AQUATIC RESOURCE DELINEATION REPORT – ADDENDUM

PCN XXXXX

Project No. AB-X-XX(XXX)XXX

Work Type

Count(ies)y

 (Previous USACE #) Only applicable with addendums

**Highlighted and/or red text is to be updated or removed.**

Prepared for:

N.D. Department of Transportation

608 E. Boulevard Ave. Bismarck, ND 58505

*Prepared by:* Russell Senske Wetland Specialist **NDDOT**

608 E. Boulevard Ave. Bismarck, ND 58505

Phone: (701) 328-2188

rsenske@nd.gov

# Executive Summary

The North Dakota Department of Transportation (NDDOT), in cooperation with the Federal Highway Administration (FHWA) is proposing roadway improvements along (Roadway Name) in/near (nearest town or local county(ies)), North Dakota. The project consists of subgrade excavations and the removal and relocation of the existing roadway offramp to match previously existing contours and relocating the elevated interchange off ramp to match the alignment of the west bound off ramp. The project consists of roadway improvements involving work to the relocating the roadway footprint and inslope widening. Please refer to **Figure 1, Project Location Map**. The project consists of roadway improvements with the project planning to be built during the 2021 construction season.

A Level 2 wetland delineation conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0). Wetland boundaries within the study area were determined by completing United States Army Corps of Engineers (USACE) Wetland Determination Data Forms for paired test hole points and observing soils, vegetation and hydrology in the area. For any other water delineations, USACE Regulatory Guidance Letter 05-05 was used in conjunction with the USACE/NDDOT Other Water form.

The field aquatic resource delineation for the proposed project was completed by Joe Wetland of the NDDOT on May 5, 2020. Four wetlands and five other waters, approximately xx acres of aquatic resources, were identified and delineated within the project area that covered xx acres within existing NDDOT ROW. Delineated resources that extended beyond the limits of the project area were clipped at the ROW line as no work is anticipated to leave the existing NDDOT ROW.

Cowardin classifications included

* One palustrine, emergent, Temporarily Flooded (PEMA) wetland
* Three, palustrine, emergent, Seasonally Flooded (PEMC) wetland
* Five, riverine, Lower Perennial, Unconsolidated Bottom, Semi-permanently Flooded, (R2UBF) Streams

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report i August 2020

Table of Contents

[Executive Summary i](#_Toc70490400)

[1.0 Introduction 1](#_Toc70490401)

[2.0 Location 1](#_Toc70490402)

[3.0 Methods 3](#_Toc70490403)

[4.0 Existing Conditions 4](#_Toc70490404)

[4.0.1 LANDSCAPE SETTING 4](#_Toc70490405)

[4.1 AQUATIC RESOURCES 5](#_Toc70490406)

[4.1.2 Wetlands 1a and 1b 5](#_Toc70490407)

[4.1.3 Other Water 1c 6](#_Toc70490408)

[4.1.4 Other Water 5 - Drainage 6](#_Toc70490409)

[5.0 References 1](#_Toc70490410)0

[6.0 Delineator’s Credentials 1](#_Toc70490411)2

**TABLES**

1. Woody Vegetation
2. Aquatic Resources (Wetlands) within the Project Area
3. Aquatic Resources (Other Water) within the Project Area
4. Aquatic Resources (Other Water - Drainages) within the Project Area

**APPENDIX**

1. Additional Information for Wetland Jurisdictional Requests

**Project Location and Aquatic Resource Delineation Maps**

1. Exhibit 1 – Site Location Map

Exhibit 2.1 – Aquatic Resources Delineation Map

Exhibit 2.2 – Aquatic Resources Delineation Map

Exhibit 2.3 – Aquatic Resources Delineation Map

Exhibit 2.4 – Aquatic Resources Delineation Map

**Supporting Maps**

1. Exhibit 3.1 – USGS Topographic Map

Exhibit 3.2 – USGS Topographic Map

Exhibit 3.3 – USGS Topographic Map

Exhibit 4 – Hydric Rating by Map Unit

Exhibit 5 – NWI Wetlands Map

1. On-site Photographs
2. Plant List
3. Wetland Delineation Data Sheets
4. OHWM Data Sheets
5. Driving Directions to Project Area
6. Signed Statement from Property Owner(s) Allowing Access

