152
N/A

Relative:
Lower
Actual:
4093 ft.

LUST:
Name: UNITED PARCEL SERVICE
Address: 1027 FORREST
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 050891-99-0000

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

UNITED PARCEL SERVICE (Continued)

S104738152

Owner/RP: UNITED PARCEL SERVICE
SFM Num: 3012
Owner Mailing Address: 2535 GOMEZ
Owner Mailing City: OMAHA
Owner Mailing State: NE
Owner Mailing Zip: 68107
Discovery Date: 02/21/1991
Material Released: GASOLINE & DIESEL

B10
SW
1/4-1/2
0.379 mi.
2003 ft.

ZALESKY STANDARD
840 9TH AVE
SIDNEY, NE 69162
Site 1 of 2 in cluster B

LUST 1005823753
UST N/A

Relative:
Lower

LUST:

Name: ZALESKY STANDARD
Address: 840 9TH AVE
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 020698-TH-0700
Owner/RP: WALTER PETROLEUM, INC.
SFM Num: 2934
Owner Mailing Address: PO BOX 212
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 11/05/1997
Material Released: GASOLINE, DIESEL, WASTE OIL

UST:

Name: ZALESKY STANDARD
Address: 840 9TH AVE
City: SIDNEY
Zip: 69162

Facility:

Facility ID: 2934
Owner Name: WALTER PETROLEUM INC
Owner Address: PO BOX 212
Owner City,St,Zip: SIDNEY, NE 69162
Tanks Currently In Use: 0
Tanks Temp Out Of Use: 0
Tanks Perm Out Of Use: 0
Tanks Closed In Place: 0
Tanks Removed: 5

Owner: WALTER PETROLEUM INC
Owner Address: PO BOX 212
Owner City,St,Zip: SIDNEY, NE 69162
Tank Id/Tank Status: 1 / Not Reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

B11 **EWELL MOTORS LEASE & RENT**
SW **909 ILLINOIS**
1/4-1/2 **SIDNEY, NE**
0.408 mi.
2152 ft. **Site 2 of 2 in cluster B**

LUST **U003185714**
 N/A

Relative: LUST:
Lower Name: EWELL MOTORS LEASE & RENT
 Address: 909 ILLINOIS
Actual: City,State,Zip: SIDNEY, NE
4088 ft. **Facility Status:** **NO FURTHER ACTION (INCIDENT CLOSED)**
 Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
 File Number: 092895-KM-1250
 Owner/RP: UNKNOWN
 SFM Num: 11408
 Discovery Date: 09/27/1995
 Material Released: PETROLEUM, UNK

12 **SIDNEY LAUNDRY & DRY CLEANING**
WSW **1106 GRANT STREET (CURRENTLY 1112 GRANT STREET)**
1/4-1/2 **SIDNEY, NE 69162**
0.440 mi.
2321 ft.

SEMS **1026728461**
 NEN000720282

Relative: SEMS:
Lower Site ID: 0720282
Actual: EPA ID: NEN000720282
4091 ft. Name: SIDNEY LAUNDRY & DRY CLEANING
 Address: 1106 GRANT STREET (CURRENTLY 1112 GRANT STREET)
 City,State,Zip: SIDNEY, NE 69162
 Cong District: 03
 FIPS Code: 31033
 FF: N
 NPL: Not on the NPL
 Non NPL Status: PA Start Needed

SEMS Detail:
Region: 07
Site ID: 0720282
EPA ID: NEN000720282
Site Name: SIDNEY LAUNDRY & DRY CLEANING
NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 2021-03-19 05:00:00
Finish Date: 3/19/2021 5:00:00 AM
Current Action Lead: EPA Perf In-Hse

Region: 07
Site ID: 0720282
EPA ID: NEN000720282
Site Name: SIDNEY LAUNDRY & DRY CLEANING
NPL: N
FF: N
OU: 00
Action Code: HX
Action Name: PRE-CERC

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SIDNEY LAUNDRY & DRY CLEANING (Continued)

1026728461

SEQ: 1
Start Date: 2020-05-01 04:00:00
Finish Date: 3/19/2021 5:00:00 AM
Qual: SI
Current Action Lead: EPA Perf

13
WSW
1/4-1/2
0.446 mi.
2356 ft.

SIDNEY POWER PLANT
801 11TH AVE
SIDNEY, NE 69162

LUST S107689107
AIRS N/A
NPDES

Relative:
Lower
Actual:
4089 ft.

LUST:
Name: CITY OF SIDNEY
Address: 801 11TH ST
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: AP3135
Owner/RP: CITY OF SIDNEY
SFM Num: 3135
Owner Mailing Address: 801 11TH ST
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 05/18/1987

Name: CITY OF SIDNEY
Address: 801 11TH ST
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 062690-99-0003
Owner/RP: CITY OF SIDNEY
SFM Num: 3135
Owner Mailing Address: 801 11TH ST
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 05/21/1990
Material Released: LUBE OIL

Name: CITY OF SIDNEY
Address: 801 11TH ST
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: AP3135
Owner/RP: CITY OF SIDNEY
SFM Num: 3135
Owner Mailing Address: 801 11TH ST
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 05/18/1987

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SIDNEY POWER PLANT (Continued)

S107689107

NE AIRS:

Name: SIDNEY POWER PLANT
Address: 801 11TH AVE
City,State,Zip: SIDNEY, NE 69162
Facility ID: 56905
Directions to Facility: SE Cnr Jct 11th Ave & Hickory Sts, N of Hwy 30

NE NPDES:

Name: SIDNEY POWER PLANT
Address: 801 11TH AVE
City,State,Zip: SIDNEY, NE 69162
Facility ID: 56905
Directions to Facility: SE Cnr Jct 11th Ave & Hickory Sts, N of Hwy 30
Program Acronym: PCS

**14
SW
1/4-1/2
0.451 mi.
2380 ft.**

**FORMER MODEL CLEANERS 933 10TH AVENUE
933 10TH AVENUE
SIDNEY, NE 69162**

**SEMS 1026655067
NEN000720215**

**Relative:
Lower
Actual:
4088 ft.**

SEMS:

Site ID: 0720215
EPA ID: NEN000720215
Name: FORMER MODEL CLEANERS 933 10TH AVENUE
Address: 933 10TH AVENUE
City,State,Zip: SIDNEY, NE 69162
Cong District: 03
FIPS Code: 31033
FF: N
NPL: Not on the NPL
Non NPL Status: PA Start Needed

SEMS Detail:

Region: 07
Site ID: 0720215
EPA ID: NEN000720215
Site Name: FORMER MODEL CLEANERS 933 10TH AVENUE
NPL: N
FF: N
OU: 00
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 2020-12-18 06:00:00
Finish Date: 12/18/2020 6:00:00 AM
Current Action Lead: EPA Perf In-Hse

Region: 07
Site ID: 0720215
EPA ID: NEN000720215
Site Name: FORMER MODEL CLEANERS 933 10TH AVENUE
NPL: N
FF: N
OU: 00
Action Code: HX
Action Name: PRE-CERC

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FORMER MODEL CLEANERS 933 10TH AVENUE (Continued)

1026655067

SEQ: 1
Start Date: 2020-04-01 05:00:00
Finish Date: 12/18/2020 6:00:00 AM
Qual: SI
Current Action Lead: St Perf

15
WSW
1/4-1/2
0.471 mi.
2485 ft.

UNKNOWN - CABELAS
1115 ILLINOIS
SIDNEY, NE

LUST S101822911
N/A

Relative:
Lower
Actual:
4089 ft.

LUST:
Name: UNKNOWN - CABELAS
Address: 1115 ILLINOIS
City,State,Zip: SIDNEY, NE
Facility Status: NO FURTHER ACTION (INCIDENT CLOSED)
Incident Type: UNDERGROUND STORAGE TANK - REGULATED UNDER FEDERAL RULES
File Number: 122095-99-0003
Owner/RP: UNKNOWN - CABELAS
SFM Num: 11392
Owner Mailing Address: 1115 ILLINOIS ST
Owner Mailing City: SIDNEY
Owner Mailing State: NE
Owner Mailing Zip: 69162
Discovery Date: 09/06/1995
Material Released: GASOLINE

16
NW
1/2-1
0.571 mi.
3013 ft.

FE WAR AFB AF FAC C-J
SIDNEY, NE

FUDS 1024898726
N/A

Relative:
Higher
Actual:
4203 ft.

FUDS:
EPA Region: 7
Installation ID: NE79799F048900
Congressional District Number: 3
Name: FE WAR AFB AF FAC C-J
FUDS Number: B07NE0739
City: SIDNEY
State: NE
County: CHEYENNE
Object ID: 4770
USACE Division: NWD
USACE District: Omaha District (NWO)
Status: Properties without projects
EMS Map Link: <https://fudsportal.usace.army.mil/ems/ems/inventory/map/map?id=58711>
Eligibility: Ineligible
Has Projects: No
NPL Status: Not on the NPL

Project Required: No
Latitude: 41.15694444
Longitude: -102.97805556

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

17
East
1/2-1
0.646 mi.
3413 ft.

LUKJAN GREAT PLAINS
1 GREENWOOD RD
SIDNEY, NE 69162

SHWS **S107689470**
AIRS **N/A**
ASBESTOS
NPDES
TIER 2

Relative:
Lower
Actual:
4092 ft.

