

Attachment E
Wetland Delineation Report

WETLAND DELINEATION REPORT

HEARTLAND GREENWAY PIPELINE SYSTEM PROJECT

OMAHA DISTRICT:

BOONE, DAKOTA, DIXON, MADISON, STANTON, AND WAYNE COUNTIES, NEBRASKA;
BROOKINGS, LINCOLN, MINNEHAHA, MOODY, AND TURNER COUNTIES, SOUTH DAKOTA.

SUBMITTED TO:



Navigator Heartland Greenway LLC

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PREPARED BY:

PERENNIAL ENVIRONMENTAL SERVICES, LLC



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List of Acronyms and Abbreviations

CO ₂	Carbon Dioxide
HGPS Project	Heartland Greenway Pipeline System
HUC	Hydrologic Unit Code
NHD	National Hydrography Dataset
NHG	Navigator Heartland Greenway LLC
NRCS	Natural Resources Conservation Services
NWI	National Wetlands Inventory
OHWM	Ordinary High-Water Mark
PEM	Palustrine Emergent
PSS	Palustrine Scrub-Shrub
PFO	Palustrine Forested
Perennial Project	Perennial Environmental Services, LLC NHG HGPS Project – Omaha District
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

INTRODUCTION

Navigator Heartland Greenway LLC (NHG) retained Perennial Environmental Services, LLC (Perennial) to conduct an environmental survey for the Heartland Greenway Pipeline System (HGPS Project), including a wetland delineation, in the State of Illinois, the State of Iowa, the State of Nebraska, the State of South Dakota, and the State of Minnesota. The HGPS Project is a new interstate carbon capture and transportation system connecting 21 emitting facilities via approximately 1,350 miles of pipeline. The purpose of the HGPS Project is to offer safe and reliable transportation of CO₂ that would otherwise be emitted to sequestration and other carbon management purposes.

Perennial's purpose was to identify and delineate all wetlands and waterbodies within the 8,762.77-acre survey area in order to provide a complete assessment of the proposed HGPS Project U.S. Army Corps of Engineers (USACE) Omaha District. The information included herein pertains only to the portions of the HGPS Project facilities located within the jurisdictional boundaries of the USACE Omaha District within the State of Nebraska and the State of South Dakota (Project).

The wetland delineation performed by Perennial and its contractors included the identification and recording of physical features that may be considered "Waters of the United States," as defined by the USACE. "Waters of the United States" include most wetlands, rivers, creeks, streams, lakes, tributaries, etc. This report summarizes the results of the delineation within the surveyed area and will be utilized to determine impacts to jurisdictional "Waters of the United States."

METHODOLOGY

Preliminary Data Gathering

Prior to visiting the Project survey area, a resource review was conducted on available background site information including current and historic aerial photography, U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) data, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, and USGS 7.5-minute topographic quadrangle maps.

Identification of Potential Waters of the United States

The delineation was conducted in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0) (USACE, 2010) and the routine determination guidelines provided in the *USACE Wetland Delineation Manual* (Technical Report Y-87-1) (USACE, 1987). According to the *Wetland Delineation Manual*, an area is a wetland if positive indicators

for the three mandatory wetland criteria are identified in a given area, with special exceptions. These criteria include the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. Identification of dominant vegetative species and the associated wetland indicator status (as defined by the USACE *National Wetland Plant List*) dictates the presence of hydrophytic vegetation. Location, inundation, saturation, and other physical indicators suggesting the presence of water are used to determine wetland hydrology at a site. A small soil pit is dug to identify the presence or absence of hydric soils within each wetland and surrounding upland area.

Waterbodies (i.e., creeks, streams, etc.) are typically identified by the presence of an ordinary high-water mark (OHWM). OHWMs are established by physical characteristics such as “a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Manmade ponds, lakes, and other bodies of open water that may not have an OHWM were also included in this category. If present, on-site streams, open waters, and wetlands were characterized and the boundaries were delineated.

Naming Scheme

Perennial biologists utilized a unique naming scheme to identify wetlands, streams, and open water features. The naming scheme consisted of three parts: feature abbreviation, survey team number, and feature ID number. Features were abbreviated as follows: wetland (W), stream (S), or open water (OW), and identification numbers were assigned consecutively. Survey team numbers were identified as O1, O2 and O5; MNR2; and P9. If needed, a suffix with the cover type, such as palustrine emergent (PEM), palustrine scrub-shrub (PSS), palustrine forested (PFO) etc., was added to the wetland names. Examples of an identified wetland using this naming scheme are WO1001_PEM, WMNR2001_PEM, and WP9001_PEM.

Perennial’s contractors utilized a unique naming scheme to identify wetlands, streams, and open water features. Contractor survey team members conducting environmental survey efforts for this Project were identified as Team 3, Team 5, Team 6, Team 8, and Team 9.

Wetland polygons and stream centerlines were named with letter and number identifiers, respectively. Ditches and open waters were numbered consecutively and named with a ‘D’ or ‘P’ identifier, respectively.

If needed, a suffix with the cover type, such as PEM, PSS, PFO etc., was added to the wetland names in the occurrence of a wetland complex. An example of an identified wetland complex using this naming scheme is 3-A PEM, 3-A PSS, and 3-A PFO. When the end of the alphabet is reached, wetlands then are identified with two-or-three-character identifiers and so on (e.g., AA, AB, BA, BB, AAA, AAB, etc.).

In areas where desktop analysis occurred, Perennial identified potential environmental features with an environmental ID followed by a desktop suffix (e.g., _DT).

Data Points/Soil Stations

Site conditions were documented through the use of data point locations, known as soil stations. A unique naming scheme was utilized to identify each soil station taken by Perennial biologists within the Project survey area. The first part of the unique naming scheme indicates the type of soil station (e.g., wetland [W] or upland [UP]). The name then identifies the biological team that collected the soil station (i.e., O1, O2, O5, MNR2, or P9). Soil stations representing the same type of habitat were numbered in consecutive order. For wetlands, the associated upland and wetland soil stations were given the same unique name but were distinguished from one another by adding the appropriate designation to the end of the name (e.g., _UP or _WET).

Wetland sample points were named similar to wetland polygons, with the team number and a letter identifier.

Associated wetland upland sample points were named the same as wetlands, with 'UPL' added after the letter. If two wetlands share an upland such as wetland 3-A and 3-B, the upland sample point would be named 3-A/B UPL. Representative upland sample points, those upland samples not associated with wetlands, were named with the team ID, followed by 'SP' and consecutive numbers.

Data point locations within the Project survey area are depicted on the Project survey mapping, which is included in **Appendix A**. Data sheets documenting each site (soil station), as well as changes in vegetative communities, are provided in **Appendix B**. In addition to the data sheets, photographs were taken at each data point and/or delineated feature in order to document conditions, such as the vegetative community or flow regime, present at the time of survey. The photographs, which are provided in **Appendix C**, are labeled by feature or data point name followed by an alphabetic qualifier that indicates the order in which the photograph was taken (e.g., WO1001_WET_PEM_A). The direction of the photograph is given in the comment section for each photograph. Perennial contractors that do not list the order with an alphabetic qualifier provide the direction of the photograph in order within the comment section.

All data points were collected using ESRI's FieldMaps software on a phone equipped with a handheld GPS receiver to geographically reference features, such as data points and wetland boundaries obtained during the field survey. These receivers typically have real-time and post-processed sub-meter accuracy. Geographic Information System software was used to analyze collected features, calculate the extent of delineated areas, and generate the attached mapping exhibits (**Appendix A**).

Aerial Interpretation/Delineation

To date, field surveys have covered a majority of the proposed route associated with the Project. However, due to ongoing landowner negotiations and engineering design, field surveys have not yet been completed along segments of the Project. A summary of the areas that have not been surveyed to date is presented in **Table 1** below and the locations are identified in **Appendix A**. Field surveys for these areas are anticipated to be completed in 2023.

For areas not yet field surveyed within the Project area, a desktop review was performed utilizing the following data sources:

- USGS 7.5 topographic quadrangle maps (USGS, 1982);
- NWI data;
- NHD data;
- USDA NRCS soils maps (USDA, 2022); and
- Google Earth historical aerial photography.

The USGS topographic maps NWI, and NHD maps were used to identify any potential waterbodies and/or wetlands that have been mapped by either of these sources. The NRCS soils maps were used to identify any hydric soils located within the survey corridor. Aerial photography was used to compare photographic signatures with areas that were pedestrian surveyed and to look for photographic signatures in areas not yet surveyed that are consistent with wetlands in the region. In total, 945.46 acres or approximately 11 percent of the Project survey area was reviewed only utilizing desktop resources, and these areas are depicted in the attached mapping exhibits (**Appendix A**).

County	Total ESA Acreage	Total Acres of Desktop Review	Approximate Percentage of Desktop Review
Boone County, NE	502.57	62.38	12%
Dakota County, NE	899.23	77.53	9%
Dixon County, NE	623.71	94.50	15%
Madison County, NE	1,084.33	29.38	3%
Stanton County, NE	539.45	65.85	12%
Wayne County, NE	762.91	22.82	3%
Brookings County, SD	296.65	5.98	2%
Lincoln County, SD	1,876.94	235.14	13%
Minnehaha County, SD	1,127.72	197.94	18%

Table 1			
Area of Desktop Review within the Project Survey Area			
Moody County, SD	977.50	153.93	16%
Turner County, SD	71.76	0.01	<1%
Totals	8,762.77	945.46	11%

CONDITIONS DOCUMENTED AT THE PROJECT SITE

Perennial biologists and contractors conducted an on-site wetland and waterbody delineation of the Project survey area between May 15, 2022 and November 16, 2022 to ascertain conditions within the 8,762.77--acre survey area. Of the 8,762.77 acres reviewed, 8,638.29 acres consisted of upland areas, 88.72 acres consisted of PEM wetlands, 3.91 acres consisted of PSS wetlands, 3.16 acres consisted of PFO wetlands, 27.87 acres consisted of streams, and 0.82 acre consisted of open water. Land use in the upland areas is characterized as developed land (e.g., public roads, residential areas), open land, agricultural land and forest. A summary of the vegetation, soils, and hydrology observed in the Project survey area is presented below.

Vegetation

Data sheets documenting the vegetative species observed during the surveys are provided in **Appendix B**. The dominant vegetation species observed in each vegetative community present within the Project survey area are presented below.

Uplands

Dominant vegetation for uplands is classified as either active-agricultural land or non-agricultural land, and were further classified with regards to the National Land Cover Database (Multi-Resolution Land Characteristics Consortium, 2021). Active-agricultural land is comprised of developed land of low or medium intensity, grassland/herbaceous, pasture/hay-areas of grasses, legumes, or grass, and cultivated crops. Non-agricultural land is comprised of developed land of open space, deciduous forest, developed land of high intensity, barren land (rock/sand/clay), evergreen forest, and mixed forest. The dominant vegetation for these primary two upland land use types observed within the Project survey area are listed in **Appendix D, Table 1**.

Wetlands

Dominant vegetation associated with wetlands is categorized by wetland type, including PEM, PSS, and PFO. The dominant vegetation species for each wetland type observed within the Project survey area are listed in **Appendix D, Table 2**.

Soils

According to the NRCS Web Soil Survey, 323 soil map units are located within the Project survey area. Soil map units organized by county and series descriptions for each unit are presented in **Appendix D, Table 3**.

Hydrology

The Project survey area is located within 10 watersheds including Lewis and Clark Lake (Hydrologic Unit Code [HUC] 8: 10170101), Vermillion (HUC 8: 10170102), Middle Big Sioux (HUC 8: 10170202), Lower Big Sioux (HUC 8: 10170203), Lower Platte-Shell (HUC 8: 10200201), Loup (HUC 8: 10210009), Upper Elkhorn (HUC 8: 10220001), Lower Elkhorn (HUC 8: 10220003), Logan (HUC 8: 10220004), and Blackbird-Soldier (HUC 8: 10230001). Associated waterbodies that influence the hydrology of the HUCs within the Project survey area are listed in **Appendix D, Table 4**.

The following 15 primary hydrology indicators were observed within delineated wetlands found in the Project survey area: surface water, high water table, saturation, water marks, aquatic fauna, inundation visible on aerial imagery, oxidized rhizospheres on living roots (where not tilled), presence of reduced iron, drift deposits, algal mat or crust, sparsely vegetated concave surface, sediment deposits, true aquatic plants, recent iron reduction in tilled soils, and water-stained leaves.

The following five secondary hydrology indicators were observed within delineated wetlands found in the Project survey area: drainage patterns, surface soil cracks, saturation visible on aerial imagery, geomorphic position, and facultative (FAC)-neutral test.

WATERS OF THE UNITED STATES SUMMARY

The following sections provide a summary of the potential “waters of the United States” that were delineated within the Project survey area.

Wetlands

Perennial and contractor biologists delineated 164 areas that exhibited positive indicators for the three required wetland criteria, as defined by the USACE. Of the 164 wetland areas, 148 were classified as PEM, 8 were classified as PSS, and 8 were classified as PFO. The delineated wetlands encompass 95.79 acres within the Project survey area.

The Survey Area Aerial/NRCS Soils Maps (**Appendix A**) depicts the location of the delineated wetlands within the Project survey area. Photographic documentation of the representative conditions and vegetation

is included as **Appendix C**. The type, classification, acreage, and location of the wetlands within the survey area are summarized in **Appendix D, Table 5**.

Waterbodies

Perennial and contractor biologists delineated 160 streams that exhibited an OHWM as defined by the USACE within the Project survey area. The delineated streams encompass approximately 27.87 acres within the survey area and 47 are classified as ephemeral, 61 as intermittent, and 52 as perennial. In addition, biologists delineated two open waterbodies, totaling 0.82 acres. The type, acreage, and location of the waterbodies within the Project survey area are presented in **Appendix D, Table 6**.

CONCLUSIONS

Perennial and contractor biologists conducted the wetland and waterbody delineation and desktop review of the 8,762.77-acre Project survey area in April through November 2022. A total of 164 locations within the Project survey area exhibited positive indicators for the three required wetland criteria, as defined by the USACE, based on field surveys or desktop review. Of the 164 wetland locations, 148 were classified as PEM, 8 were classified as PSS, and 8 were classified as PFO. These delineated areas encompassed a total of 95.79 acres.

Perennial and contractor biologists identified 160 streams and two open waterbodies, as defined by the USACE, within the Project survey area via field surveys and desktop review. Of the 160 streams identified, 47 were identified as ephemeral, 61 were identified as intermittent, and 52 were identified as perennial. Collectively, the waterbodies encompassed 28.69 acres within the Project survey area.

It is Perennial's professional opinion that these waterbodies would be subject to the USACE *Clean Water Act* jurisdiction based on significant nexus and/or adjacency to other "waters of the United States". This report is based on Perennial's professional opinion. The USACE has complete jurisdiction concerning all §404 waterbodies.