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report ii August 2020

# 1.0 Introduction

The NDDOT, in cooperation with the FHWA, proposing roadway improvements along (Roadway Name) in/near (nearest town or local county(ies)), North Dakota. The project consists of subgrade excavations and the removal and relocation of the existing roadway offramp to match previously existing contours and relocating the elevated interchange off ramp to match the alignment of the west bound off ramp. The project consists of roadway improvements involving work to the relocating the roadway footprint and inslope widening. Please refer ***Exhibit 1, Site Location Map.*** The project area for the consists of five areas and is approximately 100 acres.

The decimal degree coordinates to the center of the project area are **47.933350° N, -97.362521° W.** Please refer to ***Exhibit 1, Site Location Map, and Exhibits 2.1 – 2.4, Aquatic Resources Delineation Map***. The project is planned to be built during the 2021 construction season. The project area for the proposed project is located within the NDDOT right-of-way (ROW) and does not extend into adjacent privately owned land. The contact information for the applicant is Russell Senske, NDDOT Wetland Specialist, (701) 328-2188 and rsenske@nd.gov. Should the USACE need to request a site visit, please contact Russell Senske and the NDDOT XXXXX District Engineer at (701)XXX-XXXX. They will coordinate with adjacent landowners as needed.

The purpose of this report is to identify and describe aquatic resources or possible sensitive flora or fauna species in the project area. This report facilitates efforts to:

* + 1. Avoid or minimize impacts to aquatic resources during the design process.
		2. Document aquatic resource boundary determinations for review by regulatory authorities.
		3. Provide early indications of known sensitive species within the survey area.
		4. Provide background information.

# 2.0 Location

The project area extends from (Enter in general project area description). The total project area encompasses approximately 100 acres. The decimal degree coordinates to the center of the project area are **47.933350° N, -97.362521° W**. Please refer to ***Appendix B - Exhibit 1, Site Location Map; and Appendix H, Driving Directions to Project Area.***

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 1 August 2020

# 3.0 Methods

A Level 1 wetland determination was completed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) for the four wetlands that were office delineated. (Use if office determination was completed)

A Level 2 wetland delineation was completed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0). Wetland boundaries within the study area were determined by completing USACE Wetland Determination Data Forms for paired test hole points and observing vegetation and hydrology in the area. For any ordinary high water mark (OHWM) delineations, the 2008 “A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States” and the USACE Regulatory Guidance Letter (RGL, No. 05-05), Ordinary High Water Mark Identification, was utilized, with the USACE/NDDOT Other Water Form being filled out in the field. Potential wetland areas and other waters were examined in the entire project area according to guidelines set forth in these documents and wetland boundaries were determined through analysis of the vegetation, soils, and hydrology.

Plant species within all the project areas that obvious and at each wetland and upland test holes were identified and assigned a wetland indicator status according to the North American Digital Flora: National Wetland Plant List (Lichvar 2016). Vegetation that was discernable via NDDOT PathWeb roadside photography were recorded as well. On the enclosed data forms, the plant indicator status follows the plant’s scientific name unless a status has not been assigned. According to the 1987 Manual and “Regional Supplement” cited above, the hydrophytic plant criteria are met when more than 50% of the dominant species within all vegetative strata are assigned an obligate (OBL), facultative wet (FACW), or facultative (FAC) wetland status. The wetland indicator status is provided to show the wetland affinity for each plant. Vegetation names are consistent with US Department of Agricultural Natural Resource Conservation Service (USDA NRCS) Plants Database naming protocols (https://plants.usda.gov/java/).