SHWS:
 Name: LUKJAN GREAT PLAINS
 Address: 1 GREENWOOD RD
 City,State,Zip: SIDNEY, NE 69162
 DEQ ID: 5455
 Program Acronym: SF
 Directions to Facility: Jct Hwys 30 & 385

NE AIRS:
 Name: LUKJAN GREAT PLAINS
 Address: 1 GREENWOOD RD
 City,State,Zip: SIDNEY, NE 69162
 Facility ID: 5455
 Directions to Facility: Jct Hwys 30 & 385

ASBESTOS:
 Name: ADC TELECOMMUNICATIONS
 Address: 1 GREENWOOD ROAD
 City,State,Zip: SIDNEY, NE 69162
 Project Notification Date: 10/11/2012
 State Project Number: 2012-W238
 Business Entity Initials: EDI
 Owner Name: TE Connectivity, LTD
 Start Date: 10/30/2012
 Finish Date: 10/26/2012
 Region: West
 Year: 2012
 Schedule Type: Completed
 Project Description: Removal of 600 sq. ft. of friable vinyl asbestos tile and mastic from plant.
 Project Notification Date: 10/11/2012
 Business Entity: Environmental Direct, Inc.
 Square Feet: 600
 Start Time: 1000
 Stop Time: 1800
 Fee Paid: True
 FA Report: False
 Final Report: B2E
 Final Report Rec Date: 10/30/2012
 10 Day Waiver: False
 Emergency: False
 Canceled: False
 Completed: False
 Non-Friable: False
 Landfill Receipts: False
 Work/Worker Practices: False
 Enforcement: False
 Additional Information: False
 Final Rpt Status: 8

NE NPDES:
 Name: LUKJAN GREAT PLAINS

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LUKJAN GREAT PLAINS (Continued)

S107689470

Address: 1 GREENWOOD RD
City,State,Zip: SIDNEY, NE 69162
Facility ID: 5455
Directions to Facility: Jct Hwys 30 & 385
Program Acronym: PCS

TIER 2:

Name: ADC TELECOMMUNICATIONS INC
Address: 1 GREENWOOD RD
City,State,Zip: SIDNEY, NE 69162-0259
Facility ID: 5455

Year: 2015
SR No: 188
Location: Jct Hwys 30 & 385

Year: 2014
SR No: 393
Location: Jct Hwys 30 & 385

Year: 2013
SR No: 185
Location: Jct Hwys 30 & 385

Year: 2012
SR No: 182
Location: Jct Hwys 30 & 385

Year: 2011
SR No: 167
Location: Jct Hwys 30 & 385

Year: 2006

Chemical:

Facid: 5455
Year: 2015
Case Number: 7664939
EHS: Y
Storage Location: Batteries in material handling equip
Chemical ID: 4302

Facid: 5455
Year: 2006
Case Number: 75752
Max. Amount: 4
Average Amount: 4
Chemical ID: 4686
Chemical Reporting Name(Active Ingredient): METHANESULFONIC ACID
Chemical Reporting Name(Trade Name): Sulfonic Acid

Facid: 5455
Year: 2006
Case Number: 353504
Max. Amount: 4
Average Amount: 4

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LUKJAN GREAT PLAINS (Continued)

S107689470

Chemical ID: 3561
Chemical Reporting Name(Active Ingredient): CARBONIC DIFLUORIDE
Chemical Reporting Name(Trade Name): Fluoropolymer Plastic Pellets

Facid: 5455
Year: 2006
Case Number: 7647010
Max. Amount: 4
Average Amount: 4
Chemical ID: 3874
Chemical Reporting Name(Active Ingredient): HYDROGEN CHLORIDE, (ANHYDROUS)
Chemical Reporting Name(Trade Name): PVC Plastic Pellets

Facid: 5455
Year: 2006
Case Number: 7647010
Max. Amount: 5
Average Amount: 4
Chemical ID: 3874
Chemical Reporting Name(Active Ingredient): HYDROGEN CHLORIDE, (ANHYDROUS)
Chemical Reporting Name(Trade Name): PVC Plastic Pellets

Facid: 5455
Year: 2006
Case Number: 75752
Max. Amount: 3
Average Amount: 3
Chemical ID: 4686
Chemical Reporting Name(Active Ingredient): METHANESULFONIC ACID
Chemical Reporting Name(Trade Name): Sulfonic Acid

Facid: 5455
Year: 2006
Case Number: 7664393
Max. Amount: 4
Average Amount: 4
Chemical ID: 3880
Chemical Reporting Name(Active Ingredient): HYDROGEN FLUORIDE
Chemical Reporting Name(Trade Name): Fluoropolymer Plastic Pellets

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SIDNEY	1015735277	TRI-STATE WAREHOUSE	5TH & G ST BLDG 209	69162	SEMS-ARCHIVE
SIDNEY	S106256181		CORNER OF QUARTER SECTION		LAST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
NE	AIRS	Air State Program List	Department of Environmental Quality	12/09/2021	12/10/2021	03/01/2022
NE	ASBESTOS	Asbestos Notification Listing	Department of Health & Human Services	01/31/2022	02/01/2022	04/20/2022
NE	AST	AST Data	State Fire Marshal	03/22/2021	03/23/2021	06/15/2021
NE	BROWNFIELDS	Potential Brownfields Inventory Listing	Department of Environmental Quality	12/13/2021	12/13/2021	02/15/2022
NE	DRYCLEANERS	Drycleaner Facility Listing	Department of Environmental Quality	12/09/2021	12/09/2021	03/01/2022
NE	Financial Assurance	Financial Assurance Information Listing	Department of Environmental Quality	12/01/2021	12/13/2021	03/02/2022
NE	HIST AST	Aboveground Storage Tank Database Listing	State Fire Marshal	10/19/2004	09/01/2006	10/11/2006
NE	HIST UST	Underground Storage Tank Database Listing	State Fire Marshal	02/28/2005	09/01/2006	10/11/2006
NE	INST CONTROL	Nebraska's Institutional Control Registry	Department of Environmental Quality	03/15/2021	03/23/2021	06/14/2021
NE	LAST	Leaking Aboveground Storage Tank Sites	Department of Environmental Quality	01/04/2022	01/05/2022	03/23/2022
NE	LUST	Leaking Underground Storage Tank Sites	Department of Environmental Quality	01/04/2022	01/05/2022	03/23/2022
NE	NPDES	Wastewater Database Listing	Department of Environmental Quality	02/25/2022	02/28/2022	03/09/2022
NE	PFAS	PFAS Site Contamination Listing	Department of Environment & Energy	06/30/2017	02/07/2020	03/11/2020
NE	RG A HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Quality		07/01/2013	01/03/2014
NE	RG A LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Quality		07/01/2013	01/03/2014
NE	SHWS	Superfund State Program List	Dept. of Environmental Quality	12/09/2021	12/10/2021	03/01/2022
NE	SPILLS	Surface Spill List	Department of Environmental Quality	01/04/2022	01/05/2022	03/23/2022
NE	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	04/15/2003	01/03/2013	03/06/2013
NE	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	10/09/2012	01/03/2013	03/06/2013
NE	SWF/LF	Licensed Landfill List	Department of Environmental Quality	09/09/2021	12/09/2021	03/01/2022
NE	SWRCY	Recycling Resource Directory	Department of Environmental Quality	06/08/2021	06/09/2021	09/03/2021
NE	TIER 2	Tier 2 Facility Listing	Department of Environmental Quality	12/31/2020	06/01/2021	08/23/2021
NE	UIC	Underground Injection Control Database	Department of Environmental Quality	01/25/2022	01/26/2022	04/20/2022
NE	UST	Facility and Tank Data	Nebraska State Fire Marshal	12/17/2021	01/26/2022	04/20/2022
NE	VCP	RAPMA Sites	Department of Environmental Quality	03/15/2021	03/23/2021	06/14/2021
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	12/14/2021	12/15/2021	03/10/2022
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2019	03/02/2022	03/25/2022
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2020	11/30/2021	02/22/2022
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2021	01/14/2022	03/25/2022
US	CORRACTS	Corrective Action Report	EPA	02/28/2022	03/02/2022	03/17/2022
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transportation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	01/25/2022	02/03/2022	02/22/2022
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	01/01/2022	01/04/2022	01/10/2022
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/31/2021	03/01/2022	03/10/2022
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	05/25/2021	06/24/2021	09/20/2021
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	10/14/2021	11/05/2021	02/01/2022
US	FINDS	Facility Index System/Facility Registry System	EPA	11/04/2021	11/22/2021	02/25/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	12/01/2021	02/15/2022	05/10/2022
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/17/2022	02/17/2022	05/10/2022
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/26/2021	07/27/2021	10/22/2021
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/15/2021	12/16/2021	03/10/2022
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/12/2021	11/15/2021	02/08/2022
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/14/2021	11/15/2021	02/08/2022
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/12/2021	11/15/2021	02/08/2022
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisiting	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	01/25/2022	02/03/2022	02/22/2022
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	01/25/2022	02/03/2022	02/22/2022
US	LUCIS	Land Use Control Information System	Department of the Navy	02/08/2022	02/11/2022	05/10/2022
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	03/21/2022	03/22/2022	03/25/2022
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	07/29/2021	08/24/2021	11/19/2021
US	NPL	National Priority List	EPA	01/25/2022	02/03/2022	02/22/2022
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	01/20/2022	01/20/2022	03/25/2022
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	02/10/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	01/25/2022	02/03/2022	02/25/2022
US	Proposed NPL	Proposed National Priority List Sites	EPA	01/25/2022	02/03/2022	02/22/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	02/28/2022	03/02/2022	03/17/2022
US	RMP	Risk Management Plans	Environmental Protection Agency	04/27/2022	05/04/2022	05/10/2022
US	ROD	Records Of Decision	EPA	01/25/2022	02/03/2022	02/22/2022
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	01/25/2022	02/03/2022	02/22/2022
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	01/25/2022	02/03/2022	02/22/2022
US	SSTS	Section 7 Tracking Systems	EPA	01/19/2022	01/19/2022	04/11/2022
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	02/23/2022	03/10/2022	03/10/2022
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	11/19/2021	11/19/2021	02/14/2022
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/13/2021	12/17/2021	03/17/2022
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	11/19/2021	11/19/2021	02/14/2022
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	11/02/2021	11/22/2021	02/14/2022
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2020	01/11/2022	02/14/2022
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	12/03/2021	02/11/2022	05/06/2022
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
NE	Daycare Centers	Sensitive Receptor: Child Care Listing	Department of Health & Human Srevices			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

<u>St</u>	<u>Acronym</u>	<u>Full Name</u>	<u>Government Agency</u>	<u>Gov Date</u>	<u>Arvl. Date</u>	<u>Active Date</u>
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
NE	State Wetlands	National Wetlands Inventory	Department of Natural Resources			
US	Topographic Map	Current USGS 7.5 Minute Topographic Map	U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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SE Municipal Solar - Sidney

Section 29 Township 14 Range 49W
Sidney, NE 69162

Inquiry Number: 6986132.42

May 23, 2022

The EDR-City Directory Image Report

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Thank you for your business.

Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
2014	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2005	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
1995	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive
1992	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EDR Digital Archive

FINDINGS

TARGET PROPERTY STREET

Section 29 Township 14 Range 49W
Sidney, NE 69162

<u>Year</u>	<u>CD Image</u>	<u>Source</u>
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ELM ST

2017	pg A2	EDR Digital Archive
2014	pg A4	EDR Digital Archive
2010	pg A7	EDR Digital Archive
2005	pg A9	EDR Digital Archive
2000	pg A11	EDR Digital Archive
1995	pg A14	EDR Digital Archive
1992	pg A16	EDR Digital Archive

FINDINGS

CROSS STREETS

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
<u>ROAD 115</u>			
2017	-	EDR Digital Archive	Target and Adjoining not listed in Source
2014	pg. A6	EDR Digital Archive	
2010	pg. A8	EDR Digital Archive	
2005	pg. A10	EDR Digital Archive	
2000	pg. A13	EDR Digital Archive	
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source

City Directory Images

ELM ST 2017

706 BARNGROVER, ALFRED
 910 KARST, JOHANNAH
 926 BARKER, MANDI
 1002 SANCHEZ, JODY
 SHANEYFELT, MIKE
 1016 BRAUER, TERRY J
 1031 WERNSMAN, BRADLEY J
 1105 FORD, SASHA
 1121 APPLING, VICTORIA
 1133 ROCHA, ROBERT R
 1142 FALCON, ENEMENCIO
 1145 ESPINO, GUSTAVO C
 1204 STEPHENS, NORA T
 1216 KALLHOFF, TOM J
 1230 ONKEN, MICHAEL A
 1233 WINGFIELD, BRETT M
 1316 OSBORN, TERRY D
 1324 JONS, JEFFREY L
 1329 PATTEN, HALLI
 1344 ZIMBELMANN, STEFANIE L
 1400 HIETT, MICHAEL W
 1412 SELL, JASON L
 1427 CERENIL, ODILON F
 1432 LAHSINI, SLIMANE
 1442 BARKER, CREG
 1507 ADELS, JEFFERY
 1519 CONTRATTO, D
 1536 ROSS, SUSAN K
 1541 STEPHENSON, KELLY
 1544 THE FOURSQUARE CHURCH
 1631 SCHLIEKER, DONALD
 1633 MOSSBURGH, DEBRA K
 1704 AGUIRRE, VIRGINIA
 1717 TWITE, TOMMY
 1730 VOTRUBA, JAY
 1818 BEYER, THADDAEUS J
 1842 KESSELRING, CLINTON C
 1916 PALMER, ROBERT E
 TINTEK
 2019 HOLSINGER, STEVE C
 2028 MEDINA, LOUKISHA
 2035 CUMBIE, JAMES
 2040 SLAGLE, BRIAN E
 2103 RICE, NICHLOS
 2104 BEEKEN, KEVEN A
 2115 MURDOCK, MICHAEL
 2116 VOSIKA, GEROLD
 2127 COCHRAN, SANDRA K
 2128 FLORES, JOSE A
 2140 BENNETT, CLARISSA A

ELM ST 2017 (Cont'd)

2152 BROUGHTON, RHONDA S
2215 CONTRATTO, DAYSON P
2216 NOEL, CHRISTINE L
2228 STRUCKMEYER, BILL D

ELM ST 2014

706 BARNGROVER, ALFRED
 920 OCCUPANT UNKNOWN,
 926 OLSEN, JOSH
 1002 FULTON, JOSHUA
 SHANEYFELT, MIKE
 1016 MCNALLY, KENDALL
 1031 WERNSMAN, BRADLEY J
 1105 OCCUPANT UNKNOWN,
 1121 OCCUPANT UNKNOWN,
 1133 BECKMAN, BEATRICE L
 1142 OCCUPANT UNKNOWN,
 REGION I OFFICE OF HUMAN DEVELOPMENT
 1145 ESPINO, GUSTAVO C
 1204 STEPHENS, NORA T
 1216 KALLHOFF, TOM J
 1230 HANES, KATIE
 1302 HIETT, NANCY A
 1316 OSBORN, TERRY D
 1317 WIEMS, BRIAN
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 1329 OCCUPANT UNKNOWN,
 1344 OCCUPANT UNKNOWN,
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 2040 SLAGLE, BRIAN E
 2103 RICE, NICHLOS
 2104 BEEKEN, KEVEN A
 2115 PEPPERS, JEFFREY P

ELM ST 2014 (Cont'd)

2116 VOSIKA, GEROLD
2127 OCCUPANT UNKNOWN,
2128 FLORES, JOSE A
2139 OCCUPANT UNKNOWN,
2140 BARKER, TIMBER
2152 BROUGHTON, RHONDA S
2204 PETERSON, KATHY S
2215 CONTRATTO, DAYSON P
2216 OCCUPANT UNKNOWN,
2228 GABLE, MICHAEL

ROAD 115 2014

631	FEHRINGER, BERNARD G
2412	OCCUPANT UNKNOWN,
2421	HIGHBY, DENNIS L
2431	RAPP, KEITH A
2432	KAISER, KURT P
2490	THAYER, BENJAMIN
2677	RICHARDS, MATT F
3026	JENKS, RAYMOND A

ELM ST 2010

706	BARNGROVER, ALFRED
910	GRAY, LINDA S
920	JACOBS, JAMES A
926	BARKER, NORREEN J
1002	DICKINSON, ANDY
	SWAIN, KAVIN
	WILLE, CAROLINE L
1016	MCNALLY, KENDALL
1031	WERNSMAN, BRADLEY J
1105	HARTMAN, KATHY A
1121	MINSHALL, STEVEN R
1133	ROCHA, ROBERT R
1145	ESPINO, GUSTAVO C
1204	LEHMKUHLER, ROSS
1216	KALLHOFF, TOM J
1233	MCELROY, CATHERINE E
1302	HUNT, DALLAS
1316	OSBORN, TERRY D
1324	JONS, JEFFREY L
1344	BOBO, SHANE L
1400	KAHL, GORDON A
1412	SELL, JASON L
1427	BELTRAN, MARGARITA
1442	BARKER, CREG
1507	CAREY, DOROTHY B
1519	CONTRATTO, DENNIS P
1536	ROBERTSON, DALE
	ROSS, GERALD L
1541	BENNETT, CHARLOTTE E
1633	SYKORA, AMANDA K
1717	TWITE, ERIN F
1740	ENGERT, ERIKA
1818	SHARMAN, SEASONS M
1828	MOOR, MARY M
1842	KESSELRING, CLINTON C
1910	FARNSWORTH, DONALD C
1916	PALMER, ROBERT E
1940	JOHNSTON, BARBARA
2019	HOLSINGER, STEVE C
2028	WILLIAMSON, MICHAEL L
2040	SLAGLE, BRIAN E
2103	RICE, NICHLOS
2104	BEEKEN, KEVEN
2115	DICKSON, MICHELE E
2127	HOUSER, BETH M
2152	BROUGHTON, D
2215	CONTRATTO, DAYSON P
2228	STRUCKMEYER, BILL D

ROAD 115 2010

631	FEHRINGER, JOHN T GEORGE E FEHRINGER INC SIDNEY TRACTOR SALES
2412	MCREA, CHARLES
2421	HIGHBY, DENNIS N
2432	KAISER, KURT P
2490	THAYER, JAMES D
2677	KASTENS, LONNIE W
3026	JENKS, RAYMOND A
3083	WIESER, TYLER

ELM ST 2005

706 BARNGROVER, ALFRED
920 JACOBS, MARGE J
926 BARKER, NORREEN J
1002 BARNES, JUSTIN
BOWKER, JAMES L
1016 BRAUER, TERRY J
1031 WERNSMAN, BRADLEY J
1105 HARTMAN, KATHLEEN A
1121 MINSHALL, STEVEN R
1133 ROCHA, CRESENCIO S
1142 REGION I OFFICE OF HUMAN DEVELOPMENT
1145 ESPINO, GUSTAVO C
1204 LEHMKUHLER, ROSS
1216 KALLHOFF, TOM
1230 ONKEN, KENNETH
1240 PELEGRINO, MARICEL
1302 SCHWAB, DUSTIN W
1316 OSBORN, TERRY D
1324 MORRIS, KEITH
1329 BRAUER, CASEY
1344 BOBO, SHANE L
1400 KAHL, ALMA D
1427 BILLUPS, MICHEAL
1432 BUECHLER, LISA C
1442 BARKER, CREG
1507 CAREY, BRIEL
1519 CONTRATTO, DENNIS P
1536 ROSS, GERALD L
1544 FOURSQUARE CHURCH
1633 SIDEL, ANN
1704 STEWART, ROY A
1717 AIR POWER
VERA, JOHN E
1730 BROWNING, MARVIN G
1818 SHARMAN, SEASONS
1842 KESSELRING, LISA K
1910 FARNSWORTH, DONALD C
1916 PALMER, DACIA D
2019 HOLSINGER, STEVE C
2035 KRUEGER, CRISTAL
2040 LEACH, DAN
2103 RICE, NICHLOS
2104 BEEKEN, STANLEY T
2115 HAMBLIN, ALAN D
2139 YACK, DAWN
2152 ARELLANO, LUCY R
2228 STRUCKMEYER, BILL D

ROAD 115 2005

631	PANHANDLE IRRIGATION
2421	HIGHBY, DENNIS
2431	RAPP, MOURINE M
2432	KAISER, KURT
2490	THAYER, JAMES D
3026	JENKS, RAYMOND A

ELM ST 2000

706 BARNGROVER, ALFRED
 920 OCCUPANT UNKNOWN,
 926 BARKER, NORREEN
 954 OCCUPANT UNKNOWN,
 1002 BACKER, TIMOTHY
 PEREZ, K
 PERRY, MATTHEW
 1016 BRAUER, TERRY
 1105 HARTMAN, K
 1121 OCCUPANT UNKNOWN,
 1133 ROCHA, C S
 1142 ELM ST RESIDENCE
 REGION I OFFICE OF HUMAN DEVELOPMENT
 1145 ESPINO, GUSTAVO
 1204 JUDD, MARILYN
 1216 KALLHOFF, TOM
 1230 ONKEN, KENNETH
 1233 MCELROY, EMMETT T
 1302 SCHWAB, DUSTIN W
 1316 OSBORN, TERRY
 1317 HEITMAN, DENNIS G
 1324 OCCUPANT UNKNOWN,
 1329 OCCUPANT UNKNOWN,
 1344 BRESTEL, ARLENE
 1400 KAHL, ALMA
 1412 OCCUPANT UNKNOWN,
 1432 OCCUPANT UNKNOWN,
 1442 OCCUPANT UNKNOWN,
 1507 OCCUPANT UNKNOWN,
 1519 CONTRATTO, DENNIS P
 1536 ROSS, GERALD
 1541 THOMPSON, JEFFREY A
 1544 FOURSQUARE CHURCH
 1631 CAMPOS, RICARDO
 1633 DISCHNER, TINA
 1704 STEWART, ROY
 1717 VERA, JOHN E
 1730 COLE, JERRY
 1740 MARKLE, F E
 1818 TOUNEY, F
 1828 BAILEY, GREG P
 1842 KESSELRING, CLINTON
 1910 GRAY, TINA M
 1916 PALMER, DALIA
 1940 ROOT, LLOYD
 2019 MAHON, TIMOTHY
 2028 GILGREN, WILLIAM A
 2035 OCCUPANT UNKNOWN,
 2040 LEACH, DAN
 2103 OCCUPANT UNKNOWN,

ELM ST 2000 (Cont'd)