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APPENDIX A
PROJECT MAPPING
(Provided as access to online mapping program)

APPENDIX B
DATA SHEETS
(Electronic Files Provided)

APPENDIX C
PHOTOGRAPHS
(Electronic Files Provided)

APPENDIX D

**TABLES OF DOMINANT VEGETATION, SOIL MAP UNITS,
HYDROLOGIC UNITS AND MAJOR WATERBODIES, AND
WETLANDS AND WATERBODIES LOCATED WITHIN THE
HEARTLAND GREENWAY PIPELINE PROJECT SURVEY AREA –
OMAHA DISTRICT**

**Table 1: Dominant Upland Vegetation within the Heartland Greenway
Pipeline System Project Survey Area – Omaha District**

Table 1
Dominant Upland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
Agricultural Dominant Upland Vegetation	
alfalfa	<i>Medicago sativa</i>
alkali sacaton	<i>Sporobolus airoides</i>
alsike clover	<i>Trifolium hybridum</i>
annual bluegrass	<i>Poa annua</i>
annual ragweed	<i>Ambrosia artemisiifolia</i>
Bermudagrass	<i>Cynodon dactylon</i>
big bluestem	<i>Andropogon gerardii</i>
boxelder	<i>Acer negundo</i>
broadleaf cattail	<i>Typha latifolia</i>
broomsedge bluestem	<i>Andropogon virginicus</i>
burning bush	<i>Bassia scoparia</i>
Callery pear	<i>Pyrus calleryana</i>
Canada bluegrass	<i>Poa compressa</i>
Canada goldenrod	<i>Solidago altissima</i>
Canada goldenrod	<i>Solidago canadensis</i>
Canada thistle	<i>Cirsium arvense</i>
Canada wildrye	<i>Elymus canadensis</i>
common buckthorn	<i>Rhamnus cathartica</i>
common dandelion	<i>Taraxacum officinale</i>
common milkweed	<i>Asclepias syriaca</i>
common motherwort	<i>Leonurus cardiaca</i>
common reed	<i>Phragmites australis</i>
common sunflower	<i>Helianthus annuus</i>
common velvetgrass	<i>Holcus lanatus</i>
common wheat	<i>Triticum aestivum</i>
corn	<i>Zea mays</i>
creeping bentgrass	<i>Agrostis stolonifera</i>
curly dock	<i>Rumex crispus</i>
eastern cottonwood	<i>Populus deltoides</i>
eastern daisy fleabane	<i>Erigeron annuus</i>
eastern redcedar	<i>Juniperus virginiana</i>
field brome	<i>Bromus arvensis</i>
field pennycress	<i>Thlaspi arvense</i>
foxtail millet	<i>Setaria italica</i>
garden yellowrocket	<i>Barbarea vulgaris</i>
giant ironweed	<i>Vernonia gigantea</i>
great ragweed	<i>Ambrosia trifida</i>
green ash	<i>Fraxinus pennsylvanica</i>
green bristlegrass	<i>Setaria viridis</i>
green flatsedge	<i>Cyperus virens</i>
green needle grass	<i>Stipa viridula</i>
Heller's rosette grass	<i>Dichanthelium oligosanthes</i>

Table 1
Dominant Upland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
henbit	<i>Lamium amplexicaule</i>
herb sophia	<i>Descurainia sophia</i>
intermediate wheatgrass	<i>Agropyron intermedium</i>
Japanese bristlegrass	<i>Setaria faberi</i>
Kentucky bluegrass	<i>Poa pratensis</i>
lambsquarters	<i>Chenopodium album</i>
little bluestem	<i>Schizachyrium scoparium</i>
marijuana	<i>Cannabis sativa</i>
marsh bristlegrass	<i>Setaria parviflora</i>
mayapple	<i>Podophyllum peltatum</i>
meadow fescue	<i>Schedonorus pratensis</i>
narrowleaf cattail	<i>Typha angustifolia</i>
narrowleaf cottonwood	<i>Populus angustifolia</i>
needle and thread	<i>Stipa comata</i>
perennial ryegrass	<i>Lolium perenne</i>
purple amaranth	<i>Amaranthus blitum</i>
quackgrass	<i>Elymus repens</i>
Queen Anne's lace	<i>Daucus carota</i>
rabbitfoot clover	<i>Trifolium arvense</i>
red clover	<i>Trifolium pratense</i>
red fescue	<i>Festuca rubra</i>
reed canarygrass	<i>Phalaris arundinacea</i>
rice cutgrass	<i>Leersia oryzoides</i>
scouringrush horsetail	<i>Equisetum hyemale</i>
shepherd's purse	<i>Capsella bursa-pastoris</i>
Siberian elm	<i>Ulmus pumila</i>
smooth brome	<i>Bromus inermis</i>
smooth oxeye	<i>Heliopsis helianthoides</i>
soybean	<i>Glycine max</i>
spreading dogbane	<i>Apocynum androsaemifolium</i>
staghorn sumac	<i>Rhus typhina</i>
stiff leaved goldenrod	<i>Solidago rigida</i>
stinging nettle	<i>Urtica dioica</i>
swamp dock	<i>Rumex verticillatus</i>
sweetclover	<i>Melilotus officinalis</i>
switchgrass	<i>Panicum virgatum</i>
tall fescue	<i>Festuca arundinacea</i>
timothy	<i>Phleum pratense</i>
tufted lovegrass	<i>Eragrostis pectinacea</i>
western rockjasmine	<i>Androsace occidentalis</i>
white clover	<i>Trifolium repens</i>
yellow foxtail	<i>Setaria pumila</i>

Table 1
Dominant Upland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
Non-Agricultural Dominant Upland Vegetation	
boxelder	<i>Acer negundo</i>
annual bluegrass	<i>Poa annua</i>
big bluestem	<i>Andropogon gerardii</i>
black cherry	<i>Prunus serotina</i>
black walnut	<i>Juglans nigra</i>
black willow	<i>Salix nigra</i>
Canada goldenrod	<i>Solidago canadensis</i>
Canadian woodnettle	<i>Laportea canadensis</i>
Clayton's sweetroot	<i>Osmorhiza claytonii</i>
common dandelion	<i>Taraxacum officinale</i>
common hackberry	<i>Celtis occidentalis</i>
common milkweed	<i>Asclepias syriaca</i>
common mullein	<i>Verbascum thapsus</i>
corn	<i>Zea mays</i>
eastern cottonwood	<i>Populus deltoides</i>
eastern redcedar	<i>Juniperus virginiana</i>
eastern waterleaf	<i>Hydrophyllum virginianum</i>
feathery false lily of the valley	<i>Maianthemum racemosum</i>
field brome	<i>Bromus arvensis</i>
flowering dogwood	<i>Cornus florida</i>
Fremont cottonwood	<i>Populus deltoides ssp. fremontii</i>
greater burdock	<i>Arctium lappa</i>
green ash	<i>Fraxinus pennsylvanica</i>
henbit	<i>Lamium amplexicaule</i>
intermediate wheatgrass	<i>Agropyron intermedium</i>
Kentucky bluegrass	<i>Poa pratensis</i>
little bluestem	<i>Schizachyrium scoparium</i>
Maximilian sunflower	<i>Helianthus maximiliani</i>
narrowleaf cattail	<i>Typha angustifolia</i>
northern red oak	<i>Quercus rubra</i>
pignut hickory	<i>Carya glabra</i>
quackgrass	<i>Elymus repens</i>
ravenfoot sedge	<i>Carex crus-corvi</i>
red fescue	<i>Festuca rubra</i>
reed canarygrass	<i>Phalaris arundinacea</i>
smooth brome	<i>Bromus inermis</i>
soybean	<i>Glycine max</i>
stinging nettle	<i>Urtica dioica</i>
switchgrass	<i>Panicum virgatum</i>
tall fescue	<i>Festuca arundinacea</i>
white ash	<i>Fraxinus americana</i>
white clover	<i>Trifolium repens</i>

Table 1
Dominant Upland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
white willow	<i>Salix alba</i>
yellow foxtail	<i>Setaria pumila</i>

**Table 2: Dominant Wetland Vegetation within the Heartland Greenway
Pipeline System Project Survey Area – Omaha District**

Table 2
Dominant Wetland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
Palustrine Emergent Wetlands (PEM)	
American elm	<i>Ulmus americana</i>
annual bluegrass	<i>Poa annua</i>
barnyardgrass	<i>Echinochloa crus-galli</i>
big bluestem	<i>Andropogon gerardii</i>
black willow	<i>Salix nigra</i>
bluejoint	<i>Calamagrostis canadensis</i>
blunt spikerush	<i>Eleocharis obtusa</i>
bristly buttercup	<i>Ranunculus hispidus</i>
broadleaf cattail	<i>Typha latifolia</i>
broadleaf plantain	<i>Plantago major</i>
Canada bluegrass	<i>Poa compressa</i>
Canada germander	<i>Teucrium canadense</i>
Carolina canarygrass	<i>Phalaris caroliniana</i>
cloaked bulrush	<i>Scirpus pallidus</i>
common buckthorn	<i>Rhamnus cathartica</i>
common duckweed	<i>Lemna minor</i>
common hackberry	<i>Celtis occidentalis</i>
common milkweed	<i>Asclepias syriaca</i>
common rush	<i>Juncus effusus</i>
common threesquare	<i>Schoenoplectus pungens</i>
corn	<i>Zea mays</i>
creeping bentgrass	<i>Agrostis stolonifera</i>
curly dock	<i>Rumex crispus</i>
curlytop knotweed	<i>Persicaria lapathifolia</i>
cursed buttercup	<i>Ranunculus sceleratus</i>
deertongue	<i>Dichanthelium clandestinum</i>
eastern cottonwood	<i>Populus deltoides</i>
eastern waterleaf	<i>Hydrophyllum virginianum</i>
fall panicgrass	<i>Panicum dichotomiflorum</i>
field brome	<i>Bromus arvensis</i>
field horsetail	<i>Equisetum arvense</i>
flatstem spikerush	<i>Eleocharis compressa</i>
fox sedge	<i>Carex vulpinoidea</i>
foxtail barley	<i>Hordeum jubatum</i>
green ash	<i>Fraxinus pennsylvanica</i>
gulf cordgrass	<i>Spartina spartinae</i>
Kentucky bluegrass	<i>Poa pratensis</i>
lesser pond sedge	<i>Carex acutiformis</i>
narrowleaf cattail	<i>Typha angustifolia</i>
narrowleaf cottonwood	<i>Populus angustifolia</i>
needle sprangletop	<i>Dinebra panicea</i>
Pennsylvania smartweed	<i>Persicaria pensylvanica</i>

Table 2
Dominant Wetland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
poorland flatsedge	<i>Cyperus compressus</i>
prairie cordgrass	<i>Spartina pectinata</i>
quaking aspen	<i>Populus tremuloides</i>
red fescue	<i>Festuca rubra</i>
redtop	<i>Agrostis gigantea</i>
reed canarygrass	<i>Phalaris arundinacea</i>
rice cutgrass	<i>Leersia oryzoides</i>
roughleaf dogwood	<i>Cornus drummondii</i>
scouringrush horsetail	<i>Equisetum hyemale</i>
seaside amaranth	<i>Amaranthus pumilus</i>
shoreline sedge	<i>Carex hyalinolepis</i>
slimstem reedgrass	<i>Calamagrostis stricta</i>
smooth brome	<i>Bromus inermis</i>
stinging nettle	<i>Urtica dioica</i>
swamp dock	<i>Rumex verticillatus</i>
swamp milkweed	<i>Asclepias incarnata</i>
swamp smartweed	<i>Persicaria hydropiperoides</i>
switchgrass	<i>Panicum virgatum</i>
tapered rosette grass	<i>Dichanthelium acuminatum</i>
Torrey's rush	<i>Juncus torreyi</i>
upright sedge	<i>Carex stricta</i>
velvet panicum	<i>Dichanthelium scoparium</i>
willow oak	<i>Quercus phellos</i>
woolgrass	<i>Scirpus cyperinus</i>
Palustrine Shrub-Scrub Wetlands (PSS)	
American elm	<i>Ulmus americana</i>
black elderberry	<i>Sambucus nigra</i>
black willow	<i>Salix nigra</i>
broadleaf cattail	<i>Typha latifolia</i>
Canada germander	<i>Teucrium canadense</i>
curly dock	<i>Rumex crispus</i>
deertongue	<i>Dichanthelium clandestinum</i>
eastern cottonwood	<i>Populus deltoides</i>
green ash	<i>Fraxinus pennsylvanica</i>
narrowleaf cattail	<i>Typha angustifolia</i>
reed canarygrass	<i>Phalaris arundinacea</i>
rice cutgrass	<i>Leersia oryzoides</i>
roughleaf dogwood	<i>Cornus drummondii</i>
stinging nettle	<i>Urtica dioica</i>
swamp milkweed	<i>Equisetum hyemale</i>
upright sedge	<i>Carex stricta</i>
Palustrine Forested Wetlands (PFO)	
American black elderberry	<i>Sambucus nigra ssp. Canadensis</i>

Table 2
Dominant Wetland Vegetation within the Heartland Greenway Pipeline System
Project Survey Area – Omaha District

Common Name	Scientific name
American elm	<i>Ulmus americana</i>
black willow	<i>Salix nigra</i>
broadleaf cattail	<i>Typha latifolia</i>
common buckthorn	<i>Rhamnus cathartica</i>
common ninebark	<i>Physocarpus opulifolius</i>
crookedstem aster	<i>Symphotrichum prenanthoides</i>
curly dock	<i>Rumex crispus</i>
eastern cottonwood	<i>Populus deltoides</i>
green ash	<i>Fraxinus pennsylvanica</i>
lesser burdock	<i>Arctium minus</i>
narrowleaf cattail	<i>Typha angustifolia</i>
Nepalese browntop	<i>Microstegium vimineum</i>
quackgrass	<i>Elymus repens</i>
reed canarygrass	<i>Phalaris arundinacea</i>
stinging nettle	<i>Urtica dioica</i>
swamp dock	<i>Rumex verticillatus</i>
white mulberry	<i>Morus alba</i>

**Table 3: Soil Map Units Located within the Heartland Greenway Pipeline
Project Survey Area – Omaha District**

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
South Dakota			
Brookings County			
Barnes clay loam, 0 to 2 percent slopes (BbA)	The Barnes series consists of very deep, well drained soils that formed in loamy till. These soils are on till plains and moraines and have slopes ranging from 0 to 25 percent.	Plains	Not Hydric
Brookings silty clay loam, 0 to 2 percent slopes (Bf)	The Brookings series consists of very deep, moderately well drained soils formed in loess overlying glacial till on footslopes and in swales. Slopes range from 0 to 6 percent.	Swales	Not Hydric
Buse-Barnes loams, 6 to 9 percent slopes (BgC)	The Buse series consists of very deep, well drained soils that formed in loamy glacial till on moraines. They have slopes of 3 to 60 percent.	Plains	Not Hydric
	For Barnes soil series refer to description above.	Plains	
Chaska loam, channeled, 0 to 3 percent slopes, frequently flooded (Ch)	The Chaska series consists of very deep, somewhat poorly drained soils that formed in recent calcareous loamy alluvium on flood plains. These soils have moderate permeability. Their slopes are less than 2 percent.	Flood Plains	Hydric
Divide loam, 0 to 2 percent slopes, occasionally flooded (Z159A)	The Divide series consists of very deep, somewhat poorly drained soils that formed in loamy sediment over sand and gravel. Permeability is moderate over rapid or very rapid. These soils are on slightly depressed areas in outwash plains, flood plains, terraces and interbeach areas and have slope ranging from 0 to 3 percent.	Outwash Plains / Flood Plains	Not Hydric
Doland loam, 2 to 6 percent slopes (DoB)	The Doland series consists of well drained moderately permeable soils that formed in a silty mantle and in underlying loamy glacial till or entirely in the silty mantle. These soils are on glacial moraines and have slopes ranging from 0 to 18 percent.	Plains	Not Hydric
Fordtown loam, 0 to 2 percent slopes, rarely flooded (Z166A)	The Fordtown series consists of very deep, well drained soils formed in loamy alluvium over glacial outwash on flood plains. Permeability is moderate in the subsoil and very rapid in the underlying material. Slopes range from 0 to 2 percent.	Outwash Plains / Flood Plains	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Hamerly-Badger complex, 0 to 2 percent slopes (Hb)	The Hamerly series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy till. Permeability is moderate in the upper horizons and moderate or moderately slow in the lower horizons. These soils are on flats on lake plains and on convex slopes surrounding shallow depressions and on slight rises on till plains. They have slopes ranging from 0 to 3 percent.	Drainageways / Rims	Not Hydric
	The Badger series consists of very deep, somewhat poorly drained soils formed in alluvium or alluvium over glacial till in upland swales, drainageways, and toeslopes. Slopes range from 0 to 2 percent.	Drainageways	
Kranzburg-Brookings silty clay loams, 0 to 2 percent slopes (KrA)	The Kranzburg series consists of very deep, well drained soils formed in loess overlying glacial till on uplands. Slopes range from 0 to 9 percent.	Ground Moraines	Not Hydric
	For Brookings soil series refer to description above.	Swales	
Kranzburg-Brookings silty clay loams, 1 to 6 percent slopes (KrB)	For Kranzburg soil series refer to description above.	Ground Moraines	Not Hydric
	For Brookings soil series refer to description above.	Swales	
Lamoure silty clay loam, coteau, 0 to 1 percent slopes, occasionally flooded (Z152A)	The Lamoure series consists of very deep, somewhat poorly drained or poorly drained soils formed in silty alluvium on flood plains. Permeability is moderate or moderately slow. Slopes are less than 2 percent.	Flood Plains	Not Hydric
Lamoure-Rauville silty clay loams, channeled, 0 to 2 percent slopes, frequently flooded (Z153A)	For Lamoure soil series refer to description above.	Flood Plains	Hydric
	The Rauville series consists of very deep, very poorly drained soils formed in alluvium on flats and flood plains. Permeability is moderately slow in the upper part and moderately rapid in the underlying sand and gravel. Slopes are less than 2 percent.	Outwash Plains / Flood Plains	
Lowe, occasionally flooded-Ludden, frequently flooded, complex, 0 to 1 percent slopes (Z155A)	The Lowe series consists of very deep, poorly drained and very poorly drained soils formed in loamy alluvium on flood plains. Permeability is moderate. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
	The Ludden series consists of very deep, poorly or very poorly drained, slowly permeable soils that formed in clayey alluvium. These soils are on floodplains of streams and have slopes of 0 to 1 percent.	Flood Plains	