Hydric soil properties described follow Field Indicators of Hydric Soils in the United States (USDA-NRCS 2018). Soils were examined and characterized by digging soil pits at sample points along designated transects. If the soils exhibited indicators of hydric soils per the “Field Indicators” manual cited above, they were determined to be hydric. Soil colors described herein follow Munsell Soil Color Charts.

The presence of wetland hydrology was determined through direct observation of primary and/or secondary wetland hydrology indicators. The presence of a single primary indicator such as surface water is sufficient to conclude that the wetland hydrology parameter is met. The direct observation of two or more secondary wetland hydrology indicators such as surface soil cracks or geomorphic position is required to conclude that the wetland hydrology criteria is met.

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 2 August 2020

Jane Doe reviewed the available background aquatic resources information (U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), historical aerial photography (Google Earth), U.S. Geological Survey (USGS) Topography Map, and the U.S. Dept. of Agriculture-Natural Resources Conservation Service (NRCS) Soil Survey) of this site as a part of the aquatic resources delineation activities. Pictures taken onsite are provided in ***Appendix D, On-site Photographs*.** Specific data for each sample point can be found on data sheets included in ***Appendix F, Wetland Delineation Data Sheets*** and ***Appendix G, NDDOT OHWM Data Sheets***.

# 4.0 Existing Conditions

## LANDSCAPE SETTING

The project area encompasses approximately 100 acres. The project area consists of highly disturbed I94 and I94BUS right-of-way, interchange gore area and industrial businesses. The aquatic resource delineation was conducted during at the growing season, (DATE). The project area is situated within the **Upper Heart (HUC 10130202)** draining approximately xxxx square miles. The current land use of the project area is roadway ditches and surrounding and adjacent to the project areas the dominant land uses observed were rangeland, cropland, and crop easement/range conservation plots with houses and dwellings, abandoned railroad and intersecting roads. The project is located with the Glacial Lake Agassiz ecoregion. Glacial Lake Agassiz was the last in a series of proglacial lakes to fill the Red River Valley since the beginning of the Pleistocene. The Lake Agassiz Plain is composed of thick lacustrine sediments underlain by glacial till. It is extremely flat and has fewer lakes and pothole wetlands than neighboring ecoregions. The historic tallgrass prairie has been replaced by intensive agriculture. The preferred crops in the northern half of the region are potatoes, beans and wheat; soybeans and corn predominate in the south. Sugar beets are grown throughout the region (Ecoregions of North Dakota and South Dakota, Bryce et al. 2018). The geographic position of the project area and adjacent wetlands include roadside ditches and stream drainage systems. The dominant vegetation communities identified on site included reed canary grass, foxtail barley, field sow thistle, prairie cord grass, Baltic rush, broadleaf cattail, broad fruit bur reed, wild hops, wild grape, Garrison creeping foxtail and wooly sedge in the wetlands. While uplands were dominated by lamb’s quarters, white and yellow sweet clover, Canadian thistle, field bindweed, Kentucky bluegrass. For scientific names of the above-mentioned plants, please refer to ***Appendix E, Plant List***.

The Red River of the North, the nearest Traditional Navigable Water (TNW) to the project area, is located approximately 17.5 miles northeast of the project area at its nearest point. The functions of the wetlands include flood water retention, spring precipitation storage, nutrient and carbon storage, improved water quality within the project area, and minimal wildlife habitat. From May 2019 to August 2019, the project area experienced approximately 8 inches above normal precipitation (NOAA 2019). The above normal precipitation levels could potentially alter characteristics of aquatic features in the project area. The average annual precipitation and snowfall in Grand Forks, ND is 20 inches (as rainfall) and 44 inches, respectively (NDAWN 2019).

