

# FAST-41 Environmental Assessment

# Winnebago Tribe of Nebraska Broadband Connectivity Project

Department of Commerce

National Telecommunications and Information Administration

Cooperating Agencies:

Bureau of Indian Affairs Great Plains Region

United States Army Corps of Engineers, Omaha District

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Wayne, Dixon, Thurston, Dakota Counties, Nebraska and Woodbury County, Iowa

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### **1.0 EXECUTIVE SUMMARY**

The Winnebago Tribe of Nebraska (Grantee) was awarded funding for its Broadband Connectivity Project (Project) under the U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) Tribal Broadband Connectivity Program. The Project received FAST-41 coverage, and coordination with cooperating agencies will increase efficiency in the permitting process and ensure concurrent and timely implementation of the Project. The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed internet.

The Winnebago Reservation includes a high percentage of residents and businesses without internet service either because of lack of infrastructure or high cost. Lack of available internet service or inadequate access at higher-than-average prices has limited opportunities for residents of the Winnebago Reservation to pursue educational enrichment, employment opportunities, economic mobility, and access to vital health care services.

The Project would provide qualified broadband service to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service. By providing qualified broadband service to the Winnebago Reservation and adjacent communities, the Project is expected to facilitate economic development and commercial activity, create remote employment and entrepreneurial opportunities, and increase availability of remote learning and telehealth services.

The proposed fiber route is based on a map of the unserved properties in the project area. Based on the proposed fiber path, four alternatives were considered: (1) underground cable alternative (proposed action); (2) overhead cable alternative; (3) wireless alternative; and (4) no action alternative. After consideration of the feasibility of each alternative, the overhead cable and wireless alternatives were determined not to be reasonable due to susceptibility to damage and lack of cellular providers and service, respectively, and were eliminated from further study. The proposed action alternative is moved forward for comprehensive analysis and final design because it would have fewer infrastructure constraints, less environmental impact, lower maintenance cost, greater system longevity, and fulfill the purpose and need of the project.

The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises (FTTP) system capable of 200 megabits per second (Mbps) download speeds and 40 Mbps upload speeds. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way (ROW) and under the Missouri River in the project area. The buried fiber-optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. In addition, to facilitate operation and maintenance of the FTTP system, ancillary equipment would be installed along the alignment including optical line terminals (OLT), vaults, handholes, pedestals, markers, and network interface devices (NID).

Because the proposed project uses federal funds, NTIA must fulfill obligations under the National Environmental Policy Act (NEPA) and other applicable local, state, and federal regulations. In compliance with these regulations, the following environmental assessment (EA) has been prepared. The implementation of NEPA requires a systematic, interdisciplinary approach to project planning and implementation and emphasizes that the environmental impacts of federally funded projects be given serious consideration in the decision-making process. The EA evaluates the potential social, economic, and environmental effects from the proposed project and was prepared with input from stakeholder agencies. The EA addresses the following:

- Noise
- Air Quality
- Geology and Soils
- Water Resources
- Biological Resources
- Historic and Cultural Resources
- Aesthetic and Visual Resources
- Land Use
- Infrastructure
- Socioeconomic Resources
- Human Health and Safety

The results of the EA indicate that with appropriate mitigation and conservation measures, the proposed action would not result in any significant adverse effects to the natural, cultural, or human environment. A summary of the environmental impacts of the proposed action and the no action alternative are provided in Table 1.

Table 1-1. Summary of Environmental Impacts of the Proposed Action and the No Action Alternative.

Resource Areas	Proposed Action	No Action Alternative
Noise	Temporary impacts would occur during construction. Mitigation methods include limiting construction to normal business hours. No significant impacts.	No direct or indirect impacts would result from this alternative.
Air Quality	Temporary impacts during construction would occur from fugitive dust particles. Mitigation methods include using water trucks to reduce dust emissions. No significant impacts.	No direct or indirect impacts would result from this alternative.

Resource Areas	Proposed Action	No Action Alternative
Geology and Soils	Temporary impacts would occur during construction. This includes compaction at staging areas and dust particles from directional boring. Water trucks would be used to reduce dust emissions. No significant impacts.	No direct or indirect impacts would result from this alternative.
Water Resources	Wetlands and water resources are found within the project area. All applicable permits (Section 404, Section 10, Floodplain, etc.) will be obtained prior to start of construction and all conditions contained within the permits will be complied with. Streams and wetlands will be avoided within the staging areas, and all wetlands and streams within the ROW will be bored or drilled under to avoid permanent impacts. The Missouri River will not be impacted as a horizontal bore will occur under the river. Significant impacts are not anticipated.	No direct or indirect impacts would result from this alternative.
Biological Resources	Fiber line is being installed in existing road ROW. U.S. Fish and Wildlife Service (USFWS), Nebraska Game and Parks Commission (NGPC), and Iowa Department of Natural Resources (DNR) have concurred the Project will have "no effect" on listed species.	No direct or indirect impacts would result from this alternative.
Historic and Cultural Resources	Cultural resources and sensitive areas are present within the project area. Significant impacts are not anticipated as these resources would be avoided or installation would be monitored during construction to prevent significant impacts.	No direct or indirect impacts would result from this alternative.
Aesthetic and Visual Resources	Storage of equipment at staging areas would cause temporary visual impacts during construction. Equipment would be removed when construction is completed. No significant impacts.	No direct or indirect impacts would result from this alternative.

Resource Areas	Proposed Action	No Action Alternative
Land Use	Construction impacts would be temporary and minor. All staging areas would be returned to their preconstruction condition. No significant impacts.	
Infrastructure	Infrastructure  All fiber line would be installed in existing road ROW. The Project would be beneficial to the Winnebago Reservation and surrounding communities. No significant impacts.	
Socioeconomic Resources	Beneficial impacts to the surrounding communities would occur in the form of better communication, increased educational opportunities, economic development, and access to higher-quality health care.	Negative direct impacts would result from this alternative. Direct impacts include the lack of telehealth, education, and employment opportunities to the tribe.
Human Health and Safety	The project area has registered hazardous waste sites. For areas in proximity to identified sites, the Grantee and contractor will safeguard worker safety from potential contaminated areas. Only qualified workers would be permitted to operate heavy machinery and equipment. Impacts to this category are not significant.	No direct or indirect impacts would result from this alternative.
Cumulative Effects	Multiple projects are scheduled to be constructed within the project area. Timelines for these projects vary and are either currently underway, will begin within the timeline of this Project, or are outside the timeline for this Project. Impacts to this category are not significant.	No direct or indirect cumulative impacts would result from this alternative.

# 2.0 PURPOSE AND NEED

The purpose of the Project is to deploy a broadband infrastructure network to provide reliable and affordable high-speed internet.

The Winnebago Reservation includes a high percentage of residents and businesses without internet service either because of lack of infrastructure or high cost. Of the 886 households on the reservation 602

are unserved Native American households. There are also 44 unserved Native American tribal businesses (out of 46) and 19 unserved anchor institutions (out of 19). Those with internet service must contend with connection speeds much slower than the Federal Communications Commission's (FCC) current (2015) definition for broadband of 25 megabits per second (Mbps) download speeds and 3 Mbps upload speeds. A sample speed test survey conducted by the Winnebago Tribe of Nebraska in 2021 determined that speed averaged 15.12 Mbps for upload speeds and 6.74 Mbps for download speeds. Therefore, the service of the Winnebago Reservation is considered "unserved."

The 2020 U.S. Broadband Pricing Index reported the average monthly cost for internet access was \$60. Winnebago Tribal households on average are paying in excess of \$100 per month for service. Lack of available internet service or inadequate access at higher-than-average prices has limited opportunities for residents of the Winnebago Reservation to pursue educational enrichment, employment opportunities, economic mobility, and access to vital health care services.

By providing qualified broadband service to the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, the Project is expected to facilitate economic development and commercial activity, create remote employment and entrepreneurial opportunities, and increase availability of remote learning and telehealth services.

### 3.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This chapter includes a description of the proposed action and project alternatives and the justification for the alternatives selected for further study.

### 3.1 Introduction

Under the National Environmental Policy Act (NEPA), an environmental assessment (EA) must evaluate feasible action alternatives and a no action alternative, which serves as a baseline with which to compare the impacts of the proposed action and any other action alternatives. The Project proposes the installation of broadband infrastructure to provide beneficial high-speed internet access to the unserved Winnebago Reservation and adjacent communities in the project area. During the early planning and design phase of the project, various alternatives were considered and are briefly described below. Some alternatives were ultimately determined not to be reasonable and were eliminated from further discussion in this EA. The rationale for this determination is provided in Section 3.4.

### 3.2 Proposed Action

This section describes the project location, project components, ROW requirements, construction activities, and operation and maintenance requirements.

### **3.2.1 Project Location**

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of

Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

Portions of the fiber-optic alignment also extend to communities just outside of the reservation, including the northern portion of Emerson (the southern half of Emerson is within the reservation; Dakota, Dixon, and Thurston counties), Homer (Dakota County), and Wakefield (Dixon and Wayne counties). In addition, the fiber-optic alignment extends north to the Western Iowa Technical Community College in Sioux City, Iowa (Woodbury County).

The fiber-optic alignment includes two crossings under the Missouri River at approximately River Miles (RMs) 711.0 and 729.7 (USACE 2022). This portion of the project triggers the Section 408 permit.

Refer to Figure 1, Vicinity Map, for depiction of the project location and reservation boundary, and figures 2A through 2AC, Proposed Fiber Alignment, in Appendix B, which include a series of maps showing details of the proposed fiber routes, including topographic details.

### **3.2.2 Project Components**

The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises (FTTP) system capable of 200 Mbps download speeds and 40 Mbps upload speeds. The Project includes accessing backbone fiber, the construction of approximately 235 miles of middle- and last-mile fiber and interconnection, and development of robust back haul connections. The new fiber-optic cable would be buried within protective conduit along existing road ROW and under the Missouri River in the project area. Refer to figures 2A through 2AC in Appendix B for details on the proposed fiber route.

In total, the Project would provide qualified broadband service to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. A tribal anchor institution is a communal entity that supports broadband services for vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

### 3.2.2.1 Fiber-Optic Cable

The buried fiber-optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. Refer to Section 3.2.4.2 for details on cable installation methods.

### **3.2.2.2 Ancillary Facilities**

To facilitate operation and maintenance of the FTTP system, ancillary equipment would be installed along the alignment including optical line terminals (OLT), vaults, handholes, pedestals, markers, and network interface devices (NID). Each are described below:

- Optical Line Terminal (OLT): Two OLTs would be installed, one in Winnebago and one in Emerson. OLTs are devices used to connect optical fiber and transfer signals. The OLTs would be housed within a cabinet structure that is approximately 36 inches long, 36 inches wide, and 48 inches high. The cabinet sits on a concrete pad that is 36 inches long, 36 inches wide, and 60 inches high. Electrical power for the OLTs would be provided by Nebraska Public Power District from existing aerial distribution lines located immediately adjacent to each site. Each structure would be temperature controlled and would include a backup natural gas or propane powered generator to maintain network connectivity in the event of power failure.
- Vaults: Approximately 24 underground fiber-optic vaults measuring 36 inches long by 36 inches wide by 60 inches high would be installed and serve as local distribution hubs for the project area.
   An equipment cabinet that is 36 inches long, 36 inches wide, and 48 inches high would be bolted to the top of each vault.
- Handholes: Approximately 355 underground handholes measuring 36 inches long by 36 inches wide by 48 inches or 60 inches high, depending on the type of connection point, would provide access to the conduit and fiber-optic cable for splicing and repairs.
- **Pedestals:** Approximately 1,583 pedestals would be installed and serve as the connection point for distribution and drop fiber. Pedestals include an 18-inch-square base that would be installed underground and a 36-inch-tall aboveground pedestal that provides access to cables.
- Markers: Approximately 1,600 36-inch-tall line markers would be installed between handholes at intervals of approximately 1,000 feet to identify cable locations and where fiber will change direction.
- **Network Interface Device (NID):** Approximately 2,500 NIDs will be installed at the customer premises. The NID is a small panel, typically placed outside a home or business that connects the in-home/business wiring to the internet provider's distribution network.

The dimensions of each ancillary piece of equipment could change based on availability at the time of construction. Impacts will not change based on this change of size of equipment.

### 3.2.3 Right-of-Way Requirements

ROW permitting agreements outside and within the reservation are currently in progress, including with the Bureau of Indian Affairs (BIA). All required permits are expected to be processed and approved by June or July 2024. Where possible, the fiber line will follow BIA roads and appropriate permits will be obtained. Most of the proposed installations will occur on the Winnebago Reservation on land owned by the Winnebago Tribe of Nebraska. The south river crossing at RM 729.7 goes under the Winnebago Bend property owned by the United States Army Corps of Engineers (USACE). The remaining installations will occur along local/county roadways and state/federal highways. Encroachment permits and/or easements are required from each jurisdiction where fiber is proposed to be installed via ROW Access Requests.

### **3.2.4 Construction Activities**

This section provides details on the project's construction activities, including the location of staging areas, details of fiber installation methods, cleanup and surface restoration activities, and anticipated construction equipment and schedule.

#### 3.2.4.1 Staging Areas

Six staging areas have been identified for the Project to temporarily store equipment and materials. All staging areas are located on the Winnebago Reservation (Figure 3 in Appendix B). Temporary roads would be installed to provide access to each staging area. The six staging areas were reviewed and surveyed to determine impacts to resources. Resources will either be avoided, or the appropriate permits will be obtained.

To support boring under the Missouri River at RM 711.0, staging areas are located on either side of the river. The first staging area is an approximately 647-acre site located south of Link 17B and west of the Missouri River. Of the total area, only 330 acres will be used for the staging area. The second staging area is an approximately 238-acre site, of which 150 acres will be used, located west-southwest of the WinnaVegas Casino Resort. Both staging areas are part of larger irrigated parcels.

Four other staging areas for equipment and material storage are located on the southwestern corner of D Avenue and 17<sup>th</sup> Road (26.1-acre), just north of B Avenue directly west of U.S. Highway 75 (5.19 acres), north of East Beck Street 0.25 mile east of U.S. Highway 75 (3.6 acres), and south of Link 30 along Link 3 (4.86 acres).

### 3.2.4.2 Fiber-Optic Cable Installation Methods

Fiber would be installed by plowing, trenching, or directional boring construction methods as described below.

#### Plowed and Trenched Installation

Approximately 156 miles of the proposed installations would be performed using plowing or trenching construction techniques within existing road ROW. Plowed conduit would be installed using a track-type bulldozer equipped with a specialized single ripper that loosens the soil along the installation path. Conduit would be fed either from the plow bulldozer or from a separate truck-mounted reel through a plow chute attached to the ripper and laid directly at a nominal depth of approximately 36 to 48 inches, depending on permit requirements. A compaction machine would follow directly behind the plow bulldozer and restore the ground surface to its original contour. The installation path may be preripped by a second bulldozer, if necessary, to loosen the soil in areas where subsurface rock or other buried obstructions may be present. This second bulldozer may also, in some cases, be attached to the plow bulldozer to provide additional pulling power for the plowing operation. Ground disturbance associated with the plowed installation would be limited to an approximately 8-foot-wide corridor.

In areas that are too narrow for plowing equipment to be used and where directional boring is not required to avoid surface disturbance, trenching construction techniques would be used for the conduit installations. Typically, a backhoe would be used to dig the required trench, although a compact excavator may be used in areas that are exceedingly narrow. The nominal trench depth would be the same as for plowed installations, but the disturbance width would be less.

#### Directional Bore Installation

Approximately 78 miles of the proposed installations would be performed using directional boring construction techniques. Directional boring is a method used to install utility lines under waterways and roads and in other areas where the avoidance of surface disturbance is desirable (Exhibit 1). Directional boring machines are horizontal drilling rigs with a steerable drill bit. In general, each bore begins with the creation of a pilot hole (entry pit), through which the drill bit is guided by the operator as it progresses along the desired boring path toward the exit pit. After the pilot hole has been bored, conduit is attached to the end of the drill string, and the conduit is pulled back through the bore.

In addition to shorter road and railroad boring installations, the proposed action includes horizontal drilling underneath the Missouri River from Nebraska to Iowa at RM 711.0 (with a bore length of approximately 5,240 feet) and RM 729.7 (with a bore length of approximately 2,400 feet). For this installation, a drilling rig would be stationed at a fixed point, or entry pit, where the operator installs a piloted drilling bit while adding segments of drill rod at predetermined depths horizontally across the river. At the surface level, a locator assists the rig operator by locating the position and the depth of the piloted drilling bit as it moves away from the drilling rig. While drilling, the rig operator would continuously inject an inert clay-based fluid that lubricates and stabilizes the bore hole. This process would continue until the piloted drilling bit reaches the exit pit on the other side of the river. The piloted drilling bit would then be removed, and stages of larger reamers and drill rod would be added and pulled toward the rig operator to enlarge the hole in preparation for pipe installation. This method allows for the continuous monitoring of the bore hole and maintains a pathway until the pipe package is ready for installation. Once the hole is large enough for the determined diameter of pipe(s), the pipe package would be connected to the drilling rods and pulled across the river toward the drilling rig operator. The pipe package would then be secured at both the entry and exit pits, and the annular space around the pipe package would be filled/grouted if required or determined necessary and the ground surface restored to its original contour.

Exploratory drill borings were completed on July 26, November 3, and November 7, 2023, to determine the soil structure of the proposed drill holes. The drilling method used was a hollow-stem from 0 to 15 feet then a rotary drill to 100 feet (termination). This method was used to determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

The exploratory drill boring conducted on November 3, 2023, in South Sioux City, lowa was also used to determine if the area had archeological potential. Two cores were placed to ascertain the soil properties. See Exhibit 2 for the locations and depths of these bore sites. Core 1 was determined to have properties associated with a buried soil that has the potential for archeological deposits.

The boring depths for the directional boring will minimally encounter the buried soils in Core 1. See Exhibit 3 for the approximate depths of the directional boring. The buried soil with archeological potential is avoided and no further action is recommended.

Based on calculations from the exploratory drill borings, there is a potential for fracturing during the horizontal drilling process due to high pressures. To address this potential concern, one vertical boring using a 6-inch outer diameter core would be installed to reduce the pressures and prevent or minimize fracturing. This boring would be advanced to the depth of the horizontal boring (approximately 50 feet below ground surface) using a mud rotary drill rig (or similar). A casing or conduit would be temporarily installed in the boring to reduce the pressures in the horizontal boring. When complete, the boring would be properly abandoned. If needed, the vertical boring would be east of the railroad tracks and west of I7G Core 1 (Exhibit 4).