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Marysland loam, 0 to 1 percent slopes, occasionally flooded (Z158A)	The Marysland series consists of very deep, poorly and very poorly drained soils that formed in glacial lacustrine, alluvium or outwash sediments which consists of a 20-to-40-inch loamy mantle over sandy or sandy-skeletal sediments. These soils are on stream terraces, outwash channels, outwash plains, flood plains and lake plains. They have moderate permeability in the upper part and rapid permeability in the underlying material. Slopes range from 0 to 2 percent.	Outwash / Flood Plains	Hydric
Mckranz-Badger silty clay loams, 0 to 2 percent slopes (Mt)	The Mckranz series consists of very deep, somewhat poorly drained calcareous soils that formed in loess over clay loam glacial till. These soils are on slight rises adjacent to upland drainageways. Slopes range from 0 to 2 percent.	Drainageways / Rims	Not Hydric
	For Badger soil series refer to description above.	Drainageways	
Moritz, occasionally flooded-Lamoure, frequently flooded, complex, 0 to 2 percent slopes (Z160A)	The Moritz series consists of very deep, somewhat poorly drained soils on flood plains. They formed in alluvium. Permeability is moderate. Slopes range from 0 to 2 percent.	Flood plains	Not Hydric
Rauville silty clay loam, coteau, 0 to 1 percent slopes, frequently flooded (Z150A)	For Lamoure soil series refer to description above.	Flood plains	Hydric
	For Rauville soil series refer to description above.	Outwash Plains / Flood Plains	
Renshaw-Fordville loams, coteau, 0 to 2 percent slopes (Z171A)	The Renshaw series consists of very deep, somewhat excessively drained soils formed in loamy sediments and the underlying sand and gravel on outwash plains and terraces. Permeability is moderate in the upper part and very rapid in the underlying material. Slopes range from 0 to 25 percent.	Outwash Plains	Not Hydric
Renshaw-Fordville loams, coteau, 2 to 6 percent slopes (Z171B)	The Fordville series consists of very deep, well drained soils formed in loamy sediments that are moderately deep over sand and gravel on outwash plains and terraces. Permeability is moderate in the upper mantle and very rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Plains	Not Hydric
	For Renshaw soil series refer to description above.	Outwash Plains	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Strayhoss loam, 2 to 6 percent slopes (SrB)	For Fordville soil series refer to description above.	Outwash Plains	Not Hydric
	The Strayhoss series consists of very deep, well drained soils formed in loamy eolian material over sandy eolian material on uplands. Permeability is moderate in the upper part and rapid in the sandy material. Slopes range from 0 to 9 percent.	Plains	
Strayhoss-Maddock complex, 2 to 6 percent slopes (StB)	For Strayhoss soil series refer to description above.	Plains	Not Hydric
	The Maddock series consists of very deep, well drained or somewhat excessively drained, rapidly permeable soils that formed in fine sands deposited by wind or water. These soils are on sandy glaciolacustrine or glaciofluvial, outwash and delta plains and have slopes ranging from 0 to 35 percent.	Plains	
Vienna-Brookings complex, 1 to 6 percent slopes (VbB)	The Vienna series consists of very deep, well drained soils formed in silty and loamy loess over loamy glacial till on uplands. These soils have moderately slow permeability. Slopes range from 0 to 15 percent.	Ground Moraines	Not Hydric
	For Brookings soil series refer to description above.	Swales	
Lincoln County			
Alcester silty clay loam, 0 to 2 percent slopes (AcA)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Stream Terraces / Drainageways / Hillslopes	Not Hydric
Alcester silty clay loam, 2 to 6 percent slopes (AcB)	For Alcester soil series refer to description above.	Hillslopes	Not Hydric
Alcester silty clay loam, channeled (Af)	For Alcester soil series refer to description above.	Flood Plains	Not Hydric
Baltic silty clay loam, ponded (Mh)	The Baltic series consists of very deep, poorly drained and very poorly drained soils formed in clayey alluvial sediments in depressions and on bottom lands. Permeability is slow. Slopes range from 0 to 2 percent.	Till Plains / Potholes	Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Bon soils, frequently flooded (Bo)	The Bon series consists of very deep, well drained and moderately well drained soils formed in alluvium on bottom lands of the glacial till plain. Permeability is moderate. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Chancellor-Tetonka complex, 0 to 2 percent slopes (Ca)	The Chancellor series consists of very deep, somewhat poorly and poorly drained soils formed in silty alluvium in upland swales. Permeability is slow. Slopes are less than 1 percent.	Hillslopes / Drainageways	Not Hydric
	The Tetonka series consists of very deep, poorly drained soils formed in local alluvium in depressions on uplands. Permeability is slow. Slopes are less than 2 percent.	Hillslopes / Depressions	
Chancellor-Viborg silty clay loams (Cd)	For Chancellor soil series refer to description above.	Drainageways	Hydric
	The Viborg series consists of very deep, moderately well drained soils formed in silty material over glacial till or glacial drift. Permeability is moderate in the solum and moderately slow in the underlying material. Slopes range from 0 to 6 percent.	Drainageways	
Chancellor-Wakonda-Tetonka complex (Ch)	For Chancellor soil series refer to description above.	Drainageways	Hydric
	The Wakonda series consists of very deep, somewhat poorly drained soils formed in silty sediments on uplands. Permeability is moderate. Slope ranges from 0 to 3 percent.	Rises / Swales / Till Plains	
	For Tetonka soil series refer to description above.	Till Plains / Closed Depressions	
Clamo silty clay loam (Co)	The Clamo series consists of very deep, somewhat poorly drained, poorly drained, and very poorly drained soils formed in clayey alluvium on bottom lands. Permeability is slow. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Crofton-Nora complex, 11 to 17 percent slopes, eroded (CpD2)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Interfluves / Hillslopes	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Hillslopes / Interfluves	

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Delmont loam, 0 to 2 percent slopes (DeA)	The Delmont series consists of very deep, somewhat excessively drained soils formed in loamy alluvium over sand and gravel on outwash plains and terraces. Permeability is moderately rapid or moderate in the solum and rapid in the underlying sand and gravel. Slopes range from 0 to 25 percent.	Outwash Plains	Not Hydric
Egan silty clay loam, 3 to 6 percent slopes (EaB)	The Egan series consists of very deep, well drained soils formed in silty sediments overlying glacial till on uplands. Permeability is moderate in the silty solum and moderately slow or slow in the underlying glacial till. Slopes range from 0 to 15 percent.	Till Plains	Not Hydric
Egan-Chancellor silty clay loams, 0 to 4 percent slopes (EcB)	For Egan soil series refer to description above.	Till Plains	Not Hydric
	For Chancellor soil series refer to description above.	Till Plains	
Egan-Shindler complex, 2 to 6 percent slopes (EsB)	For Egan soil series refer to description above.	Till Plains	Not Hydric
	The Shindler series consists of very deep, well drained soils formed in glacial till on uplands. Permeability is moderately slow or slow. Slopes range from 2 to 45 percent.	Till Plains	
Egan-Shindler complex, 6 to 9 percent slopes (EsC)	For Egan soil series refer to description above.	Moraines	Not Hydric
	For Shindler soil series refer to description above.	Moraines	
Graceville silty clay loam (Gr)	The Graceville series consists of very deep, well and moderately well drained soils formed in silty sediments overlying sand and gravel. Permeability is moderate in the solum and rapid in the underlying material. Slopes range from 0 to 6 percent.	Outwash Terraces	Not Hydric
Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded (La)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood-Plain Steps	Hydric
Moody silty clay loam, 0 to 2 percent slopes (MoA)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Moody silty clay loam, 2 to 6 percent slopes (MoB)	For Moody soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Moody-Nora complex, warm, 2 to 6 percent slopes (MpB)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	For Nora soil series refer to description above.	Hillslopes	
Moody-Nora silty clay loams, 6 to 10 percent slopes, eroded (MpC2)	For Moody soil series refer to description above.	Plains	Not Hydric
	For Nora soil series refer to description above.	Plains	
Salmo silty clay loam, very wet (Sa)	The Salmo series consists of very deep, somewhat poorly drained and poorly drained soils formed in silty alluvium on flood plains. Permeability is moderate or moderately slow in the solum and moderately slow or slow in the underlying material. Slopes are less than 1 percent.	Flood Plains	Hydric
Shindler and Talmo soils, 6 to 30 percent slopes (StD)	For Shindler soil series refer to description above.	Moraines	Not Hydric
	The Talmo series consists of very deep, excessively drained soils formed in sand and gravel outwash sediments on glacial outwash plains and moraines. Permeability is rapid. Slopes range from 0 to 40 percent.	Outwash Plains	
Shindler clay loam, 25 to 40 percent slopes (ShF)	For Shindler soil series refer to description above.	Moraines	Not Hydric

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Shindler clay loam, 9 to 15 percent slopes (ShD)	For Shindler soil series refer to description above.	Till Plains	Not Hydric
Shindler-Egan complex, 9 to 15 percent slopes, eroded (SkD2)	For Shindler soil series refer to description above.	Moraines	Not Hydric
	For Egan soil series refer to description above.	Moraines	
Tetonka silt loam, 0 to 2 percent slopes, frequently ponded (Te)	For Tetonka soil series refer to description above.	Depressions	Hydric
Wentworth silty clay loam, 0 to 2 percent slopes (WeA)	The Wentworth series consists of very deep, well drained and moderately well drained soils formed in silty glacial drift on uplands. Permeability is moderate. Slopes range from 0 to 9 percent.	Hillslopes	Not Hydric
Wentworth-Chancellor silty clay loams, 0 to 2 percent slopes (WhA)	For Wentworth soil series refer to description above.	Till Plains	Not Hydric
	For Chancellor soil series refer to description above.	Drainageways	
Worthing silty clay loam, 0 to 1 percent slopes (Ws)	The Worthing series consists of very deep, poorly and very poorly drained soils formed in clayey alluvial sediments in upland depressions on till plains. Permeability is slow. Slopes are less than 1 percent.	Depressions	Hydric
Minnehaha County			
Alcester silty clay loam, cool, 0 to 2 percent slopes (AcA)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Drainageways / Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Benclare-Corson complex, 0 to 2 percent slopes (BcA)	The Benclare series consists of very deep, moderately well drained or somewhat poorly drained soils on terraces. They formed in clayey lacustrine materials. Slopes range from 0 to 2 percent.	Terraces	Not Hydric
	The Corson series consists of very deep, well drained soils formed in clayey lacustrine sediments or loess on uplands. These soils have slow permeability. Slopes range from 0 to 9 percent.	Terraces	
Blendon-Henkin fine sandy loams, 2 to 6 percent slopes (BhB)	The Blendon series consists of very deep, well drained soils formed in sandy glacial sediments or eolian sediments on terraces and alluvial fans. Permeability is moderate or moderately rapid through the solum and moderately rapid or rapid in the underlying material. Slopes range from 0 to 6 percent slopes.	Outwash Plains	Not Hydric
	The Henkin series consists of very deep, well drained soils formed in glacial meltwater deposits on uplands. They have moderately rapid permeability. Slopes range from 0 to 9 percent.	Outwash Plains	
Bon loam, 0 to 2 percent slopes, occasionally flooded (Bo)	The Bon series consists of very deep, well drained and moderately well drained soils formed in alluvium on bottom lands of the glacial till plain. Permeability is moderate. Slopes range from 0 to 2 percent.	Flood-Plain Steps	Not Hydric
Chancellor silty clay loam, 0 to 2 percent slopes, frequently flooded (Cb)	The Chancellor series consists of very deep, somewhat poorly and poorly drained soils formed in silty alluvium in upland swales. Permeability is slow. Slopes are less than 1 percent.	Hillslopes / Drainageways	Hydric
Chaska loam, 0 to 2 percent slopes (Cd)	The Chaska series consists of very deep, somewhat poorly drained soils that formed in recent calcareous loamy alluvium on flood plains. These soils have moderate permeability. Their slopes are less than 2 percent.	Flood Plains	Not Hydric
Chaska loam, channeled, 0 to 3 percent slopes, frequently flooded (Ch)	For Chaska soil series refer to description above.	Flood Plains	Hydric
Clamo silty clay, 0 to 1 percent slopes (Cm)	The Clamo series consists of very deep, somewhat poorly drained, poorly drained, and very poorly drained soils formed in clayey alluvium on bottom lands. Permeability is slow. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Corson silty clay, 2 to 6 percent slopes (CoB)	For Corson soil series refer to description above.	Terraces	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Corson-Henkin complex, 6 to 9 percent slopes (CpC)	For Corson soil series refer to description above.	Terraces	Not Hydric
	For Henkin soil series refer to description above.	Outwash Plains	
Crofton-Nora complex, 9 to 15 percent slopes (CrD)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Plains	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Plains	
Davis loam, 0 to 2 percent slopes (DcA)	The Davis series consists of very deep, well drained and moderately well drained soils formed in loamy sediments on foot slopes, fans and high bottom lands. Permeability is moderate. Slopes range from 0 to 15 percent.	Flood Plains	Not Hydric
Davison-Crossplain clay loams, 0 to 2 percent slopes (Dd)	The Davison series consists of very deep, somewhat poorly drained soils formed in stratified glacial meltwater sediments or glacial till on uplands. Permeability is moderate in the solum and moderate or moderately slow in the underlying material. Slopes range from 0 to 3 percent.	Rises / Drainageways / Till Plains	Not Hydric
	The Crossplain series consists of very deep, somewhat poorly and poorly drained soils formed in glacial drift in swales and drainageways of uplands. The soils have slow or moderately slow permeability. Slopes range from 0 to 2 percent.	Drainageways / Till Plains	
Delmont-Enet loams, 2 to 6 percent slopes (DeB)	The Delmont series consists of very deep, somewhat excessively drained soils formed in loamy alluvium over sand and gravel on outwash plains and terraces. Permeability is moderately rapid or moderate in the solum and rapid in the underlying sand and gravel. Slopes range from 0 to 25 percent.	Outwash Plains	Not Hydric
	The Enet series consists of very deep, well drained soils formed in loamy sediments and the underlying stratified sand and gravel on the glacial outwash plains and flood plains. Permeability is moderate in the solum and very rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Plains	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Delmont-Talmo complex, 6 to 9 percent slopes (DgC)	For Delmont soil series refer to description above.	Outwash Plains	Not Hydric
	The Talmo series consists of very deep, excessively drained soils formed in sand and gravel outwash sediments on glacial outwash plains and moraines. Permeability is rapid. Slopes range from 0 to 40 percent.	Outwash Plains	
Dempster silt loam, 0 to 2 percent slopes (DmA)	The Dempster series consists of very deep, well drained soils formed in silty sediments overlying outwash sand and gravel. Permeability is moderate in the silty material and moderately rapid or rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Plains	Not Hydric
Dempster silt loam, 2 to 6 percent slopes (DmB)	For Dempster soil series refer to description above.	Outwash Plains	Not Hydric
Dobalt loam, 2 to 6 percent slopes (DxB)	The Dobalt series consists of very deep, well drained, soils formed in loamy eolian material and the underlying glacial till on uplands. Permeability is moderately slow. Slopes range from 0 to 6 percent.	Till Plains	Not Hydric
Dobalt-Bonilla loams, 0 to 2 percent slopes (DyA)	For Dobalt soil series refer to description above.	Till Plains	Not Hydric
	The Bonilla series consists of very deep, moderately well drained soils formed in loamy glacial till in drainageways and swales of the uplands. Permeability is moderate in the solum and moderately slow or moderate in the underlying material. Slopes range from 0 to 6 percent.	Till Plains	
Flandreau loam, 0 to 2 percent slopes (FaA)	The Flandreau series consists of very deep, well drained soils formed in loamy eolian material over sandy material. Permeability is moderate in the upper part and rapid in the lower part. Slopes range from 0 to 15 percent.	Hillslopes	Not Hydric
Flandreau loam, 2 to 6 percent slopes (FaB)	For Flandreau soil series refer to description above.	Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Flandreau-Thurman complex, 2 to 6 percent slopes (FtB)	For Flandreau soil series refer to description above.	Till Plains	Not Hydric
	The Thurman series consists of very deep somewhat excessively drained soils that formed mainly in sandy eolian material. They are on uplands and stream terraces and have slopes that range from 0 to 40 percent.	Till Plains	
Graceville silty clay loam, 0 to 2 percent slopes (GrA)	The Graceville series consists of very deep, well and moderately well drained soils formed in silty sediments overlying sand and gravel. Permeability is moderate in the solum and rapid in the underlying material. Slopes range from 0 to 6 percent.	Outwash Terraces	Not Hydric
Grovena loam, 2 to 6 percent slopes (GsB)	The Grovena series consists of very deep, well drained soils formed in loamy eolian materials on uplands. Permeability is moderate. Slopes range from 0 to 15 percent.	Till Plains	Not Hydric
Grovena-Bonilla loams, 0 to 2 percent slopes (GvA)	For Grovena soil series refer to description above.	Till Plains	Not Hydric
	For Bonilla soil series refer to description above.	Till Plains	
Houdek-Shindler clay loams, 6 to 9 percent slopes (HsC)	The Houdek series consists of very deep, well drained soils formed in glacial till on uplands. Permeability is moderate in the solum and moderately slow in the underlying material. Slopes range from 0 to 25 percent.	Moraines	Not Hydric
	The Shindler series consists of very deep, well drained soils formed in glacial till on uplands. Permeability is moderately slow or slow. Slopes range from 2 to 45 percent.	Moraines	Hydric
Houdek-Talmo complex, 9 to 15 percent slopes (HtD)	For Houdek soil series refer to description above.	Moraines	Not Hydric
	For Talmo soil series refer to description above.	Outwash Terraces / Moraines	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Ihlen-Rock outcrop complex, 4 to 35 percent slopes (IrE)	The Ihlen series consists of moderately deep, well drained soils that formed in 20 to 40 inches of loess over bedrock in uplands. Permeability is moderate. Slopes range from 0 to 35 percent.	Plains	Not Hydric
	The Rock River series consists of very deep, well drained soils that formed in calcareous alluvium derived mainly from sandstone, eolian deposits, and residuum. Rock River soils are on alluvial fan aprons, relict terraces, benches, hillslopes, and areas of valley fill. Slopes are 0 to 25 percent.	Plains	
Lamo silty clay loam, channeled (Lb)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood Plains	Hydric
Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded (La)	For Lamo soil series refer to description above.	Flood-Plain Steps	Hydric
Moody silty clay loam, cool, 2 to 6 percent slopes (MdB)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Hillslopes / Interfluves	Not Hydric
Moody-Gayville complex, 0 to 3 percent slopes (MgA)	For Moody soil series refer to description above.	Plains	Not Hydric
	The Gayville series consists of very deep, somewhat poorly drained soils formed in clayey over loamy alluvium. These soils are on bottomlands. Permeability is very slow in the solum and moderate in the underlying material. Slopes range from 0 to 2 percent.	Flood Plains	
Moody-Nora complex, 2 to 6 percent slopes (MnB)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	For Nora soil series refer to description above.	Hillslopes	
Moody-Nora silty clay loams, 6 to 9 percent slopes (MnC)	For Moody soil series refer to description above.	Plains	Not Hydric
	For Nora soil series refer to description above.	Plains	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Moody-Trent complex, 0 to 2 percent slopes (MtA)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	The Trent series consists of very deep, well and moderately well drained soils that formed in loess on uplands and in swales. Slopes range from 0 to 6 percent.	Swales / Hillslopes	
Nora-Crofton complex, 6 to 9 percent slopes (NcC)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
	For Crofton soil series refer to description above.	Interfluves / Hillslopes	
Obert silty clay loam, 0 to 1 percent slopes (Ob)	The Obert series consists of very deep, poorly drained and very poorly drained soils that formed in calcareous, loamy alluvium. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood Plains	Hydric
Splitrock silty clay loam, 0 to 2 percent slopes (SpA)	The Splitrock series consists of very deep, moderately well drained soils formed in loess and the underlying glacial till on uplands. Permeability is moderate in the upper mantle and moderately slow or slow in the till. Slopes range from 0 to 9 percent.	Till Plains	Not Hydric
Splitrock silty clay loam, 2 to 6 percent slopes (SpB)	For Splitrock soil series refer to description above.	Till Plains	Not Hydric
Thurman-Flandreau complex, 6 to 9 percent slopes (TfC)	For Thurman soil series refer to description above.	Till Plains	Not Hydric
	For Flandreau soil series refer to description above.	Till Plains	
Trent silty clay loam, 0 to 3 percent slopes (Tr)	For Trent soil series refer to description above.	Swales / Hillslopes	Not Hydric
Wakonda-Chancellor complex, 0 to 2 percent slopes (Wa)	The Wakonda series consists of very deep, somewhat poorly drained soils formed in silty sediments on uplands. Permeability is moderate. Slope ranges from 0 to 3 percent.	Rims / Depressions	Not Hydric
	For Chancellor soil series refer to description above.	Hillslopes / Drainageways	