No trees, shrubs, or woody vegetation are present in the survey area (please add table if woody vegetation is present), **please refer to Exhibit 2, Table X and Appendix E, Plant List.**

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 3 August 2020

**Table 1 - Woody Vegetation**

|  |  |  |
| --- | --- | --- |
| **Species (common name)** | **Species (scientific name)** | **Count** |
| American elm (shrub) | *Ulmus americana* | 25 |
| American plum (shrub) | *Prunus americana* | 108 |
| Aspen (shrub) | *Populus tremuloides* | 50 |
| Black currant (shrub) | *Ribes americanum* | 37 |
| Boxelder (shrub) | *Acer negundo* | 26 |
| Buffaloberry (shrub) | *Shepherdia argentea* | 4,652 |
| Chokecherry (shrub) | *Prunus virginiana* | 2,339 |
| Common juniper (shrub) | *Juniperus communis* | 12 |
| Cottonwood (shrub) | *Populus deltoids* | 18 |
| Currant (shrub) | *Ribes spp.* | 131 |
| Green ash (shrub) | *Fraxinus pennsylvanica* | 195 |
| Hawthorn (shrub) | *Crataegus chryoscarpa* | 469 |
| Honeysuckle (shrub) | *Lonicera maackii* | 5 |
| Juneberry (shrub) | *Amelanchier alnifolia* | 50 |
| Missouri River willow (shrub) | *Salix eriocephala* | 150 |
| Peachleaf willow (shrub) | *Salix amygdaloides* | 103 |
| Pussy willow (shrub) | *Salix discolor* | 1 |
| Red birch (shrub) | *Betula occidentalis* | 3 |
| Red osier dogwood (shrub) | *Cornus sericea* | 37 |
| Rocky Mountain juniper (shrub) | *Juniperus scopulorum* | 1 |
| Siberian elm (shrub) | *Ulmus pumila* | 35 |
| Silverberry (shrub) | *Elaeagnus commutata* | 1,508 |
| American elm (deciduous tree) | *Ulmus americana* | 11 |
| Aspen (deciduous tree) | *Populus tremuloides* | 26 |
| Boxelder (deciduous tree) | *Acer negundo* | 207 |
| Bur oak (deciduous tree) | *Quercus macrocarpa* | 290 |
| Cottonwood (deciduous tree) | *Populus deltoids* | 5 |
| Green ash (deciduous tree) | *Fraxinus pennsylvanica* | 658 |
| Peachleaf willow (deciduous tree) | *Salix amygdaloides* | 1 |
| Siberian elm (deciduous tree) | *Ulmus pumila* | 10 |
| Common juniper (evergreen tree) | *Juniperus communis* | 5 |
| Rocky Mountain juniper (evergreen tree) | *Juniperus scopulorum* | 1 |
| American elm (shrub) | *Ulmus americana* | 25 |
| American plum (shrub) | *Prunus americana* | 108 |

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 4 August 2020

## AQUATIC RESOURCES

XX wetlands and XX other water were identified within the project area (total project area approximately XX acres). Approximately XX acres of wetlands, and XX acres (XX feet) of other waters were delineated. Please refer to ***Appendix B Exhibit 2.1-2.3, Aquatic Resources Delineation Map; Table 2, Aquatic Resources (Wetlands) within the Survey Area; and Table 2, Other Waters within the Survey Area.*** Detailed information on vegetation, hydrology, and soils characteristics of each wetland are included in ***Appendix F, Wetland Delineation Data Sheets. Appendix G*** provides OHWM details. **Appendix D** provides photographs of each feature delineated in the field. **Appendix E** provides a list of vegetation species recorded in the survey area, along with each species wetland indicator status. The narrative summaries in this chapter provide a justification of the wetland boundaries.

The USGS Topographic Map (XXXXXX Quadrangle Map) were examined for indications of aquatic resource conditions within the project corridor. The topographic map indicated areas of streams/rivers but no marsh symbol for wetlands. Other Water 1 (Freshwater Coulee) and Wetland 27a were located on the USGS Topographic map. Please refer to ***Appendix C - Exhibit 3.1-3.2, USGS Topographic Map.***

Wetland XX are mapped in map units that are 1 - 30% hydric components. Wetland xx is mapped within hydric soil unit that has 66 - 99% hydric components. Please refer to ***Appendix C – Exhibit 4.1-4.4, Hydric Rating by Map Unit***.