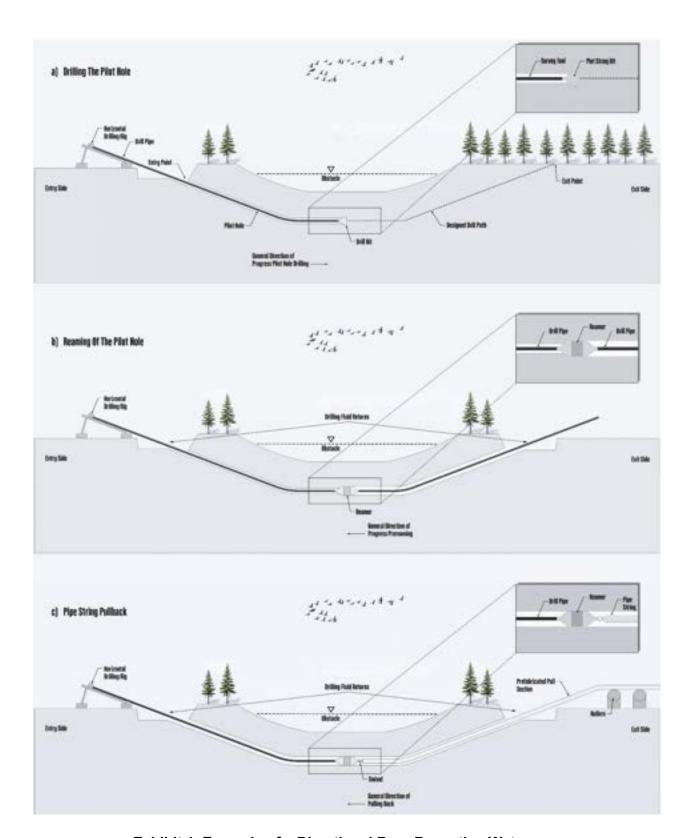
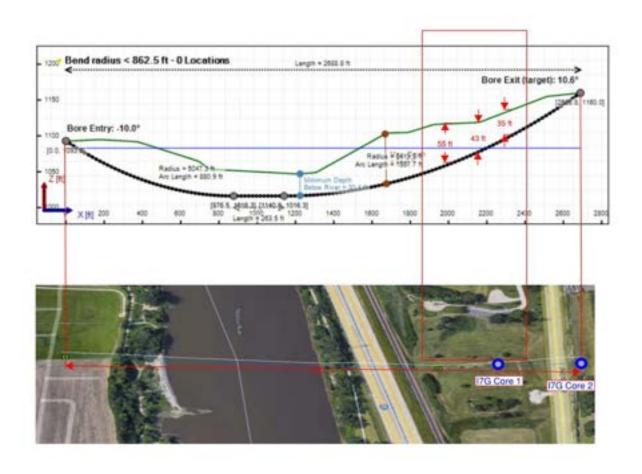


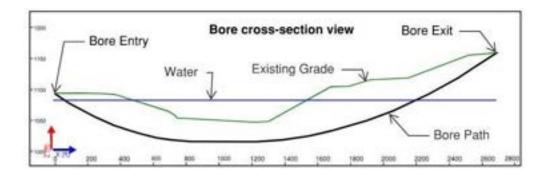
Exhibit 1. Example of a Directional Bore Beneath a Waterway

Project No. 021-05175

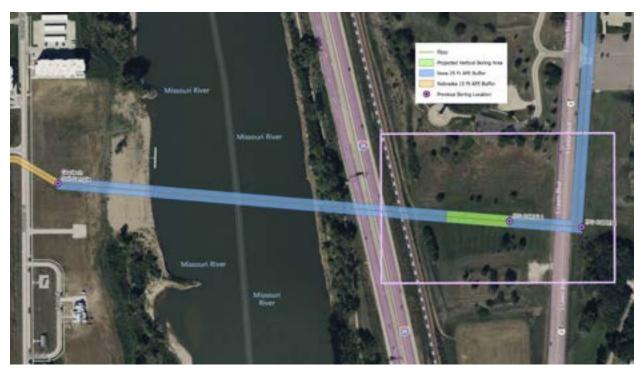
June 2024



**Exhibit 2. Locations and Depths of Exploratory Geotechnical Borings** 



**Exhibit 3. Depth of Directional Boring** 



**Exhibit 4. Location of Vertical Boring** 

### **3.2.4.3 Ancillary Facilities Installation**

Excavation activities would be required to install vaults, handholes, pedestals, and markers. To the extent feasible, installations would occur in previously disturbed areas and ground disturbance would be limited to the minimum area necessary to complete the installation. Excavated soils that could not be reused onsite as backfill would be disposed of in accordance with local, state, and federal regulations.

### **3.2.4.4 Cleanup and Surface Restoration**

Following the telecommunications line and ancillary facility installations, the contractor would promptly perform site cleanup and surface restoration. Cleanup would include removing all construction debris, and surface restoration would involve returning the surface contours of disturbed areas to their preconstruction condition. Waste would be disposed of in accordance with local, state, and federal requirements.

### **3.2.4.5 Construction Equipment**

Construction equipment necessary to complete the installations is anticipated to consist of the following:

- D5-class bulldozers for the plowed installations
- Directional boring machines (Vermeer D20x22 S3 or equivalent)
- Trailer-mounted mud-sucker pumps for drilling mud evacuation and recovery
- Backhoes (Case 580x or equivalent)

- Compact excavator (Bobcat E26 or equivalent)
- Medium-duty (5 ton), spray-bar-equipped water truck for dust control
- Medium-duty (2.5 5.0 ton) flatbed truck for reel and underground vault delivery
- Trailer-mounted air compressors for conduit pigging and blowing the fiber-optic line
- Light-duty pickups (0.50 and 0.75 ton) for crew transport

#### **3.2.4.6 Construction Schedule**

Pending obtaining all necessary permits and approvals, construction would be implemented in seven phases (Figure 4 in Appendix B) and is anticipated to begin in August 2024 and conclude in October 2026.

#### **3.2.4.7 Operation and Maintenance**

Operation and maintenance activities associated with the new telecommunications network are expected to be minimal, because once installed, fiber-optic cable is essentially maintenance free. Occasional visits by the Winnebago Tribal communication carrier to inspect facilities and confirm operability or to conduct minor repairs would occur but would not involve ground disturbance.

#### 3.3 No Action Alternative

The no action alternative represents a scenario under which the Project would not be implemented. This alternative assumes that the Winnebago Reservation and communities within the project area would remain unserved with regard to access to broadband services and that infrastructure would not be expanded.

Under the no action alternative, the existing environmental setting would be generally maintained. Changes to that setting that would result from construction, operation, and maintenance of the Project would not occur, and local communities and businesses would not realize the benefits of improved communication. Existing wireless infrastructure would remain in place, and internet service would generally continue to be provided as it is now which is unusable in its current state. No permits, encroachment permits, or easements would be granted for the installation of broadband infrastructure to serve the project area under the no action alternative.

No legal, regulatory, or technical feasibility issues were identified that would eliminate the no action alternative from consideration. However, this alternative would not meet any of the project objectives, purposes, or need. As a no-development alternative, the no action alternative would avoid all project-related impacts. It would cause no new impacts on the physical environment. Existing land uses would continue to affect environmental conditions as they are now.

### 3.4 Alternatives

Based on the proposed fiber path, the following four alternatives were considered during the EA process:

1. **Underground Cable Alternative (Proposed Action)** – Includes installation of underground cable along the entire route. Cable would be buried within existing road ROW and installed via boring under the Missouri River. Refer to Section 3.2 for details on the proposed action.

Overhead Cable Alternative – Includes installation of aerial cable on existing power poles and
construction of new power poles along routes that lack overhead lines or replacement of
existing poles requiring improvement/upgrade.

This alternative was eliminated from further study because of the high susceptibility of aerial cable and poles to damage caused by (1) extreme weather events typical of the region (e.g., high winds, low temperatures), (2) vandalism, and (3) pests and other wildlife, all of which could result in disruption of service. Aerial cable and poles also have less longevity and greater long-term maintenance costs than underground installations.

Wireless Alternative – Includes installation of a wireless network.

This alternative was eliminated from further study because of a lack of cellular providers and service in the project area. The project area is in a remote, rural area with hilly forested terrain that does not allow for sufficient signal to reach each dwelling requiring service. In addition, a wireless network is unlikely to be able to provide the same reliability, capacity, or speeds as those provided by a fiber-optic cable network.

4. **No Action Alternative** – No installation of broadband infrastructure would occur. The Winnebago Reservation and communities within the project area would remain unserved. Refer to Section 3.3 for details on the no action alternative.

Though all four alternatives were considered, the proposed action alternative is being proposed for comprehensive analysis and final design because it would have fewer infrastructure constraints, less environmental impact, lower maintenance cost, greater system longevity, and fulfill the purpose and need of the project. The no action alternative is carried forward as a baseline for comparison of impacts.

### 3.5 Alternatives Considered but Eliminated from Further Discussion

As discussed in Section 3.4, two alternatives were considered but eliminated from further study (overhead cable alternative and wireless alternative). The proposed action was determined to be the underground cable alternative.

# 4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

A screening process was used to determine which environmental resources are likely to be affected by the proposed action. Because the Project is specifically designed to produce certain environmental benefits and to avoid or mitigate others, some environmental resources require less discussion. In some cases, environmental resources may be dismissed from analysis if they are unlikely to be significantly affected by the proposed project. The remaining resources are analyzed further to assess the established baseline and likely impacts of the proposed action, and to determine what actions should be taken to mitigate adverse impacts.

### 4.1 Noise

The project area contains a mixture of rural agricultural, residential, commercial, and industrial properties. According to the Environmental Protection Agency (EPA), noise levels of 45 decibels are associated with indoor residential areas, including hospitals and schools (EPA 1974). Noise levels of 55 decibels are associated with outdoor areas where human activity can take place, including school yards and playgrounds. Noise levels of 70 decibels are a threshold for all areas to prevent hearing loss. The project area contains numerous indoor and outdoor areas that would be considered sensitive. This includes hospitals, schools, parks, single- and multifamily residences, among many others. The towns of Emerson, Winnebago, Wakefield, Thurston, and Homer do not have a noise ordinance in place. The Winnebago Tribe does not have a noise ordinance.

### 4.2 Air Quality

Air quality regulations in the U.S. are based on concerns that high concentrations of air pollutants can harm human health and adversely affect public welfare by damaging crops, vegetation, buildings, and other property. Pursuant to the Clean Air Act (CAA), the U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for seven common air pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM) for both PM<sub>10</sub> and PM<sub>2.5</sub>, and sulfur dioxide (SO<sub>2</sub>). Compliance with the NAAQS means the ambient outdoor levels of these "criteria" air pollutants are safe for human health, the public welfare, and the environment (US EPA, 2023).

The EPA shares authority to enforce the NAAQS with individual states. In the state of Nebraska, the Nebraska Department of Environment and Energy is the state agency charged with monitoring air quality and demonstrating compliance with NAAQS. Since this project is within the Winnebago Reservation, the tribe has the option to adopt a Tribal Implementation Plan (TIP) to help maintain air quality standards; however, adopting a TIP is not required. If tribes choose not to adopt a TIP, the EPA will develop a Federal Implementation Plan (FIP). The EPA evaluates ambient monitoring data from states and agency monitors and derives criteria pollutant design values, which are statistics that describe the air quality status of a particular location relative to the level of the NAAQS. Areas where monitored ambient air concentrations or design values are within an applicable NAAQS are considered in *attainment*. Areas where monitored ambient air concentrations exceed the NAAQS are designated by the EPA as *nonattainment* areas. Lastly, areas that have historically violated the NAAQS, but have since instituted controls and programs that have successfully remedied these violations, are known as *maintenance* areas.

According to the EPA Green Book (2023), the Project is within an attainment area. This assessment also considers the potential emission of greenhouse gases (GHG) associated with the project, in accordance with Executive Order (EO) 13990.

### 4.3 Geology and Soils

The Major Land Resource Area (MLRA) of the Project is Loess Uplands (102C) and Iowa and Missouri Deep Loess Hills (107). Most of the Project is within the Loess Uplands. This area has dominant soils of endoaquolls, fluvaquents, haplustolls, udifluvents, and ustorthents. Most of this area is farmed with corn or soybeans. The Iowa and Missouri Deep Loess Hills soils consists of similar dominant soils.

The Nebraska State Highway Map (NDOT, 2018) depicts the region as Rolling Hills – hilly land with moderate-to-steep slopes and rounded ridge crests. This area is mostly glacial till that has been eroded and mantled by loess.

According to the Farmland Protection Policy Act (FPPA), the U.S. Department of Agriculture (USDA) has developed criteria under which the environmental impacts and the conversion of farmland to nonagricultural uses can be assessed. This process is used to analyze alternatives for the proposed development to make sure that consideration is given to the preservation of agricultural lands.

A web soil survey map from the USDA (USDA, 2018) of prime farmland classifications indicated the Project had prime or unique farmlands located in the project area. The web soil survey map can be seen in Appendix B, Figure 5-5AB. Prime farmland can be found within the Project, but the Project will be mostly within previously disturbed roadside ditches.

#### 4.4 Water Resources

Wetlands are a specific type of land that meets specific regulatory criteria. The USACE *Wetland Delineation Manual* (1987) defines wetlands as areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Required criteria for an area to be defined as a wetland are (1) presence of hydrophytic vegetation, (2) presence of hydric soil types, and (3) hydrology or continuous saturation of the upper substrate.

The definition of WOTUS will be defined according to the most current guidance received from EPA and USACE Headquarters.

Olsson conducted a field investigation in July and August of 2023 to determine the presence and location of any WOTUS. See Figures 6-6AB in Appendix B for locations of mapped National Wetland Inventory (NWI) wetlands (USFWS, 2021) and National Hydrography Dataset (NHD) waterways (USGS, 2021). See Appendix C for the wetland delineation report.

### **4.4.1 Surface Water (i.e., Lakes and Rivers)**

The Winnebago Reservation is within the Missouri Tributaries Basin and the Elkhorn Basin.

The Missouri Tributaries Basin is approximately 5,100 square miles, of which 3,800 square miles are within Nebraska, and located along the northeastern and eastern border of the state. This basin has many municipalities within it, the largest is Omaha with approximately 410,000 residents. The Elkhorn Basin is approximately 7,000 square miles and is within the northeastern portion of Nebraska. This basin's largest municipality that intersects it is Omaha; the next largest municipality is a portion of Fremont, Nebraska. (DNR, 2018)

The Missouri River, Logan Creek, and countless other tributaries, streams, ponds, and wetlands are located within the reservation. Portions of the Project occur near these waterbodies. See Figures 6-6AB.

### 4.4.2 Groundwater

According to the National Ground-Water Monitoring Network, the nearest groundwater monitoring station is within the town of Walthill, Nebraska, approximately 6 miles south of Winnebago, Nebraska. Water level below the surface at this station, as of October 20, 2022, was 17.28 feet. The local aquifer within the region is the Dakota Sandstone Aquifer. Another close groundwater monitoring station is located approximately 1.5 miles northeast of the town of Homer, Nebraska. There are three monitoring stations at this location with an average water level of 26.63 feet as of August 30, 2023.

### 4.4.3 Coastal Zone, Estuary, and Intertidal Areas

Coastal zones include the coastlines of the Atlantic and Pacific oceans, the Great Lakes, and the Gulf of Mexico. Estuary areas are areas where oceanic water is diluted with freshwater runoff from the land (i.e., river meets the sea). Intertidal areas are where the ocean meets the land between high and low tides. The Project is not within a coastal zone or an estuary or intertidal area.

### 4.4.4 Floodplains

EO 11988 requires federal agencies to avoid actions, to the extent practicable, located within floodplains that may affect floodplain values. According to the Federal Emergency Management Agency (FEMA, 2023), the eastern portion of the reservation is within the 100-year and 500-year floodplain associated with the Missouri River. Other portions of the reservation are within the 100-year and 500-year floodplain of Morgan Creek, North Omaha Creek, Cow Creek, Coon Creek, Middle Creek, and Logan Creek, among others (DNR, 2023). See Figures 7-7AB for locations of floodplains within the project.

### **4.4.5 Wild and Scenic Rivers**

Nebraska has approximately 79,056 miles of river, of which 197 miles is designated as wild and scenic. Although 98 miles of the Missouri River is considered wild and scenic, that designated part is not within the project area. Therefore, no wild and scenic rivers are found within the project.

### 4.5 Biological Resources

The project area is within the Western Corn Belt Plains Level III ecoregion. More specifically, the project area falls within the Northeastern Nebraska Loess Hills, Nebraska/Kansas Loess Hills, and Missouri Alluvial Plain Level IV ecoregions. Common species found within these areas include eastern cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*), elm (*Ulmus sp.*), big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), and switchgrass (*Panicum virgatum*), among other species. General land use of the area is predominantly cropland; the principal crops are corn, soybeans, and alfalfa.

### **4.5.1 Threatened and Endangered Species**

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation system (IPaC) was used to identify listed and proposed threatened or endangered species and critical habitats that may be located within or close to the project area (Appendix D).

The Nebraska Game and Parks Commission (NGPC) Conservation and Environmental Review Tool (CERT) was used to determine which species, if any, are listed in Nebraska and within the project area. The lowa Department of Natural Resources (DNR) Natural Areas Inventory (NAI) was used to determine which species, if any, are listed in Iowa and within the project area. These reports are included in Appendix D.

Because of the directional boring under the Missouri River, a separate letter was sent to determine if there were any impacts to fish species found within the project area. A "no effect" determination from USFWS, NGPC, and lowa DNR was received, and no further action is needed. See Appendix D for correspondence.

Migratory birds and Bald eagles are found within the project area.

Table 4-1 shows the listed species that have the potential to be within the vicinity of the project area.

Table 4-1. Federal and State Threatened and Endangered Species.

Species	Status	Occurrence/Habitat Associations	Impact Evaluation
BIRDS			
Piping Plover Charadrius melodus	FT, ST	This species occurs most often on sparsely vegetated river sandbars. However, it can also be found on sand and gravel sandpits and along lake shore housing developments and reservoir shorelines.	Suitable habitat is unlikely present within the project area. Project would likely have "no effect" to the species.
INSECTS			
Monarch <i>Danaus plexippus</i>	CA	This species can be found in open fields and meadows with milkweed.	The monarch butterfly is a candidate species for protection under the Endangered Species Act but has not been listed or proposed for listing; therefore, no regulatory requirements are in place for the species.
FISHES			
Pallid Sturgeon Scaphirhynchus albus	FE, ST	This species can be found at the bottoms of large channels with high turbidity. It prefers habitat that has diverse water depths and velocities.	Suitable habitat is unlikely present within the project area. Project would likely have "no effect" to the species.

Species		Status	Occurrence/Habitat Associations	Impact Evaluation
Sturgeon ( Macrhybo	Chub psis gelida	SE	Sturgeon chub can be found in fast, free- flowing rivers with high turbidity and low visibility.	Suitable habitat is unlikely present within the project area. Project would likely have "no effect" to the species.
Lake Sturg Acipenser	geon : fulvescens	ST	Lake sturgeon occupy the bottom habitats of large freshwater lakes and rivers. They spend most of their time in lakes or coastal systems but migrate to large rivers to lay eggs in rocky, swift-flowing parts of the river.	Suitable habitat is unlikely present within the project area. Project would likely have "no effect" to the species.
MAMMAL	S			
Bat	ong-eared	FT, ST	In the summer months, the species can be found in woodland areas. It roosts singly or in colonies under the bark of trees and in tree cavities. Males and nonreproductive females can also be found roosting in cooler locations such as mines.	Suitable habitat is likely present within the project area. The Project will not involve tree removal. The Project would likely have "no effect" to the species.
Tricolored Perimyotis	Bat s subflavus	PE	In the spring, summer, and fall, the species can be found among live and dead leaf clusters of deciduous trees. Males roost singly while females form maternity colonies. They have also been found within barns, bridges, culverts, and rarely, within caves.	Suitable habitat is likely present within the project area. The Project will not involve tree removal. Project would likely have "no effect" to the species.
CLAMS				
Scaleshell Leptodea		FE, SE	This species is most likely to be found in clear, fast-moving streams and rivers of good water quality with gravel or sandy bottoms. It can be found in riffles or fast-moving currents.	Suitable habitat is unlikely present within the project area. The Project would likely have "no effect" to the species.
PLANTS				
,	inquefolius	ST	This species can be found in the understory of eastern deciduous forest with rich, moist soils. It is most often found on hillsides and within wooded ravines.	It is unlikely this species will be present within the project area. Although suitable habitat may be found on the eastern edge of the project area, no activities will occur within this area.
STATUS KEY				
Federal FE PE FT CA State SE ST	Federally list Proposed list Federally list Candidate to State Endang	ting as end ed as threa be listed gered	langered	

### 4.5.2 Critical or Threatened / Endangered Habitat

According to the USFWS IPaC report, there are no critical habitats within the project area.