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Whitewood silty clay loam, 0 to 2 percent slopes (Wk)	The Whitewood series consists of very deep, poorly drained and somewhat poorly drained soils formed in local silty alluvium on flats, swales, and upland drainageways. Permeability is moderately slow. Slopes range from 0 to 2 percent.	Drainageways	Not Hydric
Moody County			
Alcester silty clay loam, cool, 0 to 2 percent slopes (Ac)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Drainageways / Hillslopes	Not Hydric
Alwilda sandy loam (Ad)	The Alwilda series consists of very deep, somewhat excessively drained soils formed in loamy overwash sediments overlying gravelly sand. These soils are on terraces and glacial outwash plains. Permeability is moderately rapid in the solum and rapid in the underlying material. Slopes range from 0 to 6 percent.	Flood Plains	Not Hydric
Blendon fine sandy loam, cool, 0 to 3 percent slopes (BeA)	The Blendon series consists of very deep, well drained soils formed in sandy glacial sediments or eolian sediments on terraces and alluvial fans. Permeability is moderate or moderately rapid through the solum and moderately rapid or rapid in the underlying material. Slopes range from 0 to 6 percent slopes.	Till Plains	Not Hydric
Bon loam, 0 to 2 percent slopes, occasionally flooded (Bo)	The Bon series consists of very deep, well drained and moderately well drained soils formed in alluvium on bottom lands of the glacial till plain. Permeability is moderate. Slopes range from 0 to 2 percent.	Flood-Plain Steps	Not Hydric
Chaska loam, channeled, 0 to 3 percent slopes, frequently flooded (Ch)	The Chaska series consists of very deep, somewhat poorly drained soils that formed in recent calcareous loamy alluvium on flood plains. These soils have moderate permeability. Their slopes are less than 2 percent.	Flood Plains	Hydric
Clamo silty clay (Cm)	The Clamo series consists of very deep, somewhat poorly drained, poorly drained, and very poorly drained soils formed in clayey alluvium on bottom lands. Permeability is slow. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Davis loam, 0 to 2 percent slopes (DaA)	The Davis series consists of very deep, well drained and moderately well drained soils formed in loamy sediments on foot slopes, fans and high bottom lands. Permeability is moderate. Slopes range from 0 to 15 percent.	Flood Plains	Not Hydric
Davis loam, 2 to 9 percent slopes (DaB)	For Davis soil series refer to description above.	Fans	Not Hydric

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Davison-Crossplain clay loams (Dc)	The Davison series consists of very deep, somewhat poorly drained soils formed in stratified glacial meltwater sediments or glacial till on uplands. Permeability is moderate in the solum and moderate or moderately slow in the underlying material. Slopes range from 0 to 3 percent.	Swales / Rims	Not Hydric
	The Crossplain series consists of very deep, somewhat poorly and poorly drained soils formed in glacial drift in swales and drainageways of uplands. The soils have slow or moderately slow permeability. Slopes range from 0 to 2 percent.	Swales	
Dempster silt loam, 0 to 2 percent slopes (DmA)	The Dempster series consists of very deep, well drained soils formed in silty sediments overlying outwash sand and gravel. Permeability is moderate in the silty material and moderately rapid or rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Terraces	Not Hydric
Dempster silt loam, 2 to 6 percent slopes (DmB)	For Dempster soil series refer to description above.	Outwash Terraces	Not Hydric
Dimo clay loam (Do)	The Dimo series consists of very deep, somewhat poorly drained soils formed in loamy alluvium and the underlying sand and gravel on glacial outwash plains, stream terraces and floodplains. Permeability is moderate in the solum and very rapid in the sand and gravel. Slopes are less than 2 percent.	Flood Plains / Outwash Plains	Not Hydric
Doland loam, 2 to 6 percent slopes (DsB)	The Doland series consists of well drained moderately permeable soils that formed in a silty mantle and in underlying loamy glacial till or entirely in the silty mantle. These soils are on glacial moraines and have slopes ranging from 0 to 18 percent.	Plains	Not Hydric
Doland-Bonilla loams, 0 to 2 percent slopes (DvA)	For Doland soil series refer to description above.	Plains	Not Hydric
	The Bonilla series consists of very deep, moderately well drained soils formed in loamy glacial till in drainageways and swales of the uplands. Permeability is moderate in the solum and moderately slow or moderate in the underlying material. Slopes range from 0 to 6 percent.	Swales	
Enet loam, 0 to 2 percent slopes (EnA)	The Enet series consists of very deep, well drained soils formed in loamy sediments and the underlying stratified sand and gravel on the glacial outwash plains and flood plains. Permeability is moderate in the solum and very rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Plains / Flood Plains	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Estelline-Sioux complex, coteau, 2 to 6 percent slopes (Z183B)	The Estelline series consists of very deep, well drained soils formed in silty material overlying sand and gravel on stream terraces and glacial outwash plains. Permeability is moderate in the upper mantle and very rapid in the sand and gravel. Slopes range from 0 to 9 percent.	Outwash Terraces	Not Hydric
	The Sioux series consists of excessively drained soils formed in sand and gravel on outwash plains, terraces and eskers. They are very shallow over sandy-skeletal material. Saturated hydraulic conductivity is high or very high. Slopes range from 0 to 40 percent.	Outwash Plains	
Flandreau loam, 0 to 2 percent slopes (FaA)	The Flandreau series consists of very deep, well drained soils formed in loamy eolian material over sandy material. Permeability is moderate in the upper part and rapid in the lower part. Slopes range from 0 to 15 percent.	Hillslopes	Not Hydric
Flandreau loam, 2 to 6 percent slopes (FaB)	For Flandreau soil series refer to description above.	Hillslopes	Not Hydric
Flandreau-Maddock complex, 2 to 6 percent slopes (FmB)	For Flandreau soil series refer to description above.	Plains	Not Hydric
	The Maddock series consists of very deep, well drained or somewhat excessively drained, rapidly permeable soils that formed in fine sands deposited by wind or water. These soils are on sandy glaciolacustrine or glaciofluvial, outwash and delta plains and have slopes ranging from 0 to 35 percent.	Plains	
Graceville silty clay loam, 0 to 2 percent slopes (Ga)	The Graceville series consists of very deep, well and moderately well drained soils formed in silty sediments overlying sand and gravel. Permeability is moderate in the solum and rapid in the underlying material. Slopes range from 0 to 6 percent.	Outwash Terraces	Not Hydric
Grovena loam, 2 to 6 percent slopes (GrB)	The Grovena series consists of very deep, well drained soils formed in loamy eolian materials on uplands. Permeability is moderate. Slopes range from 0 to 15 percent.	Till Plains	Not Hydric
Grovena-Bonilla loams, 0 to 2 percent slopes (GvA)	For Grovena soil series refer to description above.	Plains	Not Hydric
	For Bonilla soil series refer to description above.	Swales	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Houdek clay loam, 0 to 2 percent slopes (HoA)	The Houdek series consists of very deep, well drained soils formed in glacial till on uplands. Permeability is moderate in the solum and moderately slow in the underlying material. Slopes range from 0 to 25 percent.	Plains	Not Hydric
Houdek clay loam, 2 to 6 percent slopes (HoB)	For Houdek soil series refer to description above.	Plains	Not Hydric
Houdek-Shindler clay loams, 5 to 9 percent slopes (HsC)	For Houdek soil series refer to description above.	Plains	Not Hydric
	The Shindler series consists of very deep, well drained soils formed in glacial till on uplands. Permeability is moderately slow or slow. Slopes range from 2 to 45 percent.	Plains	
Houdek-Shindler clay loams, 6 to 25 percent slopes (HsD)	For Houdek soil series refer to description above.	Moraines	Not Hydric
	For Shindler soil series refer to description above.	Moraines	
Houdek-Talmo complex, 6 to 40 percent slopes (HtD)	For Houdek soil series refer to description above.	Moraines	Not Hydric
	The Talmo series consists of very deep, excessively drained soils formed in sand and gravel outwash sediments on glacial outwash plains and moraines. Permeability is rapid. Slopes range from 0 to 40 percent.	Outwash Plains / Moraines	
Kranzburg-Brookings silty clay loams, 1 to 6 percent slopes (KaB)	The Kranzburg series consists of very deep, well drained soils formed in loess overlying glacial till on uplands. Slopes range from 0 to 9 percent.	Ground Moraines	Not Hydric
	The Brookings series consists of very deep, moderately well drained soils formed in loess overlying glacial till on footslopes and in swales. Slopes range from 0 to 6 percent.	Swales	
Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded (La)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood-Plain Steps	Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Lamo silty clay loam, frequently flooded (Lb)	For Lamo soil series refer to description above.	Flood Plains	Hydric
Lamoure-Rauville silty clay loams, channeled, 0 to 2 percent slopes, frequently flooded (Z153A)	The Lamoure series consists of very deep, somewhat poorly drained or poorly drained soils formed in silty alluvium on flood plains. Permeability is moderate or moderately slow. Slopes are less than 2 percent.	Flood Plains	Hydric
	The Rauville series consists of very deep, very poorly drained soils formed in alluvium on flats and flood plains. Permeability is moderately slow in the upper part and moderately rapid in the underlying sand and gravel. Slopes are less than 2 percent.	Outwash Plains / Flood Plains	
Moody silty clay loam, cool, 2 to 6 percent slopes (MoB)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Hillslopes / Interfluves	Not Hydric
Moody-Nora complex, 2 to 6 percent slopes (MnB)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Hillslopes	
Moody-Trent complex, 0 to 2 percent slopes (MtA)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	The Trent series consists of very deep, well and moderately well drained soils that formed in loess on uplands and in swales. Slopes range from 0 to 6 percent.	Swales / Hillslopes	
Nora-Crofton complex, 6 to 9 percent slopes (NcC)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Interfluves / Hillslopes	
Nora-Moody silty clay loams, 5 to 9 percent slopes (NmC)	For Nora soil series refer to description above.	Plains	Not Hydric
	For Moody soil series refer to description above.	Plains	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Orthents, gravelly (Og)	N/A	N/A	Not Hydric
Shindler-Houdek clay loams, 15 to 40 percent slopes (ShE)	For Shindler soil series refer to description above.	Moraines	Not Hydric
	For Houdek soil series refer to description above.	Moraines	
Sioux-Renshaw complex, coteau, 9 to 15 percent slopes (Z174D)	For Sioux soil series refer to description above.	Outwash Plains	Not Hydric
	The Renshaw series consists of very deep, somewhat excessively drained soils formed in loamy sediments and the underlying sand and gravel on outwash plains and terraces. Permeability is moderate in the upper part and very rapid in the underlying material. Slopes range from 0 to 25 percent.	Outwash Plains	
Wakonda-Chancellor complex, 0 to 2 percent slopes (Wa)	The Wakonda series consists of very deep, somewhat poorly drained soils formed in silty sediments on uplands. Permeability is moderate. Slope ranges from 0 to 3 percent.	Rims / Depressions	Not Hydric
	For Chancellor soil series refer to description above.	Hillslopes / Drainageways	
Worthing silty clay loam, 0 to 1 percent slopes (Wo)	The Worthing series consists of very deep, poorly and very poorly drained soils formed in clayey alluvial sediments in upland depressions on till plains. Permeability is slow. Slopes are less than 1 percent.	Depressions	Hydric
Turner County			
Bon loam, channeled, 0 to 2 percent slopes, frequently flooded (Cc)	The Bon series consists of very deep, well drained and moderately well drained soils formed in alluvium on bottom lands of the glacial till plain. Permeability is moderate. Slopes range from 0 to 2 percent.	Drainageways	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Delmont-Enet loams, high precipitation, 2 to 6 percent slopes (DehB)	The Delmont series consists of very deep, somewhat excessively drained soils formed in loamy alluvium over sand and gravel on outwash plains and terraces. Permeability is moderately rapid or moderate in the solum and rapid in the underlying sand and gravel. Slopes range from 0 to 25 percent.	Outwash Plains	Not Hydric
	The Enet series consists of very deep, well drained soils formed in loamy sediments and the underlying stratified sand and gravel on the glacial outwash plains and flood plains. Permeability is moderate in the solum and very rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Plains	
Dempster-Graceville silty clay loams, 1 to 5 percent slopes (DgB)	The Dempster series consists of very deep, well drained soils formed in silty sediments overlying outwash sand and gravel. Permeability is moderate in the silty material and moderately rapid or rapid in the underlying sand and gravel. Slopes range from 0 to 9 percent.	Outwash Terraces	Not Hydric
	The Graceville series consists of very deep, well and moderately well drained soils formed in silty sediments overlying sand and gravel. Permeability is moderate in the solum and rapid in the underlying material. Slopes range from 0 to 6 percent.	Outwash Terraces / Swales	
Egan-Ethan complex, 2 to 6 percent slopes (EeB)	The Egan series consists of very deep, well drained soils formed in silty sediments overlying glacial till on uplands. Permeability is moderate in the silty solum and moderately slow or slow in the underlying glacial till. Slopes range from 0 to 15 percent.	Till Plains	Not Hydric
	The Ethan series consists of very deep, well drained soils formed in glacial till. They have moderate permeability in the solum and moderately slow permeability in the underlying material. These upland soils have slopes ranging from 1 to 40 percent.	Till Plains / Knolls	
Egan-Trent silty clay loams, 0 to 2 percent slopes (EfA)	For Egan soil series refer to description above.	Till Plains	Not Hydric
	The Trent series consists of very deep, well and moderately well drained soils that formed in loess on uplands and in swales. Slopes range from 0 to 6 percent.	Swales	
Egan-Wentworth complex, 2 to 6 percent slopes (EgB)	For Egan soil series refer to description above.	Hillslopes	Not Hydric
	The Wentworth series consists of very deep, well drained and moderately well drained soils formed in silty glacial drift on uplands. Permeability is moderate. Slopes range from 0 to 9 percent.	Hillslopes	