## Wetlands 1a and 1b

Existing Field Conditions

Wetlands 1a and 1b appear to be created ditch wetlands when the interchange was created and the construction of XXXXXX. They appear to be created palustrine, emergent, seasonally saturated wetlands (PEMA). The wetlands function to store snow, capture and store carbon, limited wildlife habitat and nutrient recycling.

Vegetation

Wetlands 1a and 1b are located within the US 2 roadway ditch and the gore areas of the Emerado Exchange. imagery shows these areas are likely dominated by reed canary grass, cattails and identifiable sedges. The dominant plant species visible via desktop analysis appeared to be smooth brome. **Please refer to Appendix Appendix E – Plant List**

Hydrology

Wetlands 1a and 1b appear to be seasonally flooded and isolated from a TNW. Each have similar hydrological indicators of Surface Water, Saturation Visible on Aerial Imagery, Geomorphic Position. The wetland hydrology criterion was met with two secondary indicators Saturation Visible on Aerial Imagery and Geomorphic position. All receive water from the surrounding topography, seasonal precipitation, seasonally elevated water table.

Soils

Soils within the mapped wetlands are mapped by NRCS as Antler silty clay loam, 0 – 2% slopes, and is mapped as hydric. Onsite investigation identified depleted matrix starting at 8 inches and continued to 16 inches, which was the bottom on the pit. This location satisfied hydric soil indicator Depleted Matrix (F3).

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 5 August 2020

Wetland Boundary

The wetland boundary was based on distinct differences in vegetation, hydrology, soils and topography consisting of the following: 1) transition from a flooded/saturated wetland basin with wetland vegetation to an upland with upland vegetation; 2) transition from hydrology indicators to lack of wetland hydrology indicators.

Interstate or Foreign Commerce

This/ese wetlands do not appear to/may support any type of interstate or foreign commerce for the purposes of recreation relating to sporting or leisure activities associated with interstate or foreign travelers, or industries engaged in interstate or foreign commerce relating to the production or sale of products and services.

## Other Water 1c

Other Water 1c, Wetland 1a and Wetland 1b are associated with an unnamed

stream/drainage that flows northwest. Other Water 1c is an erosional cut that is

connected to Wetland 1a, a natural slope (seep) wetland, to the southeast. Wetland 1b

is a created ditch (seep) wetland that is connected to Wetland 1a through a culvert under

ND XX.

Other Water 1c is not classified (mapped) on the USFWS NWI. No surface water was

present during the field survey. Ordinary high water mark indicators included litter

disturbed or washed away, and scour.

## Other Water 5 - Drainage

Other Water 5-D, is an ephermal swale that begins outside of the project area within an agricultural field and may convey water after precipitation events and flows beneath ND XX to the south. OW5-D doesn’t appear to be connected to an intermittment tributary nor does it exhibit any indicators of an OHWM. OW5-d is not classified (mapped) on the USFWS NWI and no surface water was

present during the field survey.

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 6 August 2020

**Table 2**. Aquatic Resources (Wetlands) within the Project Area.

|  |
| --- |
| The wetland delineation for PCN 67890 was conducted on September 24, 2013 by John Doe of the North Dakota Department of Transportation. The wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. Observations at each sample location were recorded on the Wetland Delineation Data Form - Great Plains Region Version 2.0. Wetland boundaries and paired sample locations were recorded by GPS. The project is located within the LAKE SAKAKAWEA (10110101) Hydrologic Unit Code (HUC). |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Wetland Number** | **Test Hole** | **Location** | **LONG West (Dec. Deg.)** | **LAT North (Dec. Deg.)** | **Field Cowardin Classification** | **Wetland Type** | **Wetland Size (acres)** | **Wetland Feature** | **Located in an Natural Feature** |  |  |
| **(in wetland)** |  |
| #1a | 11 | Sec.19, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMCx | Ditch | 5.00 | Created | NO |  |  |
| #1b | 13 | Sec.19, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMCx | Basin | 5.50 | Natural | YES |  |  |
| #2 | 9 | Sec. 6, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMA | Basin | 2.00 | Natural | YES |  |  |
| #3 | 7 | Sec.6, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMB | Fringe | 6.00 | Natural | YES |  |  |
| #5 | 5 | Sec.30, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMBx | Slope | 0.02 | \*Natural OR Created |   |  |  |
| #6 | 15 | Sec 20, T146N, R95W | -xxx.xxxxxx  | xx.xxxxxx  | PEMA | Mosaic | 0.50 | Nautral | NO |  |  |
|  |  | **Totals** | **19.02** |  |  |  |  |
| \* Some slope wetlands are created wetlands when ditch excavations exposes a ground water source. |  |  |  |  |