#### 4.5.3 Wetland Habitats

Olsson conducted a field investigation in July and August of 2023 to determine the presence and location of any WOTUS. This field effort focused on staging areas, horizontal bore locations, and office locations. A total of nine wetland features were identified within the study area. See Appendix C for the wetland delineation report.

#### 4.6 Historic and Cultural Resources

Historic properties, as defined in the NHPA (54 U.S.C. § 300308), consist of any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource." Cultural resource(s) is a generic and overarching term used by Cultural Resource Management (CRM) professionals and can be used in reference to different site types, including archaeological, historical, and architectural sites, as well as properties of traditional, cultural, or religious importance that may or may not be eligible for inclusion on the National Register of Historic Places (NRHP).

#### **Evaluation Criteria**

To be eligible for inclusion on the NRHP, a site must usually be more than 50 years old and retain sufficient historic integrity to communicate significance based on one or more of the following seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Furthermore, the site must meet at least one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of our history
- Associated with the lives of persons significant in our past
- Embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinctions
- · Have yielded, or maybe likely to yield, information important in prehistory or history

In addition, cultural resources that hold traditional, cultural, or religious significance may be eligible for the NRHP if any of the National Register criterion mentioned above are met.

Beaver Creek Archaeology, Inc. (BCA) personnel conducted a literature search (Class I) and review with both the Nebraska and Iowa State Historic Preservation Officers (SHPOs) and with the Bureau of Indian Affairs Great Plains Region archaeologist. The literature searches indicated 52 projects overlapped with the project area.

The literature (files) searches revealed the site distribution is moderate to dense within 150 feet of the Project and contained 40 previously recorded cultural resource sites, and 31 Winnebago Tribal Historic Preservation Office (THPO)-sensitive and protected site locations (some of which overlap with previously

documented cultural resources sites on file with the SHPO), seven historic Native American locations, and one notable location. Of the 40 previously documented sites, five have been listed on the NRHP. These results are included in Tables 4-2 and 4-3. Twenty-six of the aforementioned previously recorded cultural resource sites cross into the project area. These results are included in Table 5-1. Of those 26 previously documented cultural resource sites, four have been listed on the NRHP.

Additionally, a sensitive areas review was conducted and discussed with the Winnebago THPO for the portion of the Project located within the Winnebago Reservation. The need to know of this review and discussion was provided to BCA by Olsson. As part of the THPO sharing of this information, Olsson, BCA, and NTIA will not release the results or any other details of the THPO-sensitive areas, aside from listing the number of areas considered and subsequently avoided as part of the project design process, as these areas are privileged information and public disclosure could be harmful to these resources. Appendix E includes the letter received from the Winnebago THPO concurring the project is in compliance with Section 106 and avoidance of resources is the best route for the project.

Table 4-2. Previously Recorded Cultural Resources within 150 feet of the Project Area.

SITS No.	Affiliation	Description	NRHP Status
25TS49	Farm/Ranch	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS48	Period Unknown	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS6	Period Unknown	Burials	Unevaluated
25TS33	Period Unknown	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS10	Period Unknown	Bison Bone, Shell, FCR, Pottery	Unevaluated
25TS11	Period Unknown	Projectile Points, Awl, Flakes, Bison Bone, Shell & Pottery, Bean and Squash Seeds	Unevaluated
25TS22	Education, Omaha, Winnebago	Cultural Material	Unevaluated
25TS2	Period Unknown	Depressions, 1 Pit, Small Burial	Unevaluated
DX09-001	Historical	Swedish Evangelical Lutheran Salem Church (On the Register #83001088)	Eligible/Listed on the NRHP
25DX50	Plains Woodland	CM Scatter: Chipped Stone Tools, Body Sherds	Eligible
DX04-003	Historical	Emerson City Park (On the Register #100002165)	Eligible/Listed on the NRHP
DK00-113	Historical	Ben Bonderson Farm (On the Register #06000993)	Eligible/Listed on the NRHP

SITS No.	Affiliation	Description	NRHP Status
25DK7	Plains Woodland, St. Helena Phase	Unknown	Unevaluated
25DK9	St. Helena Phase	Unknown	Unevaluated
25DK15	Period Unknown	Cultural Material	Unevaluated
25DK16	Period Unknown	Human Remains	Unevaluated
25DK14	St. Helena Phase	Cultural Material	Eligible
25DK2	Period Unknown	Burial Mounds/Cemetery	Eligible
25DK20	Period Unknown	Cultural Material	Unevaluated
25DK51	Euro-American	4 Structures, 2 Foundations, CM Scatter: Historic Artifacts, Faunal Remains	Ineligible
25DK8	Period Unknown	Cultural Material	Unevaluated
25DK501	Euro-American	Water Powered Flour Mill	Ineligible
25TS14	Omaha	Village	Unevaluated
25DK5	Period Unknown	Ton-wa-ton-ga/Omaha Big Village (On the Register #73001058)	Eligible/Listed on the NRHP
25TS9	Woodland	Cultural Material	Unevaluated
DK00-001	Historical	Cornelius O'Connor House (On the Register #77000826)	Eligible/Listed on the NRHP
25DK1	Period Unknown	Cultural Material	Unevaluated
25DK22	Period Unknown	Cultural Material	Eligible
25DK4	Period Unknown	Cultural Material	Unevaluated
25DK47	Period Unknown	Cultural Material	Eligible
25TS49	Farm/Ranch	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS33	Period Unknown	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS10	Period Unknown	Bison Bone, Shell, FCR, Pottery	Unevaluated
25TS11	Period Unknown	Projectile Points, Awl, Flakes, Bison Bone, Shell & Pottery, Bean and Squash Seeds	Unevaluated

SITS No.	Affiliation	Description	NRHP Status
25TS22	Education, Omaha, Winnebago	Cultural Material	Unevaluated
25TS2	Period Unknown	Depressions, 1 Pit, Small Burial	Unevaluated
DX09-001	Historical	Swedish Evangelical Lutheran Salem Church (On the Register #83001088)	Eligible/Listed on the NRHP
25DX50	Plains Woodland	CM Scatter: Chipped Stone Tools, Body Sherds	Eligible
DX04-003	Historical	Emerson City Park (On the Register #100002165)	Eligible/Listed on the NRHP
DK00-113	Historical	Ben Bonderson Farm (On the Register #06000993)	Eligible/Listed on the NRHP

SITS No. = Smithsonian Institution Trinomial System Number

Note: Bolded sites are listed on the NRHP.

Table 4-3. Iowa State Historic Preservation Office Historic Indian Locations (HILD) within 150 feet of the Project Area.

HILD	Description
7	Floyd's Bluff post, County Seat 1848-(13WD184)
1053	1854 Battle
10	Omaha Claim
956	Winnebago Tribe of Nebraska Reservation Property, WinneVagas Casino
957/958	Winnebago Tribe of Nebraska Property
1106	Lewis and Clark CampLewis and Clark Expedition 17-20 Aug 1804 Also, has a Notable Location Number: XX7906: Lewis and Clark camp
651	Omaha Tti-ttaga Ziga Village

The Iowa SHPO did not have any Notable Locations documented within 150 feet of the proposed project area.

### **4.7 Aesthetic and Visual Resources**

The Winnebago Reservation and the surrounding area has many water resources, recreational areas, and parks within its boundary. These include, but are not limited to the following:

- Winnebago Bend Wildlife Area
- Big Bear Park
- Winnebago Veteran's Memorial Park
- Fiddler Creek MC (racecourse)

- Graves Park
- South Ravine Park
- Engineers Point
- Snyder-Winnebago Bends Area
- Land of Wellness
- Veteran's Park
- Blue Park
- Winnebago Scouts
- Dog Park
- Horseshoe Pit
- Logan Creek Dredge
- Missouri River
- Middle Creek
- Cow Creek
- North Omaha Creek
- Omaha Creek
- Turtle Creek
- South Omaha Creek
- Morgan Creek
- South Logan Creek
- North Blackbird Creek

No national or state parks are located within the boundaries of the Winnebago Reservation. No state or scenic parks are mapped within the project area (NPS, 2023). NRHP-listed properties are discussed in Section 4.6.

### 4.8 Land Use

Land use within the project area is zoned as rural and urban. Uses include residential, commercial, industrial, and agricultural. The land use primarily within the project area is agricultural and grassed ROW. Most of the land within the project area is owned and leased by the Winnebago Tribal Council. A portion of the project is located on BIA lands or within BIA ROW. Another small portion of the project is located under the Winnebago Bend property owned by USACE.

### 4.9 Infrastructure

There is no current infrastructure that would support aboveground installation of fiber. All installations will be underground where no current fiber is installed. Traffic in most of the project area consists of travelers on rural roads with annual average daily traffic (AADT) counts ranging from 15 to 325 in 2022 (NDOT, 2023). There are two major highways on the eastern side of the reservation – U.S. Highway 77 and U.S. Highway 75. The intersection of these two highways has the largest AADT count of approximately 7,640 in 2020. Nebraska Highway 9 had an AADT in 2022 of 140 at the intersection with H Avenue.

No other forms of infrastructure are significant for the purpose of a fiber installation. The Winnebago Tribe of Nebraska (Grantee) will contact 811 (Call Before You Dig) prior to installing subsurface utilities.

### 4.10 Socioeconomic Resources

Under EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, federal agencies must determine whether their programs, policies, or activities have disproportionately high and adverse human health or environmental effects on protected populations. According to the U.S. Census Bureau (2023, Thurston County has a population density of 17 people per square mile. County demographics consist of 58.5 percent American Indian, 36.9 percent White, 8.6 percent Hispanic or Latino, and 3.2 percent two or more races. The population is 50.1 percent female and 49.9 percent male. Most persons are between the ages of 18-65 (52 percent), with 35.6 percent between 5-18 years, and 12.4 percent 65 and older. In the area, 90.5 percent of the population that is aged 25 and older has a high school diploma or higher; of those, 18.9 percent have a bachelor's degree or higher. English speakers equal 95 percent of the population and 5 percent of the population includes non-English languages as the primary language at home. The median household income is \$56,223 with 19 percent of the population living in poverty. A total of 60.2 percent of properties are owner-occupied.

### **4.11 Human Health and Safety**

The most significant concern of the Project is proximity to existing underground utilities. Grantee will contact 811 (Call Before You Dig) prior to installing subsurface utilities and only permit workers who are qualified by training or experience to operate heavy machinery and equipment. Occupational Health and Safety Administration (OSHA) standards will be followed regarding all activities.

The project area contains a total of four superfund sites (NDEE, 2023). All these sites are recorded as "active." There are also 11 Resource Conservation Recovery Sites. These sites are recorded as active, inactive, or unknown. There are 33 intact underground storage tanks (USTs) within the project area and 36 leaking USTs. See Figure 8 in Appendix B for the locations of these sites.

# **5.0 ANALYSIS OF ENVIRONMENTAL IMPACTS**

The level of NEPA analysis needed depends on the potential significance of the project's impacts. The term "significance" as used in NEPA requires considerations of both context and intensity. Context means that the significance of an action must be analyzed in several contexts, such as society as a whole (human and national), the affected region, interests, and locality. Intensity refers to the severity of the impact, the cumulative effects, and the degree of controversy. Significance varies with the setting of the proposed action. Both short-term and long-term effects are relevant. Impacts that are routinely handled through the issuance of permits, consultations, modifications to design, or other agreements are not considered significant unless there are exceptional circumstances and/or a potential for generating controversy. Minimal discussion is provided within the following sections or Table 5-2 regarding areas of the affected environment where little to no consequence is anticipated regarding the proposed action.

### **5.1 Noise**

The Proposed Action Alternative will have short-term direct impacts to ambient noise levels in the project area from the use of construction equipment (pickup trucks, boring equipment, etc.) that would occur during the fiber installation. Construction equipment noise levels can range from 70 to 95 decibels (USDOT, 2017). These impacts would be temporary and minor throughout most of the project area. The most affected area would be at the location of the noise-generating equipment. Mitigation methods include confirming workers follow OSHA regulations for worker protection, limiting hours of construction to occur during normal business hours, and avoiding work on the weekends, where applicable. Implementation of the Proposed Action would result in temporary, short-term impacts to ambient noise levels in areas immediately adjacent to construction activities which are considered minor. Since fiber installation would occur underground and no noise emanating equipment is proposed to be installed, no long-term impacts to the noise environment would occur.

The No Action Alternative would have no temporary or permanent impacts to noise levels.

### **5.2 Air Quality**

Construction activities associated with the Proposed Action Alternative would generate particulate matter from soil disturbances and equipment (direct impacts). Air emissions from construction vehicles and equipment would be temporary and minor, resulting in negligible impacts. When equipment is not in use, best practice will be implemented such that equipment will be shut off and will not be allowed to run idle. Activities such as clearing for hand holes and trenching would temporarily generate dust emissions. To minimize these emissions during construction, dust suppression (water trucks) would be implemented along with seeding and stabilization activities in accordance with stormwater pollution prevention plan best management practices (BMPs). Post-construction, all areas would be revegetated to help reduce the dust. Implementation of the Proposed Action would result in temporary, short-term impacts to air quality during construction which are considered to be minor. Equipment to be installed does not generate emissions, therefore, no long-term impacts to air quality would occur.

The No Action Alternative would have no temporary or permanent impacts to air quality.

### 5.3 Geology and Soils

The Proposed Action Alternative would be installed in existing road ROW that is previously disturbed. Depth of construction is not anticipated to reach bedrock in these road ROWs and would be limited to 3 to 4 feet of soil. During construction, soil erosion and sedimentation would be avoided or minimized through BMPs and would be compliant with National Pollutant Discharge Elimination System (NPDES) permit requirements. All areas would be revegetated where necessary. Geologic and soil impacts from the Project are not considered to be significant.

The No Action Alternative would have no temporary or permanent impacts to geology and soils.

### **5.4 Water Resources**

Impacts from the Proposed Action Alternative to water resources will be minimized and avoided. During construction, where soil erosion and sedimentation may take place, BMPs including silt fences may be utilized to prevent silt and soil deposition runoff in local waterways. A wetland delineation was completed in July and August of 2023 at all staging areas and bore locations. Wetlands were identified at some sites. A copy of the wetland delineation report is included in Appendix C. The wetland delineation report will be submitted with the Section 10 permit application. Coordination with USACE has been on-going and will continue throughout the permit application. Assuming that all identified water resources are jurisdictional, all water resources will be avoided within staging areas, and water resources within the ROW will be bored or drilled under to avoid permanent impacts. Because fiber will be installed below the channel grade/floodplain width and far enough below the thalweg of the river as to not cause river scour, there will be no change in floodplain conveyance capacity within the regulated floodplain. No changes in the surface grade or water surface elevation will occur as a part of this Project. All necessary permits will be obtained for any impacts to water resources. The necessary permits include, but are not limited to, CWA Section 404, Section 408 of Section 14 of the Rivers and Harbors Act (RHA) of 1899, Section 10 of the RHA, floodplain permits, and any other needed permits.

The No Action Alternative would have no temporary or permanent impacts to water resources.

### **5.5 Biological Resources**

Consultation for critical habitat with USFWS and appropriate state agencies has occurred. Based on coordination efforts with the USFWS Nebraska office, the NTIA made a no effect determination to all federally listed species in the project's action area. Coordination with NGPC was completed through its CERT online tool and conservation measures for the northern long-eared bat will be implemented. The lowa DNR responded on September 14, 2023, with no site-specific records found within the project area. No suitable habitat for listed species was identified within the existing road ROW or within staging areas. The Project does not involve tree removal. If this were to change, a survey for migratory birds and bat species will be conducted by a qualified biologist. See Appendix D for coordination with agencies. After consultation with USFWS, NGPC, and lowa DNR, the Proposed Action Alternative would have no effect on listed threatened and endangered species.

The No Action Alternative would have no temporary or permanent impacts to biological resources.

### **5.6 Historic and Cultural Resources**

Cultural resources and historic properties are present within the project area (Table 5-1), and a Class III cultural survey was conducted before the issuance of the FONSI. Consultation with the Winnebago THPO and Omaha THPO has been conducted and will continue throughout project construction. NTIA submitted a Section 106 Finding of No Historic Properties Affected to both the Winnebago Tribe of Nebraska and Omaha Tribe of Nebraska on February 21, 2024. Winnebago THPO and Omaha THPO concurred with the Section 106 finding of No Historic Properties Affected, with correspondence included in Appendix E. The Winnebago and Omaha THPOs are participating in field investigations. An Unanticipated Discovery plan has been developed if any resources are found during construction.

NTIA utilized their internal Tower Construction Notification System (TCNS) to notify tribes claiming ancestral ties to the area to meet federal agency requirements for government-to-government consultation. This notification was uploaded to TCNS on February 14, 2024, with a 30-day response period. Six tribes responded within the 30-day period. Three tribes responded after the 30-day response period. Copies of the responses are included in Appendix E. Tribes that have an interest in the project and would like to be kept informed include Flandreau Santee Sioux Tribe and Spirit Lake Nation. All tribes that responded have asked to be informed if archaeological remains or resources are discovered during construction.

Coordination with Nebraska SHPO has occurred, and NTIA submitted a Section 106 Finding of No Historic Properties Affected on February 21, 2024. Nebraska SHPO concurred the determination of No Adverse Effect to Historic Properties is appropriate as long as the following conditions are met:

- 1. Proposed project construction will remain within existing ground disturbances when working within or near the documented NRHP listed, eligible, or unevaluated sites.
- 2. Archaeological and tribal monitoring is required when construction is occurring within and near to each of the sites identified in Table 5-1 below.

Coordination with Iowa SHPO has also occurred, and Iowa SHPO concurred with the No Historic Properties Affected – No Effect determination for the undertaking within Woodbury County, Iowa. Further coordination was conducted regarding the vertical drill pressure relief boring that may be required for the horizontal drill boring. Iowa SHPO further concurred with No Historic Properties Affected – No Effect and archeological resources are unlikely to be affected by this activity. See Appendix E for documentation of consultation with Nebraska and Iowa SHPO.

No direct effects are anticipated to occur to NRHP-listed structure sites because there will not be any modifications to the structures, and fiber line will not be connected. Furthermore, no changes to the eligible structure are being conducted as part of this project.

Table 5-1. Previously Recorded Cultural Resources within the Project Area.