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Ethan-Egan complex, 5 to 9 percent slopes (EtC)	For Ethan soil series refer to description above.	Moraines / Knolls	Not Hydric
	For Egan soil series refer to description above.	Moraines	
Lamo silty clay loam, cool, 0 to 2 percent slopes, occasionally flooded (La)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood-Plain Steps	Hydric
Tetonka silt loam, 0 to 1 percent slopes (Te)	The Tetonka series consists of very deep, poorly drained soils formed in local alluvium in depressions on uplands. Permeability is slow. Slopes are less than 2 percent.	Depressions	Hydric
Wentworth-Chancellor-Wakonda silty clay loams, 0 to 2 percent slopes (WcA)	For Wentworth soil series refer to description above.	Till Plains	Not Hydric
	The Chancellor series consists of very deep, somewhat poorly and poorly drained soils formed in silty alluvium in upland swales. Permeability is slow. Slopes are less than 1 percent.	Till Plains / Drainageways	
	The Wakonda series consists of very deep, somewhat poorly drained soils formed in silty sediments on uplands. Permeability is moderate. Slope ranges from 0 to 3 percent.	Rises / Drainageways	
Worthing silty clay loam, 0 to 1 percent slopes (Wo)	The Worthing series consists of very deep, poorly and very poorly drained soils formed in clayey alluvial sediments in upland depressions on till plains. Permeability is slow. Slopes are less than 1 percent.	Depressions	Hydric
Nebraska			
Boone County			
Alcester silty clay loam, 0 to 2 percent slopes (7230)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Stream Terraces / Drainageways / Hillslopes	Not Hydric
Alcester silty clay loam, 2 to 6 percent slopes (6603)	For Alcester soil series refer to description above.	Stream Terraces / Drainageways / Hillslopes	Not Hydric
Belfore silty clay loam, 0 to 2 percent slopes (6628)	The Belfore series consists of very deep, well drained soils formed in loess on uplands and stream terraces. Slopes range from 0 to 4 percent.	Interfluves	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Crofton silt loam, 17 to 30 percent slopes, eroded (6681)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton-Nora complex, 11 to 17 percent slopes, eroded (6789)	For Crofton soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Interfluves / Hillslopes	
Crofton-Nora complex, 17 to 30 percent slopes (6697)	For Crofton soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
	For Nora soil series refer to description above.	Hillslopes / Interfluves	
Crofton-Nora complex, 6 to 11 percent slopes, eroded (6694)	For Crofton soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Nora soil series refer to description above.	Hillslopes / Interfluves	
Fillmore silt loam, occasionally ponded (3951)	The Fillmore series consists of very deep, somewhat poorly drained soils that formed in loess. Fillmore soils are in closed depressions on loess uplands and loess-covered stream terraces on river valleys in the Central Loess Plains, MLRA 75. Slopes are 0 to 2 percent.	Playas	Hydric
Hall silt loam, 0 to 1 percent slopes (8840)	The Hall series consists of very deep well drained soils that formed in loess or alluvium. These soils are on uplands and stream terraces of Central Nebraska Loess Hills, MLRA 71. Slope ranges from 0 to 6 percent.	Interfluves / Flats	Not Hydric
Hobbs silt loam, 0 to 2 percent slopes, occasionally flooded, cool (3561)	The Hobbs series consists of very deep, well drained soils that formed in stratified, silty alluvium. These soils are on flood plains, foot slopes, and alluvial fans in river valleys of Central Loess Plains, MLRA 75. Slopes range from 0 to 6 percent.	Drainageways	Not Hydric
Hord silt loam, 0 to 1 percent slopes (8869)	The Hord series consists of very deep, well drained, moderately permeable soils that formed in mixed loess and alluvium on foot slopes and stream terraces. Slope is dominantly less than 1 percent but can range from 0 to 7 percent.	Stream Terraces	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Moody silty clay loam, 0 to 2 percent slopes (6808)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves	Not Hydric
Moody silty clay loam, 2 to 6 percent slopes, eroded (6812)	For Moody soil series refer to description above.	Interfluves	Not Hydric
Nora silt loam, 6 to 11 percent slopes, eroded (6756)	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Hillslopes / Interfluves	Not Hydric
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Nora-Crofton complex, 6 to 11 percent slopes, eroded (6778)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Crofton soil series refer to description above.	Hillslopes / Interfluves	
Nora-Moody complex, 2 to 6 percent slopes, eroded (6780)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Moody soil series refer to description above.	Interfluves	
Shell silt loam, rarely flooded (6556)	The Shell series consists of very deep, well drained soils that formed in stratified silty and loamy alluvium. Shell soils are on bottomlands. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Shell silty clay loam, 0 to 2 percent slopes, occasionally flooded (6555)	For Shell soil series refer to description above.	Flood Plains	Not Hydric
Dakota County			
Albaton silty clay loam, 0 to 2 percent slopes, occasionally flooded (7713)	The Albaton series consists of very deep, poorly, or very poorly drained soils on flood plains. Albaton soils formed in calcareous alluvium. Slope ranges from 0 to 2 percent.	Flood Plains	Hydric
Albaton silty clay, 0 to 2 percent slopes, occasionally flooded (7710)	For Albaton soil series refer to description above.	Flood Plains	Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Alcester silty clay loam, 2 to 6 percent slopes (6603)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Hillslopes	Not Hydric
Alcester silty clay loam, 6 to 11 percent slopes (6601)	For Alcester soil series refer to description above.	Hillslopes	Not Hydric
Aowa silt loam, 0 to 3 percent slopes, occasionally flooded (6300)	The Aowa series consists of very deep, well drained and moderately well drained, moderately permeable soils on bottom lands. They formed in light and dark colored stratified calcareous alluvium. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Barney fine sandy loam, occasionally flooded (6308)	The Barney series consists of very deep poorly drained and very poorly drained soils formed in stratified loamy material deposited over sandy and gravelly alluvium on flood plains along major streams. Permeability is rapid or very rapid below the loamy material. Slope ranges from 0 to 2 percent.	Flood Plains	Hydric
Blake silty clay loam, occasionally flooded (7722)	The Blake series consists of very deep, somewhat poorly drained soils on flood plains. These soils formed in recently deposited calcareous, silty alluvium. Slope ranges from 0 to 2 percent.	Flood Plains	Not Hydric
Blencoe silty clay, rarely flooded (7729)	The Blencoe series consists of very deep, somewhat poorly drained soils on flood plains and flood-plain steps. These soils formed in 51 to 102 centimeters of clayey alluvium and underlying loamy alluvium. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Blyburg silt loam, 2 to 6 percent slopes, rarely flooded (7766)	The Blyburg series consists of very deep, well drained soils on flood plains formed in weakly stratified loamy alluvium. Slope ranges from 0 to 6 percent.	Flood Plains	Not Hydric
Blyburg silt loam, rarely flooded (7765)	For Blyburg soil series refer to description above.	Flood Plains	Not Hydric
Blyburg silty clay loam, rarely flooded (7767)	For Blyburg soil series refer to description above.	Flood Plains	Not Hydric
Blyburg silty clay, overwash, rarely flooded (7768)	For Blyburg soil series refer to description above.	Flood Plains	Not Hydric
Calco silt loam, overwash, occasionally flooded (6400)	The Calco series consists of very deep, poorly drained, and very poorly drained soils formed in calcareous alluvium. These soils are on flood plains in river valleys. Slope ranges from 0 to 2 percent.	Flood Plains	Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Crofton silt loam, 17 to 30 percent slopes, eroded (6681)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton silt loam, 2 to 6 percent slopes, eroded (6685)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 6 to 11 percent slopes, eroded (6687)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 8 to 17 percent slopes, eroded (6860)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Forney silt loam, overwash, rarely flooded (7780)	The Forney series consists of very deep, poorly drained soils formed in clayey alluvium on flood plains. Slope ranges from 0 to 2 percent.	Flood Plains	Hydric
Forney silty clay, rarely flooded (7781)	For Forney soil series refer to description above.	Flood Plains	Hydric
Forney soils, swales, rarely flooded (7782)	For Forney soil series refer to description above.	Flood Plains	Hydric
Grable very fine sandy loam, occasionally flooded (7704)	The Grable series consists of very deep, well drained soils on flood plains. These soils formed in 45 to 80 centimeters of calcareous silty alluvium and the underlying sandy alluvium. Slopes range from 0 to 5 percent.	Flood Plains	Not Hydric
Haynie silt loam, 0 to 2 percent slopes, occasionally flooded (7741)	The Haynie series consists of very deep, moderately well drained soils on flood plains. These soils formed in calcareous alluvium. Slope ranges from 0 to 5 percent.	Flood Plains	Not Hydric
Ida soils, 30 to 60 percent slopes (8011)	The Ida series consists of very deep, well drained soils formed in calcareous loess. These soils are on side slopes and crests on dissected till plains and on risers on stream terraces. Slopes range from 2 to 60 percent.	Loess Hills	Not Hydric
Kennebec silt loam, 0 to 3 percent slopes, rarely flooded (7153)	The Kennebec series consists of very deep, moderately well drained soils formed in silty alluvium. These soils are on flood plains in river valleys and on drainageways on uplands. Slope ranges from 0 to 5 percent.	Flood Plains	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Kennebec silt loam, 0 to 3 percent slopes, occasionally flooded, over wash (7053)	For Kennebec soil series refer to description above.	Drainageways	Not Hydric
Luton silty clay, thin surface, rarely flooded (7792)	The Luton series consists of very deep, poorly and very poorly drained soils formed in clayey alluvium. These soils are on flood plains. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Moody silty clay loam, 2 to 6 percent slopes (6811)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Hillslopes / Interfluves	Not Hydric
Moody silty clay loam, 6 to 11 percent slopes (6813)	For Moody soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Moody silty clay loam, 6 to 11 percent slopes, eroded (6814)	For Moody soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Moody-Nora silty clay loams, 11 to 17 percent slopes (6823)	For Moody soil series refer to description above.	Loess Hills	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Loess Hills	
Napier silt loam, 11 to 17 percent slopes (8106)	The Napier series consists of very deep, well drained soils on foot slopes, upland drainageways, and alluvial fans. These soils formed in local colluvium and alluvium derived from loess. Slopes range from 0 to 20 percent.	Drainageways	Not Hydric
Napier-Gullied land complex, 2 to 10 percent slopes (8107)	For Napier soil series refer to description above.	Loess Hills / Foot Slope	Not Hydric
	N/A	N/A	
Nora silt loam, 11 to 17 percent slopes (6749)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silt loam, 11 to 17 percent slopes, eroded (6750)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Nora silt loam, 17 to 30 percent slopes (6751)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silt loam, 2 to 6 percent slopes, eroded (6754)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora silt loam, 6 to 11 percent slopes, eroded (6756)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Omadi silt loam, rarely flooded (7874)	The Omadi series consists of very deep, moderately well drained soils formed in loamy alluvium on flood plains. Slopes range from 0 to 5 percent.	Flood Plains	Not Hydric
Onawa silty clay, occasionally flooded (7880)	The Onawa series consists of very deep, somewhat poorly drained soils on flood plains. These soils formed in 18 to 30 inches of clayey alluvium and the underlying loamy alluvium. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Percival silty clay, occasionally flooded (7802)	The Percival series consists of very deep, somewhat poorly drained soils on flood plains. These soils formed in 38 to 76 centimeters (15 to 30 inches) of clayey alluvium and the underlying sandy alluvium. Slope ranges from 0 to 6 percent.	Flood Plains	Not Hydric
Sarpy loamy fine sand, occasionally flooded (7083)	The Sarpy series consists of very deep, excessively drained soils on flood plains. These soils formed in sandy alluvium. Slopes range from 0 to 9 percent.	Flood Plains	Not Hydric
Sarpy silty clay, overwash, occasionally flooded (7855)	For Sarpy soil series refer to description above.	Flood Plains	Not Hydric
Dixon County			
Alcester silty clay loam, 2 to 6 percent slopes (6603)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Hillslope	Not Hydric
Aowa silt loam, 0 to 3 percent slopes, occasionally flooded (6300)	The Aowa series consists of very deep, well drained and moderately well drained, moderately permeable soils on bottom lands. They formed in light and dark colored stratified calcareous alluvium. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Bazile silty clay loam, 2 to 6 percent slopes (6617)	The Bazile series consists of very deep, well drained soils that formed in loess or outwash material over sandy sediments on uplands and stream terraces. Permeability is moderately slow in the solum and rapid in the substratum. Slopes range from 0 to 11 percent.	Stream Terraces	Not Hydric
Calco silt loam, overwash, occasionally flooded (6400)	The Calco series consists of very deep, poorly drained and very poorly drained soils formed in calcareous alluvium. These soils are on flood plains in river valleys. Slope ranges from 0 to 2 percent.	Flood Plains	Hydric
Calco silty clay loam, occasionally flooded (6401)	For Calco soil series refer to description above.	Drainageways	Hydric
Calco silty clay loam, wet, occasionally flooded (6403)	For Calco soil series refer to description above.	Drainageways	Hydric
Coleridge silty clay loam, 0 to 2 percent slopes, occasionally flooded (6324)	The Coleridge series consists of very deep, somewhat poorly drained soils formed in silty alluvium on bottom lands. Slope ranges from 0 to 2 percent.	Flood Plains	Not Hydric
Crofton silt loam, 17 to 30 percent slopes, eroded (6681)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton silt loam, 2 to 6 percent slopes, eroded (6685)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 6 to 11 percent slopes, eroded (6687)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 8 to 17 percent slopes, eroded (6860)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Kennebec silt loam, 0 to 3 percent slopes, rarely flooded (7153)	The Kennebec series consists of very deep, moderately well drained soils formed in silty alluvium. These soils are on flood plains in river valleys and on drainageways on uplands. Slope ranges from 0 to 5 percent.	Flood Plains	Not Hydric
Lamo silt loam, overwash, 0 to 2 percent slopes, occasionally flooded (3514)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood-Plain Steps / Hillslopes / Drainageways	Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Lamo silty clay loam, 0 to 2 percent slopes, occasionally flooded (3518)	For Lamo soil series refer to description above.	Flood-Plain Steps	Hydric
Maskell loam, 0 to 2 percent slopes (6540)	The Maskell series consists of very deep, well drained soils formed in loamy alluvial-colluvial material on terraces and foot slopes. Permeability is moderate. Slopes range from 0 to 6 percent.	Stream Terraces	Not Hydric
Moody silty clay loam, 0 to 2 percent slopes (6808)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves	Not Hydric
Moody silty clay loam, 2 to 6 percent slopes (6811)	For Moody soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Moody silty clay loam, 2 to 6 percent slopes, eroded (6812)	For Moody soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
Moody silty clay loam, 6 to 11 percent slopes (6813)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
Moody silty clay loam, 6 to 11 percent slopes, eroded (6814)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
Moody-Leisy complex, 6 to 11 percent slopes (6819)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
	The Leisy series consists of very deep, well drained soils formed in eolian sand overlying loess on uplands. Permeability is moderate in the upper part of the solum and moderately slow in the lower part. Slopes range from 1 to 15 percent.	Hillslopes	
Nora silt loam, 11 to 17 percent slopes (6749)	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Interfluves / Hillslopes	Not Hydric
Nora silt loam, 11 to 17 percent slopes, eroded (6750)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silt loam, 2 to 6 percent slopes, eroded (6754)	For Nora soil series refer to description above.	Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Nora silt loam, 6 to 11 percent slopes, eroded (6756)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded (7099)	The Zook series consists of very deep, poorly drained and very poorly drained soils formed in alluvium. These soils are on flood plains and stream terraces in river valleys and in drainageways on uplands. Slope ranges from 0 to 5 percent.	Flood Plains	Hydric
Madison County			
Alcester silty clay loam, 2 to 6 percent slopes (6603)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Hillslopes	Not Hydric
Bazile loam, 2 to 6 percent slopes (6605)	The Bazile series consists of very deep, well drained soils that formed in loess or outwash material over sandy sediments on uplands and stream terraces. Permeability is moderately slow in the solum and rapid in the substratum. Slopes range from 0 to 11 percent.	Interfluves	Not Hydric
Belfore silty clay loam, 0 to 2 percent slopes (6628)	The Belfore series consists of very deep, well drained soils formed in loess on uplands and stream terraces. Slopes range from 0 to 4 percent.	Interfluves	Not Hydric
Blendon fine sandy loam, 0 to 2 percent slopes (6508)	The Blendon series consists of very deep, well drained soils formed in sandy glacial sediments or eolian sediments on terraces and alluvial fans. Permeability is moderate or moderately rapid through the solum and moderately rapid or rapid in the underlying material. Slopes range from 0 to 6 percent slopes.	Stream Terraces / Alluvial Fans	Not Hydric
Boelus loamy fine sand, 2 to 6 percent slopes (6637)	The Boelus series consists of very deep, well drained soils formed in eolian sand deposited over loess. Saturated hydraulic conductivity is rapid in the sandy part and moderate in the silty part. These soils are on uplands and stream terraces and have slopes ranging from 0 to 11 percent.	Hillslopes / Sand Sheets	Not Hydric
Crofton silt loam, 17 to 30 percent slopes, eroded (6681)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton silt loam, 6 to 11 percent slopes, eroded (6687)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Crofton-Nora complex, 11 to 17 percent slopes, eroded (6789)	For Crofton soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Interfluves / Hillslopes	
Elsmere fine sandy loam, rarely flooded (4352)	The Elsmere series consists of very deep, somewhat poorly drained soils that formed in mostly eolian sands on interdunes on sandhills. Some areas formed in alluvial sands on stream terraces on valleys. They formed in eolian sands. Slopes range from 0 to 3 percent.	Swales	Not Hydric
Elsmere loamy fine sand, 0 to 3 percent slopes (4553)	For Elsmere soil series refer to description above.	Terraces	Not Hydric
Hobbs silt loam, 0 to 2 percent slopes, occasionally flooded, cool (3561)	The Hobbs series consists of very deep, well drained soils that formed in stratified, silty alluvium. These soils are on flood plains, foot slopes, and alluvial fans in river valleys of Central Loess Plains, MLRA 75. Slopes range from 0 to 6 percent.	Flood Plains	Not Hydric
Hobbs silt loam, channeled, 0 to 2 percent slopes, frequently flooded (3545)	For Hobbs soil series refer to description above.	Flood Plains / Channels	Not Hydric
Lawet loam, rarely flooded (6330)	The Lawet series consists of very deep, poorly drained and very poorly drained soils formed in loamy alluvium on flood plains. Permeability is moderate or moderately slow. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Libory loamy fine sand, 3 to 6 percent slopes (4371)	The Libory series consists of very deep, moderately well drained soils mostly formed in eolian sands over loamy deposits on interdunes on sandhills of the Nebraska Sandhills (MLRA 65). Slopes are dominantly less than 1 percent, but range from 0 to 6 percent.	Hillslopes	Not Hydric
Loretto fine sandy loam, 0 to 2 percent slopes (6533)	The Loretto series includes very deep, well drained, moderately permeable soils. They formed primarily in loamy material of eolian origin. These soils are on uplands and old stream terraces and have slopes ranging from 0 to 12 percent.	Stream Terraces	Not Hydric
Loretto fine sandy loam, 2 to 6 percent slopes (6790)	For Loretto soil series refer to description above.	Hillslopes	Not Hydric
Loretto loam, 0 to 2 percent slopes (6791)	For Loretto soil series refer to description above.	Stream Terraces	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Loretto loam, 2 to 6 percent slopes (6792)	For Loretto soil series refer to description above.	Hillslopes	Not Hydric
Loup loamy fine sand, frequently ponded (4674)	The Loup series consists of very deep, poorly drained and very poorly drained, rapidly permeable soils formed in sandy eolian deposits on swales on interdunes on sandhills. Slopes range from 0 to 2 percent.	Swales / Flood Plains	Hydric
Moody silty clay loam, 2 to 6 percent slopes (6811)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves / Hillslopes	Not Hydric
Moody silty clay loam, terrace, 0 to 2 percent slopes (6545)	For Moody soil series refer to description above.	Stream Terraces	Not Hydric
Muir silty clay loam, 0 to 2 percent slopes, rarely flooded (3774)	The Muir series consists of very deep, well drained, moderately permeable soils that formed in alluvium. These soils are on risers and treads of stream terraces in river valleys in the Central Kansas Sandstone Hills, MLRA 74. Slopes range from 0 to 7 percent.	Terraces	Not Hydric
Nora silt loam, 2 to 6 percent slopes (6753)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora silty clay loam, 11 to 17 percent slopes (6758)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora-Crofton complex, 2 to 6 percent slopes, eroded (6775)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Crofton soil series refer to description above.	Hillslopes / Interfluves	
Nora-Crofton complex, 6 to 11 percent slopes, eroded (6778)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Crofton soil series refer to description above.	Hillslopes / Interfluves	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Ord fine sandy loam, occasionally flooded (4241)	The Ord series consists of very deep, somewhat poorly drained, moderately rapidly over rapidly permeable soils formed in loamy over sandy eolian deposits on interdunes on sandhills of the Nebraska Sandhills (MLRA65). Slopes range from 0 to 3 percent.	Flood Plains	Not Hydric
Ord loam, occasionally flooded (4244)	For Ord soil series refer to description above.	Flood Plains	Not Hydric
Ortello fine sandy loam, 2 to 6 percent slopes (6845)	The Ortello series consists of very deep, well drained soils on uplands and stream terraces. They formed in loamy and sandy eolian deposits derived from glacial deposits, alluvium, and residuum. Saturated hydraulic conductivity is moderately rapid. Slopes range from 0 to 30 percent.	Hillslopes	Not Hydric
Ovina fine sandy loam, rarely flooded (8540)	The Ovina series consists of deep, somewhat poorly drained soils formed in loamy and sandy eolian and alluvial material on flood plains and terraces. Slopes range from 0 to 6 percent.	Stream Terraces	Not Hydric
Shell silty clay loam, 0 to 2 percent slopes, occasionally flooded (6555)	The Shell series consists of very deep, well drained soils that formed in stratified silty and loamy alluvium. Shell soils are on bottomlands. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Thurman loamy fine sand, 0 to 2 percent slopes (6700)	The Thurman series consists of very deep somewhat excessively drained soils that formed mainly in sandy eolian material. They are on uplands and stream terraces and have slopes that range from 0 to 40 percent.	Hillslopes / Sand Sheets / Alluvial Flats	Not Hydric
Thurman loamy fine sand, 2 to 6 percent slopes (6703)	For Thurman soil series refer to description above.	Hillslopes / Sand Sheets	Not Hydric
Thurman loamy fine sand, 6 to 11 percent slopes (6706)	For Thurman soil series refer to description above.	Hillslopes / Sand Sheets	Not Hydric
Thurman loamy fine sand, terrace, 0 to 2 percent slopes (6570)	For Thurman soil series refer to description above.	Sand Sheets / Stream Terraces	Not Hydric
Valentine fine sand, rolling, moist (4796)	The Valentine series consists of very deep excessively drained soils formed in eolian sands. Valentine soils are on interdunes, dunes and valley sides of sandhills. A few areas are on stream terraces of valleys. These soils have slopes ranging from 0 to 80 percent.	Sand Sheets / Dunes	Not Hydric
Valentine fine sand, undulating (4791)	For Valentine soil series refer to description above.	Dunes / Sand Sheets	Not Hydric