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 7 August 2020

**Table 3**. Aquatic Resources (Other Waters) within the Project Area. (DELETE IF NO OWs are identified)

|  |
| --- |
| **\* OTHER WATERS** |
| **Number** | **Location** | **LONG West (Dec. Deg.)** | **LAT North (Dec. Deg.)** | **Local Waterway Name**  | **Tributary To** | **Field or NWI Cowardin Classification** | **OW Size (acres)** | **OW Length (feet)** | **Other Water Type** | **Located in or Relocating a Natural Tributary** |
|  |
| #OW 1 | Sec.19, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | Deep Creek | Heart River | R2UB1 | 0.64 | 340 | River | YES |  |
| #OW 2 | Sec. 6, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | Tributary | Deep Creek | R2AB1 | 0.06 | 15 | Stream | YES |  |
| #OW 3 | Sec.30, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | Rice Lake | NA | L2ABF | 5.00 | NA | Lake | YES |  |
| #OW 4 | Sec. 6, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | Tributary | Deep Creek | R4SBCx | 0.30 | 250 | Artificial Straightened Stream | YES |  |
| #OW 5 | Sec.19, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | NA | NA | L2ABF | 0.50 | NA | Lake | NA |  |
| #OW 6 | Sec.19, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | NA | NA | R4SBCx | 0.50 | NA | Constructed Ditch / Ag Drain | NO |  |
|  |  |  |  |  | **TOTALS** | **6.50** | **605.00** |  |  |  |
| \*\* Other Waters (OW) can include traditional navigable waters (named rivers, streams, and lakes); non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and deepwater habitat (greater than 2 meters) not dominated by persistent, emergent vegetation. |  |  |

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 8 August 2020

**Table 4**. Aquatic Resources (Other Water - Drainages) within the Project Area. (DELETE IF NO OW#-Ds are identified)

|  |
| --- |
| **\* OTHER WATERS - Drainages** |
| **Number** | **Location** | **LONG West (Dec. Deg.)** | **LAT North (Dec. Deg.)** | **Local Waterway Name**  | **Tributary To** | **Field or NWI Cowardin Classification** | **OW Size (acres)** | **OW Length (feet)** |   |
| **Other Water Type** |
| #OW10-D | Sec.19, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | NA | NA |   |   | 340 | Ephemeral Swale |
| #OW12-D | Sec. 6, T146N, R95W | -xxx.xxxxxx  | -xxx.xxxxxx  | NA | NA |   |   | 15 | Ephemeral Swale |
|  |  |  |  |  | **TOTALS** | **0.00** | **355.00** |  |

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 9 August 2020

# 5.0 References

Bryce et al. 2018. Ecoregions of North Dakota and South Dakota. Available online: <https://store.usgs.gov/assets/MOD/StoreFiles/Ecoregion/21629_nd_sd_front.pdf>. (Accessed April 2020).

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

Available online: <http://www.fws.gov/wetlands/_documents/gNS> DI/ClassificationWetlandsDeepwaterHabitatsUS.pdf

Environmental Laboratory. 1987. Corp of Engineers Wetlands Delineation Manual. Wetlands Research Program. Technical Report Y-87-1. Department of the Army, Waterways Experiment Station, US Army Corp of Engineers, Vicksburg, Mississippi, USA.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland rankings. Phytoneuron 2016-30: 1-17. Published 28 April

2016. ISSN 2153 733X.

Natural Resources Conservation Service. United States Department of Agriculture. 2012.