SITS No.	Affiliation	Description	NRHP Recommendation/NRHP Status
25DK1	Period Unknown	Cultural Material	Unevaluated
25DK14	St. Helena Phase	Cultural Material	Eligible
25DK15	Period Unknown	Cultural Material	Unevaluated
25DK16	Period Unknown	Human Remains	Unevaluated
25DK2	Period Unknown	Burial Mounds/Cemetery	Eligible
25DK22	Period Unknown	Cultural Material	Eligible
25DK4	Period Unknown	Cultural Material	Unevaluated
25DK5	Period Unknown	Ton-wa-ton-ga/Omaha Big Village (On the Register #73001058)	Eligible/Listed on the NRHP

SITS No.	Affiliation	Description	NRHP Recommendation/NRHP Status
25DK501	Euro-American	Water Powered Flour Mill	Ineligible
25DK51	Euro-American	4 Structures, 2 Foundations, CM Scatter: Historic Artifacts, Faunal Remains	Ineligible
25DK7	Plains Woodland, St. Helena Phase	Unknown	Unevaluated
25DK8	Period Unknown	Cultural Material	Unevaluated
25DK9	St. Helena Phase	Unknown	Unevaluated
25TS10	Period Unknown	Bison Bone, Shell, FCR, Pottery	Unevaluated
25TS11	Period Unknown	Projectile Points, Awl, Flakes, Bison Bone, Shell & Pottery, Bean and Squash Seeds	Unevaluated
25TS14	Omaha	Village	Unevaluated
25TS2	Period Unknown	Depressions, 1 Pit, Small Burial	Unevaluated
25TS22	Education, Omaha, Winnebago	Cultural Material	Unevaluated
25TS33	Period Unknown	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS48	Period Unknown	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS49	Farm/Ranch	Cultural Material (Ineligible Determined by SHPO)	Ineligible
25TS6	Period Unknown	Burials	Unevaluated
25TS9	Woodland	Cultural Material	Unevaluated
DK00-001	Historical	Cornelius O'Connor House (On the Register #77000826)	Eligible/Listed on the NRHP
DK00-113	Historical	Ben Bonderson Farm (On the Register #06000993)	Eligible/Listed on the NRHP
DX09-001	Historical	Swedish Evangelical Lutheran Salem Church (On the Register #83001088)	Eligible/Listed on the NRHP

SITS No. = Smithsonian Institution Trinomial System Number

Note: Bolded sites are listed on the NRHP.

The No Action alternative would have no temporary or permanent impacts to historic or cultural resources.

### **5.7 Aesthetic and Visual Resources**

Aesthetic and visual resources do exist within the project area; the Proposed Action Alternative consists of installing fiber underground within existing road ROW. Temporary impacts around staging areas will occur to these resources but will be temporary. After construction, equipment and materials will be removed from

staging areas and resources will return to preconstruction conditions. The above-ground components are small in size and will not significantly impact these resources. Based on the proposed design measures of the fiber installation, the Proposed Action will not result in significant impacts to aesthetic and visual resources.

The No Action Alternative would have no temporary or permanent impacts to aesthetic and visual resources.

#### 5.8 Land Use

The project area mainly consists of rural land use. This includes agricultural, pastureland, or not densely populated areas. The Proposed Action Alternative is anticipated to have a beneficial impact on the population of the Winnebago Reservation. The fiber would be installed within existing ROW and will not change the designation of land use. Staging areas will be temporarily affected. The portion of the project that is located near the Winnebago Bend property will not be impacted or disturbed by the horizontal boring occurring underneath the Missouri River. The depth of the bore will be 30 feet below the flowline of the Missouri River and the exit point is outside the boundary of the Winnebago Bend property. The Natural Resources Conservation Services concurred on September 21, 2023, that no permanent or irreversible impacts will occur to farmland. See Appendix C for their concurrence. The Proposed Action will result in no significant impacts to land use. Agreements from the BIA Great Plains Region are in in progress and will be in place prior to fiber installation for BIA-owned ROW or lands.

The No Action Alternative would have no temporary or permanent impacts to land use.

### **5.9 Infrastructure**

The Proposed Action Alternative includes installing fiber and other necessary facilities within existing road ROW. These areas will not be altered outside of small disturbances during the installation of the fiber and will not result in impacts to traffic during construction. The staging area on the east side of the Missouri River can be accessed via the bridge crossings at Interstate 129 in Sioux City, Nebraska or United States Highway-175 in Decatur, Nebraska. The Proposed Action has an overall beneficial impact to the residents of the Winnebago Reservation who lack reliable broadband infrastructure. To guarantee minimal conflict, the Grantee and contractor will call 811 before digging to identify buried utilities. Temporary staging areas will be returned to preconstruction states when installation is completed. The Proposed Action will result in no significant impacts, directly or indirectly.

The No Action Alternative would have no temporary or permanent impacts to infrastructure.

### **5.10 Socioeconomic Resources**

The Proposed Action Alternative is anticipated to have a positive impact on the Winnebago Reservation and surrounding communities, who have previously lacked access or affordable broadband. The Proposed Action Alternative will not result in disproportionately high and adverse effects to Environmental Justice (EJ) communities.

The No Action Alternative would have significant impacts to the residents of the Winnebago Reservation. These residents would continue to lack reliable, high-speed broadband infrastructure.

### **5.11 Human Health and Safety**

The Proposed Action Alternative is anticipated to benefit Tribal health by providing access to internet based medical resources such as telemedicine in the future. The project area contains many active and inactive hazardous waste sites and USTs. These sites do not pose a significant risk to the Proposed Action because most of the Project will occur within already disturbed road ROW. For work areas near identified sites, the Grantee and contractor will make sure of worker safety from potential contaminated areas. Only qualified workers will be permitted to operate heavy machinery and equipment. A Soil and Groundwater Management Plan will be developed and adhered to in areas near hazardous sites. The Proposed Action will not have significant impacts to human health and safety.

The No Action Alternative would have no temporary or permanent impacts to human health and safety.

### **5.12 Cumulative Impacts**

Cumulative impacts take into consideration foreseeable future actions that will occur within the project vicinity. The Winnebago Tribe of Nebraska has a planning document that was reviewed for such actions. Multiple major construction projects will be occurring around the project area, but the schedule of some is unknown.

Multiple transportation projects have also been approved, but a specific schedule is unknown for when these will be completed. These transportation projects are being completed by the Nebraska Department of Transportation (NDOT) and is anticipated to begin between 2025 and 2029.

Pender – Emerson is a highway 3R (resurfacing, restoration, and rehabilitation) NDOT project occurring on Nebraska Highway 9 that intersects the Project on the western side. The project program year is 2024.

Spur 87A Thurston Spur is tied to the Pender – Emerson project to begin in 2024.

Additionally, in Emerson is a highway milling and resurfacing NDOT project occurring on Highway 9 through Emerson within the Project on the western side. The project program year is 2025-2029.

Macy – Winnebago is a highway 3R NDOT project occurring on Nebraska Highway 75 that extends south from Winnebago within the Project on the eastern side. The project program year is 2025-2029.

Wakefield North & South is a highway milling and resurfacing project occurring on Nebraska Highway 35 (Oak Street) through Wakefield within the Project on the western side. The project program year is 2025-2029.

The Winnebago Tribe is currently building a new daycare facility and emergency services building on U.S. Highway 75, north of Winnebago. Both of these projects should be completed within 18 months.

Near the previously mentioned daycare facility and emergency services buildings, a roundabout and walking trail are scheduled for construction within 12 months and for completion within 24 months.

The Winnebago Tribe is also planning to construct a Boys and Girls Club that is scheduled to begin within 9 months and be completed within 24 months.

In regard to the Proposed Action and other proposed projects within the project vicinity, it is anticipated that the execution of the Proposed Action will not significantly affect the cumulative impacts of other proposed projects in the area.

The Proposed Action Alternative is consistent with goals to further develop the area and provide reliable broadband infrastructure. Additionally, the construction needed to install this fiber line would be minimal and would be coordinated with other planned construction projects. No detours or closures of road are needed for the Proposed action. No significant impacts will result from the Proposed Action.

The No Action Alternative would have no temporary or permanent impacts to cumulative impacts.

Table 5-2. Comparison of the Potential Environmental Impacts by Alternative.

Alternative	Potential Impacts	
Noise		
Proposed Action	Impacts would be low-to-moderate during construction activities, to ambient noise levels in areas immediately adjacent to the activities. Fiber and ancillary facilities would be installed underground and no noise emanating equipment is proposed, no long-term impacts would occur.	
No Action Alternative	No transmission structures or facilities would be constructed, no impacts would occur.	
Air Quality		
Proposed Action	Impacts would be low-to-moderate during construction activities. Air emission from construction vehicles and equipment would be temporary and minor. Activities such as clearing would temporarily generate dust emissions. Dust suppression techniques will be utilized to minimize emissions. Temporary, short-term impacts during construction will be minor. Equipment being installed does not generate emissions; no long-term impacts would occur.	
No Action Alternative	No transmission structures or facilities would be constructed, no impacts would occur.	

Alternative	Potential Impacts
Geology and Soils	
Proposed Action	Impacts would be low-to-moderate during transmission structure work including burying guy wire anchors; reconstruction or improvement of roads; compaction in areas used as staging areas and pulling/tensioning sites; or potential contamination from wood-pole preservative or accidental equipment spills.
No Action Alternative	Because no transmission structures would be constructed, there would be no impacts. However, to keep the existing infrastructure operating, emergency repairs would be needed that would cause low impacts that would be spread out over time as needed. Emergency repairs during wet seasons could increase risk of erosion and soil compaction.
Water Resources an	d Floodplains
Proposed Action	Water resources are found within the project area. With the assumption that all identified water resources are jurisdictional, all water resources will be avoided within staging areas, and water resources within the ROW will be bored or drilled under to avoid permanent impacts. Coordination with the U.S. Army Corps of Engineers (USACE) is ongoing, and all appropriate permits will be acquired prior to the start of construction.
No Action Alternative	No ground disturbance would occur; no impacts.
Wetlands	
Proposed Action	A wetland delineation was completed in July and August of 2023. With the assumption that all identified water resources are jurisdictional, all water resources will be avoided within staging areas, and water resources within the ROW will be bored or drilled under to avoid permanent impacts. All appropriate permits will be acquired prior to the start of construction.
No Action Alternative	No ground disturbance would occur; no impacts.
Vegetation	
Proposed Action	Impacts would be temporary during installation of the fiber line. At staging areas, vegetation is row-crop or pastureland and would be reseeded to preconstruction conditions. Road ditch ROW would also be reseeded to preconstruction conditions.
No Action Alternative	No ground disturbance would occur; no impacts.
Wildlife	
Proposed Action	Nebraska Game and Parks Commission (NGPC), and the lowa Department of Natural Resources (DNR) have concurred that the Project has "no effect" on listed species. No tree removal is expected to occur, but if this were to change, a survey would be completed by a qualified biologist. The project was coordinated with the USFWS Ecological Services office. NTIA made a determination of no effect to listed ESA species.
No Action Alternative	No ground disturbance would occur; no impacts.
Cultural Resources	
Proposed Action	Cultural resources and sensitive areas are present within the project area.  Significant impacts are not anticipated as these resources will be avoided.  Consultation and coordination with the Winnebago and Omaha THPOs will be on-going throughout project construction.

Alternative	Potential Impacts
No Action Alternative	No ground disturbance would occur; no impacts.
Aesthetic and Visual	
Proposed Action	Fiber line is being installed in road ROW; no impacts will occur to resources.  Resources around staging areas will be affected temporarily. Equipment will be removed once construction is completed.
No Action Alternative	No ground disturbance would occur; no impacts.
Land Use	
Proposed Action	The fiber line is being installed in existing road ROW. Staging areas will be temporarily affected during construction but will return to a preconstruction state when completed.
No Action Alternative	No ground disturbance would occur; no impacts.
Infrastructure	
Proposed Action	The fiber line is being installed in existing road ROW. Staging areas will be temporarily affected during construction but will return to a preconstruction state when completed
No Action Alternative	No ground disturbance would occur; no impacts.
Socioeconomic Reso	ources
Proposed Action	The action would have a significant beneficial impact to the surrounding communities by bringing high-speed and reliable internet. No disproportionately high and adverse effects will occur to EJ communities. Short-term impacts from construction equipment will occur but will not be significant.
No Action Alternative	The Winnebago Reservation and surrounding communities would continue to lack access to affordable, reliable, high-speed internet. Significant impacts would occur.
Human Health and S	afety
Proposed Action	The project area has registered hazardous waste and UST sites. For areas in proximity to identified sites, the Grantee and contractor will make certain workers are safe from potential contaminated areas. Only qualified workers will be permitted to operate heavy machinery and equipment. Impacts to this category are not significant.
No Action Alternative	No ground disturbance would occur; no impacts.
Cumulative Impacts	
Proposed Action	Multiple projects will be occurring concurrently with fiber installation. Significant beneficial impacts to the surrounding community will help further promote growth.
No Action Alternative	No ground disturbance would occur; no impacts.

# 6.0 APPLICABLE ENVIRONMENTAL PERMITS AND REGULATORY REQUIREMENTS

The following Special Requirements shall be implemented as part of the proposed action to retain a finding of no significant impacts:

- Prior to construction, the Winnebago Tribe will obtain a Section 10 and Nationwide Permit (NWP) 57 for directional borings under the Missouri River and all WOTUS impacts, respectively.
- The Contractor will adhere to the Unanticipated Discovery Plan during construction. The contractor will stop
  work if archeological materials or human remains are discovered and follow the provisions of the plan.
- Development and adherence to a Soil and Groundwater Management Plan in the areas of the site mapped in close proximity to hazardous waste sites/UST facilities.
- Prior to construction, the Winnebago Tribe will obtain a NPDES permit for construction greater than one
  acre and adhere to erosion and sedimentation control measures as determined applicable under the permit
  during construction.
- During construction, the Contractor will limit construction activities to normal business hours, Monday through Friday. Work will be avoided on weekends, to the extent possible.
- The Contractor will use dust suppression techniques to reduce fugitive dust emissions during construction.
- The Contractor will screen the project location for existing buried utilities by calling 811 and permit only
  workers qualified by training or experience to operate heavy machinery and equipment.

Table 6. Potential Applicable Statutory, Regulatory, and Other Requirements.

Potentially Applicable Requirement	Relevant Project Information
All Resources	
National Environmental Policy Act (NEPA) of 1969 42 U.S.C. § 4321 et seq.	NEPA Environmental Assessment (EA) and associated components are currently underway.
Fixing America's Surface Transportation Act (FAST Act) Title 41 (42 U.S.C. § 4370m et seq.)	The Project received coverage under the FAST Act.
Vegetation, Wildlife, and Fish	
Endangered Species Act (ESA) of 1973 16 U.S.C. § 1531 et seq.	The Project as currently proposed will have "no effect" on listed threatened or endangered species. Coordination with U.S. Fish and Wildlife Service (USFWS), Nebraska Game and Parks Commission (NGPC), and the Iowa Department of Natural Resources (DNR) has occurred.
Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976 16 U.S.C. 1801 et seq.	The Project as currently proposed will have no effect on fisheries.

Potentially Applicable Requirement	Relevant Project Information
Bald Eagle and Golden Eagle Protection Act (Eagle Act) of 1940 16 U.S.C. § 668-668d	The Project as currently proposed will have no effect on bald or golden eagles.
Migratory Bird Treaty Act (MBTA) of 1918 16 U.S.C. § 703-712 Responsibilities to Federal Agencies to Protect Migratory Birds Executive Order 13186	The Project as currently proposed will have no effect on migratory birds. If tree removal is to occur, a survey will be completed by a qualified biologist.
Fish and Wildlife Conservation Act 16 U.S.C. § 2901 et seq. Fish and Wildlife Coordination Act 16 U.S.C. § 661 et seq.	The Project as currently proposed will have "no effect" on listed threatened or endangered species. Coordination with USFWS, NGPC, and Iowa DNR has occurred.
Farmland Protection Policy Act (FPPA) 7 U.S.C § 4201-4209	The Project as currently proposed will have minimal effect on prime farmland as most of the Project will take place in previously disturbed roadside ditches.
Waters, Wetlands, and Floodplain	n Protection
Clean Water Act (CWA) 33 U.S.C. § 1251 et seq.  Floodplain/Wetlands Environmental Review Requirements 10 CFR 1022.12  Section 14 of the Rivers and Harbors Act (RHA) of 1899 33 U.S.C. § 408  Section 10 of the Rivers and	A wetland delineation was completed in July and August of 2023. Coordination with the U.S. Army Corps of Engineers (USACE) is underway. This Project will be permitted under a Nationwide Permit (NWP) 57. A Section 10 permit will also be issued for the work being completed under the Missouri River. The wetland delineation report will be submitted with the Section 10 permit application.  Applicable permits will be obtained prior to construction.
Harbors Act (RHA) of 1899 33 U.S.C. § 403  Floodplain Management Executive Order 11988  Protection of Wetlands Executive Order 11990	

Potentially Applicable Requirement	Relevant Project Information
Coastal Zone Management Act (CZMA) 16 U.S.C. § 1451 et seq.	The Project is not located in a coastal zone that requires coordination.
Air Quality and Greenhouse Gase	es
The Clean Air Act, as revised in 1990 42 U.S.C. § 4701	The Project is not anticipated to require air permits. To mitigate for fugitive dust during construction, dust suppression techniques will be used.
Final Mandatory Reporting of Greenhouse Gases Rule 40 CFR 98	The Project is not anticipated to require air permits. To mitigate for fugitive dust during construction, dust suppression techniques will be used.
Federal Leadership in Environmental, Energy, and Economic Performance Executive Order 13514	
Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis Executive Order 13990	
Cultural and Historic Resources	
Antiquities Act of 1906 16 U.S.C. § 431-433 Historic Sites Act of 1935	A Class I archaeological survey has been conducted. Any sensitive areas found will be avoided during construction. If any materials or remains are found during construction, the contractor will stop work and notify the appropriate agencies and tribes.
16 U.S.C. § 461-467	A Class III survey has been completed and the results shared with
National Historic Preservation Act (NHPA), as amended, inclusive of Section 106 54 U.S.C. § 306108 et seq.	NTIA, SHPOs, and THPOs
Archaeological Data Preservation Act of 1974 16 U.S.C. § 469 – 469-1	
Archaeological Resources Protection Act of 1979, as amended 16 U.S.C. § 469 a-c	
Native American Graves Protection and Repatriation Act 25 U.S.C. § 3001 et seq.	

Potentially Applicable Requirement	Relevant Project Information
Indian Sacred Sites Executive Order 13007 American Indian Religious Freedom Act of 1978 42 U.S.C. § 1996	
Noise, Public Health, and Safety	
Noise Control Act of 1972 42 U.S.C. § 4901 et seq.	Construction work will be performed during normal business hours to reduce construction noise. These hours will be determined based on ordinances per the specific village, city, or urban area.
Spill Prevention Control and Countermeasures Rule 40 CFR 112	The Grantee will operate under the provisions of a Soil and Groundwater Management Plan to safeguard worker protection from potentially contaminated media and proper disposal of any soil generated from construction.
Comprehensive Environmental Response, Compensation, and Liability Act 42 U.S.C. § 9601 et seq.	
Resource Conservation and Recovery Act 42 U.S.C. § 6901 et seq.	
The Toxic Substances Control Act 15 U.S.C. 2601 et seq.	
Environmental Justice	
Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations Executive Order 12898	
State, County, and Local Plan Co	nsistency
National Pollution Discharge Elimination System (NPDES)	An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed and approved by the applicable regional office at least 30 days before beginning activity. An NPDES Construction Stormwater permit will also be issued.
Right-of-Way (ROW) Access Requests	Permits with ROW Access Requests will be submitted to complete construction within ROW owned by industries, rail organizations, federal entities, state departments, counties, and cities.