**Table 3
Soil Map Units Located within the Project Survey Area – Omaha District**

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Stanton County			
Alcester silty clay loam, 2 to 6 percent slopes (6603)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Hillslopes	Not Hydric
Coleridge silty clay loam, 0 to 2 percent slopes, occasionally flooded (6324)	The Coleridge series consists of very deep, somewhat poorly drained soils formed in silty alluvium on bottom lands. Slope ranges from 0 to 2 percent.	Flood Plains	Not Hydric
Crofton silt loam, 17 to 30 percent slopes, eroded (6681)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton silt loam, 2 to 6 percent slopes, eroded (6685)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 6 to 11 percent slopes, eroded (6687)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, coarse, 8 to 17 percent slopes, eroded (6674)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton-Nora complex, 11 to 17 percent slopes, eroded (6789)	For Crofton soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Interfluves / Hillslopes	
Elsmere loamy fine sand, 0 to 3 percent slopes (4553)	The Elsmere series consists of very deep, somewhat poorly drained soils that formed in mostly eolian sands on interdunes on sandhills. Some areas formed in alluvial sands on stream terraces on valleys. They formed in eolian sands. Slopes range from 0 to 3 percent.	Terraces	Not Hydric
Fluvaquents, frequently flooded (9900)	N/A	Flood Plains	Hydric
Gibbon silty clay loam, occasionally flooded (3537)	The Gibbon series consists of very deep, somewhat poorly drained soils that formed in stratified, calcareous alluvium. These soils are on flood plains in river valleys of Central Loess Plains, MLRA 75. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Hobbs silt loam, 0 to 2 percent slopes, occasionally flooded, cool (3561)	The Hobbs series consists of very deep, well drained soils that formed in stratified, silty alluvium. These soils are on flood plains, foot slopes, and alluvial fans in river valleys of Central Loess Plains, MLRA 75. Slopes range from 0 to 6 percent.	Flood Plains	Not Hydric
Hobbs silt loam, channeled, 0 to 2 percent slopes, frequently flooded (3545)	For Hobbs soil series refer to description above.	Flood Plains / Channels	Not Hydric
Inavale-Boel complex, channeled, occasionally flooded (2352)	The Inavale series consists of very deep, excessively drained, rapidly permeable soils formed in sandy alluvium on flood plains in river valleys of the Rolling Plains and Breaks in (MLRA 73). Slopes range from 0 to 11 percent.	Channels / Flood Plains	Not Hydric
	The Boel series consists of very deep, somewhat poorly drained soils on flood plains. They formed in recent loamy and sandy alluvium. These soils have moderate to rapid permeability in the solum and rapid permeability below. Slopes range from 0 to 3 percent.	Flood Plains	
Kezan silt loam, frequently flooded (3640)	The Kezan series consists of very deep, poorly drained, moderately permeable soils that formed in silty alluvial sediments derived from loess and glacial till. These soils occur on flood plains of narrow upland drainageways. Slopes range from 0 to 2 percent.	Drainageways	Hydric
Lawet silty clay loam, rarely flooded (6342)	The Lawet series consists of very deep, poorly drained and very poorly drained soils formed in loamy alluvium on flood plains. Permeability is moderate or moderately slow. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Loup fine sandy loam, occasionally flooded (4265)	The Loup series consists of very deep, poorly drained and very poorly drained, rapidly permeable soils formed in sandy eolian deposits on swales on interdunes on sandhills. Slopes range from 0 to 2 percent.	Flood Plains	Hydric
Moody silty clay loam, 2 to 6 percent slopes (6811)	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves / Hillslopes	Not Hydric
Muir silty clay loam, 0 to 2 percent slopes, rarely flooded (3774)	The Muir series consists of very deep, well drained, moderately permeable soils that formed in alluvium. These soils are on risers and treads of stream terraces in river valleys in the Central Kansas Sandstone Hills, MLRA 74. Slopes range from 0 to 7 percent.	Terraces	Not Hydric
Nora silty clay loam, 11 to 17 percent slopes (6758)	For Nora soil series refer to description above.	Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora-Crofton complex, 2 to 6 percent slopes, eroded (6775)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Crofton soil series refer to description above.	Hillslopes / Interfluves	
Nora-Crofton complex, 6 to 11 percent slopes, eroded (6778)	For Nora soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	For Crofton soil series refer to description above.	Hillslopes / Interfluves	
Obert silty clay loam, frequently ponded (6364)	The Obert series consists of very deep, poorly drained and very poorly drained soils that formed in calcareous, loamy alluvium. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood Plains	Hydric
Ord fine sandy loam, occasionally flooded (4241)	The Ord series consists of very deep, somewhat poorly drained, moderately rapidly over rapidly permeable soils formed in loamy over sandy eolian deposits on interdunes on sandhills of the Nebraska Sandhills (MLRA65). Slopes range from 0 to 3 percent.	Flood Plains	Not Hydric
Ord silt loam, occasionally flooded (4245)	For Ord soil series refer to description above.	Flood Plains	Not Hydric
Ovina loamy fine sand, 0 to 3 percent slopes (8908)	The Ovina series consists of deep, somewhat poorly drained soils formed in loamy and sandy eolian and alluvial material on flood plains and terraces. Slopes range from 0 to 6 percent.	Stream Terraces	Not Hydric
Shell silty clay loam, 0 to 2 percent slopes, occasionally flooded (6555)	The Shell series consists of very deep, well drained soils that formed in stratified silty and loamy alluvium. Shell soils are on bottomlands. Slopes range from 0 to 2 percent.	Flood Plains	Not Hydric
Thurman loamy fine sand, 0 to 2 percent slopes (6700)	The Thurman series consists of very deep somewhat excessively drained soils that formed mainly in sandy eolian material. They are on uplands and stream terraces and have slopes that range from 0 to 40 percent.	Hillslopes / Sand Sheets / Alluvial Flats	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Thurman loamy fine sand, 2 to 6 percent slopes (6703)	For Thurman soil series refer to description above.	Hillslopes / Sand Sheets	Not Hydric
Thurman loamy fine sand, 6 to 11 percent slopes (6706)	For Thurman soil series refer to description above.	Hillslopes / Sand Sheets	Not Hydric
Valentine fine sand, undulating (4791)	The Valentine series consists of very deep excessively drained soils formed in eolian sands. Valentine soils are on interdunes, dunes and valley sides of sandhills. A few areas are on stream terraces of valleys. These soils have slopes ranging from 0 to 80 percent.	Dunes / Sand Sheets	Not Hydric
Wayne County			
Alcester silty clay loam, 2 to 6 percent slopes (6603)	The Alcester series consists of very deep, well and moderately well drained soils formed in silty colluvial-alluvial sediments on terraces, foot slopes and flood plains. Slopes range from 0 to 25 percent.	Hillslopes	Not Hydric
Belfore-Moody silty clay loams, 1 to 3 percent slopes (6630)	The Belfore series consists of very deep, well drained soils formed in loess on uplands and stream terraces. Slopes range from 0 to 4 percent.	Interfluves	Not Hydric
	The Moody series consists of very deep, well drained soils that formed in loess. Moody soils are on uplands. Slopes range from 0 to 17 percent.	Interfluves	
Crofton silt loam, 2 to 6 percent slopes, eroded (6685)	The Crofton series consists of very deep, well drained soils that formed in calcareous loess on uplands. Slopes range from 1 to 60 percent.	Hillslopes	Not Hydric
Crofton silt loam, 6 to 11 percent slopes, eroded (6687)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton silt loam, 8 to 17 percent slopes, eroded (6860)	For Crofton soil series refer to description above.	Hillslopes	Not Hydric
Crofton-Nora complex, 11 to 17 percent slopes, eroded (6789)	For Crofton soil series refer to description above.	Hillslopes / Interfluves	Not Hydric
	The Nora series consists of very deep, well drained soils that formed in loess on uplands. Slope ranges from 0 to 30 percent.	Interfluves / Hillslopes	