National Hydric Soils List by State [Electronic Database]. Available online at:<http://soils.usda.gov/use/hydric/>

Natural Resources Conservation Service. United States Department of Agriculture. 2010.

Field Indicators of Hydric Soils in the United States A Guide for Identifying and Delineating Hydric Soils, Version 7.0. Available online at:

ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric\_Soils/FieldIndicators\_v7.pdf

Natural Resources Conservation Service. United States Department of Agriculture. Plants Database.

Available online: <http://plants.usda.gov/>(Accessed DATE).

NOAA. 2019. United States Department of Commerce. Advanced Hydrologic Prediction Service.

Available Online: [https://water.weather.gov/precip/#](https://water.weather.gov/precip/)

North Dakota Department of Transportation. Project Development Manual, Chapter II – Section IV: Wetlands, Vegetation and Environmental Permitting. Available online at:<http://www.dot.nd.gov/manuals/design/designmanual/chapter2/DM-2-04_tag.pdf>(Accessed DATE).

NDSWC. 2019. Map Services. Available online: <http://mapservice.swc.nd.gov/>(Accessed DATE).

Schoeneberger, P. J., Wysocki, D. A., Benham, E. C. and Broderson, W.E. 2002. Field Book for describing and sampling soils. Ver. 2.0 USDA-NRCS.

Soil Survey Staff. 1982. Soil Survey Manual. 430-V, Issue 2. Washington D.C., U. S. Govt.

Printing Office.

Soil Survey Staff. 2010. Keys to Soil Taxonomy, 11th Edition USDA-NRCS.

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 10 August 2020

Stevens, O.A. 1963. Handbook of North Dakota Plants. North Dakota Institute for Regional Studies, Fargo, North Dakota, USA.

U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05. Ordinary High Water Mark Identification. Available online: https[://w](http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf)ww.[nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf](http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf) (Accessed DATE).

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. U.S. Army Corps of Engineers,

U.S. Army Engineer Research and Development Center Vicksburg, Mississippi, USA.

U.S. Climate Data. 2019. Average Annual Precipitation (rainfall), Valley City, ND. Available online: https://[www.usclimatedata.com/climate/valley-city/north-dakota/united-states/usnd0353](http://www.usclimatedata.com/climate/valley-city/north-dakota/united-states/usnd0353) (Accessed DATE).

USDA-NRCS. 2012. National Hydric Soils List by State [Electronic Database]. Available online:<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>(Accessed April 2020).

USDA-NRCS. 2018. Field Indicators of Hydric Soils in the United States—Guide for Identifying and Delineating Hydric Soils, Version. 8.2 L.M. Vasilas, G.W. Hurt, and

J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

USDA-NRCS. 2019. Soil Survey of Barnes County, North Dakota. Available online:<http://websoilsurvey.nrcs.usda.gov/app>(Accessed DATE).

U.S. Dept. of Commerce-National Oceanic and Atmospheric Administration (NOAA). 2019. National Weather Service. Advanced Hydrologic Prediction Service. Departure from Normal. Available online: https://water.weather.gov/precip/ (Accessed DATE).

USFWS. 2019. National Wetlands Inventory. Available online:<http://wetlandsfws.er.usgs.gov/NWI/>(Accessed DATE).

United States Geological Survey. 2019. USGS Topographic Map. Available online at:<http://viewer.nationalmap.gov/viewer/>(Accessed DATE).