## 7.0 CONSULTATIONS

### **Table 7. Agency Consultations.**

Agency and Name	Consultation	Status
State Historic Preservation Office (SHPO) of Nebraska Betty Gillespie- Interim Deputy SHPO August 9, 2023; November 8, 2023 402.805.7392	Preservation Consultation	SHPO concurrence received on August 23, 2023
SHPO of Iowa Branden Scott- Archaeologist, SHPO August 11,2023 515.348.6291	Section 106 Historic Preservation Consultation	SHPO comments received on August 28, 2023.  Asked for geoarchaeological investigation during exploratory borings. Concurred "no effect" on February 7, 2024 and April 22, 2024.
U.S. Fish and Wildlife Service (USFWS) - Nebraska Field Office Mark Porath – Project Leader August 28, 2023 308.382.6468	Section 7 consultation for threatened and endangered species	USFWS acknowledged "no effect" determination on September 2, 2023.
Nebraska Game & Parks Commission (NGPC) CERT Tool August 21,2023 402.471.5423	Section 7 consultation for threatened and endangered species	NGPC CERT tool was used to determine impacts to species. Conservation conditions were accepted on August 24, 2023.
Iowa Department of Natural Resources (DNR) Casey Laskowski – Environmental Scientist August 28, 2023 515.330.6432	Section 7 consultation for threatened and endangered species	Response received on September 14, 2023, stating no species or critical habitat within project area.
lowa Department of Transportation (IDOT) 800 Lincoln Way Ames, Iowa 50010 515.239.1216	Right-of-way (ROW) Access Requests	Notified of request
Sioux City, Iowa Tyler Erickson 620 Douglas St, 5 <sup>th</sup> Floor Sioux City, IA 51101 712.279.6109	ROW Access Requests	Notified of request

Agency and Name	Consultation	Status
South Sioux City,	ROW Access Requests	Notified of request
Nebraska	1000 Access Requests	Notified of request
Nanci Walsh		
1615 1st Ave		
South Sioux City, NE		
68776		
402.494.7504		
Woodbury County, Iowa	ROW Access Requests	Request pending completion of EA
Tyler Mogensen	4	
620 Douglas St, Rm 703		
Sioux City, IA 51101		
712.279.6505		
Dakota County, Nebraska	ROW Access Requests	Request pending completion of EA
Assessor	·	
Christ Abts		
PO Box 9		
Dakota City, NE 68731		
402.987.2101		
Dixon County, Nebraska	ROW Access Requests	Request pending completion of EA
Assessor		
Amy Watchorn		
PO Box 369		
Ponca, Ne 68770		
402.755.5601		
Thurston County,	ROW Access Requests	Request pending completion of EA
Nebraska		
Assessor		
Susan Schrieber		
PO Box 309		
Pender, NE 68047		
402.385.2251		
Wayne County, Nebraska	ROW Access Requests	Request pending completion of EA
Assessor		
Dawn Duffy		
510 Pearl Street		
Wayne, NE 68787		
402.375.2288	DOW Assess Desired	Ni-4ifi - J - f 4
Union Pacific Railroad	ROW Access Requests	Notified of request
(UPRR)		
1.888.877.7267	DOW Assess Degrees	Notified of request
Bureau of Indian Affairs	ROW Access Requests	Notified of request
Great Plains Region		
605.226.7343	DOW Assess Bassissta	Notified of request
Ho-Chunk Inc.	ROW Access Requests	Notified of request
402.878.2560		

Agency and Name	Consultation	Status
Natural Resources	Farmland Protection Act	Response received on September 1, 2023.
Conservation Service	consultation	Responded back for clarification on September
Elizabeth Gray – Assistant		18, 2023.
State Soil Scientist		
August 28, 2023		Letter of concurrence received September 21,
402.846.5655 extension 3		2023.
U.S. Army Corps of	Section 404 and Section	Pre-application meeting held on May 24, 2023.
Engineers (USACE)	10 consultation	Concurred Nationwide Permit (NWP) 57 and
Omaha District		Section 10 needed on June 28, 2023.
Amanda Dague – Project	ROW Access Requests	
Specialist		ROW request submitted
May 24, 2023		
402.896.0896		
11-1-4-1-04		
Updated Contact		
Kristina Amato		
Nebraska Regulatory Office		
402.949.3906		
USACE Rock Island	Section 404 and Section	Concurred NWP 57 needed on June 27, 2023.
District	10 consultation	Concurred NVVF 37 fleeded on Julie 27, 2025.
Albert Frohlich – Project	10 consultation	
Specialist		
June 16, 2023		
309.794.5859		
U.S. Army Corps of	Section 408 consultation	Pre-coordination meetings held on February
Engineers (USACE)		16, 2023 (Oliver Berglund) and March 8, 2024.
Omaha District	ROW Access Requests	
Sarah Miller – Project	·	ROW request submitted
Manager		
March 8, 2024		
402.995.2699		

### **Tribal Nation Consultation**

NTIA initiated tribal consultation using the Tower Construction Notification System (TCNS). Through this system, NTIA consulted with the following federally recognized tribes:

- Crow Creek Sioux Tribe
- Flandreau Santee Sioux Tribe
- Spirit Lake Nation
- Northern Cheyenne Tribe
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- Rosebud Sioux Tribe
- North Cheyenne Tribe
- Prairie Band Potawatomi Nation

#### • Northern Arapahoe

Flandreau Santee Sioux Tribe, Spirit Lake Nation, and Lac du Flambeau Band of Lake Superior Chippewa Indians replied they had an interest in the project and would like more information. The other six tribes had no interest in the site. After more information was received, Spirit Lake Nation sent a No Effect determination for the project and Lac du Flambeau Band of Lake Superior Chippewa Indians responded that the project was outside their current area of interest. Three tribes responded after the 30-day response period indicating no interest in the project.

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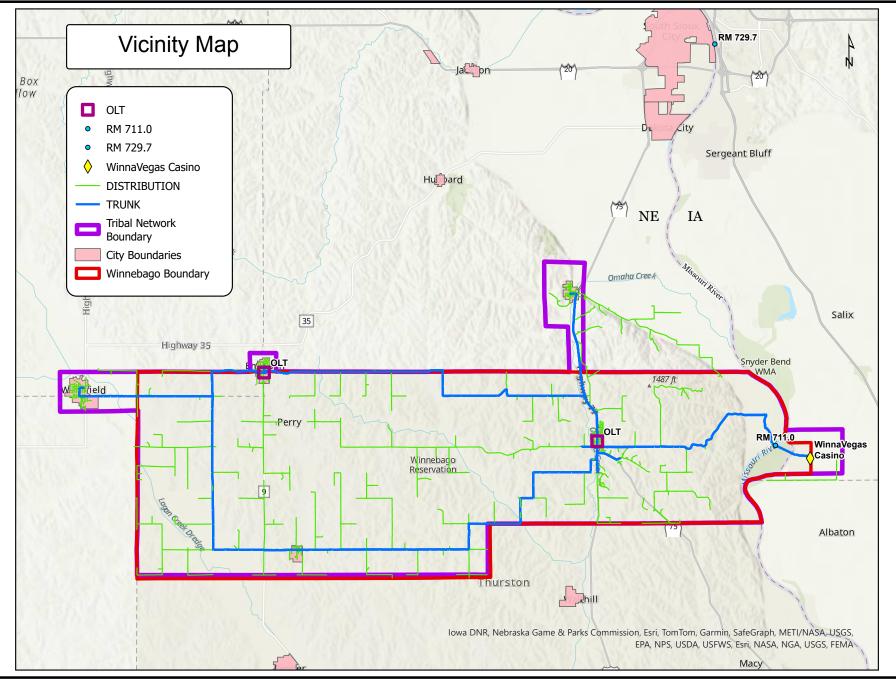
# Appendix A

### **List of Preparers**

Name	Title	Role	
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Susan Opperman	Olsson; Project Scientist	Coordinator and QA/QC	
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Julie Smith	Olsson; Technical Leader	Author and QA/QC	
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Wade Burns	Beaver Creek Archeology	Cultural Resources Research	
Lisha Cauthen	Olsson; Specialist/Editing	QA/QC	
Jenn Bailey	Olsson; Specialist/Editing	QA/QC	

# Appendix B

Figures

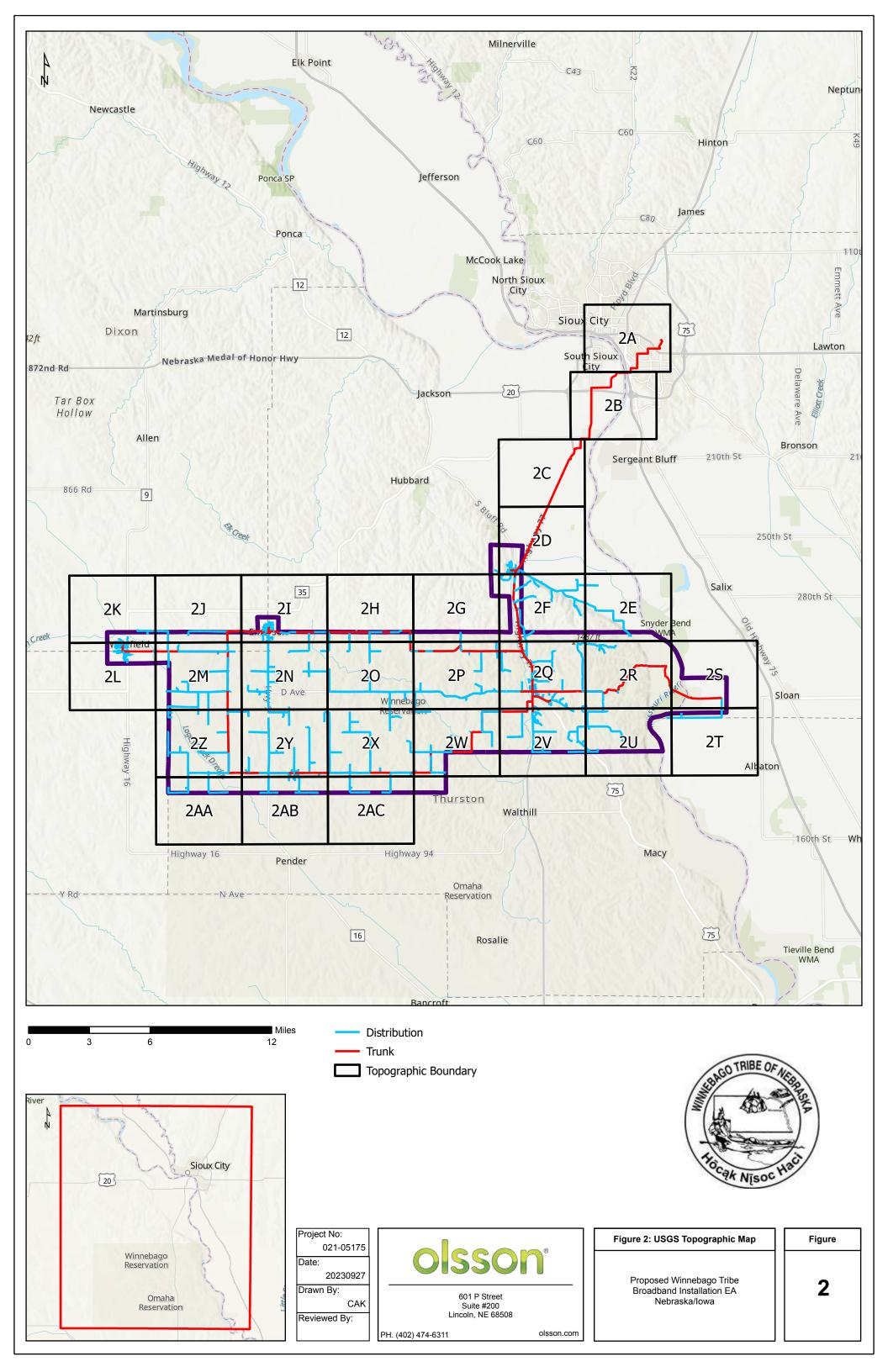


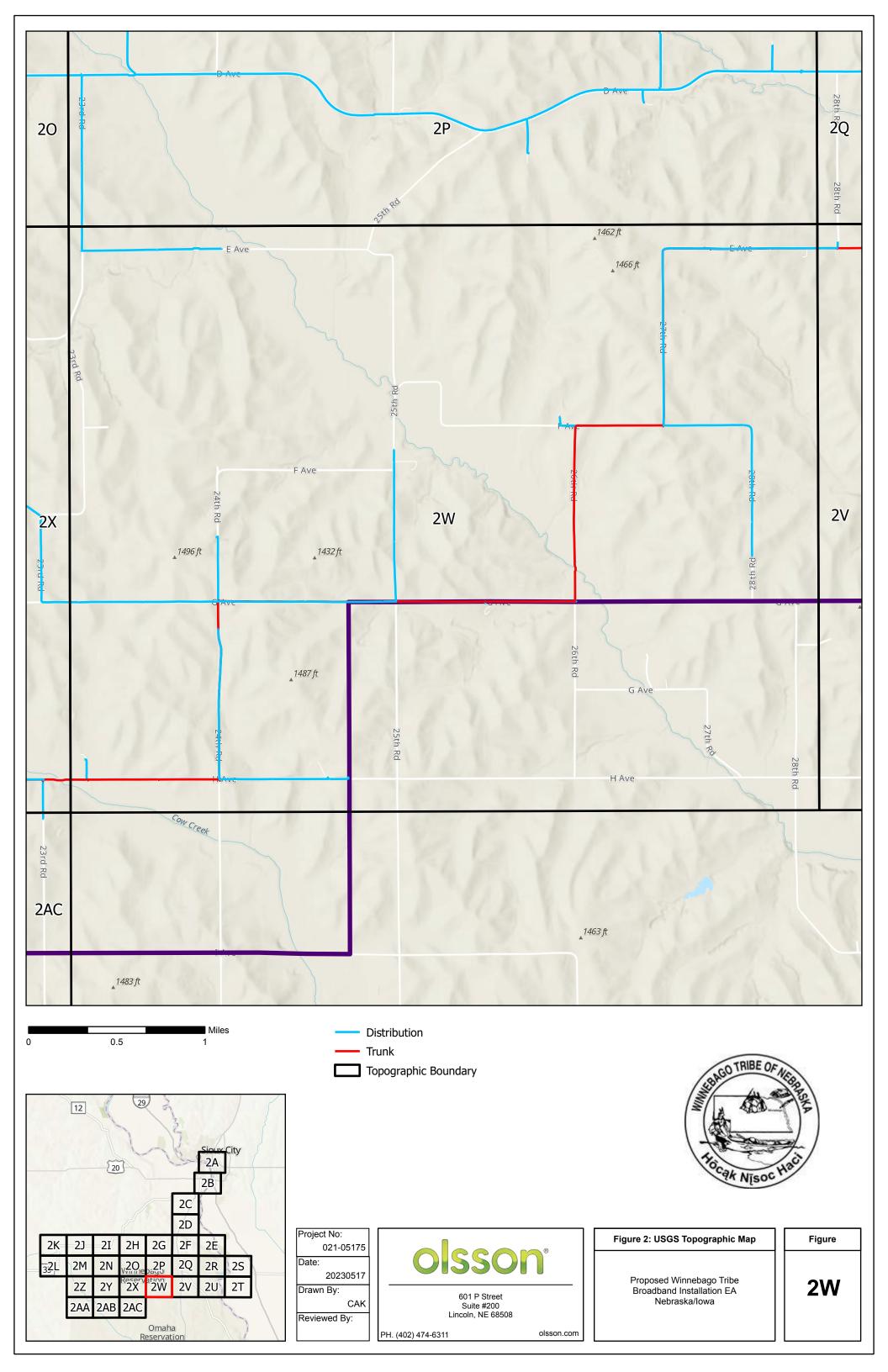
#### Winnebago Tribe Broadband Connectivity Environmental Assessment

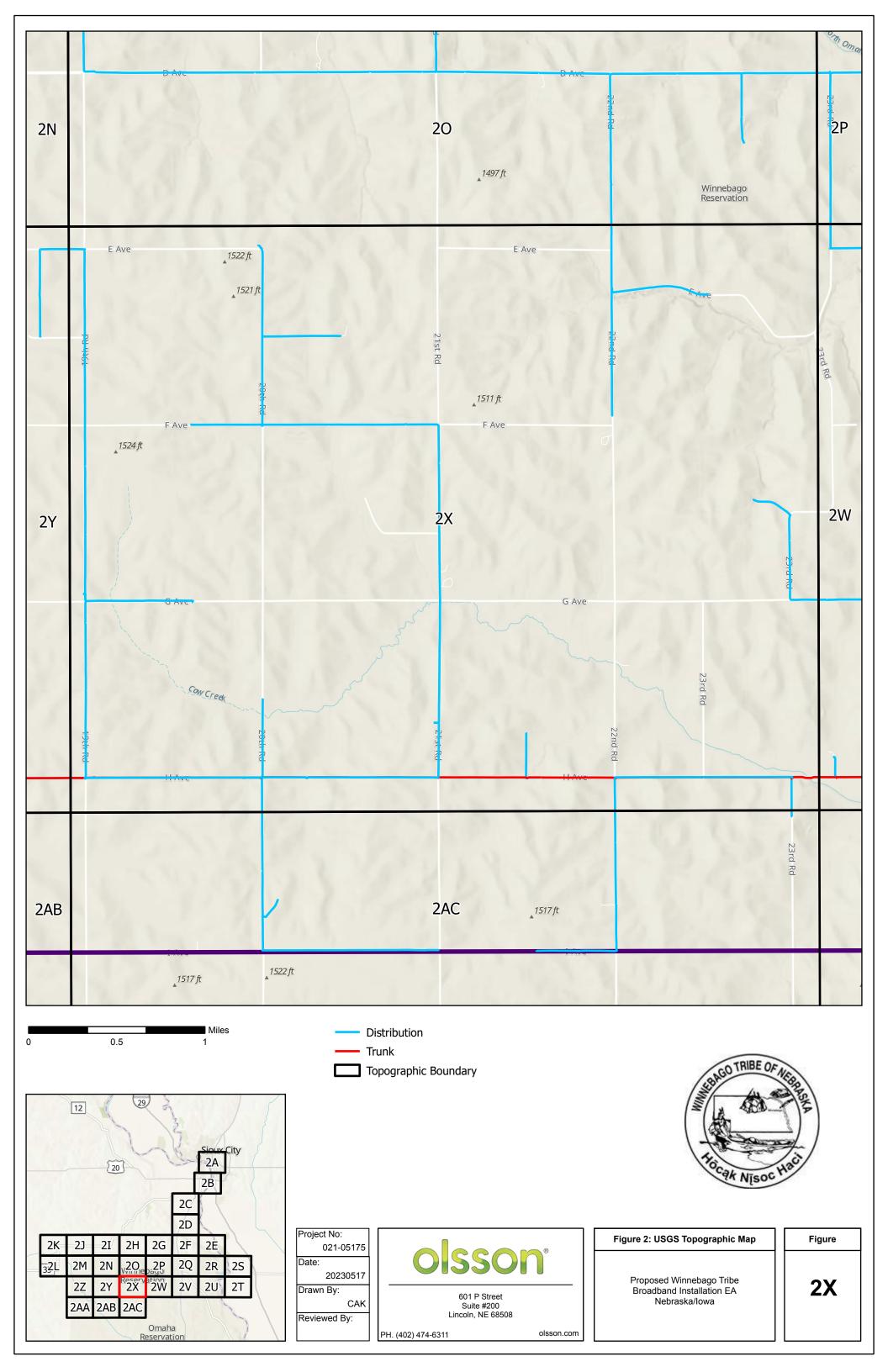
Dixon, Thurston, and Wayne Counties, Nebraska Woodbury County, Iowa