2104 BEEKEN, STANLEY
2115 RICE, NICHLOS
2116 GROSENBACH, E
2127 OCCUPANT UNKNOWN,
2128 OCCUPANT UNKNOWN,
2140 SCHUPPAN, IVA
2152 ARELLANO, RUBEN
2204 DODDS, PHYLLIS
2215 OCCUPANT UNKNOWN,
2216 OCCUPANT UNKNOWN,
2228 HOPPES, MARVIN

ROAD 115 2000

631	FEHRINGER, BERNARD
2412	POHL, JAMES
2490	THAYER, JAMES D
3026	JENKS, RAYMOND

ELM ST 1995

706 BARNGROVER, JULIA
910 OCCUPANT UNKNOWNN
920 OCCUPANT UNKNOWNN
926 OCCUPANT UNKNOWNN
940 OCCUPANT UNKNOWNN
1002 LOGSDON, STEVE
TETERS, JASON
WHEELOCK, JOHN
1016 BRAUER, TERRY
1031 OCCUPANT UNKNOWNN
1105 HARTMAN, K
1121 OCCUPANT UNKNOWNN
1133 ROCHA, C S
1145 OCCUPANT UNKNOWNN
1204 JUDD, JACK
1216 KALLHOFF, TOM
1230 ONKEN, KENNETH
1233 MCELROY, EMMETT T
1302 WARREN, RODNEY
1316 OSBORN, TERRY
1317 CAPE, JANESE
1324 MARI, SHANNA
1329 OLIVERIUS, HARRY
1344 BRESTEL, ARLENE
1400 KAHL, ALMA
1412 HAWKINS, CHARLES
1427 HENZL, JIM
1432 FRAHM, FRED
1442 BARKER, CREG
1507 ARNOLD, EMMETT V JR
1519 CONTRATTO, DENNIS P
1536 ROSS, GERALD
1541 BENNETT, C
1631 VILLARREAL, C J
1633 SIMMONS, JOSEPH
1704 OCCUPANT UNKNOWNN
1717 VERA, JOHN E
1730 COLE, JERRY
1818 TOUNEY, F
1828 OCCUPANT UNKNOWNN
1842 KESSELRING, CLINTON
1910 FARNSWORTH, DONALD C
1916 CHILEWSKI, CHUCK
1940 ROOT, LLOYD
2018 OCCUPANT UNKNOWNN
2028 GILGREN, WILLIAM A
2035 OGLE, ROBERT
2040 LEACH, DAN
2045 OCCUPANT UNKNOWNN
2103 APPLEBY, TARA

ELM ST 1995 (Cont'd)

2104 BEEKEN, P
2115 OCCUPANT UNKNOWNN
2116 GROSENBACH, E
2127 BELLMYER, BRETT
2128 ONIGKEIT, CONNIE
2139 OCCUPANT UNKNOWNN
2140 OCCUPANT UNKNOWNN
2152 ARELLANO, RUBEN
2204 DODDS, ROBERT E
2215 OCCUPANT UNKNOWNN
2216 JACOBS, JAMES
2228 HOPPES, MARVIN

ELM ST 1992

501	HRBEK, WALTER
706	BARNGROVER, JULIA
910	ANDREWS, BERNITA
920	WARD, DELORES
1002	KUHNS, RICHARD
1016	BRAUER, TERRY
1031	BENNETT, D L
1105	HARTMAN, K
1133	ROCHA, C S
1216	KALLHOFF, TOM
1230	ONKEN, KENNETH
1233	MCELROY, EMMETT T
1302	WARREN, RODNEY
1316	OSBORN, TERRY
1324	KRAMER, GEORGE
1329	OLIVERIUS, HARRY
1344	BRESTEL, ARLENE
1400	KAHL, ALMA
1412	HAWKINS, CHARLES
1432	WOLF, C
1442	BARKER, CREG
1507	ARNOLD, EMMETT V JR
1519	CONTRATTO, DENNIS P
1536	ROSS, GERALD
1541	BENNETT, C
1631	EGGER, R
1633	EICH, MICHEAL
1717	VERA, JOHN E
1730	COLE, JERRY
1740	SANCHEZ, ROSLEO
1818	TOUNEY, F
1828	FRERICHS, JOE
1842	KESSELRING, CLINTON
1910	FARNSWORTH, DONALD C
1940	ROOT, LLOYD
2018	GREENWOOD, MICHAEL
2028	GILGREN, WILLIAM A
2104	BEEKEN, P
2115	HICKMAN, DENNIS
2116	GROSENBACH, E
2127	HARTZLER, TRACI
2128	ONIGKEIT, CONNIE
2152	ARELLANO, RUBEN
2204	DODDS, ROBERT E
2215	KAUS, ALBERT
2228	HOPPES, MARVIN

**APPENDIX E
CREDENTIALS**

Megan R. Hughes

SENIOR ASSOCIATE / GROUP MANAGER

PROFESSIONAL EXPERIENCE

Ms. Hughes is an environmental scientist in Terracon's Omaha, Nebraska, office. Her responsibilities include business development, project management, report preparation, and oversight of various environmental projects. Ms. Hughes has over 20 years of experience in environmental consulting including conducting Phase I Environmental Site Assessments (ESA) and Limited Site Investigations (Phase II ESAs), brownfields assessments, Tier I and Tier II RBCA Investigations, groundwater sampling, soil sampling, installing and developing monitoring wells, site mapping, surveying, workplan and report development. Ms. Hughes responsibilities also include being an authorized project reviewer (APR) and Environmental Professional (EP) for Phase I Environmental Site Assessments. Ms. Hughes is also a member of Terracon's Senior Environmental Site Assessment Practitioner Resource Group.

PROJECT EXPERIENCE

Phase I and Phase II Environmental Site Assessments - Iowa, Nebraska, South Dakota, and North Dakota

Directs and prepares numerous Phase I and Phase II ESA projects in support of real estate transactions for many commercial and industrial clients. Ms. Hughes is familiar with the ASTM guidance used to prepare a Phase I assessment. Ms. Hughes' experience includes management, business development, and project review.

Omaha Steel Castings – Omaha, Nebraska

Ms. Hughes' responsibilities has included the management of environmental services for the University of Nebraska Medical Center (UNMC) to acquire 100+ year old steel foundry on 11.2 acres of land and to prepare the site for redevelopment. The environmental services for this project included the preparation of Phase I and Phase II ESA reports, underground storage tank removal, Tier 1 services, polychlorinated biphenyl (PCB) sampling (concrete surface, soil, and groundwater), coordination and removal of drums/totes and various containers of unknown waste, foundry sand sampling and disposal, foundation removal oversight services, preparation of a Remedial Action Plan, and pre-demolition services including asbestos sampling and post abatement clearance sampling. Ms. Hughes has also been responsible for working with the client and the Nebraska Department of Environmental and Energy (NDEE) to achieve site closure through the Voluntary Cleanup Program (VCP).

B&T Metals – Gering, Nebraska

Ms. Hughes was the project manager of an EPA Brownfields Assessment Grant at a former metal recycling facility. Assessment activities included Phase I and Phase II ESA reporting, development of a Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP), Analysis of Brownfield Cleanup Alternatives (ABCA), and multiple workplans.

Otoe County Landfill – Nebraska

Ms. Hughes' responsibilities includes management of semi-annual groundwater sampling events performed in accordance with a site remedial action plan (RAP). Ms. Hughes is also responsible for the preparation of the Annual Groundwater Monitoring Report which is submitted to the Nebraska Department of Environment and Energy (NDEE) on behalf of the client.

Nebraska Department of Environmental Quality SPARC Contract – Nebraska

Multi-site environmental services contract with the State of Nebraska. Currently under this contract, Terracon maintains and operates about 20 remediation systems, with additional sites, under construction or design. Remediation technologies applied to project sites include in-situ air sparge, soil vapor extraction, high-vacuum extraction, vacuum-enhanced fluids removal, groundwater extraction, excavation, receptor mitigation, bio-stimulation/enhancement, and monitored natural attenuation. Assessment services provided have included Risk-Based Corrective Action (RBCA) Tier 1 and Tier 2, free product delineations, soil vapor assessments, and enclosed space assessments. Terracon also conducts on-call quick response activities such as emergency vapor assessment and mitigation, water line

EDUCATION

Bachelor of Science, Environmental Science, 1998, Creighton University

CERTIFICATIONS/LICENSES

OSHA 29 cfr 1910.120

Red Cross Adult CPR – 2014

Red Cross Standard First Aid – 2014

ASTM Technical Training-Phase I and Phase II Environmental Site Assessments for Commercial Real Estate-2014

Fundamentals of Project Management - 2013

Fundamentals of Supervision-2014

AFFILIATIONS

American Institute of Professional Commercial Real Estate for Women (CREW) Omaha Metro-Member

American Council of Engineering Companies (ACEC)

WORK HISTORY

Terracon Consultants, Inc.,
Project Manager, 2005-Present

BioScience Laboratories,
Bozeman, Montana,
Microbiologist, 2002-2004

LT Environmental, Denver,
Colorado, Environmental
Scientist, 2002

United States Geological
Survey, Biologist, Denver,
Colorado, 2001

Hazen Research, Chemist,
Golden, Colorado, 2000

Megan R. Hughes

SENIOR ASSOCIATE / GROUP MANAGER

replacements, spill cleanup, and soil/groundwater remediation. Ms. Hughes has conducted Tier 1 site assessment fieldwork, report writing and project management at more than 100 active assessment and remediation sites in varied geologic regimes.

Agricultural Chemical Projects – Iowa and Nebraska

Assessment of subsurface impact from anhydrous ammonia, carbon tetrachloride, nitrogen fertilizers, and a wide variety of pesticides. Clients include Scoular Grain Company, Cenex/Land O'Lakes, Farmland Industries (regional firms) as well as local grain elevator and farm cooperative companies.

Matthew A. Harbeck

SENIOR STAFF SCIENTIST

PROFESSIONAL EXPERIENCE

Mr. Harbeck is an environmental scientist in the Omaha, Nebraska office. His duties include data collection, data evaluation, scheduling, site mapping, report development, and assisting with other projects as needed. He has experience in a variety of field and laboratory activities including soil sampling, field logging, soil sample processing (density, liquid limit, hydrometer, etc), conducting Phase I Environmental Site Assessments, and NEPA screens.

Mr. Harbeck's previous work experiences and educational background gives him a strong foundation for work in the Environmental Science field with an educational background in botany, invertebrate biology, environmental sciences, physics, and chemistry. Mr. Harbeck performs his work in a professional, safe, and efficient manner. His work ethic puts emphasis on client service and satisfaction.