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Kennebec silt loam, 0 to 3 percent slopes, rarely flooded (7153)	The Kennebec series consists of very deep, moderately well drained soils formed in silty alluvium. These soils are on flood plains in river valleys and on drainageways on uplands. Slope ranges from 0 to 5 percent.	Flood Plains	Not Hydric
Kennebec silty clay loam, occasionally flooded (7054)	For Kennebec soil series refer to description above.	Flood Plains	Not Hydric
Lamo silty clay loam, 0 to 2 percent slopes, occasionally flooded (3518)	The Lamo series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy alluvium. The soils have moderately slow permeability. These soils are on flood plains and have slopes of 0 to 2 percent.	Flood-Plain Steps	Hydric
McPaul silt loam, occasionally flooded (7716)	The McPaul series consists of very deep, moderately well or somewhat poorly drained soils formed in 90 to 240 centimeters of calcareous, stratified alluvium from loess uplands. These soils are in settling basins and near drainage channels on narrow flood plains of tributary streams that flow across the slack water areas of flood plains in river valleys. Slope ranges from 0 to 5 percent.	Flood Plains	Not Hydric
McPaul silt loam, wet, occasionally flooded (7717)	For McPaul soil series refer to description above.	Flood Plains	Not Hydric
Moody silty clay loam, 2 to 6 percent slopes (6811)	For Moody soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Moody silty clay loam, 6 to 11 percent slopes (6813)	For Moody soil series refer to description above.	Hillslopes	Not Hydric
Nora silt loam, 11 to 17 percent slopes, eroded (6750)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silt loam, 2 to 6 percent slopes, eroded (6754)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
Nora silt loam, 6 to 11 percent slopes, eroded (6756)	For Nora soil series refer to description above.	Interfluves / Hillslopes	Not Hydric
Nora silty clay loam, 6 to 11 percent slopes (6767)	For Nora soil series refer to description above.	Hillslopes	Not Hydric

Table 3
Soil Map Units Located within the Project Survey Area – Omaha District

Map Unit (Map Symbol)	Texture and Drainage	General Location	NRCS Hydric Rating
Nora-Moody silty clay loams, 11 to 17 percent slopes (6781)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
	For Moody soil series refer to description above.	Hillslopes	
Nora-Moody silty clay loams, 6 to 11 percent slopes (6782)	For Nora soil series refer to description above.	Hillslopes	Not Hydric
	For Moody soil series refer to description above.	Hillslopes	

**Table 4: Hydrologic Units and Major Waterbodies within the Heartland
Greenway Pipeline Project Survey Area – Omaha District**

**Table 4
Hydrologic Units and Major Waterbodies within Heartland Greenway Pipeline System Project Survey Area, Omaha District**

Hydrologic Unit Code 8 (HUC8)	Major Waterbodies
10170101	Elk Creek
10170102	Long Creek
10170202	Medary Creek
10170203	Big Sioux River
	Brookfield Creek
	West Pipestone Creek
	Split Rock Creek
	Beaver Creek East
	Fourmile Creek
	Beaver Creek West
	South Beaver Creek
	Little Beaver Creek
Pattee Creek	
10200201	North Shell Creek
	Shell Creek
10210009	Vorhees Creek
	Beaver Creek
10220001	Battle Creek
10220003	Humbug Creek
	South Branch Humbug Creek
	Maskenthine Creek
	Pleasant Run
	Elkhorn River
10220004	Middle Creek
	Sand Creek
	Logan Creek Dredge
	Dog Creek
	Deer Creek
	South Logan Creek
10230001	Missouri River
	Pigeon Creek
	Jones Creek
	West Creek

**Table 5: Wetlands Located within the Heartland Greenway Pipeline Project
Survey Area – Omaha District**

Table 5
Wetlands Located within the Heartland Greenway Pipeline System Project – Omaha District

Wetland ID	Wetland Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
Nebraska					
Boone County					
5-AF PEM	PEM	0.66	41.679690	-97.976312	§ 404
5-AF PSS	PSS	0.19	41.679699	-97.976729	§ 404
5-AG	PEM	0.09	41.795949	-97.857610	§ 404
5-AH	PEM	0.05	41.796334	-97.856144	§ 404
WP9896_DT ^a	PEM	0.03	41.796707	-97.856894	§ 404
WP9897_DT ^a	PEM	0.50	41.807806	-97.845663	§ 404
Dakota County					
3-AS	PEM	0.05	42.329347	-96.706874	§ 404
3-AT	PEM	0.04	42.329384	-96.715655	§ 404
3-AR	PEM	0.05	42.339998	-96.673504	§ 404
3-AP	PEM	0.45	42.342998	-96.665199	§ 404
3-AQ	PEM	0.26	42.343434	-96.665460	§ 404
3-AO	PFO	0.06	42.361852	-96.641278	§ 404
6-AF	PFO	0.06	42.362557	-96.417923	§ 404
6-AG	PSS	0.13	42.363663	-96.420578	§ 404
3-AM PSS	PSS	0.13	42.365968	-96.598302	§ 404
3-AN	PEM	0.06	42.366191	-96.599629	§ 404
3-AM PEM	PEM	0.11	42.366234	-96.598393	§ 404
6-AI	PSS	0.21	42.367668	-96.576948	§ 404
6-AJ	PEM	0.01	42.368104	-96.576995	§ 404
6-AH	PEM	0.12	42.370428	-96.541695	§ 404
WP9901_DT ^a	PEM	1.68	42.386343	-96.616266	§ 404
WP9767_DT ^a	PEM	0.20	42.406163	-96.615386	§ 404
WP9768_DT ^a	PEM	0.13	42.438249	-96.605680	§ 404
Dixon County					
WP9996_DT ^a	PEM	0.45	42.283852	-96.968218	§ 404
WP9995_DT ^a	PEM	0.71	42.290715	-96.937462	§ 404
3-AU	PEM	0.01	42.300343	-96.815105	§ 404
3-AV	PEM	0.01	42.300429	-96.846612	§ 404
3-AW	PEM	0.11	42.300845	-96.877340	§ 404
WP9994_DT ^a	PEM	0.75	42.321583	-96.735487	§ 404
Madison County					
9-AM	PEM	0.49	41.924303	-97.624494	§ 404
9-U	PEM	0.41	41.932726	-97.474722	§ 404
9-T	PEM	0.18	41.932920	-97.478294	§ 404
9-S	PEM	0.13	41.935147	-97.455120	§ 404
9-R	PEM	1.39	41.936238	-97.454124	§ 404
9-P_PEM	PEM	0.29	41.938198	-97.418503	§ 404
9-AK	PEM	1.67	41.938319	-97.407671	§ 404
9-AJ	PEM	2.32	41.938451	-97.406342	§ 404
9-P PEM	PEM	0.10	41.938464	-97.416731	§ 404
9-P_PFO	PFO	0.82	41.938490	-97.417628	§ 404

**Table 5
Wetlands Located within the Heartland Greenway Pipeline System Project – Omaha District**

Wetland ID	Wetland Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
WP9665_DT ^a	PFO	0.84	41.938636	-97.590274	§ 404
9-AI	PEM	0.10	41.941811	-97.387573	§ 404
Stanton County					
9-AE	PEM	0.08	41.953245	-97.345851	§ 404
WP9998_DT ^a	PEM	1.26	41.962606	-97.329468	§ 404
9-AD PEM	PEM	0.54	41.967918	-97.324605	§ 404
9-AD PSS	PSS	0.13	41.968231	-97.324912	§ 404
9-AC	PEM	0.48	41.972187	-97.321613	§ 404
9-AB	PEM	2.87	41.972894	-97.319873	§ 404
WP9997_DT ^a	PEM	0.11	42.001144	-97.270967	§ 404
9-AA	PEM	0.30	42.010163	-97.256076	§ 404
9-Z	PSS	0.19	42.019836	-97.254605	§ 404
9-Y	PEM	1.22	42.031762	-97.247885	§ 404
9-X	PFO	0.24	42.041122	-97.234883	§ 404
9-X	PEM	0.20	42.041669	-97.234905	§ 404
9-W	PEM	0.03	42.055939	-97.227326	§ 404
9-V	PEM	0.58	42.066202	-97.223635	§ 404
Wayne County					
9-AH	PEM	0.26	42.098660	-97.221911	§ 404
9-AG	PEM	0.28	42.111130	-97.221948	§ 404
9-AF	PFO	0.31	42.118611	-97.220570	§ 404
8-BH	PEM	0.50	42.158528	-97.186850	§ 404
8-BG	PEM	0.39	42.164043	-97.183119	§ 404
8-BF	PEM	0.18	42.165601	-97.167540	§ 404
8-BE	PEM	0.10	42.189580	-97.138449	§ 404
8-BD	PEM	0.32	42.199402	-97.111468	§ 404
8-BC	PEM	0.41	42.218761	-97.087735	§ 404
8-BA	PEM	0.11	42.268324	-97.026544	§ 404
South Dakota					
Brookings County					
WO1044	PEM	0.09	44.253815	-96.709863	§ 404
WO1045	PEM	0.17	44.253886	-96.710725	§ 404
WO1043	PEM	0.42	44.254187	-96.710159	§ 404
WO1042	PEM	0.23	44.255725	-96.709835	§ 404
WO1041	PEM	0.26	44.255843	-96.710657	§ 404
WO1040	PEM	0.85	44.258247	-96.712193	§ 404
WO1039	PEM	13.34	44.261756	-96.716090	§ 404
WO1038	PEM	0.13	44.271283	-96.716317	§ 404
WO1037	PEM	0.11	44.271935	-96.716054	§ 404
WO1036	PEM	0.11	44.274454	-96.714179	§ 404
WO1033	PEM	0.36	44.282894	-96.713639	§ 404
WO1032	PEM	1.78	44.284252	-96.699795	§ 404
WO1030	PEM	0.95	44.288068	-96.694913	§ 404
WO1031	PEM	0.21	44.288438	-96.693983	§ 404

**Table 5
Wetlands Located within the Heartland Greenway Pipeline System Project – Omaha District**

Wetland ID	Wetland Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
Lincoln County					
WP9820_DT	PEM	0.28	43.122349	-96.503660	§ 404
WP9821_DT	PEM	0.40	43.125636	-96.503755	§ 404
WP9822_DT	PEM	0.23	43.131485	-96.506325	§ 404
WP9823_DT	PEM	0.19	43.133414	-96.508974	§ 404
WP9824_DT	PEM	0.17	43.138866	-96.516467	§ 404
WP9645_DT	PEM	0.22	43.244157	-96.638135	§ 404
WP9215	PEM	0.93	43.244333	-96.639070	§ 404
WP9214_PEM	PEM	0.12	43.302752	-96.639257	§ 404
WP9213_PEM	PEM	1.58	43.323017	-96.647718	§ 404
WP9212_PEM	PEM	0.40	43.323614	-96.659511	§ 404
WP9849_DT	PEM	0.30	43.339241	-96.679442	§ 404
WP9850_DT	PEM	0.17	43.350773	-96.679691	§ 404
WP20002	PEM	0.55	43.377573	-96.915393	§ 404
WP20012	PEM	0.29	43.378746	-96.786728	§ 404
WP20014	PEM	0.21	43.379159	-96.746739	§ 404
WP20016	PEM	1.31	43.379291	-96.706996	§ 404
WP20015	PEM	0.19	43.379308	-96.707622	§ 404
WP9858_DT	PEM	0.56	43.379341	-96.720276	§ 404
WP9856_DT	PEM	0.15	43.379357	-96.718111	§ 404
WP9857_DT	PEM	0.68	43.379404	-96.719402	§ 404
WP20013	PEM	0.21	43.379716	-96.755410	§ 404
WP20010	PEM	0.32	43.381117	-96.827989	§ 404
WP20006	PEM	0.37	43.381119	-96.846614	§ 404
WP20008	PEM	0.92	43.381122	-96.837486	§ 404
WP200029	PEM	1.29	43.381129	-96.892155	§ 404
WP20004	PEM	0.25	43.381130	-96.854663	§ 404
WP20007	PEM	0.35	43.381157	-96.842664	§ 404
WP20005	PEM	0.03	43.381229	-96.856036	§ 404
WP9876_DT	PEM	0.00001	43.381238	-96.846943	§ 404
WP20006	PEM	0.00001	43.381238	-96.846943	§ 404
WP20003	PEM	0.06	43.381281	-96.894968	§ 404
WP8001	PEM	3.31	43.381463	-96.824511	§ 404
WP9876_DT	PEM	0.12	43.381500	-96.847065	§ 404
WP20011	PEM	0.44	43.381615	-96.826754	§ 404
WP20009	PEM	0.08	43.381751	-96.835674	§ 404
WP9810_DT	PEM	0.30	43.385532	-96.612011	§ 404
WP20017_PEM	PEM	0.39	43.421022	-96.591360	§ 404
WP20017_PFO	PFO	0.14	43.421066	-96.591711	§ 404
WP9791_DT	PEM	0.02	43.426736	-96.583795	§ 404
Minnehaha County					
WO2021_PFO	PFO	0.69	43.536084	-96.489104	§ 404
WO2021_PEM	PEM	0.65	43.536123	-96.489374	§ 404
WO2022	PEM	1.21	43.539188	-96.496460	§ 404

**Table 5
Wetlands Located within the Heartland Greenway Pipeline System Project – Omaha District**

Wetland ID	Wetland Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
WO2024	PEM	0.55	43.551885	-96.498315	§ 404
WO2023_WET	PEM	0.22	43.552263	-96.498313	§ 404
WO1056	PSS	2.35	43.593229	-96.499257	§ 404
WP9944_DT ^a	PEM	1.48	43.611133	-96.504927	§ 404
WP9945_DT ^a	PEM	1.09	43.614317	-96.505024	§ 404
WP9777_DT ^a	PEM	0.57	43.627077	-96.507319	§ 404
WP9210_PEM	PEM	0.55	43.653335	-96.520618	§ 404
WO1055	PEM	2.12	43.654476	-96.526884	§ 404
WO1054	PSS	0.58	43.658487	-96.536167	§ 404
WP9209_PEM	PEM	0.18	43.696042	-96.546676	§ 404
WP9644_DT ^a	PEM	0.27	43.746171	-96.561383	§ 404
WO2018	PEM	1.81	43.774450	-96.581813	§ 404
WO2017	PEM	0.09	43.801573	-96.602117	§ 404
WO2016	PEM	0.16	43.808440	-96.602194	§ 404
Moody County					
WO2015	PEM	0.16	43.872114	-96.597486	§ 404
WO2014	PEM	0.43	43.875595	-96.597514	§ 404
WP9950_DT ^a	PEM	0.83	43.885969	-96.611151	§ 404
WO2013	PEM	0.73	43.889133	-96.614449	§ 404
WO2012	PEM	0.19	43.909211	-96.618556	§ 404
WP9211_PEM	PEM	1.31	43.914539	-96.617765	§ 404
WP9778_DT ^a	PEM	0.20	43.940388	-96.617617	§ 404
WP9779_DT ^a	PEM	0.31	43.962004	-96.643366	§ 404
WO2011	PEM	0.15	43.966876	-96.644505	§ 404
WO2010	PEM	0.17	43.971426	-96.646541	§ 404
WO1059	PEM	0.09	43.984535	-96.657888	§ 404
WP9780_DT ^a	PEM	0.24	43.996269	-96.669172	§ 404
WP9952_DT ^a	PEM	1.28	43.999469	-96.669621	§ 404
WO1053	PEM	0.98	44.011988	-96.676098	§ 404
WO1052	PEM	0.17	44.015650	-96.679296	§ 404
WO1051	PEM	3.20	44.020912	-96.679088	§ 404
WP9201_PEM	PEM	0.54	44.068308	-96.680171	§ 404
WO1050	PEM	0.58	44.114405	-96.681629	§ 404
WO1049	PEM	0.40	44.134765	-96.682271	§ 404
WO1048	PEM	1.16	44.135254	-96.683093	§ 404
WO1047	PEM	1.33	44.135879	-96.685393	§ 404
WO1046	PEM	0.10	44.137862	-96.689903	§ 404
WP9203_PEM	PEM	0.30	44.143667	-96.690060	§ 404
WP9953_DT ^a	PEM	0.37	44.163422	-96.690415	§ 404
WP9954_DT ^a	PEM	0.84	44.166341	-96.689689	§ 404
WP9783_DT ^a	PEM	0.10	44.175728	-96.689962	§ 404
WP9200	PEM	0.10	44.184700	-96.689318	§ 404
WP8002	PEM	1.21	44.184758	-96.689952	§ 404
Turner County					

Table 5
Wetlands Located within the Heartland Greenway Pipeline System Project – Omaha District

Wetland ID	Wetland Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
WP20001	PEM	0.07	43.377522	-96.937751	§ 404
Total PFO Wetland Acreage Delineated			3.16		
Total PSS Wetland Acreage Delineated			3.91		
Total PEM Wetland Acreage Delineated			88.72		
TOTAL Wetland Acreage Delineated			95.79		

^a Feature delineated utilizing a desktop analysis.