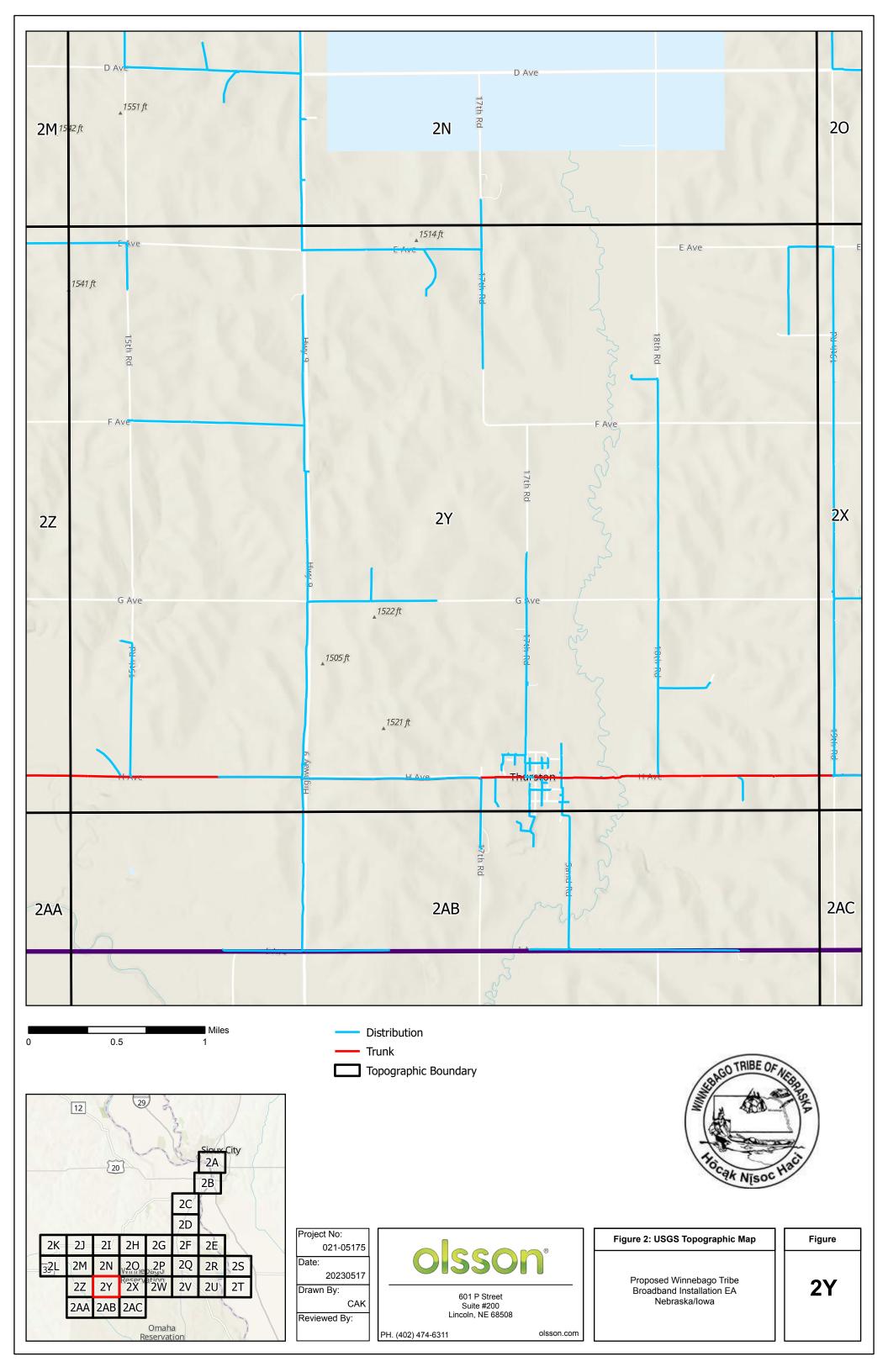
### Vicinity Map

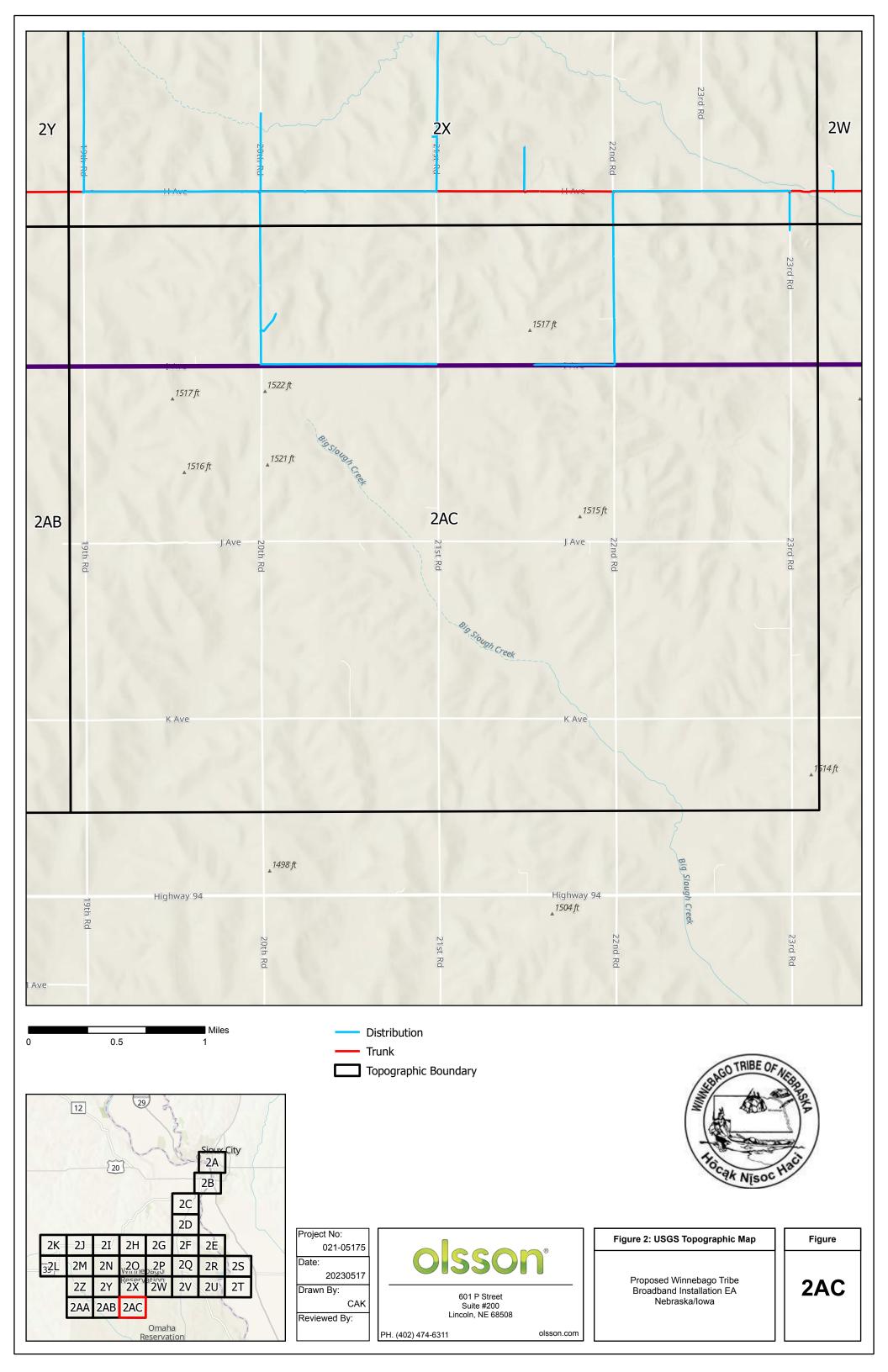
Figure 1









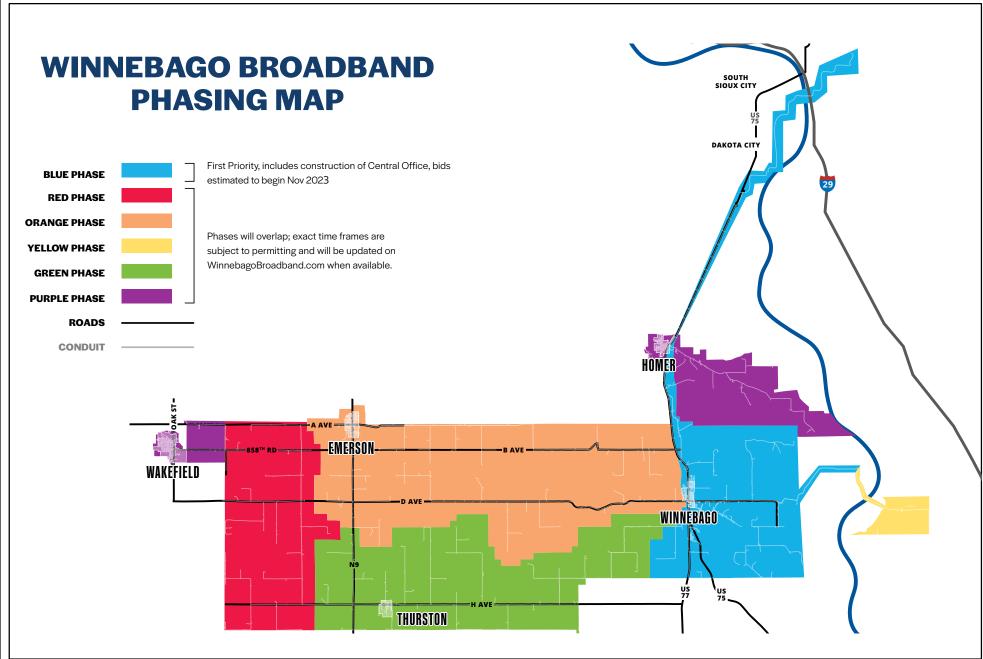


County Boundary

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Figure 3

Woodbury County, Iowa Staging Areas Map





## Winnebago Tribe Broadband Connectivity Environmental Assessment

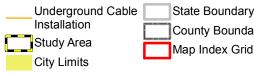
Dixon, Thurston, and Wayne Counties, Nebraska Woodbury County, Iowa

## Phasing Map

Figure 4



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Dixon, Thurston, and Wayne Counties, Nebraska Woodbury County, Iowa

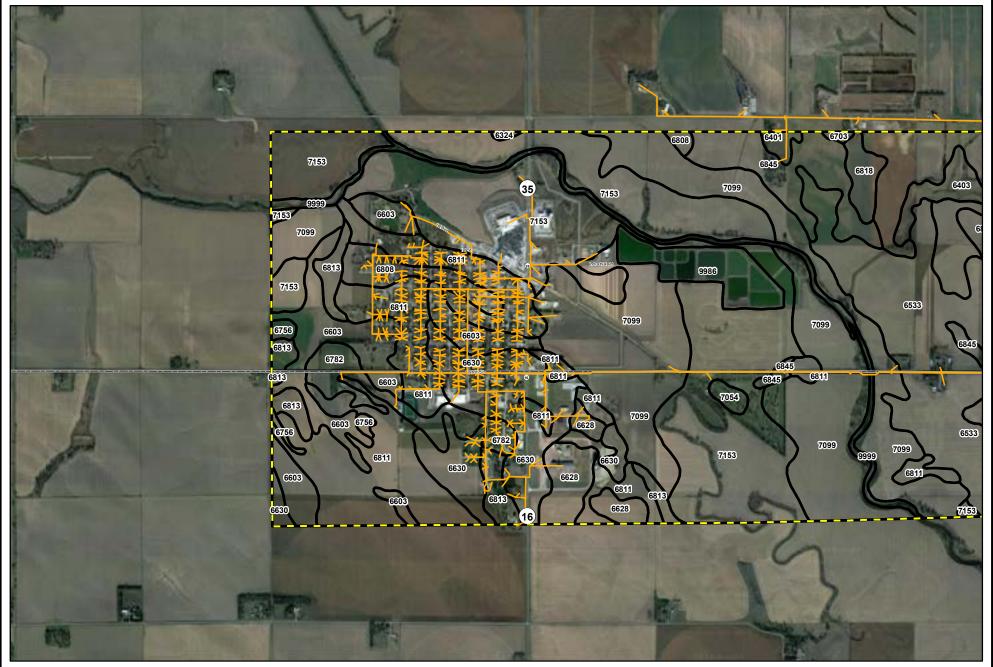
Soils Map Index

Figure 5

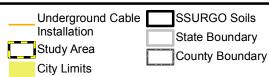
WGS 1984 ARC System Zone 11

Soils Map

Figure 5A







## Winnebago Tribe Broadband Connectivity Environmental Assessment

Dixon and Wayne Counties, Nebraska Soils Map Figure 5B

Figure 5C

WGS 1984 ARC System Zone 11

Figure 5D

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Figure 5E

**Environmental Assessment** 

Dakota and Thurston Counties, Nebraska Soils Map Figure 5F

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Figure 5G

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Figure 5H

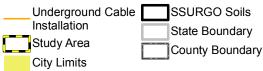
WGS 1984 ARC System Zone 11

Figure 51

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Figure 5J





**Environmental Assessment** 

Dixon and Thurston Counties, Nebraska Soils Map Figure 5K

County Boundary

WGS 1984 ARC System Zone 11

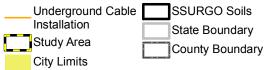
Soils Map

Figure 5L

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Figure 5N





**Environmental Assessment** 

Thurston County, Nebraska Soils Map Figure 5P

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WGS 1984 ARC System Zone 11

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Soils Map

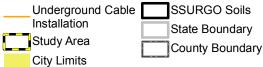
Figure 5Q

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Soils Map

Figure 5R

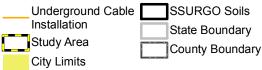




**Environmental Assessment** 

Thurston County, Nebraska Soils Map Figure 5S





**Environmental Assessment** 

Thurston County, Nebraska Soils Map Figure 5T

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Figure 5V

WGS 1984 ARC System Zone 11

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Soils Map

Figure 5W

City Limits

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Figure 5X

Figure 5Y

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City Limits

Soils Map

Figure 5AA

City Limits

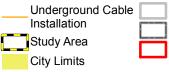
County Boundary

Soils Map

Figure 5AB



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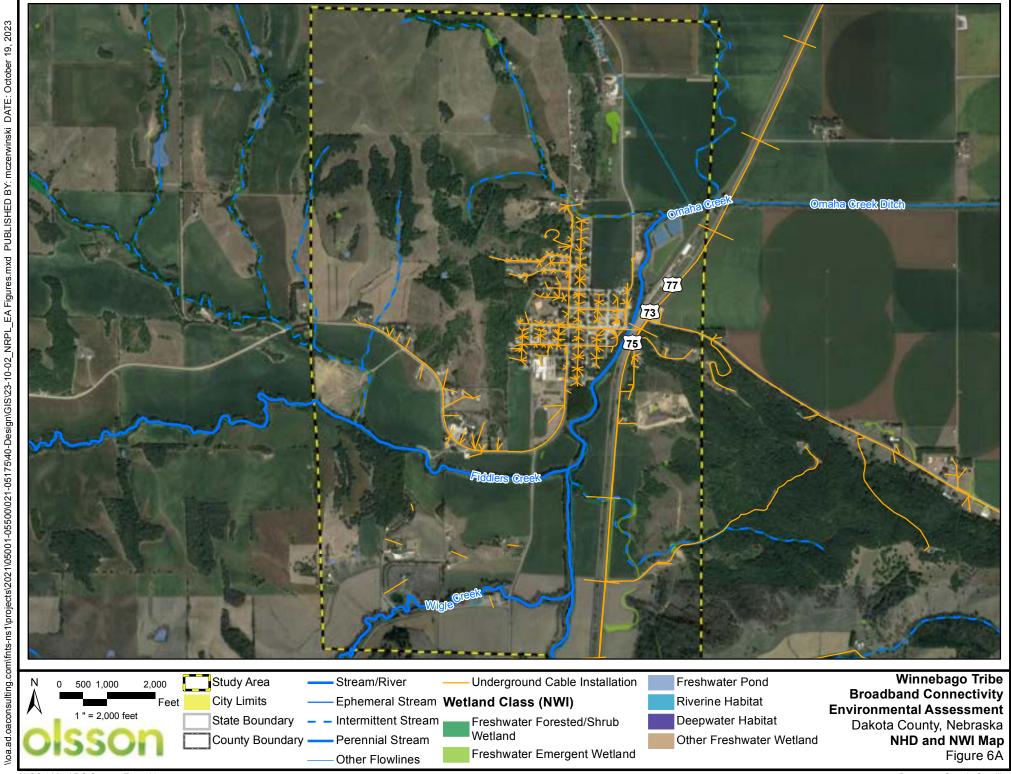


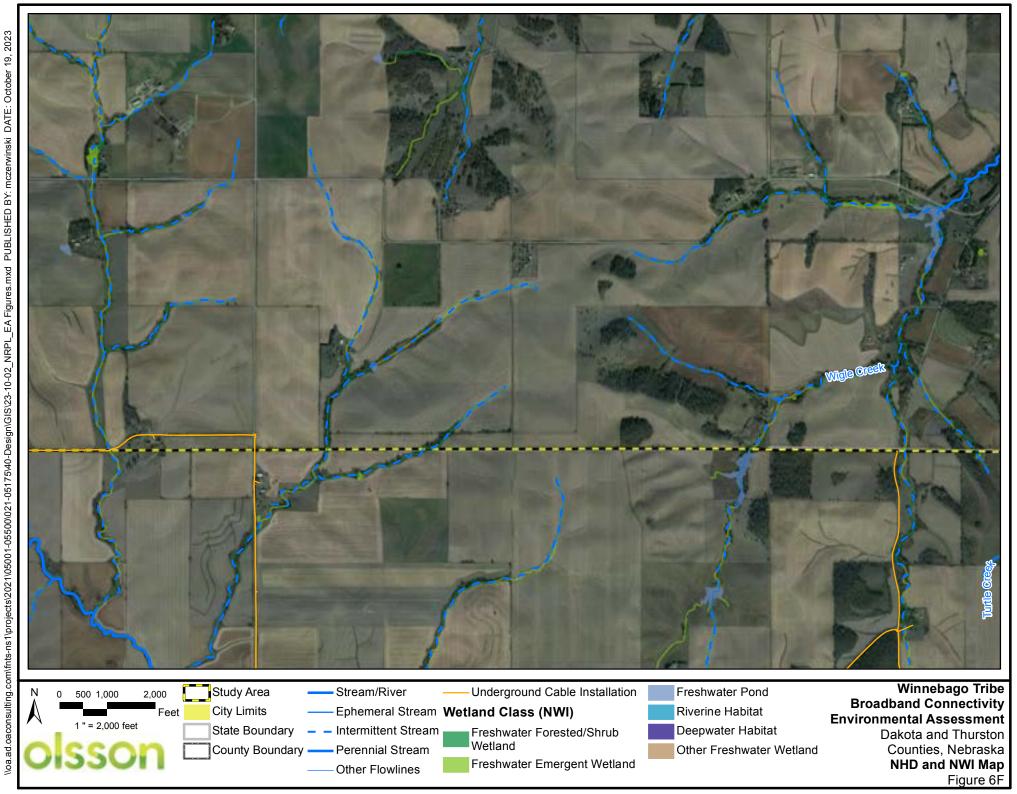
State Boundary
County Boundary
Map Index Grid

