

Appendix F

Desktop Wetland & Species Report



Desktop Wetland & Species Report
SD44 Additional Areas
SD44 Platte-Winner Bridge Corridor Study
Charles Mix County, SD

February 2023

SDDOT Project Nos. HP5596(19) P and P0044(207)290 N

HR Green Project No: 160025



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South Dakota
Department of Transportation

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1.0 Introduction

This desktop wetland and species investigation investigates three areas near the proposed SD44 Platte-Winner Bridge reconstruction. The areas are outside of the area of the original potential effect being evaluated for the SD44 bridge environmental assessment. These outside areas include:

- Study Area 1. A proposed dump station mitigation area at West Platte Game Production Area (GPA) abutting the south right-of-way of SD44 approximately 1.4 miles east of the Snake Creek Recreation Area (SCRA) entrance. Study Area 1 is 28.1 acres.
- Study Area 2. Located approximately 3,000 feet southwest of Study Area 1, Study Area 2 is outside but abuts the West Platte GPA. Study Area 2 is also being considered as part of dump station mitigation. Study Area 2 is 33.8 acres.
- Study Area 3 is a SD44 landslide mitigation area south and west of Study Area 1. Study Area 3 is 0.8 acres.

TABLE 1: STUDY AREA LOCATION SPECIFICS

Study Area	Description	Latitude, Longitude (dec. deg.)	Section, Township, Range
1	Dump Station	43.39044328, -99.09368066	Mid 14, 99 N, 70 W
2	Dump Station Mitigation	43.38323485, -99.10085356	NW¼ 23, 99 N, 70 W
3	Landslide Mitigation	43.39127061, -99.11049548	Mid 15, 99 N, 70 W

2.0 Wetlands and Habitat

2.1 USGS Quadrangle Map

The USGS 7.5" quadrangle topographic map was reviewed (See Figure 1 and exhibits below).

Elevations in Study Area 1 are 1600-1630 feet above mean sea level (asl). The study area is relatively flat with slopes to the west and south to intermittent streams outside of the study area. No stream or wetland features are apparent.

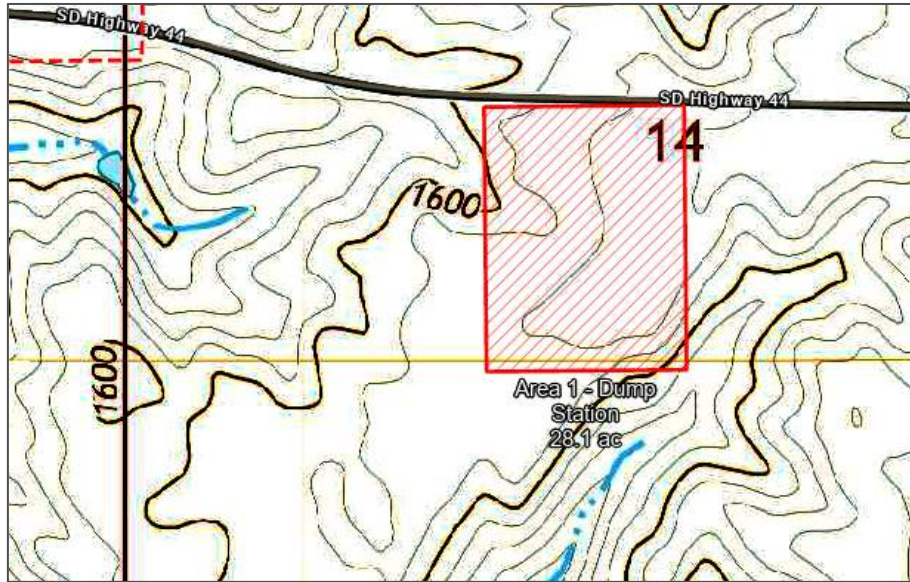


Exhibit 1 - USGS Academy Quadrangle (2021) detail of Study Area 1

Elevations in Study Area 2 ranges from 1400 to 1580 feet asl. Shoreland adjacent to Lake Francis Case is apparent near the south edge of Study Area 2. No wetlands or other water features are apparent.

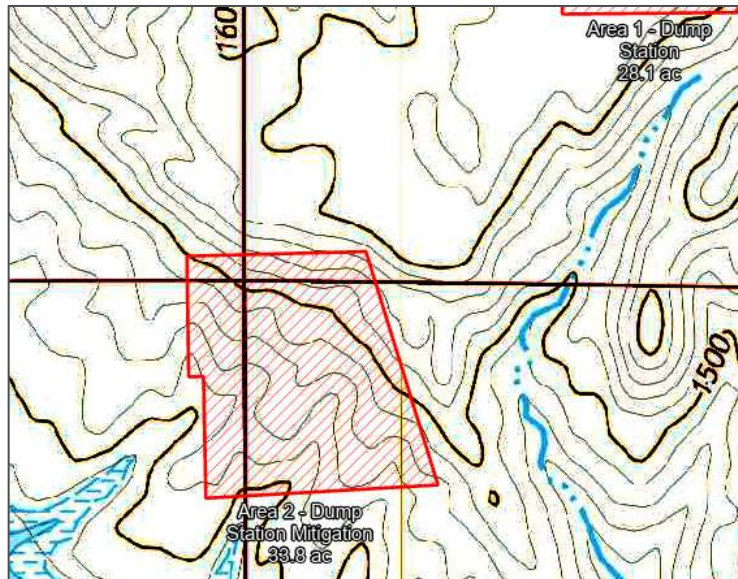


Exhibit 2 - USGS Academy Quadrangle (2021) detail of Study Area 2

Study area 3 elevations are between 1400-1420 feet asl. An unnamed intermittent stream is immediately south of the study area. Study Area 3 slopes towards this unnamed stream. A similar drainage slope was observed nearby during a field delineation completed for the SD44 project. See Exhibit 4 for a photo looking up a similarly-situated drainage. No wetland features are apparent in the photo.

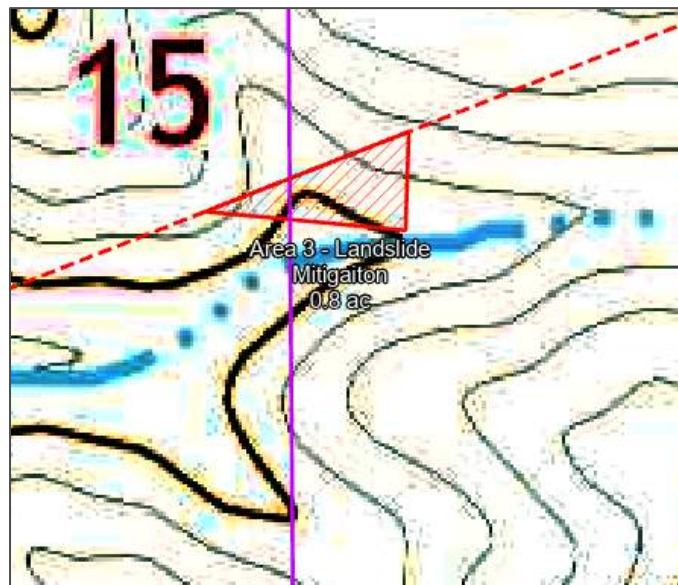


Exhibit 3 - USGS Academy Quadrangle (2021) detail of Study Area 3



Exhibit 4 - Photo looking upgradient from adjacent drainage similar to drainage observed in Study Area 3

2.2 National Wetlands Inventory (NWI)

The Minnesota DNR NWI GIS dataset for South Dakota¹ was reviewed (See Figure 2). There are no mapped NWI polygons within the study areas.