PROJECT EXPERIENCE

NEPA Screens

Mr. Harbeck has conducted NEPA Screens (limited collocation exclusions, Section 106, and full FCC NEPA studies) for large cell tower portfolio projects in Colorado, Iowa, Nebraska, New Mexico, North Dakota, South Dakota, and Utah. NEPA Screen activities included collecting necessary archeological, cultural, and historical information, correspondence with various state and federal agencies, site reconnaissance, and final report preparation. Mr. Harbeck has also prepared Memorandum of Agreements

Phase I Environmental Site Assessments – Nebraska, Iowa, and South Dakota

Mr. Harbeck has conducted Phase I Environmental Site Assessments in support of real estate transactions and due diligence purposes for various commercial and industrial clients. Mr. Harbeck's responsibilities include conducting site reconnaissance, obtaining and reviewing historical research, paint and soil sample collection, report preparation and final recommendations.

Threatened and Endangered Species Surveys

Mr. Harbeck has conducted Threatened and Endangered Species Surveys in Nebraska and has additional experience coordinating with State Wildlife Agencies in Colorado, North Dakota, South Dakota, Nebraska, and Iowa regarding potential impacts to threatened and endangered species. Mr. Harbeck has conducted desktop threatened and endangered species reviews in Nebraska and Iowa for proposed large scale energy facilities and wastewater pipelines. Additionally, Mr. Harbeck has conducted surveys for the Western Massasauga rattlesnake in Nebraska.

Underground Storage Tank Closures

Mr. Harbeck has experience closing underground storage tank systems and writing closure assessment reports in the state of Nebraska. Mr. Harbeck's responsibilities include determining if the tank is safe for removal, soil sampling under the former tank, environmental oversight, and evaluation of soil sample results.

Field Logging and Strata Identification

Mr. Harbeck has experience identifying and logging soil and rock core samples while part of a drill crew. Specifically, he has assisted in the successful completion of the Council Bluffs Interstate System, Segment 4 Expansion. Responsibilities included recommendation of sampling patterns based off soil samples observed and calculates Rock Quality Designation (RQD) per American Society for Testing and Materials (ASTM) D6032 / D6032M -17: Standard Test Method for Determining RQD of Rock Core. Mr. Harbeck also completed the laboratory testing requested by the client, which was completed in accordance to ASTM/American Association of State Highway and Transportation Officials (AASHTO) specifications.

EDUCATION

Bachelor of Science, Biology, Briar Cliff University

Associate of Science Degree, Western Iowa Technical C.C.

CERTIFICATIONS/LICENSES

40 Hour HAZWOPER

State of Nebraska Underground Storage Tank Closure: CL3035

Iowa Department of Transportation Soils

IDOT Aggregate I & II

AFFILIATIONS

West "O" Toastmasters- District 24

WORK HISTORY

Terracon Consultants, Inc. – Senior Staff Scientist, January 2022 – Present

Terracon Consultants, Inc. Staff Scientist, April 2020 – January 2022

Terracon Consultants, Inc. Assistant Scientist, November 2017-April 2020

Terracon Consultants, Inc. MAT Engineering Technician I, September 2015-November 2017

Vmax Vision, Inc., Regional Manager, March 2014-September 2015

Netpique, LLC. Sales Representative, February 2013-March 2014

Laboratory Testing

Mr. Harbeck assists on soil and aggregate testing for a variety of geotechnical, materials, and environmental projects. He has performed moisture content, density, standard proctors, atterberg limits, hydrometer, gradations, specific gravity, shrinkage limits, sieve analysis, and organic content testing, in accordance to ASTM/AASHTO specifications.

APPENDIX F
DESCRIPTION OF TERMS AND ACRONYMS

Description of Selected General Terms and Acronyms

Term/Acronym	Description
ACM	<p>Asbestos Containing Material. Asbestos is a naturally occurring mineral, three varieties of which (chrysotile, amosite, crocidolite) have been commonly used as fireproofing or binding agents in construction materials. Exposure to asbestos, as well as ACM, has been documented to cause lung diseases including asbestosis (scarring of the lung), lung cancer and mesothelioma (a cancer of the lung lining).</p> <p>Regulatory agencies have generally defined ACM as a material containing greater than one (1) percent asbestos, however some states (e.g. California) define ACM as materials having 0.1% asbestos. In order to define a homogenous material as non-ACM, a minimum number of samples must be collected from the material dependent upon its type and quantity. Homogenous materials defined as non-ACM must either have 1) no asbestos identified in all of its samples or 2) an identified asbestos concentration below the appropriate regulatory threshold. Asbestos concentrations are generally determined using polarized light microscopy or transmission electron microscopy. Point counting is an analytical method to statistically quantify the percentage of asbestos in a sample. The asbestos component of ACM may either be friable or non-friable. Friable materials, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure and have a higher potential for a fiber release than non-friable ACM. Non-friable ACM are materials that are firmly bound in a matrix by plastic, cement, etc. and, if handled carefully, will not become friable.</p> <p>Federal and state regulations require that either all suspect building materials be presumed ACM or that an asbestos survey be performed prior to renovation, dismantling, demolition, or other activities that may disturb potential ACM. Notifications are required prior to demolition and/or renovation activities that may impact the condition of ACM in a building. ACM removal may be required if the ACM is likely to be disturbed or damaged during the demolition or renovation. Abatement of friable or potentially friable ACM must be performed by a licensed abatement contractor in accordance with state rules and NESHAP. Additionally, OSHA regulations for work classification, worker training and worker protection will apply.</p>
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tanks. ASTs are generally described as storage tanks less than 10% of which are below ground (i.e., buried). Tanks located in a basement, but not buried, are also considered ASTs. Whether, and the extent to which, an AST is regulated, is determined on a case-by-case basis and depends upon tank size, its contents and the jurisdiction of its location.
BGS	Below Ground Surface
Brownfields	State and/or tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes. BTEX are VOC components found in gasoline and commonly used as analytical indicators of a petroleum hydrocarbon release.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (a.k.a. Superfund). CERCLA is the federal act that regulates abandoned or uncontrolled hazardous waste sites. Under this Act, joint and several liability may be imposed on potentially responsible parties for cleanup-related costs.
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System. An EPA compilation of sites having suspected or actual releases of hazardous substances to the environment. CERCLIS also contains information on site inspections, preliminary assessments and remediation of hazardous waste sites. These sites are typically reported to EPA by states and municipalities or by third parties pursuant to CERCLA Section 103.
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations

Description of Selected General Terms and Acronyms

Term/Acronym	Description
CREC	Controlled Recognized Environmental Condition is defined in ASTM E1527-13 as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority) , with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report.”
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System. An EPA-maintained federal database which stores information on notifications of oil discharges and hazardous substance releases in quantities greater than the applicable reportable quantity under CERCLA. ERNS is a cooperative data-sharing effort between EPA, DOT, and the National Response Center.
ESA	Environmental Site Assessment
FRP	Fiberglass Reinforced Plastic
Hazardous Substance	As defined under CERCLA, this is (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (with some exclusions); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action under section 2606 of Title 15. This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise listed as a hazardous substance under subparagraphs (A) through (F) above, and the term include natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
Hazardous Waste	This is defined as having characteristics identified or listed under section 3001 of the Solid Waste Disposal Act (with some exceptions). RCRA, as amended by the Solid Waste Disposal Act of 1980, defines this term as a “solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”
HREC	Historical Recognized Environmental Condition is defined in ASTM E1527-13 as “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time of the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition.”

Description of Selected General Terms and Acronyms

Term/Acronym	Description
IC/EC	A listing of sites with institutional and/or engineering controls in place. IC include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. EC include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.
ILP	Innocent Landowner/Operator Program
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank. This is a federal term set forth under RCRA for leaking USTs. Some states also utilize this term.
MCL	Maximum Contaminant Level. This Safe Drinking Water concept (and also used by many states as a ground water cleanup criteria) refers to the limit on drinking water contamination that determines whether a supplier can deliver water from a specific source without treatment.
MSDS	Material Safety Data Sheets. Written/printed forms prepared by chemical manufacturers, importers and employers which identify the physical and chemical traits of hazardous chemicals under OSHA's Hazard Communication Standard.
NESHAP	National Emissions Standard for Hazardous Air Pollutants (Federal Clean Air Act). This part of the Clean Air Act regulates emissions of hazardous air pollutants.
NFRAP	Facilities where there is "No Further Remedial Action Planned," as more particularly described under the Records Review section of this report.
NOV	Notice of Violation. A notice of violation or similar citation issued to an entity, company or individual by a state or federal regulatory body indicating a violation of applicable rule or regulations has been identified.
NPDES	National Pollutant Discharge Elimination System (Clean Water Act). The federal permit system for discharges of polluted water.
NPL	The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.
OSHA	Occupational Safety and Health Administration or Occupational Safety and Health Act
PACM	Presumed Asbestos-Containing Material. A material that is suspected of containing or presumed to contain asbestos but which has not been analyzed to confirm the presence or absence of asbestos.
PCB	Polychlorinated Biphenyl. A halogenated organic compound commonly in the form of a viscous liquid or resin, a flowing yellow oil, or a waxy solid. This compound was historically used as dielectric fluid in electrical equipment (such as electrical transformers and capacitors, electrical ballasts, hydraulic and heat transfer fluids), and for numerous heat and fire sensitive applications. PCB was preferred due to its durability, stability (even at high temperatures), good chemical resistance, low volatility, flammability, and conductivity. PCBs, however, do not break down in the environment and are classified by the EPA as a suspected carcinogen. 1978 regulations, under the Toxic Substances Control Act, prohibit manufacturing of PCB-containing equipment; however, some of this equipment may still be in use today.
pCi/L	picoCuries per Liter of Air. Unit of measurement for Radon and similar radioactive materials.
PLM	Polarized Light Microscopy (see ACM section of the report, if included in the scope of services)
PST	Petroleum Storage Tank. An AST or UST that contains a petroleum product.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
Radon	A radioactive gas resulting from radioactive decay of naturally-occurring radioactive materials in rocks and soils containing uranium, granite, shale, phosphate, and pitchblende. Radon concentrations are measured in picoCuries per Liter of Air. Exposure to elevated levels of radon creates a risk of lung cancer; this risk generally increases as the level of radon and the duration of exposure increases. Outdoors, radon is diluted to such low concentrations that it usually does not present a health concern. However, radon can accumulate in building basements or similar enclosed spaces to levels that can pose a risk to human health. Indoor radon concentrations depend primarily upon the building's construction, design and the concentration of radon in the underlying soil and ground water. The EPA recommended annual average indoor "action level" concentration for residential structures is 4.0 pCi/l.
RCRA	Resource Conservation and Recovery Act. Federal act regulating solid and hazardous wastes from point of generation to time of disposal ("cradle to grave"). 42 U.S.C. 6901 et seq.
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.
RCRA CORRACTS/TS Ds	The USEPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous materials which are undergoing "corrective action". A "corrective action" order is issued when there is a release of hazardous waste or constituents into the environment from a RCRA facility.
RCRA Non-CORRACTS/TS Ds	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA of facilities which report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.
RCRA Violators List	RAATS. RCRA Administrative Actions Taken. RAATS information is now contained in the RCRIS database and includes records of administrative enforcement actions against facilities for noncompliance.
RCRIS	Resource Conservation and Recovery Information System, as defined in the Records Review section of this report.
REC	Recognized Environmental Conditions are defined by ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment. De minimis conditions are not recognized environmental conditions."
SCL	State "CERCLIS" List (see SPL /State Priority List, below).
SPCC	Spill Prevention, Control and Countermeasures. SPCC plans are required under federal law (Clean Water Act and Oil Pollution Act) for any facility storing petroleum in tanks and/or containers of 55-gallons or more that when taken in aggregate exceed 1,320 gallons. SPCC plans are also required for facilities with underground petroleum storage tanks with capacities of over 42,000 gallons. Many states have similar spill prevention programs, which may have additional requirements.
SPL	State Priority List. State list of confirmed sites having contamination in which the state is actively involved in clean up activities or is actively pursuing potentially responsible parties for clean up. Sometimes referred to as a State "CERCLIS" List.
SQG	Small Quantity Generator
SWF/LF	State and/or Tribal database of Solid Waste/Landfill facilities. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.
TPH	Total Petroleum Hydrocarbons
TRI	Toxic Release Inventory. Routine EPA report on releases of toxic chemicals to the environment based upon information submitted by entities subject to reporting under the Emergency Planning and Community Right to Know Act.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
TSCA	Toxic Substances Control Act. A federal law regulating manufacture, import, processing and distribution of chemical substances not specifically regulated by other federal laws (such as asbestos, PCBs, lead-based paint and radon). 15 U.S.C 2601 et seq.
USACE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
USNRCS	United States Department of Agriculture-Natural Resource Conservation Service
UST	Underground Storage Tank. Most federal and state regulations, as well as ASTM E1527-13, define this as any tank, incl., underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground (i.e., buried).
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.
VOC	Volatile Organic Compound
Wetlands	<p>Areas that are typically saturated with surface or ground water that creates an environment supportive of wetland vegetation (i.e., swamps, marshes, bogs). The <u>Corps of Engineers Wetlands Delineation Manual</u> (Technical Report Y-87-1) defines wetlands as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. For an area to be considered a jurisdictional wetland, it must meet the following criteria: more than 50 percent of the dominant plant species must be categorized as Obligate, Facultative Wetland, or Facultative on lists of plant species that occur in wetlands; the soil must be hydric; and, wetland hydrology must be present.</p> <p>The federal Clean Water Act which regulates “waters of the US,” also regulates wetlands, a program jointly administered by the USACE and the EPA. Waters of the U.S. are defined as: (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction could affect interstate/ foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U. S., (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Only the USACE has the authority to make a final wetlands jurisdictional determination.</p>