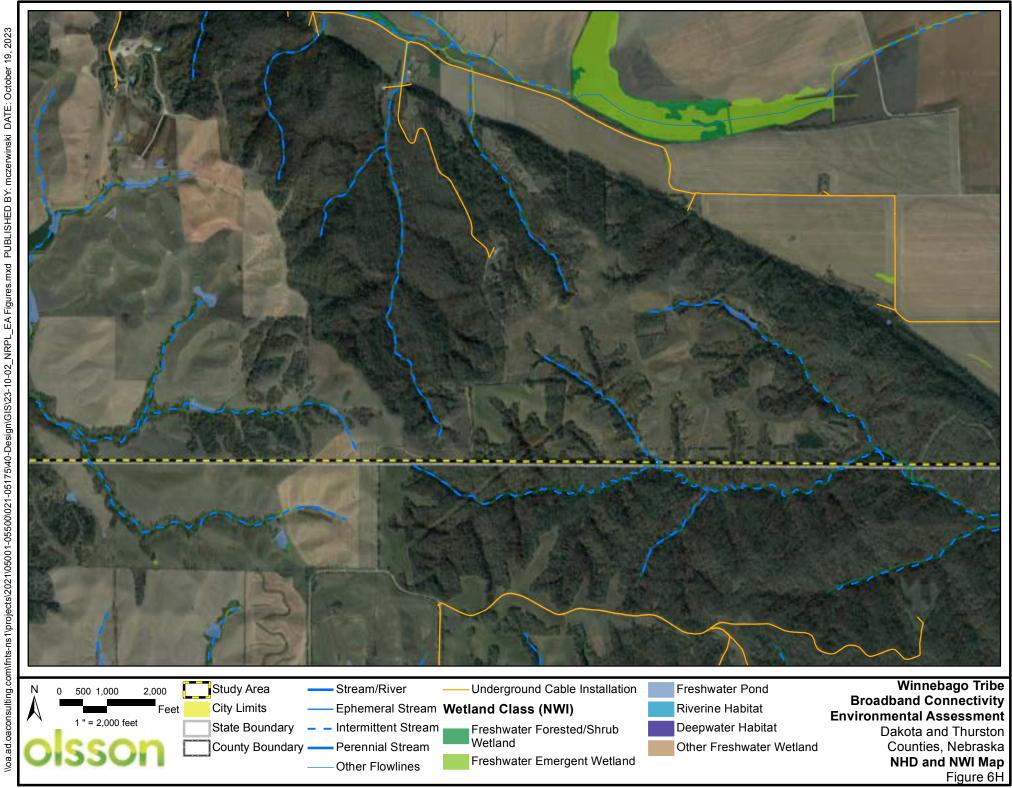
Dixon, Thurston, and Wayne Counties, Nebraska Woodbury County, Iowa