2.3 National Hydrography Dataset

The National Hydrography Dataset for South Dakota² was reviewed for streams and waterbody in and around the study area. No streams, rivers, or waterbodies intersect with any of the three study areas.

2.4 Charles Mix County NRCS Soil Data

A United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) web soil survey was reviewed for the project study area (Table 2). Five soil units are mapped in the study areas. See Table 2 for soil descriptions. See Figure 2 and Appendix C for further details. There are no mapped hydric soils in the study areas and the flattest soil map unit slope is 3 to 6 percent slopes making the area less likely to harbor wetland basins.

TABLE 2: NRCS SOILS IN STUDY AREA

Map Unit Symbol	Map Unit Name	Hydric?	Area (acres)	% of Study Area
DbF	Betts-Ethan loams, 15 to 40 percent slopes	No	7.5	12.0
LoB	Lowry silt loam, 3 to 6 percent slopes	No	22.0	35.1
LoC	Lowry silt loam, 6 to 9 percent slopes	No	0.0	0.0
SnF	Sansarc clay, 6 to 35 percent slopes	No	20.2	32.2
SoF	Sansarc-Boyd complex, 15 to 40 percent slopes	No	13.0	20.7

Source: USDA Web Soil Survey, NRCS SSURGO GIS Dataset for Charles Mix County, SD

2.5 FEMA National Flood Hazard Layer

The Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) online map was reviewed. The study areas are outside of any mapped floodplains. See Appendix D.

2.6 Historical Imagery Review

Historical imagery was viewed for the three study areas via Google Earth Pro. A historical imagery review using available imagery from 1996, 2004, 2005, 2006, 2007, 2010, 2013 and 2020 was completed. Study

¹ <https://www.fws.gov/program/national-wetlands-inventory>

² <https://www.usgs.gov/national-hydrography/national-hydrography-dataset>

Area 1 includes a few rows of small trees along the eastern third, row crops in the southwest, and grasslands in the northwest. There is a small unpaved road with access to South Dakota Highway 44 to the north of the study area. Through analysis of the historic photos, there does not appear to be presence of wetlands or saturated features. Study Area 2 slopes steeply towards Lake Francis Case and is undeveloped grasslands with two predominant valleys that drain to the southwest towards the lake. These sloping grasslands do appear to show presence or development of any wetland or saturated areas. Downgradient of Study Area 2 closer to Lake Francis there appear to be wetland and shoreline features, however they are fully outside of Study Area 2. Study Area 3 is a smaller study area which is predominantly grassland and forested area. From the initial imagery available up to 2020, there was no access via trail to this area, however in the 2021 imagery, a trail or informal road is visible crossing the study area. No wetland environments are apparent. Additionally, the stream observed in the USGS quadrangle immediately south of Area 3 is obscured by trees, if present.

3.0 Habitat Assessment

The current physical setting and condition of the study areas are predominantly undeveloped grassland with small portions of row crop agriculture and forested areas in Study Area 1. It was determined there are no critical habitats in the study areas.

The United States Fish and Wildlife Service (USFWS) Planning and Consultation (IPaC)³ species list for the study areas was reviewed. There are six threatened, endangered, or candidate species that may exist in the study areas based on the geographic area. See Table 3.

Table 1 - IPaC Species List for the Study Areas

Species	Scientific Name	Critical Habitat in Study Area	Federal Status
Northern Long-Eared Bat (NLEB)	<i>Myotis septentrionalis</i>	No critical habitat designated for species	Endangered
Piping Plover	<i>Charadrius melodus</i>	No critical habitat in study areas	Threatened
Red Knot	<i>Calidris canutus rufa</i>	Proposed critical habitat not in study areas	Threatened
Whooping Crane	<i>Grus americana</i>	No critical habitat in study areas	Endangered
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	No critical habitat designated for species	Endangered
Monarch Butterfly	<i>Danaus plexippus</i>	No critical habitat designated for species	Candidate

The IPaC review included an effect determination key for NLEB. The “FHWA, FRA, FTA Programmatic Consultation for Transportation Projects affecting NLEB or Indiana Bat” determination key resulted in a “no effect” determination for NLEB for the study areas. See Appendix D for the consistency letter.

³ <https://ipac.ecosphere.fws.gov/>

Piping plover and red knot are primarily shorebirds, and that habitat is not present within the study areas. Similarly, no large river habitat is present within the additional study areas and pallid sturgeon habitat is not present.

Whooping crane migration habitat is present but nesting habitat at wetland and lake fringes is not present in the study areas.

Bald Eagles may be present in the study area and are protected under the Bald and Golden Eagle Protection Act.

4.0 Conclusions

Review of data including NRCS soils, National Wetland Inventory (NWI), the National Hydrography Dataset, FEMA, and historical imagery available was conducted to evaluate the potential existence of wetlands within three additional study areas for the Platte-Winner Bridge Corridor study. There are no mapped hydric soils within any of the study areas. Similarly, there are no NWI mapped wetlands interesting or existing within the additional study areas. No identified hydrography features intersected with the additional study areas. The study areas do not fall within any special floodplain determination. Through historical imagery review, there are no wetlands or saturated areas are apparent.

Study Area 1 is situated at or near the peak of ridge and no depressions or saturated areas are apparent within or near Study Area 1. Study Area 2 slopes steeply, but shows wetlands abutting Lake Francis Case adjacent and south outside of Study Area 2. Study Area 3 also sloped steeply, but a mapped intermittent stream is immediately south of and outside Study Area 3. Wetland and water features are near Study Area 2 and Study Area 3, but wetland or stream features were observed within the three study areas from the desktop analysis.

No habitat for federally listed species appears to be present in the study areas.