APPENDIX F
AGENCY CORRESPONDENCE

8/24/2022

Brad Oeltjenbruns
Ebenezer Management, LLC
VIA EMAIL

Addresses these sites: Alliance (EA), Ansley (ER), Pender (ER), Sidney (EA), and Stuart (ER)
--

RE: HP# 2205-090-01, 2205-091-01, 2205-101-01, 2205-102-01, 2205-103-01; *A Phase II Cultural Resources Investigation of the Ebenezer Management, LLC Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska*

Mr. Oeltjenbruns:

Thank you for submitting the cultural resource survey report prepared for the above referenced project for Nebraska State Historic Preservation Office (NeSHPO) review and comment. Our comment on this project and its potential to affect historic properties is required by Section 106 of the National Historic Preservation Act of 1966, as amended in 2014, and implementing regulations 36 CFR Part 800.

This report documents the results of a cultural resources investigation prior to the project. Based on the information provided, the proposed undertaking is unlikely to affect any cultural resources listed on the National Register of Historic Places or eligible for such a listing. Therefore, the NeSHPO concurs that the determination of **no historic properties affected** is appropriate for this undertaking and the project should proceed as planned.

However, even though the project occurs within an area that has been evaluated by a professional archeologist, there is the possibility that buried or otherwise obscured cultural or human remains may be discovered during the undertaking. If any such discovery is made, please contact this office immediately for further instruction.

Be advised that this determination does not necessarily reflect the opinion of Native American Tribes that may have an interest in the area, nor does it pertain to Traditional Cultural Properties, if they exist in the area.

Please retain this correspondence and your documented finding in order to show compliance with Section 106 of the National Historic Preservation Act, as amended and submit this letter to the project's lead federal agency to fulfill the statutory obligation of Section 106 consultation with the NeSHPO. If you have any questions, please contact me at john.swigart@nebraska.gov or 402-560-0574.

Sincerely,



John Swigart
Preservation Archeologist

1500 R Street
Lincoln, NE 68508-1651
P: 402.471.3270
P: 800.833.6747
F: 402.471.3100
history.nebraska.gov

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %		Amount of Farmland As Defined in FPPA Acres: %		
Name of Land Evaluation System Used	Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:		Date Of Selection		Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>	
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

United States Department of Agriculture



Natural Resources Conservation Service
Nebraska State Office
Federal Building, Room 152
100 Centennial Mall North
Lincoln, NE 68508-3866
(402) 437-5300

<http://www.ne.nrcs.usda.gov>

Subject: LNU – Farmland Protection
Proposed Solar Project - Sidney
NEPA/FPPA Evaluation
Cheyenne County, Nebraska

Date: June 30, 2022

To: Ebenezer Management LLC
Attn: Brad Oeltjenbruns (opeople@lvcta.com)

File Code: 310

We have reviewed the information provided in your correspondence dated June 9, 2022, concerning the proposed solar project located in Cheyenne County, Nebraska. This review is part of the National Environmental Policy Act (NEPA) evaluation for the U.S. Department of Agriculture, Rural Development (RD). We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed site contains areas of Prime Farmland and we have completed the Farmland Conversion Impact Rating form (AD-1006) for the proposed site. The combined rating of the site is 95. The FPPA law states that sites with a rating less than 160 will need no further consideration for protection and no additional evaluation is necessary. We encourage the use of accepted erosion control methods during the construction of this project.

If you have further questions, please contact Carlos Villarreal at 402.437.4105 or by email at carlos.villarreal@usda.gov (preferred).

Sincerely,

CARLOS J. VILLARREAL
USDA-NRCS Nebraska State Soil Scientist

Attachment: EM Solar Installation Project Sidney_NE033.pdf (AD-1006)



Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC
2516 380th Street
Dayton, IA 50530

12/23/2022

Bobby Komardley
Chairman
Apache Tribe of Oklahoma
P.O. Box 1330
Anadarko, OK 73005

Subject: USDA RD Rural Utilities Service Applicant THPO Recommended Finding of No Historic Properties Affected, Municipal Solar Project, Sidney, Nebraska

Dear Chairman Komardley:

SE Municipal Solar, LLC plans to seek financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for SE Municipal Solar, LLC (Project). This Project will not be using the NPA.¹

Project Description: The project involves installation of a 4,500-kW ground mounted solar array. The array will be placed generally as shown on the attached site layout. These are estimates and the module placements may vary inside the general layout area. The array will have driven posts for mounting of the racking with cross pieces for the actual module installation. The posts for racking will be in rows with the posts generally 8-10 feet apart and 4-6 feet deep, posts are generally 3 inches in diameter. Each row of racking will be connected by a trench along the edge of the array, the trench from each portion of the array will extend to the location of the transformer on a cement pad, where the city of Sidney will take control of the energy generated. The trenches will be 18-24 inches deep and 12 inches wide. The ground disturbance will also include an area for project construction staging including parking and equipment/component storage. This area will receive heavy traffic and may be rutted at times.

Project purpose: Installation of a solar array to generate energy to partially offset the municipality usage currently supplied by the utility company serving the community.

¹ *Nationwide Programmatic Agreement among the U.S. Department of Agriculture Rural Development Programs, National Conference of State Historic Preservation Officers, Tribal Signatories, and The Advisory Council on Historic Preservation for Sequencing Section 106 (NPA).*

USDA RD Applicant Section 106 THPO Recommended Finding Letter 2

Project Need: The municipality is trying to control their utility costs. This project will allow the community to lower their overall costs which will benefit the community residents. The array will also contribute to a reduction in fossil fuel usage.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

At the direction of RUS, on 12/23/2022 SE Municipal Solar, LLC notified the following Indian tribes about the SE Municipal Solar, LLC : Apache Tribe of Oklahoma, Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana. No response to date. The same information has been provided to the Nebraska State Preservation Office for review.

The enclosed report titled, A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska. Project No. 336 dated August 2022 describes the results of the Class II intensive cultural resources investigation.

In summary, the Class II intensive cultural resources investigation covered 25.98 acres in Cheyenne County. Field investigations resulted in the identification of no cultural resources.

Based on the findings of this Class II intensive cultural resources investigation report summarized above, Archeology Laboratory Augustana University recommends no further cultural resources investigations for the proposed Sidney solar facility. Based on the findings of the Archeology Laboratory Augustana University Project No. 336 issued August 2022, a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the referenced project.

USDA RD Applicant Section 106 THPO Finding Letter 3

Accordingly, SE Municipal Solar, LLC is submitting a recommended finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) and supporting documentation for review and consideration by the Apache Tribe of Oklahoma.

Please provide your concurrence or objection, **electronically** within 30 days of your receipt of this recommended finding. In accordance with 36 CFR § 800.3(c)(4), RUS will proceed to the next step in review if we do not receive a response from you within thirty days. Please direct any questions you may have to Greg Korosec, Archaeologist RUS, RD National Office, greg.korosec@usda.gov.

Sincerely,



Brad Oeltjerbruns

VP

Ebenezer Mgmt, LLC

Enclosure

Aerial Map

A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska
(Pages 22-27 detail the Cheyenne County proposed site)

Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC
2516 380th Street
Dayton, IA 50530

12/23/2022

Ben Ridgley
THPO
Arapaho Tribe of the Wind River Reservation, Wyoming
PO Box 67
St. Stevens, WY 82524

Subject: USDA RD Rural Utilities Service Applicant THPO Recommended Finding of No Historic Properties Affected, Municipal Solar Project, Sidney, Nebraska

Dear THPO Ridgley:

SE Municipal Solar, LLC plans to seek financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for SE Municipal Solar, LLC (Project). This Project will not be using the NPA.¹

Project Description: The project involves installation of a 4,500-kW ground mounted solar array. The array will be placed generally as shown on the attached site layout. These are estimates and the module placements may vary inside the general layout area. The array will have driven posts for mounting of the racking with cross pieces for the actual module installation. The posts for racking will be in rows with the posts generally 8-10 feet apart and 4-6 feet deep, posts are generally 3 inches in diameter. Each row of racking will be connected by a trench along the edge of the array, the trench from each portion of the array will extend to the location of the transformer on a cement pad, where the city of Sidney will take control of the energy generated. The trenches will be 18-24 inches deep and 12 inches wide. The ground disturbance will also include an area for project construction staging including parking and equipment/component storage. This area will receive heavy traffic and may be rutted at times.