**Table 6: Waterbodies Located within the Heartland Greenway Pipeline
Project Survey Area – Omaha District**

Table 6
Waterbodies Located within the Heartland Greenway Pipeline System Project – Omaha District

Waterbody ID	Waterbody Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
Nebraska					
Boone County					
5-028	Perennial	0.42	41.687630	-97.975747	§ 404
SP9999_DT ^a	Intermittent	0.06	41.710585	-97.923934	§ 404
5-029	Perennial	0.18	41.796080	-97.857098	§ 404
SP9998_DT ^a	Perennial	0.20	41.796929	-97.855965	§ 404
SP9997_DT ^a	Perennial	0.08	41.813619	-97.836528	§ 404
Dakota County					
6-050	Perennial	4.15	42.362371	-96.416685	§ 10 (Missouri River)
3-080	Perennial	0.05	42.327183	-96.695473	§ 404
3-081	Perennial	0.10	42.327537	-96.698581	§ 404
3-084	Intermittent	0.01	42.329021	-96.715959	§ 404
3-083	Ephemeral	0.003	42.329362	-96.707690	§ 404
3-082	Perennial	0.07	42.329379	-96.706335	§ 404
3-078	Perennial	0.02	42.339999	-96.673508	§ 404
3-074	Ephemeral	0.001	42.343038	-96.665466	§ 404
3-077	Ephemeral	0.001	42.343078	-96.665392	§ 404
3-076	Ephemeral	0.003	42.343207	-96.665233	§ 404
3-075	Intermittent	0.02	42.343256	-96.665481	§ 404
3-073	Ephemeral	0.00	42.361664	-96.641572	§ 404
3-072	Intermittent	0.01	42.361810	-96.641380	§ 404
3-069	Intermittent	0.03	42.366207	-96.599630	§ 404
3-070	Ephemeral	0.003	42.366286	-96.599485	§ 404
3-068	Ephemeral	0.002	42.366584	-96.598470	§ 404
3-071	Perennial	0.07	42.367558	-96.615401	§ 404
6-053	Perennial	0.51	42.367720	-96.576080	§ 404
6-052	Intermittent	0.01	42.370440	-96.541695	§ 404
6-054	Ephemeral	0.01	42.371782	-96.531577	§ 404
SP9816_DT ^a	Ephemeral	0.001	42.372473	-96.531522	§ 404
OWP9993_DT ^a	Open Water	0.70	42.372923	-96.531411	§ 404
SP9991_DT ^a	Intermittent	0.36	42.373696	-96.621046	§ 404
SP9990_DT ^a	Intermittent	0.23	42.374604	-96.619832	§ 404
6-051	Perennial	0.09	42.374893	-96.520209	§ 404
SMNR2026	Ephemeral	0.0003	42.394362	-96.615944	§ 404
SP9875_DT ^a	Ephemeral	0.02	42.438261	-96.605723	§ 404
SMNR2027	Perennial	0.07	42.446988	-96.605918	§ 404
Dixon County					
SP9929_DT ^a	Ephemeral	0.02	42.268269	-97.006121	§ 404
SP9994_DT ^a	Intermittent	0.18	42.283791	-96.968174	§ 404
SP9928_DT ^a	Ephemeral	0.01	42.299816	-96.779431	§ 404
3-087	Perennial	0.004	42.300352	-96.815103	§ 404
3-088	Ephemeral	0.001	42.300427	-96.846637	§ 404

**Table 6
Waterbodies Located within the Heartland Greenway Pipeline System Project – Omaha District**

Waterbody ID	Waterbody Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
SP9993_DT ^a	Perennial	0.38	42.300886	-96.890543	§ 404
3-089	Ephemeral	0.02	42.300896	-96.877245	§ 404
SP9927_DT ^a	Intermittent	0.01	42.309983	-96.762366	§ 404
SP9992_DT ^a	Perennial	0.11	42.310853	-96.761163	§ 404
3-085	Intermittent	0.02	42.328931	-96.727512	§ 404
3-086	Intermittent	0.01	42.329267	-96.728534	§ 404
Madison County					
9-041	Ephemeral	0.01	41.844624	-97.785285	§ 404
SP9996_DT ^a	Intermittent	0.19	41.850322	-97.777942	§ 404
9-040	Ephemeral	0.06	41.889644	-97.687436	§ 404
9-038	Ephemeral	0.02	41.923989	-97.625077	§ 404
9-037	Perennial	0.18	41.924266	-97.624636	§ 404
9-P-001	Open Water	0.12	41.935067	-97.455761	§ 404
9-018	Intermittent	0.03	41.936107	-97.451292	§ 404
9-017	Perennial	0.01	41.936218	-97.453579	§ 404
9-015	Ephemeral	0.01	41.938186	-97.416835	§ 404
9-035	Intermittent	0.04	41.938250	-97.413964	§ 404
9-019	Ephemeral	0.002	41.938276	-97.536583	§ 404
9-016	Intermittent	0.10	41.938451	-97.421708	§ 404
9-036	Ephemeral	0.001	41.939776	-97.593023	§ 404
9-034	Perennial	0.02	41.940464	-97.399811	§ 404
9-033	Perennial	0.29	41.942164	-97.390035	§ 404
Stanton County					
9-027	Perennial	2.09	41.959430	-97.333548	§ 404
9-026	Ephemeral	0.04	41.978946	-97.310146	§ 404
9-025	Ephemeral	0.01	41.981376	-97.309116	§ 404
9-024	Ephemeral	0.01	41.981877	-97.306919	§ 404
SP9874_DT ^a	Ephemeral	0.05	41.992324	-97.297541	§ 404
SP9873_DT ^a	Intermittent	0.04	42.000880	-97.275897	§ 404
9-023	Ephemeral	0.01	42.027141	-97.252389	§ 404
9-022	Intermittent	0.02	42.031752	-97.247932	§ 404
9-021	Perennial	0.17	42.056023	-97.226855	§ 404
9-020	Perennial	0.02	42.079420	-97.221233	§ 404
Wayne County					
9-032	Perennial	0.04	42.098661	-97.221902	§ 404
9-039	Intermittent	0.03	42.111148	-97.221934	§ 404
9-031	Perennial	0.10	42.118669	-97.220548	§ 404
9-030	Intermittent	0.02	42.129832	-97.220074	§ 404
9-029	Intermittent	0.02	42.139558	-97.221180	§ 404
8-095	Intermittent	0.02	42.158551	-97.186828	§ 404
8-094	Intermittent	0.02	42.165579	-97.167499	§ 404
SP9930_DT ^a	Intermittent	0.03	42.169361	-97.160719	§ 404
8-093	Perennial	0.49	42.171629	-97.159048	§ 404
8-092	Intermittent	0.09	42.189607	-97.138456	§ 404

Table 6
Waterbodies Located within the Heartland Greenway Pipeline System Project – Omaha District

Waterbody ID	Waterbody Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
SP9995_DT ^a	Perennial	0.13	42.227504	-97.067755	§ 404
8-091	Perennial	0.10	42.268298	-97.026456	§ 404
South Dakota					
Brookings County					
SO1020	Perennial	0.05	44.201669	-96.695602	§ 404
SO1019	Perennial	0.15	44.202644	-96.696148	§ 404
SO1018	Perennial	0.38	44.254007	-96.710321	§ 404
Lincoln County					
SP8001	Ephemeral	0.01	43.097880	-96.479234	§ 404
SP8002	Ephemeral	0.01	43.141353	-96.522705	§ 404
SP8003	Ephemeral	0.05	43.141454	-96.524044	§ 404
SP8004	Ephemeral	0.02	43.142250	-96.529665	§ 404
SP8005	Ephemeral	0.02	43.142763	-96.530323	§ 404
SP8006	Ephemeral	0.07	43.154498	-96.539021	§ 404
SP9809_DT ^a	Ephemeral	0.002	43.176231	-96.577767	§ 404
SP8007	Ephemeral	0.01	43.176416	-96.577178	§ 404
SP9220	Intermittent	0.03	43.195304	-96.594910	§ 404
SP8008	Perennial	0.86	43.264062	-96.639230	§ 404
SP8009	Intermittent	0.03	43.265310	-96.639209	§ 404
SP9808_DT ^a	Intermittent	0.03	43.265535	-96.638210	§ 404
SP8010	Ephemeral	0.02	43.273557	-96.638943	§ 404
SP8011	Perennial	0.17	43.279397	-96.639214	§ 404
SP9215	Intermittent	0.30	43.303366	-96.639715	§ 404
SP9806_DT ^a	Perennial	0.12	43.304444	-96.640832	§ 404
SP9807_DT ^a	Intermittent	0.02	43.304762	-96.640784	§ 404
SP9216	Intermittent	0.02	43.305347	-96.640161	§ 404
SP9214	Ephemeral	0.001	43.335393	-96.680247	§ 404
SP9213	Intermittent	0.01	43.336035	-96.680255	§ 404
SP9213_B	Intermittent	0.01	43.337270	-96.679306	§ 404
SP9213_B	Intermittent	0.0002	43.337289	-96.679400	§ 404
SP9883_DT ^a	Perennial	0.0002	43.337289	-96.679400	§ 404
SP9213_B	Intermittent	0.0002	43.337289	-96.679212	§ 404
SP9884_DT ^a	Perennial	0.0002	43.337289	-96.679212	§ 404
SP9883_DT ^a	Perennial	0.14	43.337368	-96.679834	§ 404
SP9884_DT ^a	Perennial	0.24	43.337770	-96.679121	§ 404
SP9810_DT ^a	Intermittent	0.10	43.350733	-96.682794	§ 404
SP20005	Intermittent	0.04	43.377560	-96.915362	§ 404
SP20012	Intermittent	0.03	43.378741	-96.782963	§ 404
SP20010	Intermittent	0.05	43.378793	-96.786741	§ 404
SP20008	Intermittent	0.40	43.378833	-96.811216	§ 404
SP20009	Intermittent	0.18	43.378836	-96.813008	§ 404
SP20011	Intermittent	0.003	43.379113	-96.782637	§ 404
SP8012	Ephemeral	0.06	43.379378	-96.750358	§ 404
SP20007	Intermittent	0.04	43.380998	-96.894805	§ 404

**Table 6
Waterbodies Located within the Heartland Greenway Pipeline System Project – Omaha District**

Waterbody ID	Waterbody Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
SP20006	Intermittent	0.02	43.381347	-96.893619	§ 404
SP8013	Ephemeral	0.02	43.381483	-96.859607	§ 404
SP20912	Intermittent	0.11	43.387818	-96.598274	§ 404
SP20013	Ephemeral	0.01	43.420851	-96.588225	§ 404
SMNR2010	Perennial	1.86	43.431683	-96.578158	§ 404
SP9851_DT ^a	Perennial	1.53	43.432053	-96.580532	§ 404
Minnehaha County					
SP9959_DT ^a	Intermittent	0.24	43.516743	-96.463092	§ 404
SO2011	Intermittent	0.03	43.536090	-96.489260	§ 404
SO2010	Perennial	0.02	43.536149	-96.478188	§ 404
SP9960_DT ^a	Intermittent	0.12	43.548760	-96.498203	§ 404
SP9961_DT ^a	Perennial	0.07	43.550022	-96.498245	§ 404
SO2012	Perennial	0.0002	43.551245	-96.498756	§ 404
SP9962_DT ^a	Intermittent	0.42	43.575101	-96.498517	§ 404
SP9963_DT ^a	Intermittent	0.45	43.575949	-96.498556	§ 404
SP9964_DT ^a	Intermittent	0.20	43.577029	-96.498540	§ 404
SP9965_DT ^a	Perennial	0.33	43.578915	-96.498575	§ 404
SP9966_DT ^a	Intermittent	0.35	43.581311	-96.498481	§ 404
SP9210	Ephemeral	0.01	43.653502	-96.520829	§ 404
SO1029	Intermittent	0.35	43.656212	-96.535838	§ 404
SO1028	Intermittent	0.21	43.657436	-96.535845	§ 404
SO1027	Perennial	0.84	43.675092	-96.538783	§ 404
SP9967_DT ^a	Perennial	0.37	43.702405	-96.555532	§ 404
SP9205	Ephemeral	0.02	43.801579	-96.601991	§ 404
Moody County					
SO2008	Perennial	0.17	43.909255	-96.619100	§ 404
SO2009	Perennial	0.22	43.909842	-96.618720	§ 404
SP9212	Ephemeral	0.01	43.914661	-96.617731	§ 404
SO1026	Ephemeral	0.01	43.984028	-96.656820	§ 404
SO1025	Perennial	1.24	43.984456	-96.657453	§ 404
SO1024	Perennial	0.15	44.002356	-96.670047	§ 404
SO1023	Intermittent	0.04	44.002824	-96.669558	§ 404
SO1022	Intermittent	0.11	44.020376	-96.679065	§ 404
SO1021	Intermittent	0.09	44.024165	-96.678764	§ 404
SP9201	Ephemeral	0.03	44.143631	-96.690461	§ 404
SP9202	Ephemeral	0.02	44.143699	-96.689893	§ 404
SP9973_DT ^a	Perennial	0.93	44.157627	-96.691733	§ 404
SP9974_DT ^a	Intermittent	0.49	44.160383	-96.691048	§ 404
SP9200	Intermittent	0.02	44.181478	-96.689278	§ 404
SP8014	Intermittent	0.12	44.182428	-96.689755	§ 404
Turner County					
SP20004	Ephemeral	0.01	43.377518	-96.935859	§ 404
SP20003	Perennial	0.73	43.377537	-96.937229	§ 404
SP20002	Intermittent	0.16	43.377787	-96.944962	§ 404

**Table 6
Waterbodies Located within the Heartland Greenway Pipeline System Project – Omaha District**

Waterbody ID	Waterbody Type	Acreage	Location		Class of Aquatic Resource
			Latitude	Longitude	
SP20001	Ephemeral	0.003	43.377888	-96.944238	§ 404
Perennial Stream Totals Delineated within the ESA			20.72		
Intermittent Stream Totals Delineated within the ESA			6.42		
Ephemeral Stream Totals Delineated within the ESA			0.73		
Open Water Totals Delineated within the ESA			0.82		
Project TOTALS Delineated within the ESA			28.69		

^a Feature delineated utilizing a desktop analysis.