FIGURES

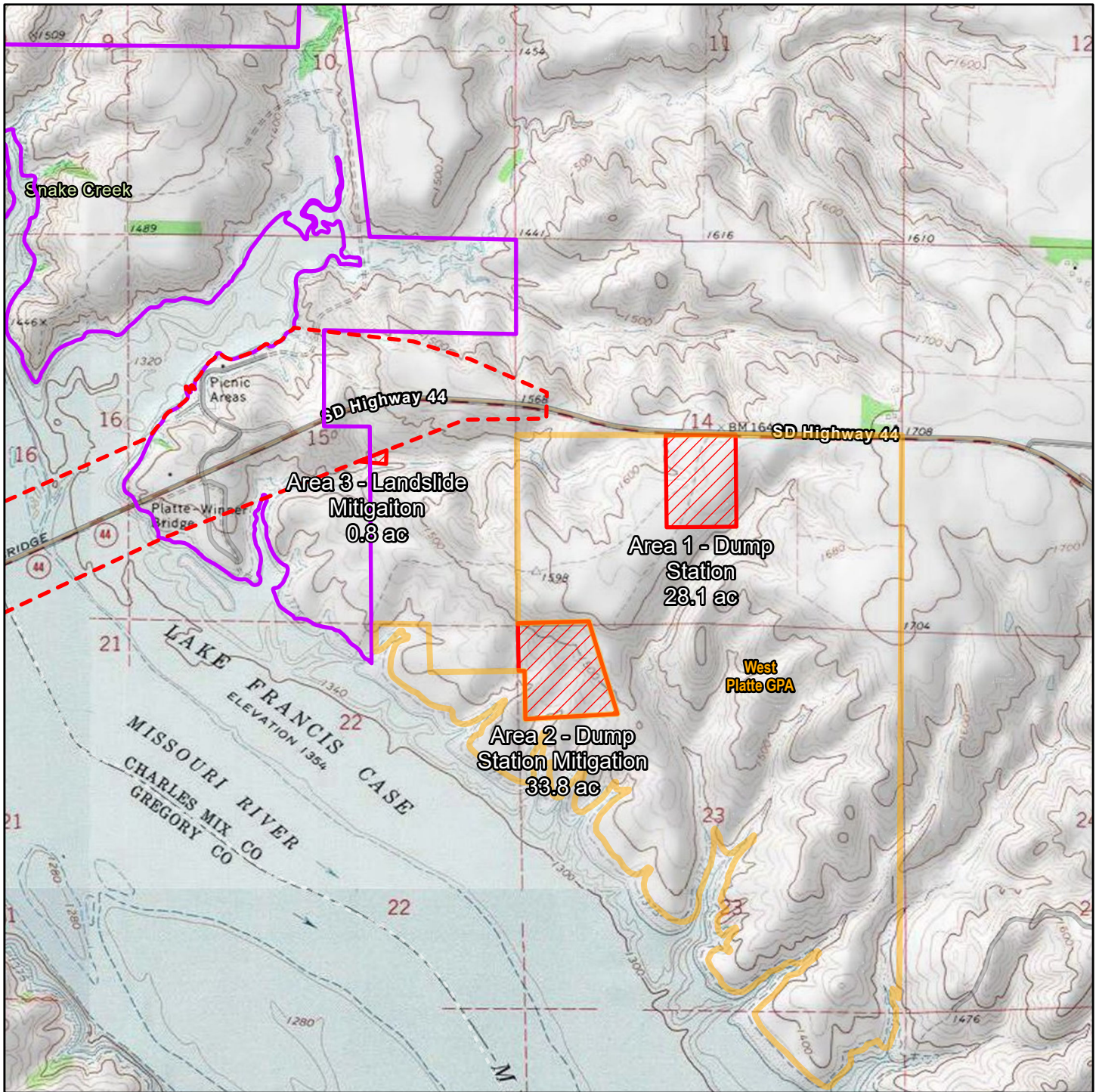






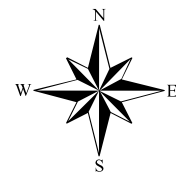
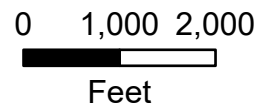
Figure 1

Study Locations

**SD44 Platte-Winner Bridge
Corridor Study**

Additional Wetland Survey

-  Original Study Area (APE)
-  Additional Study Areas
-  Snake Creek Recreation Area
-  West Platte GPA



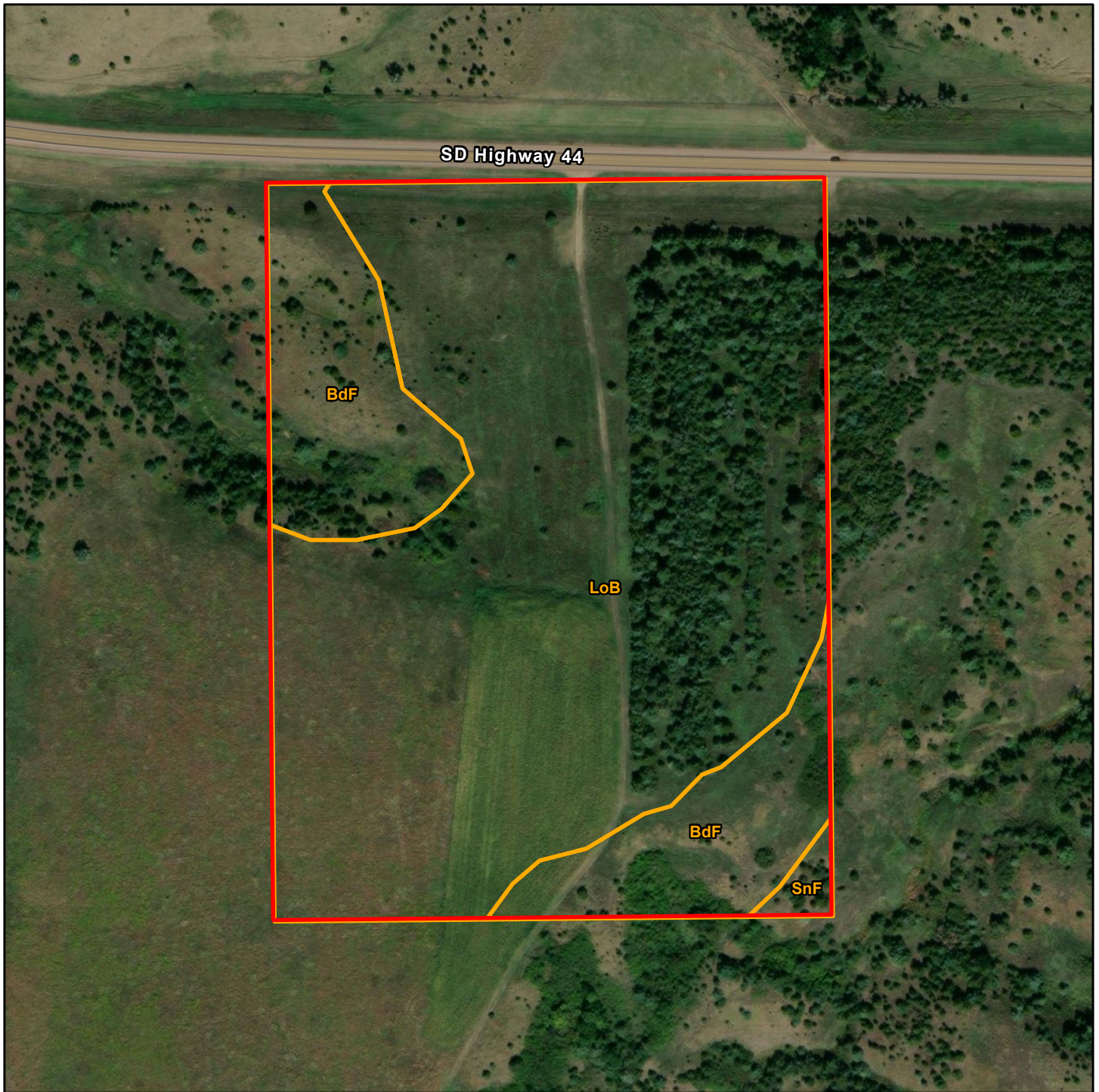







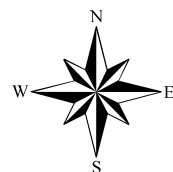
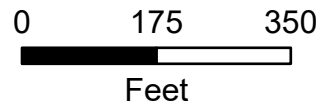
Figure 2-1