Project purpose: Installation of a solar array to generate energy to partially offset the municipality usage currently supplied by the utility company serving the community.

¹ *Nationwide Programmatic Agreement among the U.S. Department of Agriculture Rural Development Programs, National Conference of State Historic Preservation Officers, Tribal Signatories, and The Advisory Council on Historic Preservation for Sequencing Section 106 (NPA).*

USDA RD Applicant Section 106 THPO Recommended Finding Letter 2

Project Need: The municipality is trying to control their utility costs. This project will allow the community to lower their overall costs which will benefit the community residents. The array will also contribute to a reduction in fossil fuel usage.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

At the direction of RUS, on 12/23/2022 SE Municipal Solar, LLC notified the following Indian tribes about the SE Municipal Solar, LLC: Apache Tribe of Oklahoma, Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana. No response to date. The same information has been provided to the Nebraska State Preservation Office for review.

The enclosed report titled, A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska. Project No. 336 dated August 2022 describes the results of the Class II intensive cultural resources investigation.

In summary, the Class II intensive cultural resources investigation covered 25.98 acres in Cheyenne County. Field investigations resulted in the identification of no cultural resources.

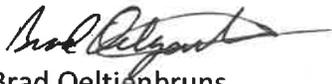
Based on the findings of this Class II intensive cultural resources investigation report summarized above, Archeology Laboratory Augustana University recommends no further cultural resources investigations for the proposed Sidney solar facility. Based on the findings of the Archeology Laboratory Augustana University Project No. 336 issued August 2022, a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the referenced project.

USDA RD Applicant Section 106 THPO Finding Letter 3

Accordingly, SE Municipal Solar, LLC is submitting a recommended finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) and supporting documentation for review and consideration by the Arapaho Tribe of the Wind River Reservation, Wyoming.

Please provide your concurrence or objection, **electronically** within 30 days of your receipt of this recommended finding. In accordance with 36 CFR § 800.3(c)(4), RUS will proceed to the next step in review if we do not receive a response from you within thirty days. Please direct any questions you may have to Greg Korosec, Archaeologist RUS, RD National Office, greg.korosec@usda.gov.

Sincerely,



Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC

Enclosure

Aerial Map

A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska
(Pages 22-27 detail the Cheyenne County proposed site)

Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC
2516 380th Street
Dayton, IA 50530

12/23/2022

Max Bear
THPO
Cheyenne and Arapaho Tribes, Oklahoma
700 Black Kettle Blvd
Concho, OK 73022

Subject: USDA RD Rural Utilities Service Applicant THPO Recommended Finding of No Historic Properties Affected, Municipal Solar Project, Sidney, Nebraska

Dear THPO Bear:

SE Municipal Solar, LLC plans to seek financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for SE Municipal Solar, LLC (Project). This Project will not be using the NPA.¹

Project Description: The project involves installation of a 4,500-kW ground mounted solar array. The array will be placed generally as shown on the attached site layout. These are estimates and the module placements may vary inside the general layout area. The array will have driven posts for mounting of the racking with cross pieces for the actual module installation. The posts for racking will be in rows with the posts generally 8-10 feet apart and 4-6 feet deep, posts are generally 3 inches in diameter. Each row of racking will be connected by a trench along the edge of the array, the trench from each portion of the array will extend to the location of the transformer on a cement pad, where the city of Sidney will take control of the energy generated. The trenches will be 18-24 inches deep and 12 inches wide. The ground disturbance will also include an area for project construction staging including parking and equipment/component storage. This area will receive heavy traffic and may be rutted at times.

Project purpose: Installation of a solar array to generate energy to partially offset the municipality usage currently supplied by the utility company serving the community.

¹ *Nationwide Programmatic Agreement among the U.S. Department of Agriculture Rural Development Programs, National Conference of State Historic Preservation Officers, Tribal Signatories, and The Advisory Council on Historic Preservation for Sequencing Section 106 (NPA).*

USDA RD Applicant Section 106 THPO Recommended Finding Letter 2

Project Need: The municipality is trying to control their utility costs. This project will allow the community to lower their overall costs which will benefit the community residents. The array will also contribute to a reduction in fossil fuel usage.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

At the direction of RUS, on 12/23/2022 SE Municipal Solar, LLC notified the following Indian tribes about the SE Municipal Solar, LLC: : Apache Tribe of Oklahoma, Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana. No response to date. The same information has been provided to the Nebraska State Preservation Office for review.

The enclosed report titled, A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska. Project No. 336 dated August 2022 describes the results of the Class II intensive cultural resources investigation.

In summary, the Class II intensive cultural resources investigation covered 25.98 acres in Cheyenne County. Field investigations resulted in the identification of no cultural resources.

Based on the findings of this Class II intensive cultural resources investigation report summarized above, Archeology Laboratory Augustana University recommends no further cultural resources investigations for the proposed Sidney solar facility. Based on the findings of the Archeology Laboratory Augustana University Project No. 336 issued August 2022, a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the referenced project.

USDA RD Applicant Section 106 THPO Finding Letter 3

Accordingly, SE Municipal Solar, LLC is submitting a recommended finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) and supporting documentation for review and consideration by the Cheyenne and Arapaho Tribes, Oklahoma.

Please provide your concurrence or objection, **electronically** within 30 days of your receipt of this recommended finding. In accordance with 36 CFR § 800.3(c)(4), RUS will proceed to the next step in review if we do not receive a response from you within thirty days. Please direct any questions you may have to Greg Korosec, Archaeologist RUS, RD National Office, greg.korosec@usda.gov.

Sincerely,



Brad Oeltjenbruns

VP

Ebenezer Mgmt, LLC

Enclosure

Aerial Map

A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska
(Pages 22-27 detail the Cheyenne County proposed site)

Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC
2516 380th Street
Dayton, IA 50530

12/23/2022

Martina Minthorn
THPO
Comanche Nation, Oklahoma
6 SW D Avenue
Lawton, OK 73502

Subject: USDA RD Rural Utilities Service Applicant THPO Recommended Finding of No Historic Properties Affected, Municipal Solar Project, Sidney, Nebraska

Dear THPO Minthorn:

SE Municipal Solar, LLC plans to seek financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for SE Municipal Solar, LLC (Project). This Project will not be using the NPA.¹

Project Description: The project involves installation of a 4,500-kW ground mounted solar array. The array will be placed generally as shown on the attached site layout. These are estimates and the module placements may vary inside the general layout area. The array will have driven posts for mounting of the racking with cross pieces for the actual module installation. The posts for racking will be in rows with the posts generally 8-10 feet apart and 4-6 feet deep, posts are generally 3 inches in diameter. Each row of racking will be connected by a trench along the edge of the array, the trench from each portion of the array will extend to the location of the transformer on a cement pad, where the city of Sidney will take control of the energy generated. The trenches will be 18-24 inches deep and 12 inches wide. The ground disturbance will also include an area for project construction staging including parking and equipment/component storage. This area will receive heavy traffic and may be rutted at times.

Project purpose: Installation of a solar array to generate energy to partially offset the municipality usage currently supplied by the utility company serving the community.

¹ *Nationwide Programmatic Agreement among the U.S. Department of Agriculture Rural Development Programs, National Conference of State Historic Preservation Officers, Tribal Signatories, and The Advisory Council on Historic Preservation for Sequencing Section 106 (NPA).*

USDA RD Applicant Section 106 THPO Recommended Finding Letter 2

Project Need: The municipality is trying to control their utility costs. This project will allow the community to lower their overall costs which will benefit the community residents. The array will also contribute to a reduction in fossil fuel usage.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

At the direction of RUS, on 12/23/2022 SE Municipal Solar, LLC notified the following Indian tribes about the SE Municipal Solar, LLC: : Apache Tribe of Oklahoma, Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana. No response to date. The same information has been provided to the Nebraska State Preservation Office for review.

The enclosed report titled, A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska. Project No. 336 dated August, 2022 describes the results of the Class II intensive cultural resources investigation.

In summary, the Class II intensive cultural resources investigation covered 25.98 acres in Cheyenne County. Field investigations resulted in the identification of no cultural resources.

Based on the findings of this Class II intensive cultural resources investigation report summarized above, Archeology Laboratory Augustana University recommends no further cultural resources investigations for the proposed Sidney solar facility. Based on the findings of the Archeology Laboratory Augustana University Project No. 336 issued August, 2022, a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the referenced project.

USDA RD Applicant Section 106 THPO Finding Letter 3

Accordingly, SE Municipal Solar, LLC is submitting a recommended finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) and supporting documentation for review and consideration by the Comanche Nation, Oklahoma.

Please provide your concurrence or objection, **electronically** within 30 days of your receipt of this recommended finding. In accordance with 36 CFR § 800.3(c)(4), RUS will proceed to the next step in review if we do not receive a response from you within thirty days. Please direct any questions you may have to Greg Korosec, Archaeologist RUS, RD National Office, greg.korosec@usda.gov.

Sincerely,



Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC

Enclosure

Aerial Map

A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska
(Pages 22-27 detail the Cheyenne County proposed site)

Brad Oeltjenbruns
VP
Ebenezer Mgmt, LLC
2516 380th Street
Dayton, IA 50530

12/23/2022

Teanna Limpy
THPO
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
PO Box 128
Lame Deer, MT 59043

Subject: USDA RD Rural Utilities Service Applicant THPO Recommended Finding of No Historic Properties Affected, Municipal Solar Project, Sidney, Nebraska

Dear THPO Limpy:

SE Municipal Solar, LLC plans to seek financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for SE Municipal Solar, LLC (Project). This Project will not be using the NPA.¹

Project Description: The project involves installation of a 4,500-kW ground mounted solar array. The array will be placed generally as shown on the attached site layout. These are estimates and the module placements may vary inside the general layout area. The array will have driven posts for mounting of the racking with cross pieces for the actual module installation. The posts for racking will be in rows with the posts generally 8-10 feet apart and 4-6 feet deep, posts are generally 3 inches in diameter. Each row of racking will be connected by a trench along the edge of the array, the trench from each portion of the array will extend to the location of the transformer on a cement pad, where the city of Sidney will take control of the energy generated. The trenches will be 18-24 inches deep and 12 inches wide. The ground disturbance will also include an area for project construction staging including parking and equipment/component storage. This area will receive heavy traffic and may be rutted at times.