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 11 August 2020

# 6.0 Delineator’s Credentials

PCN XXXXX

AB-X-XX(XXX)XXX

I94 Interchange Re-Alignment and Improvements

Aquatic Resource Delineation Report 12 August 2020

Appendix A – Additional Information for Wetland Jurisdictional Requests

Appendix B – Project Location and Aquatic Resource Maps

Exhibit 1 – Site Location Map

Exhibit 2 – Aquatic Resource Delineation Maps

Appendix C – Supporting Maps

Exhibit 3 – USGS Topographic Map

Exhibit 4 – Hydric Rating by Map Unit

Exhibit 5 – NWI Wetlands Map

Appendix D – On-Site Photographs

On-Site Photographs

|  |  |
| --- | --- |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken: Notes: |
|  | Adjacent Wetland #:Photo #:Observer:Date:Direction Photo is Taken:Notes: |

Appendix E – Plant List

Appendix E – Plant List

|  |  |  |  |
| --- | --- | --- | --- |
| **Genus** | **Species** | **Common Name** | **WIS\*** |
| *Phalaris* | *arundinacea* | Reed canary grass | FACW |
| *Elymus* | *repens* | Quackgrass | FACU |
| *Typha* | *angustifolia* | Narrowleaf CatTail | OBL |
| *Mentha* | *arvensis* | Wild Mint | FACW |
| *Cirsium* | *arvense* | Canadian Thistle | FACU |
| *Poa* | *pratensis* | Kentucky blue grass | FACU |
| *Bromus* | *inermis* | Smooth brome | UPL |
| *Poa* | *palustris* | Fowl blue grass | FACW |
| *Carex* | *atherodes* | Wheat sedge | OBL |
| *Asclepias* | *syriaca* | Common milkweed | UPL |
| *Achillea* | *millefolium* | Common yarrow | FACU |
| *Euphorbia* | *esula* | Leafy spurge | UPL |
| *Solidago* | *canadensis* | Canadian Goldenrod | FACU |
| *Sonchus* | *arvensis* | Field sow thistle | FAC |
| *Equisetum* | *hyemale* | Rough horsetail | FACW |
| *Alopecurus* | *arundinaceus* | Creeping foxtail | FACW |
| *Beckmannia* | *syzigachne* | American slough grass | OBL |
| *Schoenoplectus* | *tabernaemontani* | Softstem bullrush | OBL |
| *Xanthium* | *strumarium* | Rough cockleburr | FAC |
| *Ambrosia* | *artemisiifolia* | Annual ragweed | FACU |
| *Helianthus* | *maximiliani* | Maximilian sunflower | FACU |
| *Panicum* | *virgatum* | Switchgrass | FAC |
| *Distichlis* | *spicata* | Inland salt grass | FACW |
| *Grindelia* | *squarrosa* | Curly-cup gumweed | UPL |
| *Rumex* | *crispus* | Curly dock | FAC |
| *Taraxacum* | *officinale* | Common dandelion | FACU |
| *Eleocharis* | *palustris* | Common spike-rush | OBL |
| *Phragmites* | *austrialis* | Common reed | FACW |
| *Fraxinus* | *pennsylvanica* | Green ash | FAC |
| *Acer* | *negundo* | *Box elder* | *FAC* |
| *Mallus* | *Spp.* | *Crab apple* | *UPL* |
| *Salix* | *alba* | *White willow* | *FACW* |
| *Salix* | *interior* | Sandbar willow | FACW |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

\* Wetland Indicator Status (WIS):

OBL = occurs in aquatic resources > 99% of time FACW = occurs in aquatic resources 67-99% of time FAC = occurs in aquatic resources 34-66% of time FACU = occurs in aquatic resources 1-33% of time UPL = occurs in uplands > 99% of time

Appendix F – Wetland Delineation Data Sheets

Appendix G – OHWM Data Sheets

Appendix H – Driving Directions to Project Area

Appendix I – Signed Statement from Property Owner(s) Allowing Access

The survey area for the proposed project is located within the NDDOT right-of-way (ROW) and does not extend into adjacent privately owned land. The contact information for the applicant is Russell Senske, NDDOT Wetland Specialist, 701-328-2188 and rsenske@nd.gov. Should the USACE need to request a site visit and leave NDDOT ROW, please contact Russell Senske or the NDDOT Dickinson District Engineer at 701-665-5100. They will coordinate with adjacent landowners as needed.