Soils and Hydrography

**SD44 Platte-Winner Bridge
Corridor Study**

Additional Wetland Survey

-  Additional Study Areas
-  NRCS Web Soil Survey
-  National Wetland Inventory
-  NHD Streams and Rivers
-  NHD Waterbody



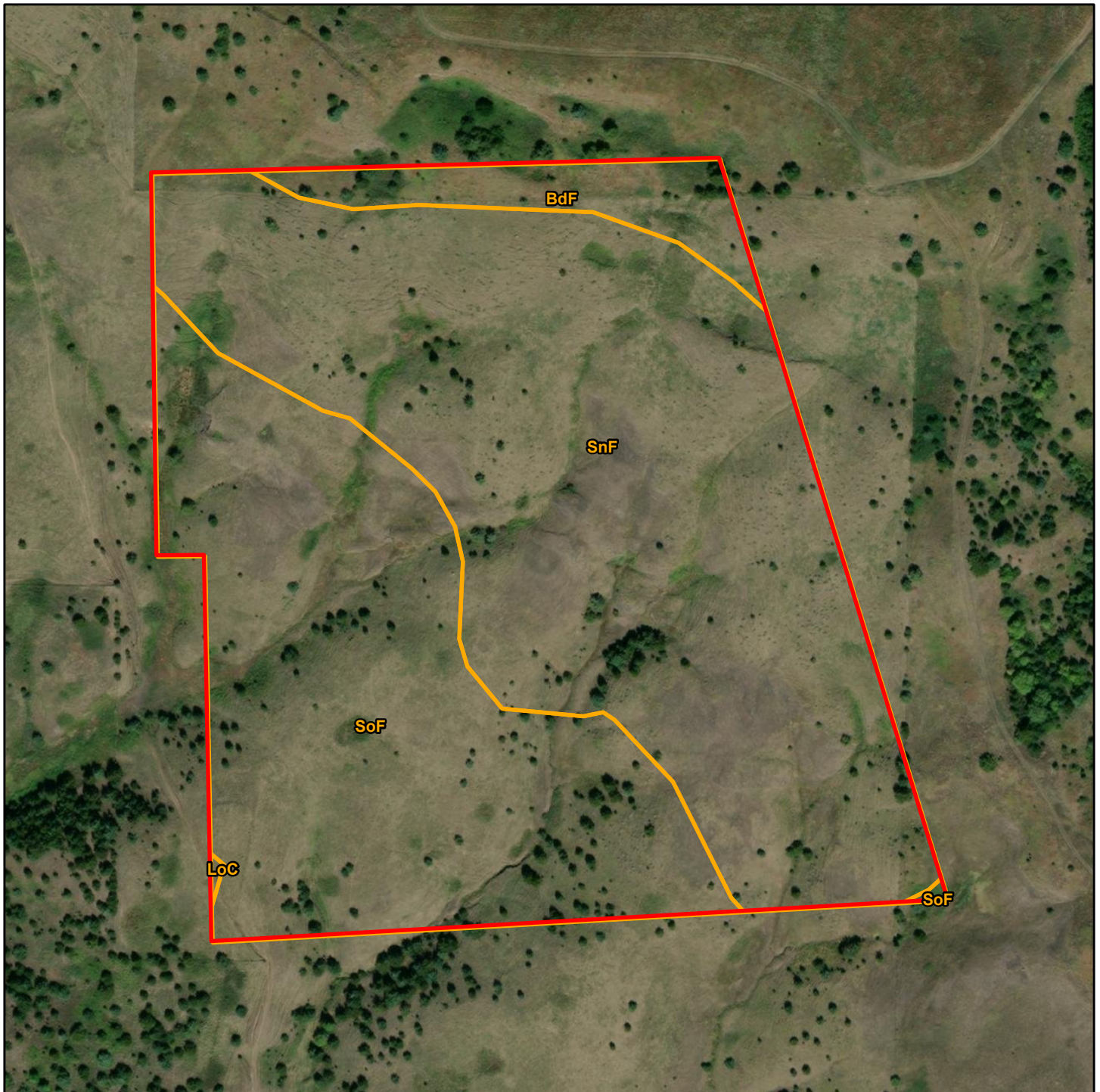


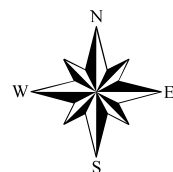
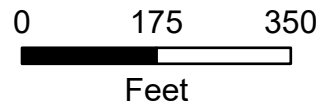
Figure 2-2

Soils and Hydrography

**SD44 Platte-Winner Bridge
Corridor Study**

Additional Wetland Survey

- Additional Study Areas
- NRCS Web Soil Survey
- National Wetland Inventory
- NHD Streams and Rivers
- NHD Waterbody