Project purpose: Installation of a solar array to generate energy to partially offset the municipality usage currently supplied by the utility company serving the community.

¹ *Nationwide Programmatic Agreement among the U.S. Department of Agriculture Rural Development Programs, National Conference of State Historic Preservation Officers, Tribal Signatories, and The Advisory Council on Historic Preservation for Sequencing Section 106 (NPA).*

USDA RD Applicant Section 106 THPO Recommended Finding Letter 2

Project Need: The municipality is trying to control their utility costs. This project will allow the community to lower their overall costs which will benefit the community residents. The array will also contribute to a reduction in fossil fuel usage.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

At the direction of RUS, on 12/23/2022 SE Municipal Solar, LLC notified the following Indian tribes about the SE Municipal Solar, LLC: : Apache Tribe of Oklahoma, Arapaho Tribe of the Wind River Reservation, Wyoming; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana. No response to date. The same information has been provided to the Nebraska State Preservation Office for review.

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In summary, the Class II intensive cultural resources investigation covered 25.98 acres in Cheyenne County. Field investigations resulted in the identification of no cultural resources.

Based on the findings of this Class II intensive cultural resources investigation report summarized above, Archeology Laboratory Augustana University recommends no further cultural resources investigations for the proposed Sidney solar facility. Based on the findings of the Archeology Laboratory Augustana University Project No. 336 issued August 2022, a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the referenced project.

Accordingly, SE Municipal Solar, LLC is submitting a recommended finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) and supporting documentation for review and consideration by the Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana.

Please provide your concurrence or objection, **electronically** within 30 days of your receipt of this recommended finding. In accordance with 36 CFR § 800.3(c)(4), RUS will proceed to the next step in review if we do not receive a response from you within thirty days. Please direct any questions you may have to Greg Korosec, Archaeologist RUS, RD National Office, greg.korosec@usda.gov.

Sincerely,



Brad Oeltjenbruns

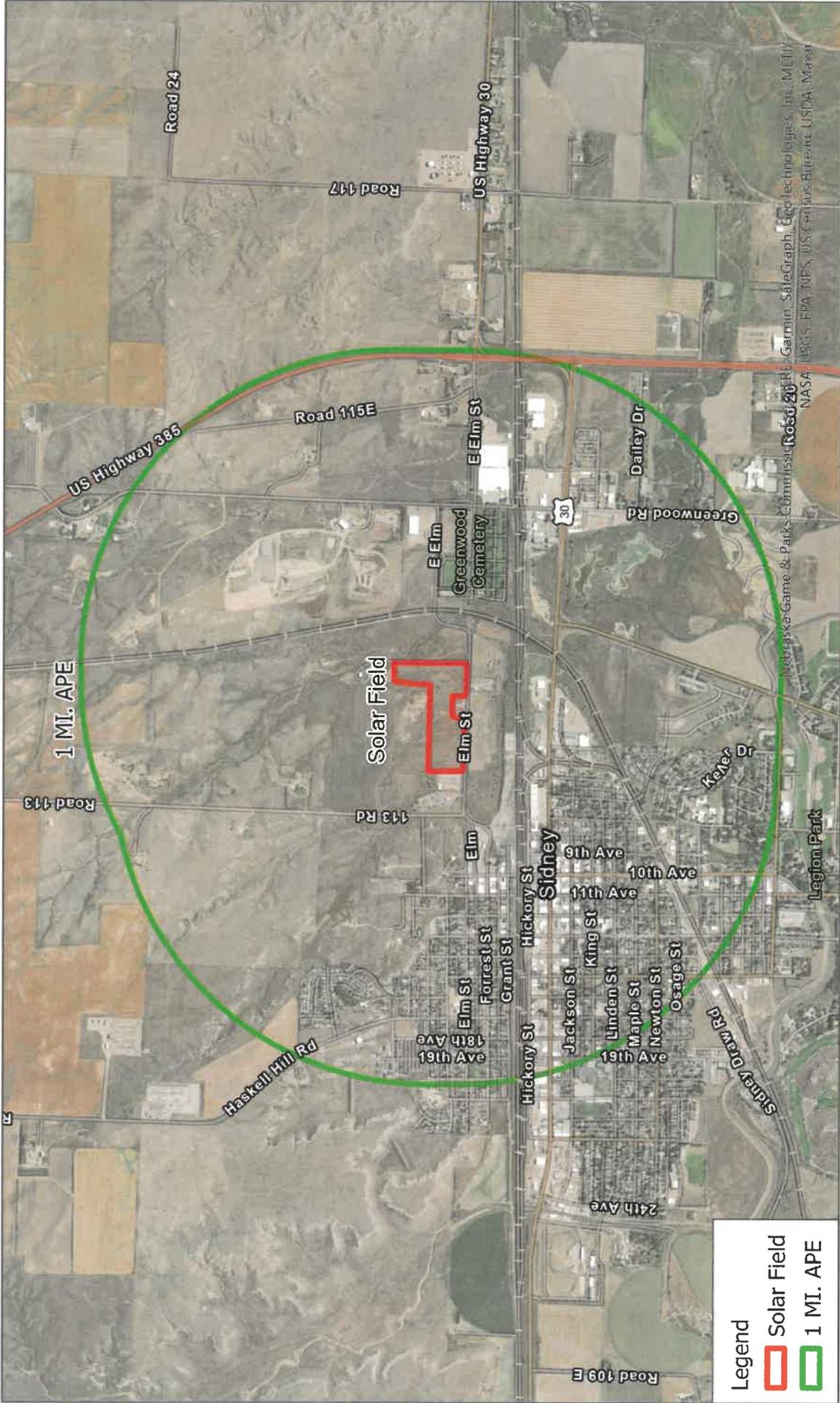
VP

Ebenezer Mgmt, LLC

Enclosures

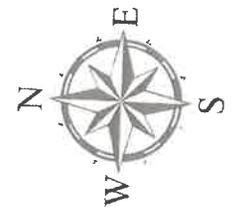
Aerial Map

A Phase II Cultural Resources Investigation of the Municipal Solar Project Localities in Box Butte, Cheyenne, Custer, Holt, and Thurston Counties, Nebraska
(Pages 22-27 detail the Cheyenne County proposed site)



NAD 1983 (State Plane) Nebraska: 102.9691360°W 41.1499361°N

SIDNEY SOLAR FIELD
CHEYENNE COUNTY, NEBRASKA
S29-T14N-R49W



Legend

- Solar Field
- 1 MI. APE



Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

THPO Recommended Finding of No Historic Properties Affected

1 message

Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>
To: bkomardley@outlook.com

Fri, Dec 23, 2022 at 2:06 PM

Chairman Komardley,

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year. Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns
Ebenezer Mgmt, LLC
515-460-0106

3 attachments

 **Apache Tribe.pdf**
129K

 **Sidney Larger Site.pdf**
130K

 **Nebraska Augustana Report.pdf**
4160K



Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

Recommended Finding of No Historic Properties Affected

1 message

Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>
To: "benridgley007@gmail.com" <benridgley007@gmail.com>

Fri, Dec 23, 2022 at 2:14 PM

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year. Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns
Ebenezer Mgmt, LLC
515-460-0106

3 attachments

 **Arapaho Tribe letter.pdf**
130K

 **Sidney Larger Site.pdf**
130K

 **Nebraska Augustana Report.pdf**
4160K



Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

Recommended Finding of No Historic Properties Affected

1 message

Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>
To: mbear@c-a-tribes.org

Fri, Dec 23, 2022 at 2:17 PM

THPO Bear,

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year. Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns
Ebenezer Mgmt, LLC
515-460-0106

3 attachments

 **Cheyenne and Arapaho Tribes letter.pdf**
130K

 **Sidney Larger Site.pdf**
130K

 **Nebraska Augustana Report.pdf**
4160K



Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

Recommended Finding of No Historic Properties Affected

1 message

Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

To: "martina.minthorn@comanchenation.com" <martina.minthorn@comanchenation.com>

Fri, Dec 23, 2022 at 2:19 PM

THPO Minthorn,

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year.

Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns

Ebenezer Mgmt, LLC

515-460-0106

3 attachments

 **Comanche Nation letter.pdf**

129K

 **Sidney Larger Site.pdf**

130K

 **Nebraska Augustana Report.pdf**

4160K



Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

Recommended Finding of No Historic Properties Affected

Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>
To: Brad and Lori <opeople@lvcta.com>

Fri, Dec 23, 2022 at 2:31 PM

----- Forwarded message -----

From: **Brad Oeltjenbruns** <brad.oeltjenbruns@gmail.com>

Date: Fri, Dec 23, 2022 at 2:29 PM

Subject: Fwd: Recommended Finding of No Historic Properties Affected

To: <teanna.limpy@cheyennenation.com>

THPO Limpy,

Please ignore first email forgot to attach 1 of the attachments.

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year. Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns

Ebenezer Mgmt, LLC

515-460-0106

3 attachments

 **Northern Cheyenne Tribe letter.pdf**
131K

 **Sidney Larger Site.pdf**
130K

 **Nebraska Augustana Report.pdf**
4160K

Skaalure, Shannon

Subject: FW: Recommended Finding of No Historic Properties Affected

----- Forwarded message -----

From: **Teanna Limpy** <teanna.limpy@cheyennenation.com>
Date: Fri, Jan 20, 2023 at 6:15 PM
Subject: RE: Recommended Finding of No Historic Properties Affected
To: Brad Oeltjenbruns <brad.oeltjenbruns@gmail.com>

Mr. Oeltjenbruns,

I have reviewed the project information provided. Based on the results of the Class II report and subsequent pedestrian survey of the direct project area, it is possible to make a formal determination on this project now. The Northern Cheyenne THPO provides a formal determination of 'No Adverse Effect' regarding this project undertaking. Please contact me directly, if you have any questions regarding this correspondence.

Respectfully,

Teanna Limpy, Director
Tribal Historic Preservation Office
Northern Cheyenne Tribe
14 E. Medicine Lodge Drive
PO Box 128
Lame Deer, MT. 59043
Office: 406-477-4838/8113
Direct: 406-477-4839
Work Cell: 406-740-0420

From: Brad Oeltjenbruns [mailto:brad.oeltjenbruns@gmail.com]
Sent: Friday, December 23, 2022 1:22 PM
To: teanna.limpy@cheyennenation.com
Subject: Recommended Finding of No Historic Properties Affected

THPO Limpy,

We had a change in project scope which increased the size of this site. You received the original initiation in May of this year. Attached is the current letter recommending a finding of no historic properties affected. An aerial photo of the larger site and the Phase II Cultural Resources Investigation.

Thank you,

Brad Oeltjenbruns

Ebenezer Mgmt, LLC

515-460-0106