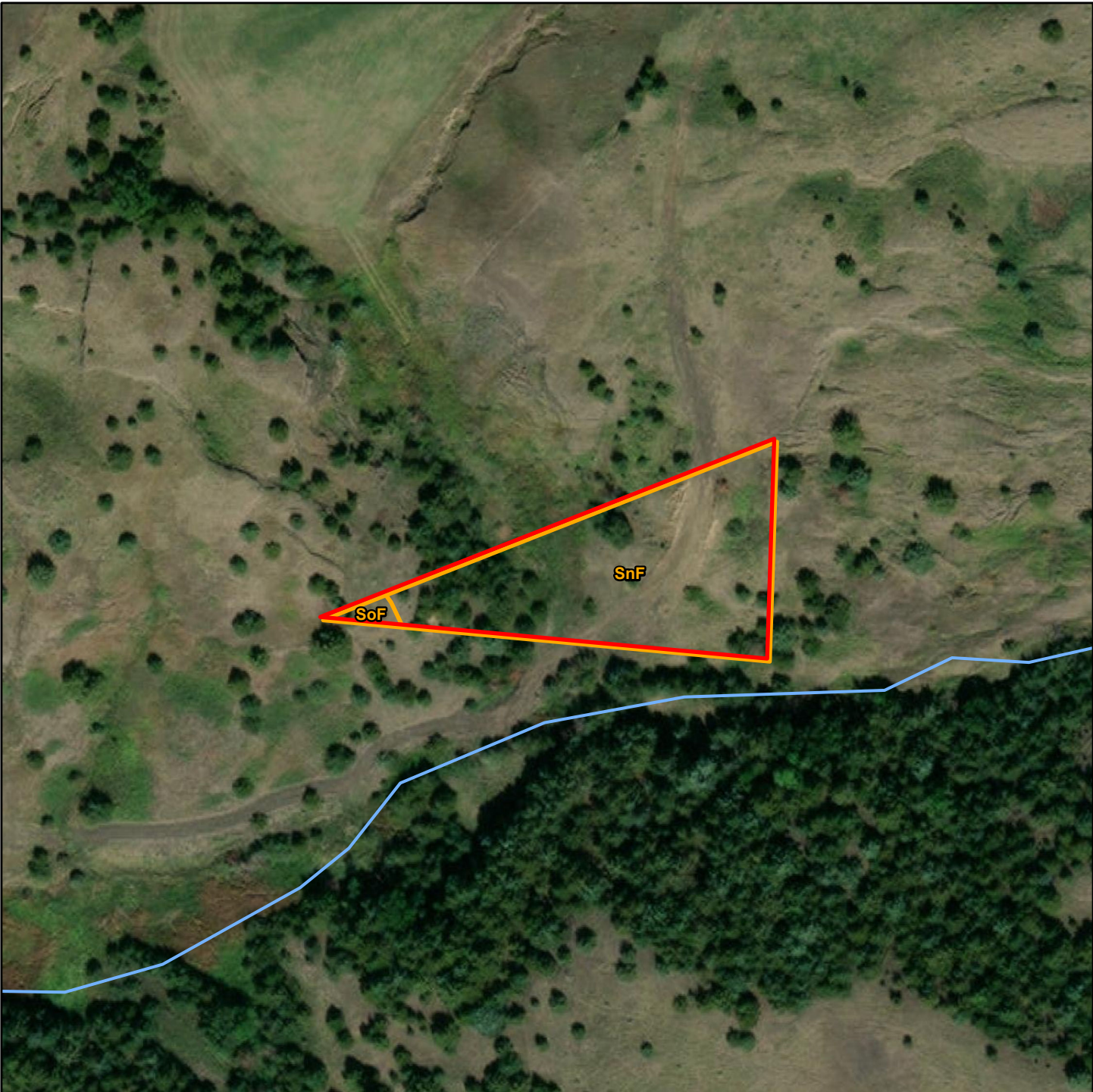







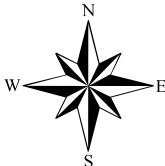
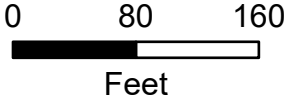
Figure 2-3

Soils and Hydrography

SD44 Platte-Winner Bridge Corridor Study

Additional Wetland Survey

-  Additional Study Areas
-  NRCS Web Soil Survey
-  National Wetland Inventory
-  NHD Streams and Rivers
-  NHD Waterbody





APPENDIX A: USDA WEB SOIL SURVERY DATA



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 Charles Mix County, South Dakota



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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LoC—Lowry silt loam, 6 to 9 percent slopes.....	17
SnF—Sansarc clay, 6 to 35 percent slopes.....	18
SoF—Sansarc-Boyd complex, 15 to 40 percent slopes.....	20
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

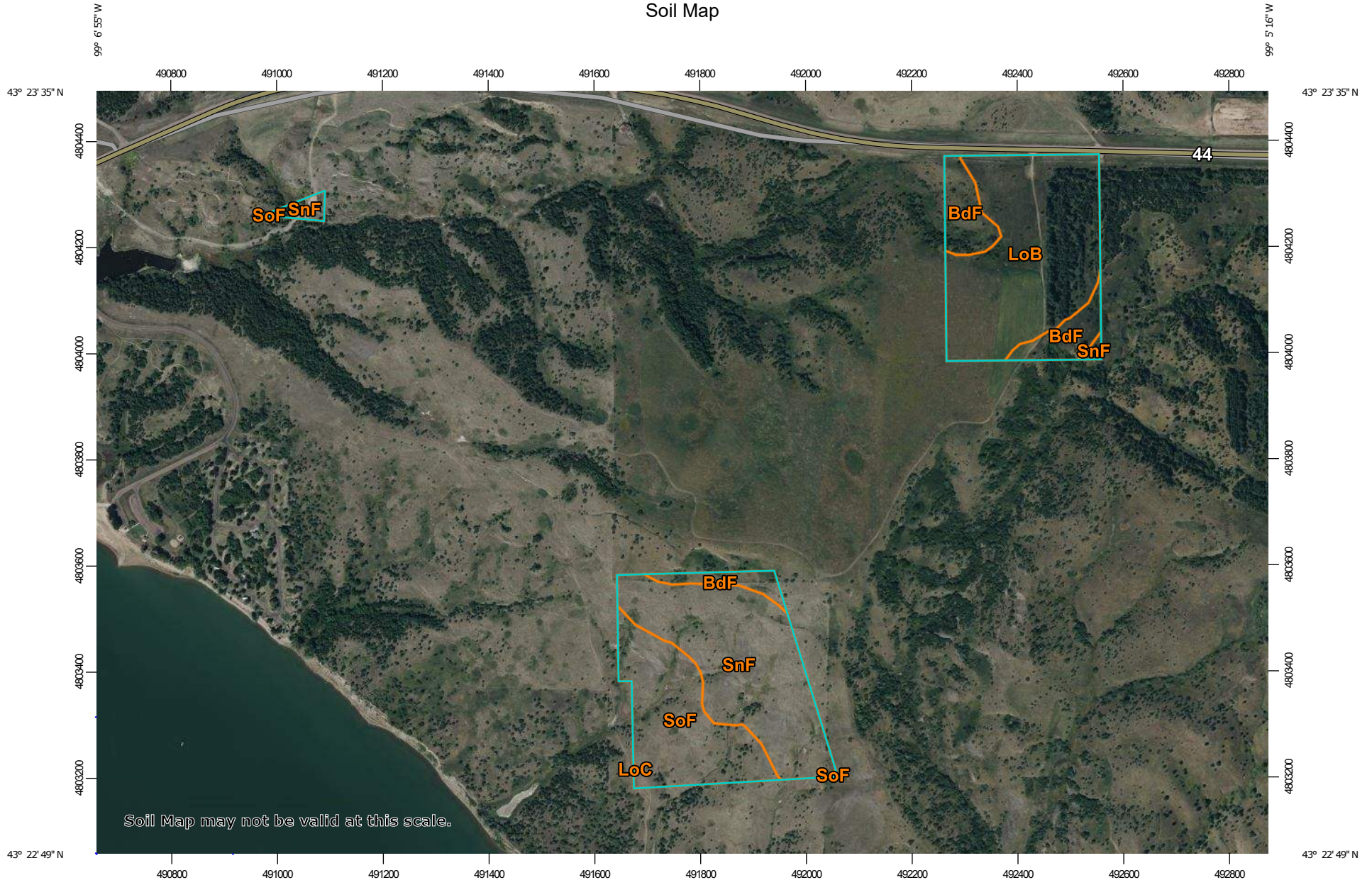
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

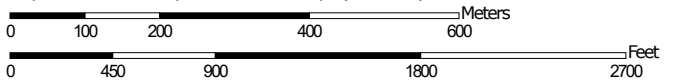
Soil Map

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 Scale: 1:10,100 if printed on A landscape (11" x 8.5") sheet.










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: Charles Mix County, South Dakota
 Survey Area Data: Version 29, Sep 13, 2021

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

Date(s) aerial images were photographed: Apr 1, 2021—Oct 25, 2021

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
BdF	Betts-Ethan loams, 15 to 40 percent slopes	7.5	12.0%
LoB	Lowry silt loam, 3 to 6 percent slopes	22.0	35.1%
LoC	Lowry silt loam, 6 to 9 percent slopes	0.0	0.0%
SnF	Sansarc clay, 6 to 35 percent slopes	20.2	32.2%
SoF	Sansarc-Boyd complex, 15 to 40 percent slopes	13.0	20.7%
Totals for Area of Interest		62.7	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.

Charles Mix County, South Dakota

BdF—Betts-Ethan loams, 15 to 40 percent slopes

Map Unit Setting

National map unit symbol: 2wkq9
Elevation: 1,120 to 2,230 feet
Mean annual precipitation: 16 to 28 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Betts and similar soils: 55 percent
Ethan and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Betts

Setting

Landform: Ground moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-loamy till

Typical profile

A - 0 to 3 inches: loam
Bk - 3 to 31 inches: clay loam
C - 31 to 79 inches: clay loam

Properties and qualities

Slope: 15 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
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: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R055CY012SD - Thin Upland
Forage suitability group: Not suited (G055CY000SD)
Other vegetative classification: Not suited (G055CY000SD)
Hydric soil rating: No

Description of Ethan

Setting

Landform: Ground moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bk - 7 to 33 inches: clay loam
C - 33 to 79 inches: clay loam

Properties and qualities

Slope: 15 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
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: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: R055CY012SD - Thin Upland
Forage suitability group: Limy Upland (G055CY400SD)
Other vegetative classification: Limy Upland (G055CY400SD)
Hydric soil rating: No

Minor Components

Clarno

Percent of map unit: 4 percent
Landform: Ground moraines
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R055CY010SD - Loamy
Other vegetative classification: Loam (G055CY100SD)
Hydric soil rating: No

Talmo

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R055CY016SD - Very Shallow
Other vegetative classification: Not suited (G055CY000SD)

Custom Soil Resource Report

Hydric soil rating: No

Davis

Percent of map unit: 2 percent

Landform: Ground moraines

Landform position (three-dimensional): Base slope, talf

Down-slope shape: Concave

Across-slope shape: Linear

Ecological site: R055CY020SD - Loamy Overflow

Other vegetative classification: Loam (G055CY100SD)

Hydric soil rating: No

Ethan, very stony

Percent of map unit: 1 percent

Landform: Ground moraines

Landform position (three-dimensional): Rise

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R055CY012SD - Thin Upland

Other vegetative classification: Not suited (G055CY000SD)

Hydric soil rating: No

Betts, very stony

Percent of map unit: 1 percent

Landform: Ground moraines

Landform position (three-dimensional): Rise

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R055CY012SD - Thin Upland

Other vegetative classification: Not suited (G055CY000SD)

Hydric soil rating: No

LoB—Lowry silt loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2ym7w

Elevation: 1,210 to 2,660 feet

Mean annual precipitation: 16 to 21 inches

Mean annual air temperature: 43 to 50 degrees F

Frost-free period: 100 to 150 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Lowry and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lowry

Setting

Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty loess

Typical profile

Ap - 0 to 8 inches: silt loam
Bw - 8 to 15 inches: silt loam
Bk - 15 to 41 inches: silt loam
Ab - 41 to 79 inches: silty clay loam

Properties and qualities

Slope: 3 to 6 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): 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: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: R063AY010SD - Loamy
Forage suitability group: Loam (G063AY100SD)
Other vegetative classification: Loam (G063AY100SD)
Hydric soil rating: No

Minor Components

Reliance

Percent of map unit: 4 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R063AY010SD - Loamy
Other vegetative classification: Loam (G063AY100SD)
Hydric soil rating: No

Agar

Percent of map unit: 3 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R063AY010SD - Loamy
Other vegetative classification: Loam (G063AY100SD)

Custom Soil Resource Report

Hydric soil rating: No

Mobridge

Percent of map unit: 3 percent

Landform: Plains

Microfeatures of landform position: Swales

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: R063AY010SD - Loamy

Other vegetative classification: Loam (G063AY100SD)

Hydric soil rating: No

LoC—Lowry silt loam, 6 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2ym7x

Elevation: 1,250 to 2,020 feet

Mean annual precipitation: 16 to 21 inches

Mean annual air temperature: 43 to 50 degrees F

Frost-free period: 100 to 150 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lowry and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lowry

Setting

Landform: Plains

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Silty loess

Typical profile

Ap - 0 to 8 inches: silt loam

Bw - 8 to 15 inches: silt loam

Bk - 15 to 41 inches: silt loam

Ab - 41 to 79 inches: silty clay loam

Properties and qualities

Slope: 6 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

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

Custom Soil Resource Report

Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R063AY010SD - Loamy
Forage suitability group: Loam (G063AY100SD)
Other vegetative classification: Loam (G063AY100SD)
Hydric soil rating: No

Minor Components

Mobridge

Percent of map unit: 5 percent
Landform: Plains
Microfeatures of landform position: Swales
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R063AY010SD - Loamy
Other vegetative classification: Loam (G063AY100SD)
Hydric soil rating: No

Sully

Percent of map unit: 5 percent
Landform: Plains
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R063AY012SD - Thin Upland
Other vegetative classification: Limy Upland (G063AY400SD)
Hydric soil rating: No

Agar

Percent of map unit: 5 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R063AY010SD - Loamy
Other vegetative classification: Loam (G063AY100SD)
Hydric soil rating: No

SnF—Sansarc clay, 6 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2v675
Elevation: 1,260 to 2,490 feet
Mean annual precipitation: 16 to 21 inches
Mean annual air temperature: 43 to 50 degrees F

Custom Soil Resource Report

Frost-free period: 100 to 150 days

Farmland classification: Not prime farmland

Map Unit Composition

Sansarc and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sansarc

Setting

Landform: Hills

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear

Across-slope shape: Convex

Parent material: Residuum weathered from shale

Typical profile

A - 0 to 4 inches: clay

AC - 4 to 10 inches: parachannery clay

C - 10 to 14 inches: very parachannery clay

Cr - 14 to 34 inches: bedrock

Properties and qualities

Slope: 6 to 35 percent

Depth to restrictive feature: 11 to 20 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 6 percent

Gypsum, maximum content: 2 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): 7e

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Ecological site: R063AY017SD - Shallow Clay

Forage suitability group: Not suited (G063AY000SD)

Other vegetative classification: Not suited (G063AY000SD)

Hydric soil rating: No

Minor Components

Promise

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Linear
Ecological site: R063AY011SD - Clayey
Other vegetative classification: Clayey Subsoil (G063AY210SD)
Hydric soil rating: No

Opal

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R063AY011SD - Clayey
Other vegetative classification: Not suited (G063AY000SD)
Hydric soil rating: No

Bullcreek

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R063AY018SD - Dense Clay
Other vegetative classification: Not suited (G063AY000SD)
Hydric soil rating: No

Badland

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear, convex
Other vegetative classification: Not suited (G063AY000SD)
Hydric soil rating: No

SoF—Sansarc-Boyd complex, 15 to 40 percent slopes

Map Unit Setting

National map unit symbol: cxgv
Elevation: 1,310 to 1,640 feet
Mean annual precipitation: 17 to 25 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Sansarc and similar soils: 50 percent
Boyd and similar soils: 30 percent

Custom Soil Resource Report

Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sansarc

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from shale

Typical profile

H1 - 0 to 4 inches: clay
H2 - 4 to 13 inches: clay
Cr - 13 to 60 inches: weathered bedrock

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: 4 to 20 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R063BY017SD - Shallow Clay
Forage suitability group: Not suited (G063BY000SD)
Other vegetative classification: Not suited (G063BY000SD)
Hydric soil rating: No

Description of Boyd

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey residuum weathered from shale

Typical profile

H1 - 0 to 5 inches: silty clay
H2 - 5 to 23 inches: clay
H3 - 23 to 31 inches: clay
Cr - 31 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 25 percent

Custom Soil Resource Report

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: R063BY011SD - Clayey
Forage suitability group: Not suited (G063BY000SD)
Other vegetative classification: Not suited (G063BY000SD)
Hydric soil rating: No

Minor Components

Gavins

Percent of map unit: 7 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R063BY012SD - Thin Upland
Other vegetative classification: Not suited (G063BY000SD)
Hydric soil rating: No

Betts

Percent of map unit: 7 percent
Landform: Moraines
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R063BY012SD - Thin Upland
Other vegetative classification: Not suited (G063BY000SD)
Hydric soil rating: No

Sully

Percent of map unit: 6 percent
Landform: Plains
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R063BY012SD - Thin Upland
Other vegetative classification: Limy Upland (G063BY400SD)
Hydric soil rating: No

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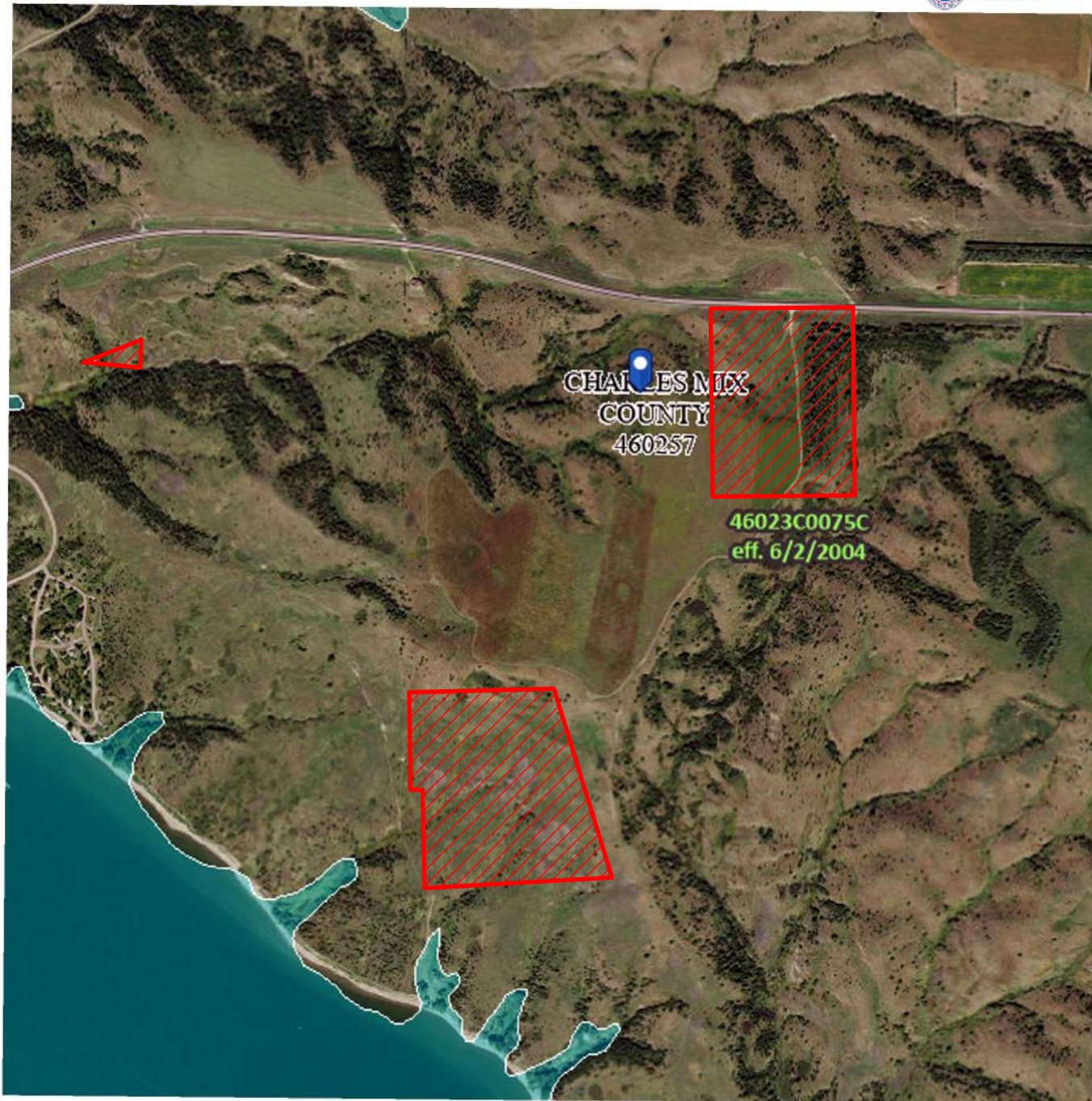
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APPENDIX B: FEMA FLOOD HAZARD LAYER

National Flood Hazard Layer FIRMette



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

- SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
- | | | |
|------------------------------------|----------------------|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard
Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes,
Zone X |
| | | Area with Flood Risk due to Levee
Zone 0 |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard
Zone X |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard
Zone 0 |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | Hydrographic Feature | |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/11/2022 at 2:04 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX C: IPAC SPECIES LIST



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Dakota Ecological Services Field Office
420 South Garfield Avenue, Suite 400
Pierre, SD 57501-5408

Phone: (605) 224-8693 Fax: (605) 224-1416

<https://www.fws.gov/office/south-dakota-ecological-services>

In Reply Refer To:
Project Code: 2022-0062330
Project Name: SD44 Platte-Winner Additional Areas

January 20, 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 ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

<https://www.fws.gov/media/endangered-species-consultation-handbook>

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 see <https://www.fws.gov/law/bald-and-golden-eagle-protection-act>, <https://www.fws.gov/media/endangered-species-act-1>, and/or <https://www.fws.gov/law/migratory-bird-treaty-act-1918>.

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.fws.gov/law/migratory-birds>

Please be aware that bald and golden eagles are protected under the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712, as amended), as well as the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may benefit from the development of an Eagle Conservation Plan (ECP), see guidance at this website (<https://www.fws.gov/node/266177>). An ECP can assist developers in achieving compliance with regulatory requirements, help avoid "take" of eagles at project sites, and

provide biological support for eagle permit applications. Additionally, we recommend wind energy developments adhere to our Land-based Wind Energy Guidelines for minimizing impacts to migratory birds and bats.

We have recently updated our guidelines for minimizing impacts to migratory birds at projects that have communication towers (including meteorological, cellular, digital television, radio, and emergency broadcast towers). These guidelines can be found at:

<https://www.fws.gov/story/incidental-take-beneficial-practices-communication-towers>
<http://www.towerkill.com>

According to National Wetlands Inventory maps, (available online at <https://www.fws.gov/library/collections/national-wetland-inventory>) wetlands exist adjacent to the proposed construction corridor. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible. If this is not possible, attempts should be made to minimize adverse impacts. Finally if adverse impacts are unavoidable, measures should be undertaken to replace the impacted areas. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted, and the methods of replacement should be prepared and submitted to the resource agencies for review.

Please check with your local wetland management district to determine whether Service interest lands exist at the proposed project site, the exact locations of these properties, and any additional restrictions that may apply regarding these sites. The Offices are listed below. If you are not sure which office to contact, we can help you make that decision.

U.S. Fish and Wildlife Service, Huron Wetland Management District, Federal Building, Room 309, 200 4th Street SW, Huron, SD 57350; telephone (605) 352-5894. Counties in the Huron WMD: Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Sanborn, Sully.

U.S. Fish and Wildlife Service, Lake Andes Wetland Management District, P O Box 18, Pickstown, South Dakota, 57367; telephone (605) 487-7603. Counties in the Lake Andes WMD: Aurora, Brule, Charles Mix, Davison, Douglas.

U.S. Fish and Wildlife Service, Madison Wetland Management District, P.O. Box 48, Madison, South Dakota, 57042, telephone (605) 256-2974. Counties in the Madison WMD: Bon Homme, Brookings, Clay, Deuel, Hamlin, Hanson, Hutchinson, Kingsbury, Lake, Lincoln, McCook, Miner, Minnehaha, Moody, Turner, Union, Yankton.

U.S. Fish and Wildlife Service, Sand Lake Wetland Management District, 39650 Sand Lake Drive, Columbia, South Dakota, 57433; telephone (605) 885-6320. Counties in the Sand Lake WMD: Brown, Campbell, Edmunds, Faulk, McPherson, Potter, Spink, Walworth.

U.S. Fish and Wildlife Service, Waubay Wetland Management District, 44401 134A Street, Waubay,

South Dakota, 57273; telephone (605) 947-4521. Counties in the Waubay WMD: Clark, Codington, Day, Grant, Marshall, Roberts.

You are welcome to visit our website (<https://www.fws.gov/office/southdakota-ecological-services>) or to contact our office/staff at the address or phone number above for more information.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code 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:

South Dakota Ecological Services Field Office

420 South Garfield Avenue, Suite 400

Pierre, SD 57501-5408

(605) 224-8693

Project Summary

Project Code: 2022-0062330

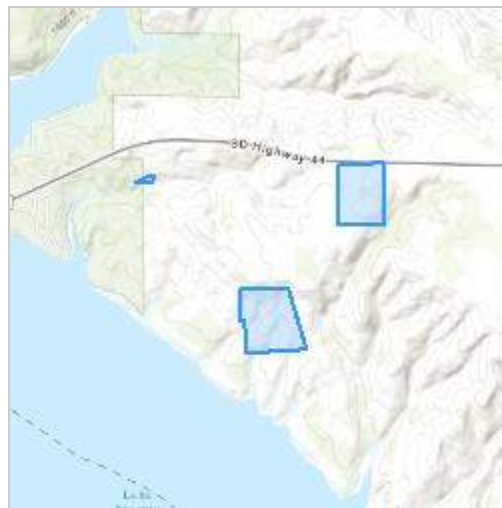
Project Name: SD44 Platte-Winner Additional Areas

Project Type: Road/Hwy - Maintenance/Modification

Project Description: Selected areas will be used for mitigation for a project replacing a bridge over Lake Francis Case and approaches.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.38327005,-99.10092025187299,14z>



Counties: Charles Mix County, South Dakota

Endangered Species Act Species

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

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

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.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

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
Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	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

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 Dec 1 to Aug 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
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 (|)

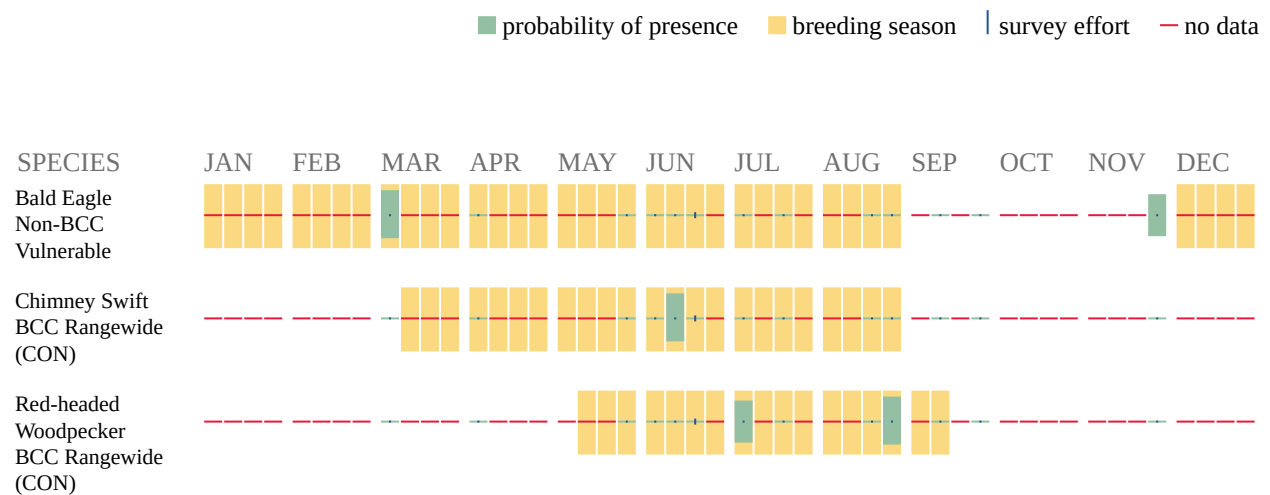
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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: HR Green, Inc.
Name: Ted McCaslin
Address: 2550 University Ave W, STE 400N
City: St. Paul
State: MN
Zip: 55114
Email: tmccaslin@hrgreen.com
Phone: 6516597708

Lead Agency Contact Information

Lead Agency: Federal Highway Administration



APPENDIX D: NLEB CONSISTENCY LETTER



United States Department of the Interior



FISH AND WILDLIFE SERVICE

South Dakota Ecological Services Field Office

420 South Garfield Avenue, Suite 400

Pierre, SD 57501-5408

Phone: (605) 224-8693 Fax: (605) 224-1416

<https://www.fws.gov/office/south-dakota-ecological-services>

In Reply Refer To:

July 15, 2022

Project code: 2022-0062330

Project Name: Platte-Winner Additional Areas

Subject: Consistency letter for the 'Platte-Winner Additional Areas' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated July 15, 2022 to verify that the **Platte-Winner Additional Areas** (Proposed Action) may rely on the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the threatened Northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, **no consultation is required for these two species**. If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessments failed to detect Indiana bats, but you later detect bats prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
 - Pallid Sturgeon *Scaphirhynchus albus* Endangered
 - Piping Plover *Charadrius melodus* Threatened
 - Red Knot *Calidris canutus rufa* Threatened
 - Whooping Crane *Grus americana* Endangered
-

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Platte-Winner Additional Areas

Description

Selected areas will be used for mitigation for a project regarding road modification.

Determination Key Result

Based on the information you provided, you have determined that the Proposed Action will have no effect on the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for these two species.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

No

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

Yes

6. Are *all* project activities **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

7. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

8. Is the project located **within** a karst area?

No

9. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat](#).

No

10. Does the project include maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

No

11. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

12. Does the project include slash pile burning?

No

13. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

No

14. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

15. Will the project involve the use of **temporary** lighting *during* the active season?

No

16. Will the project install new or replace existing **permanent** lighting?

Yes

17. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting will be installed or replaced?

No

18. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

Yes

19. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

20. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

21. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

22. Will the project raise the road profile **above the tree canopy**?

No

23. Is the location of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the project action area is not within suitable Indiana bat and/or NLEB summer habitat and is outside of 0.5 miles of a hibernaculum.

24. Is the permanent lighting portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the lighting will be more than 1,000 feet from the nearest suitable habitat

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 28, 2022. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

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