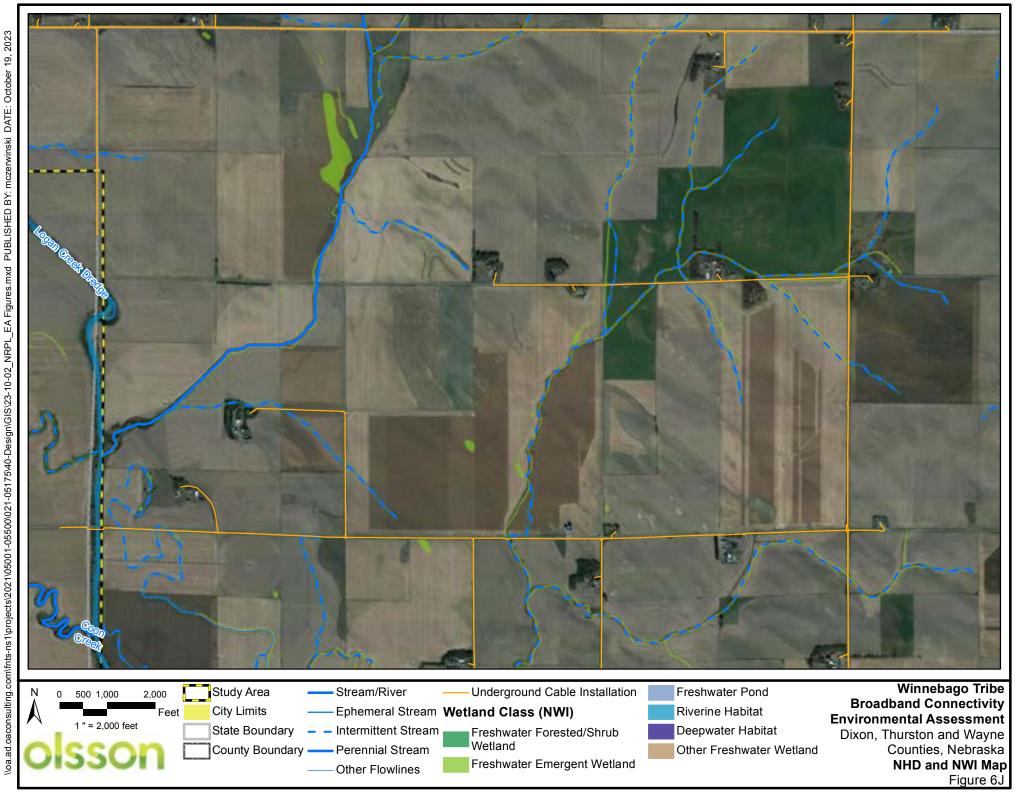
NHD and NWI Index

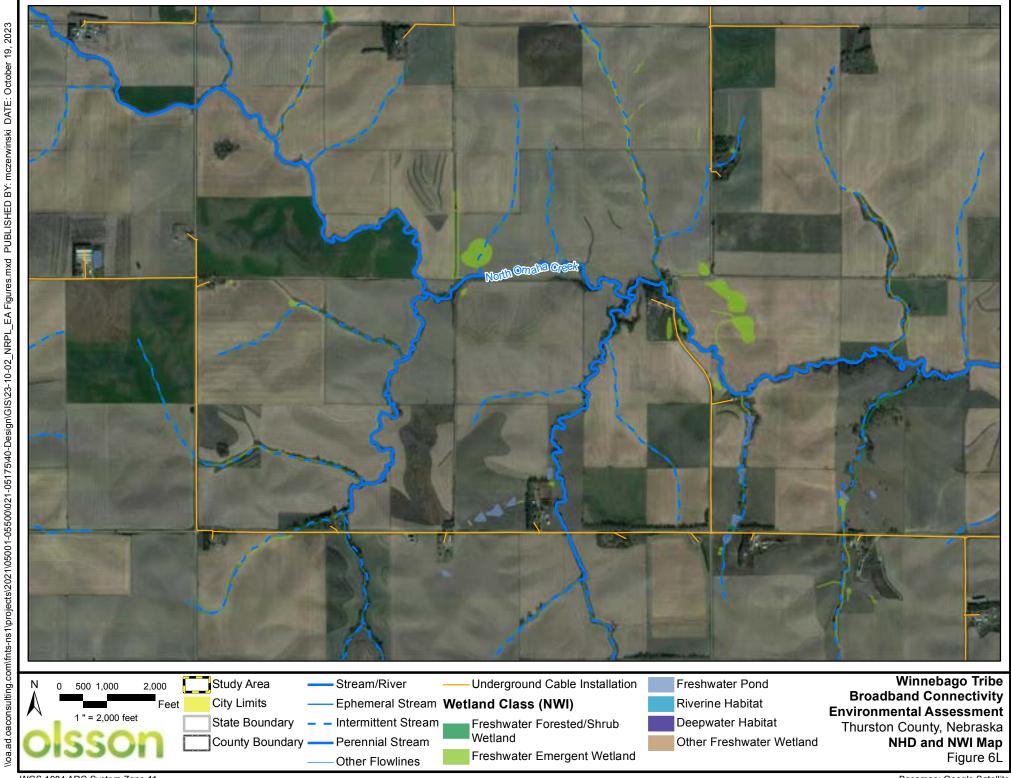
Figure 6



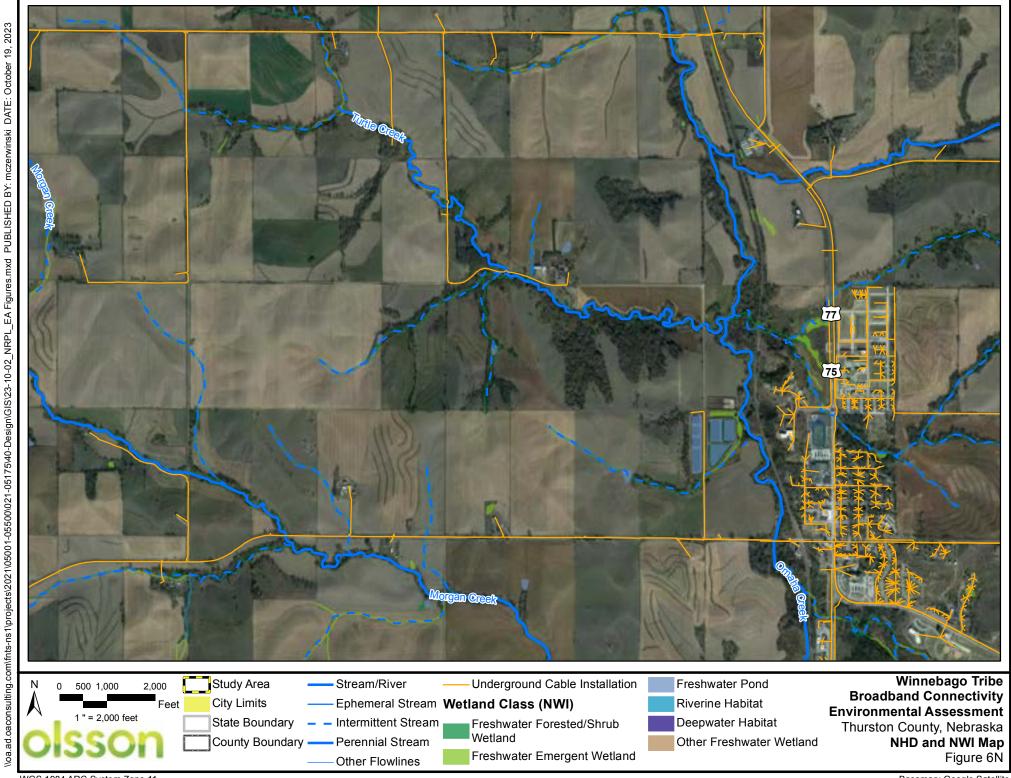


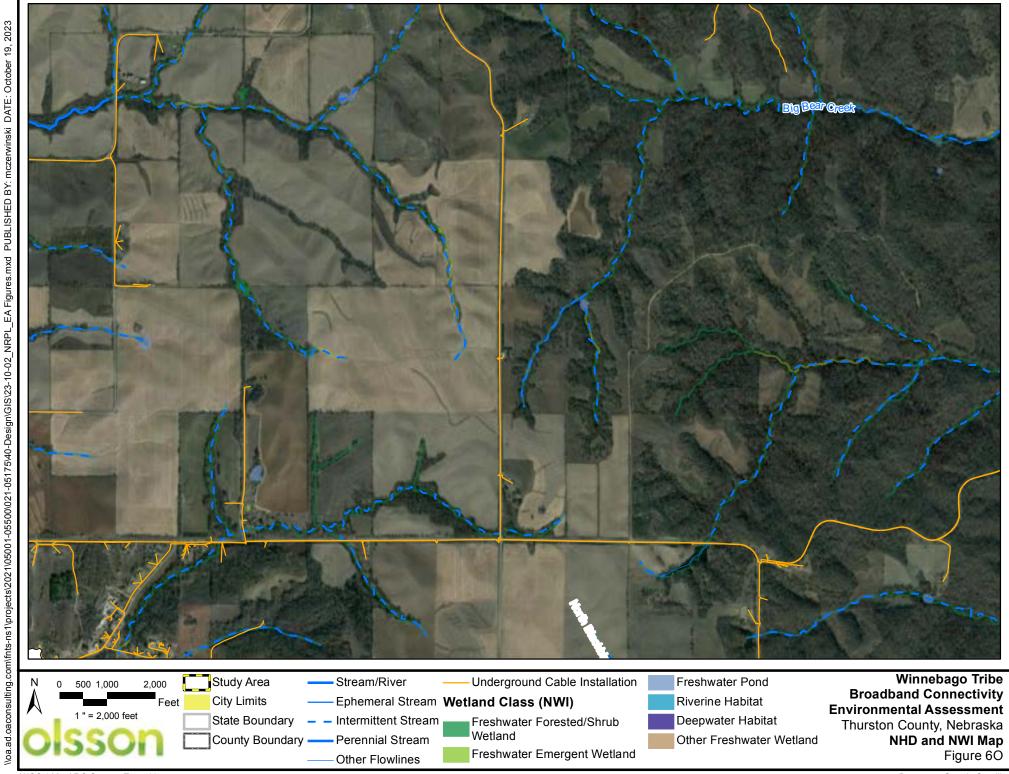


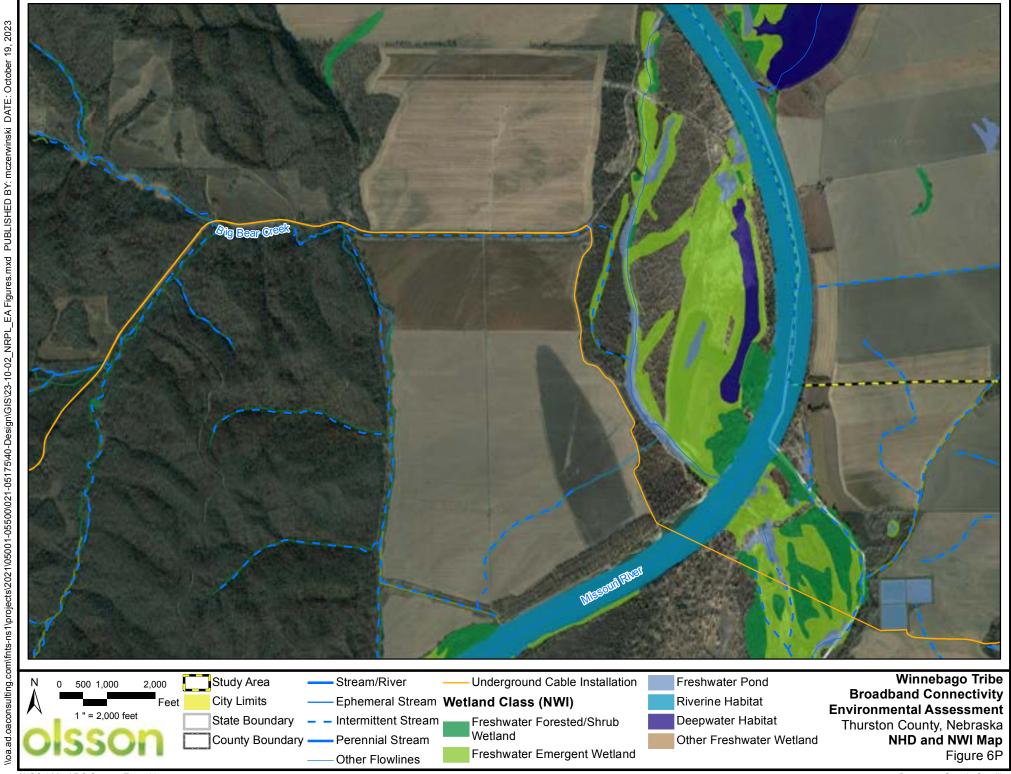


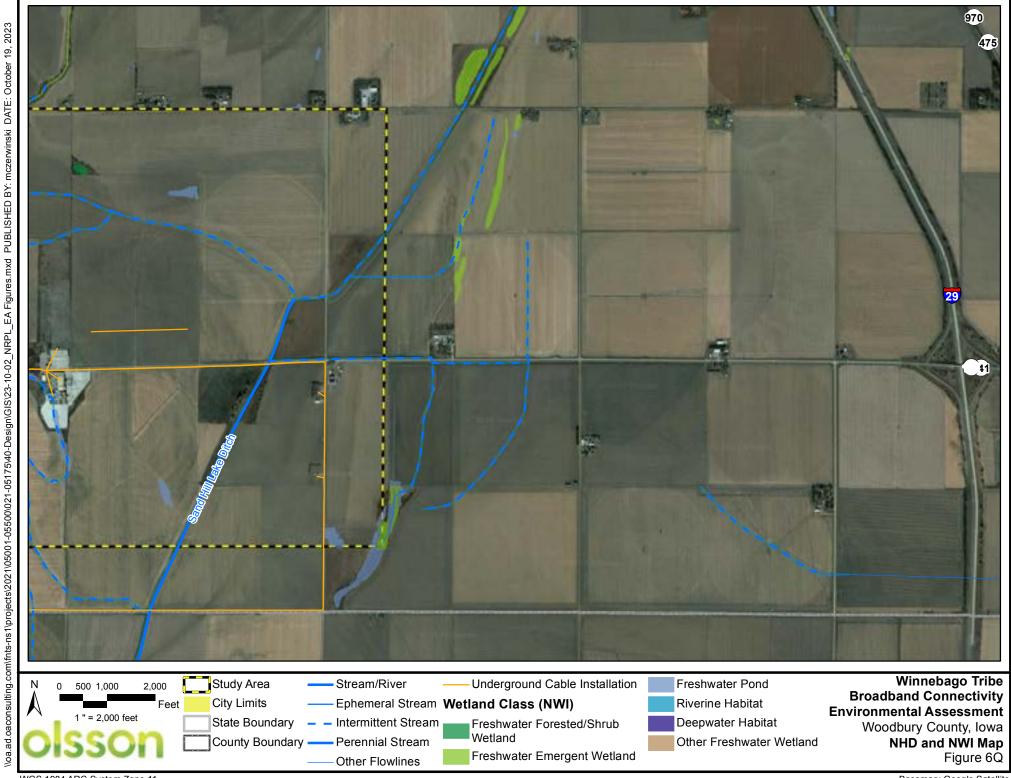


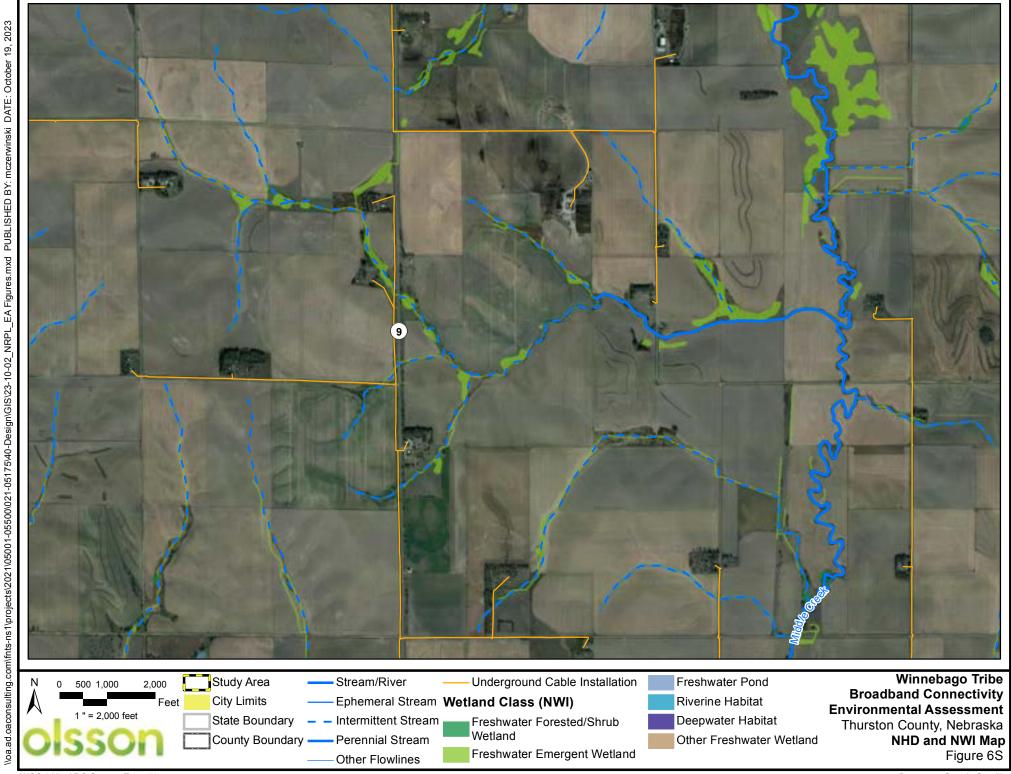


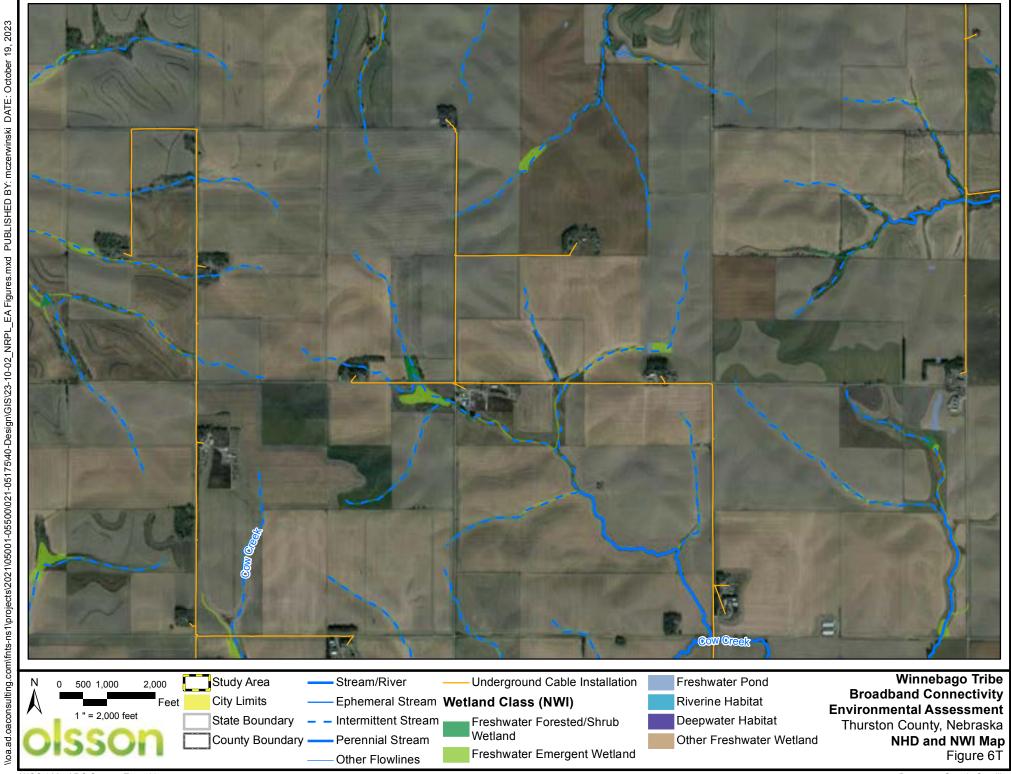


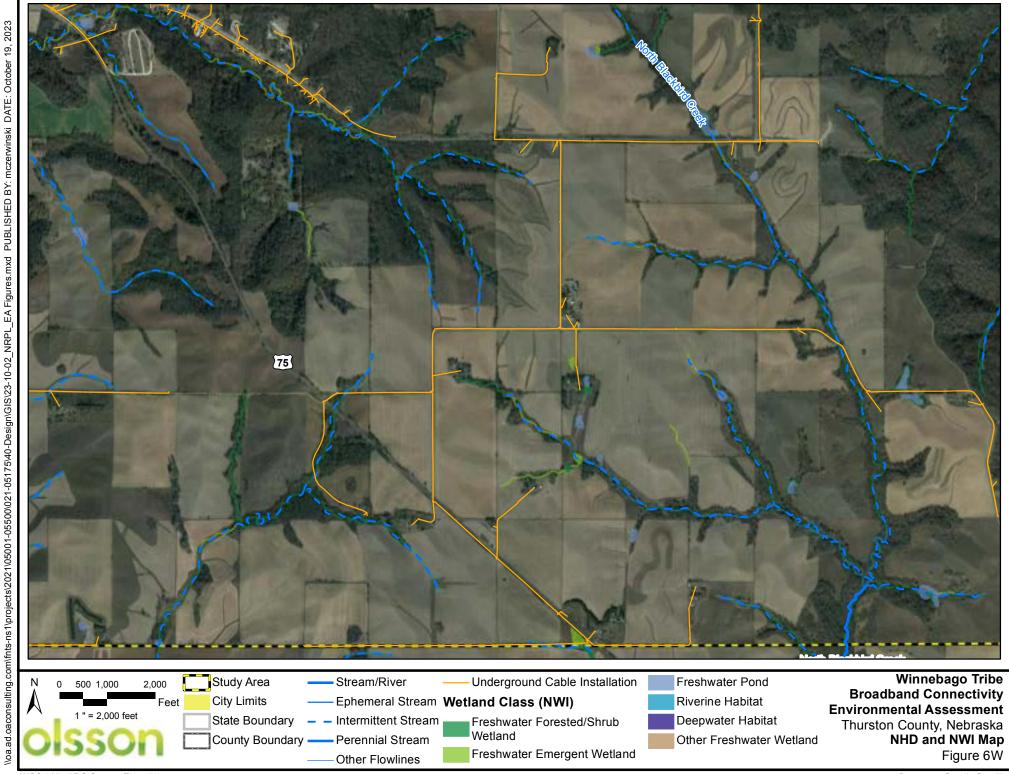


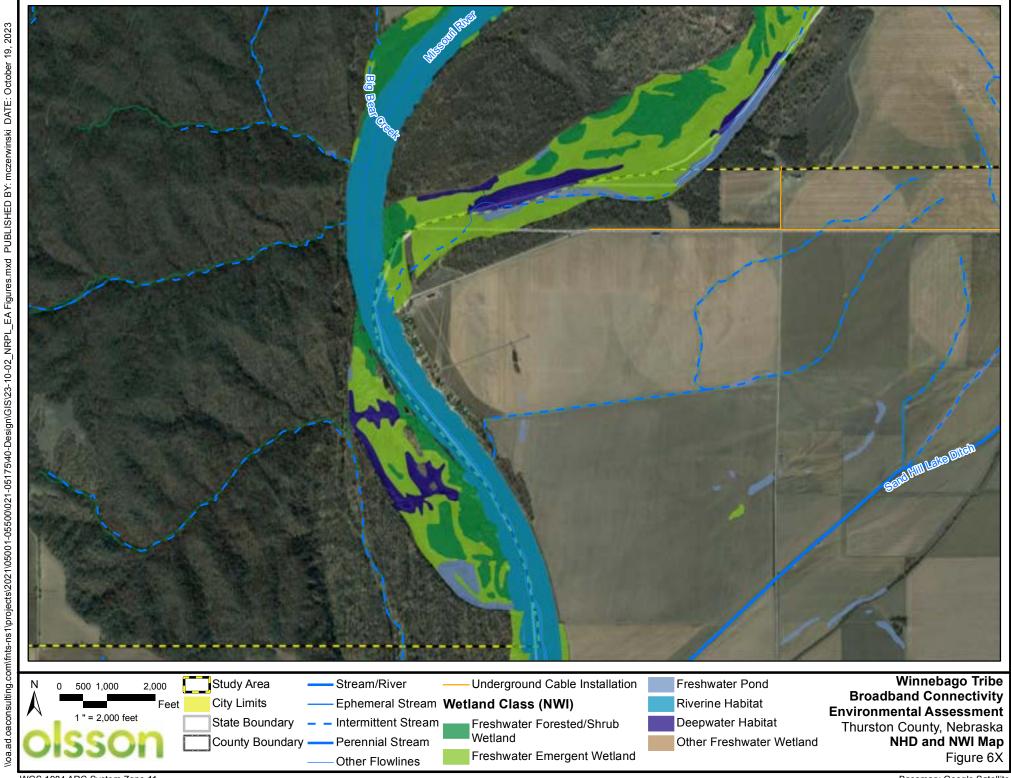


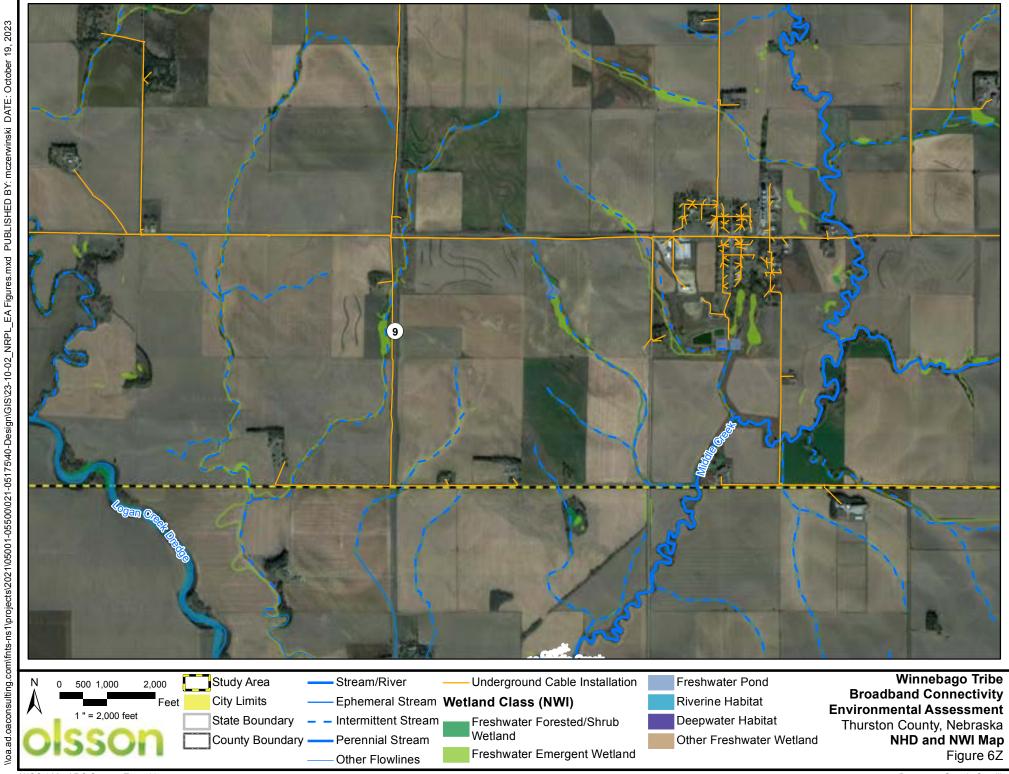


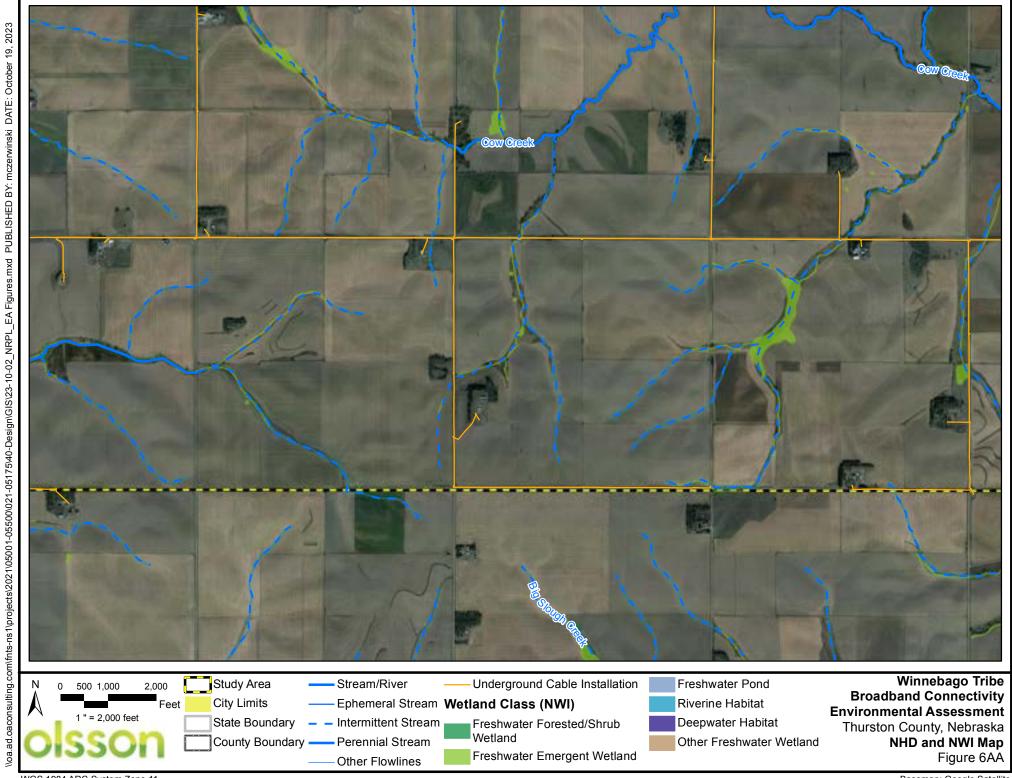












County Boundary

Map Index Grid

Study Area

City Limits

Miles

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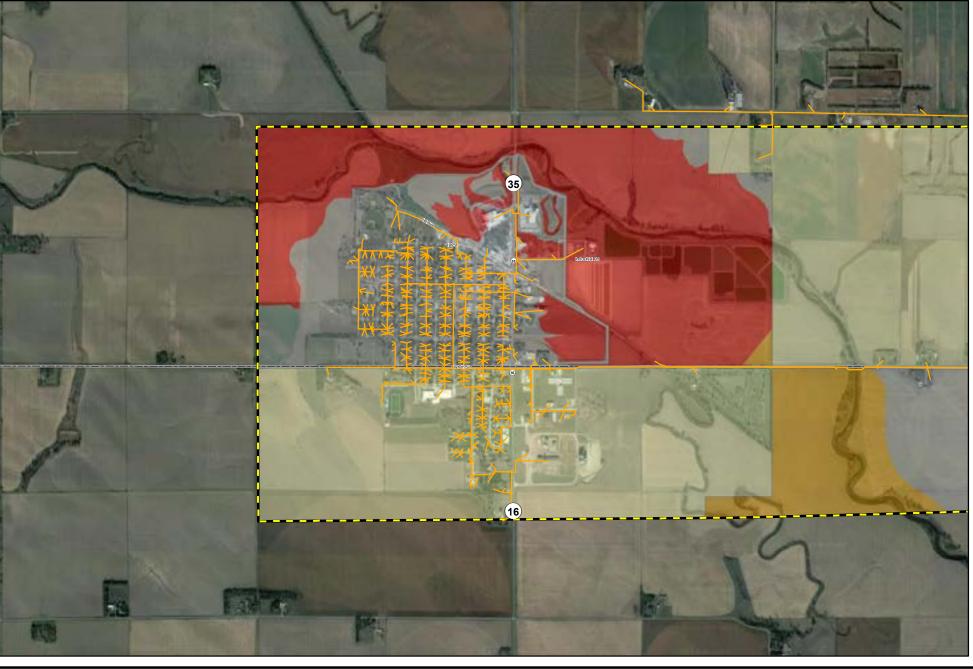
Figure 7

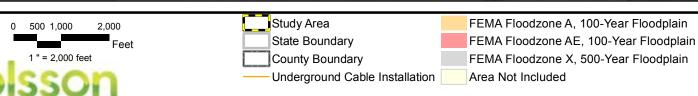
Woodbury County, Iowa

Floodplain Map Index

Dixon, Thurston, and Wayne Counties, Nebraska

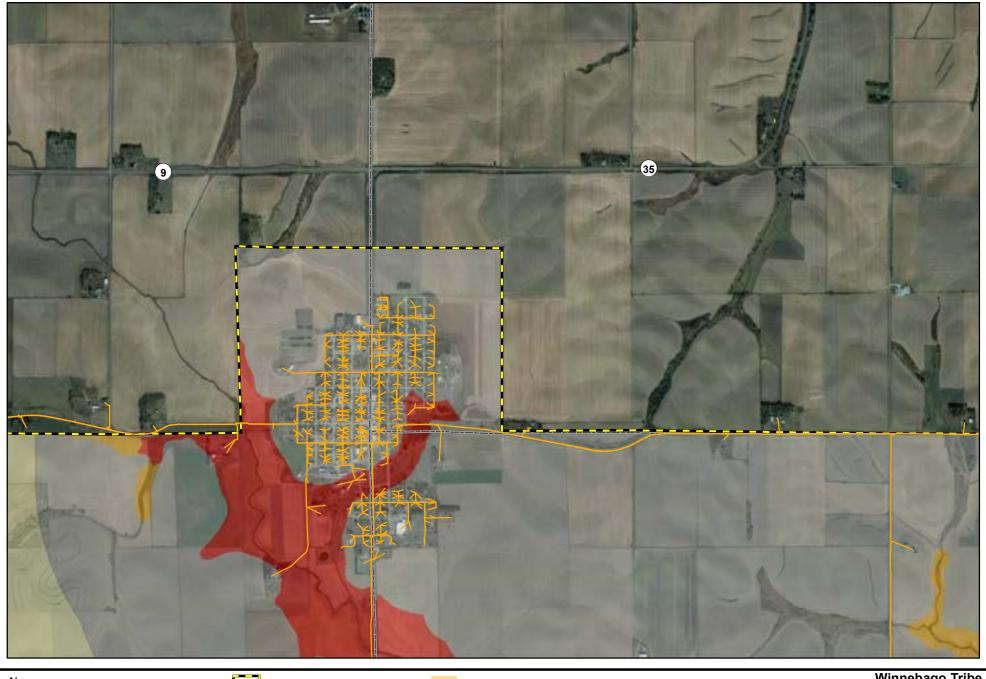
WGS 1984 ARC System Zone 11



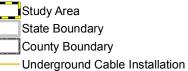


Winnebago Tribe Broadband Connectivity **Environmental Assessment** Dixon and Wayne Counties, Nebraska Floodplain Map Figure 7B

Winnebago Tribe Broadband Connectivity **Environmental Assessment** Dixon County, Nebraska Floodplain Map Figure 7C Basemap: Google Satellite



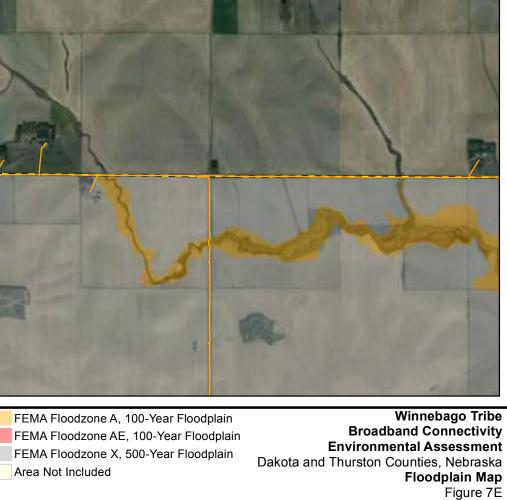




FEMA Floodzone A, 100-Year Floodplain FEMA Floodzone AE, 100-Year Floodplain FEMA Floodzone X, 500-Year Floodplain Area Not Included

Winnebago Tribe **Broadband Connectivity Environmental Assessment** Dakota, Dixon, and Thurston Counties, Nebraska Floodplain Map Figure 7D

WGS 1984 ARC System Zone 11



WGS 1984 ARC System Zone 11

Figure 7F

Figure 7G

Figure 7I

Area Not Included

Underground Cable Installation

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Floodplain Map Figure 7J Noa.ad.oaconsulting.com/ints-ns1\projects\2021\050001-05500\021-05175\40-Design\GIS\23-10-02\_NRPL\_EA Figures.mxd PUBLISHED BY: mczerwinski DATE: October 19, 2023

Figure 7K

Floodplain Map

WGS 1984 ARC System Zone 11

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Figure 7L

Figure 7M

Figure 7N

WGS 1984 ARC System Zone 11

Figure 7Q

Figure 7R

Figure 7S

Figure 7T

Figure 7U

Figure 7Y

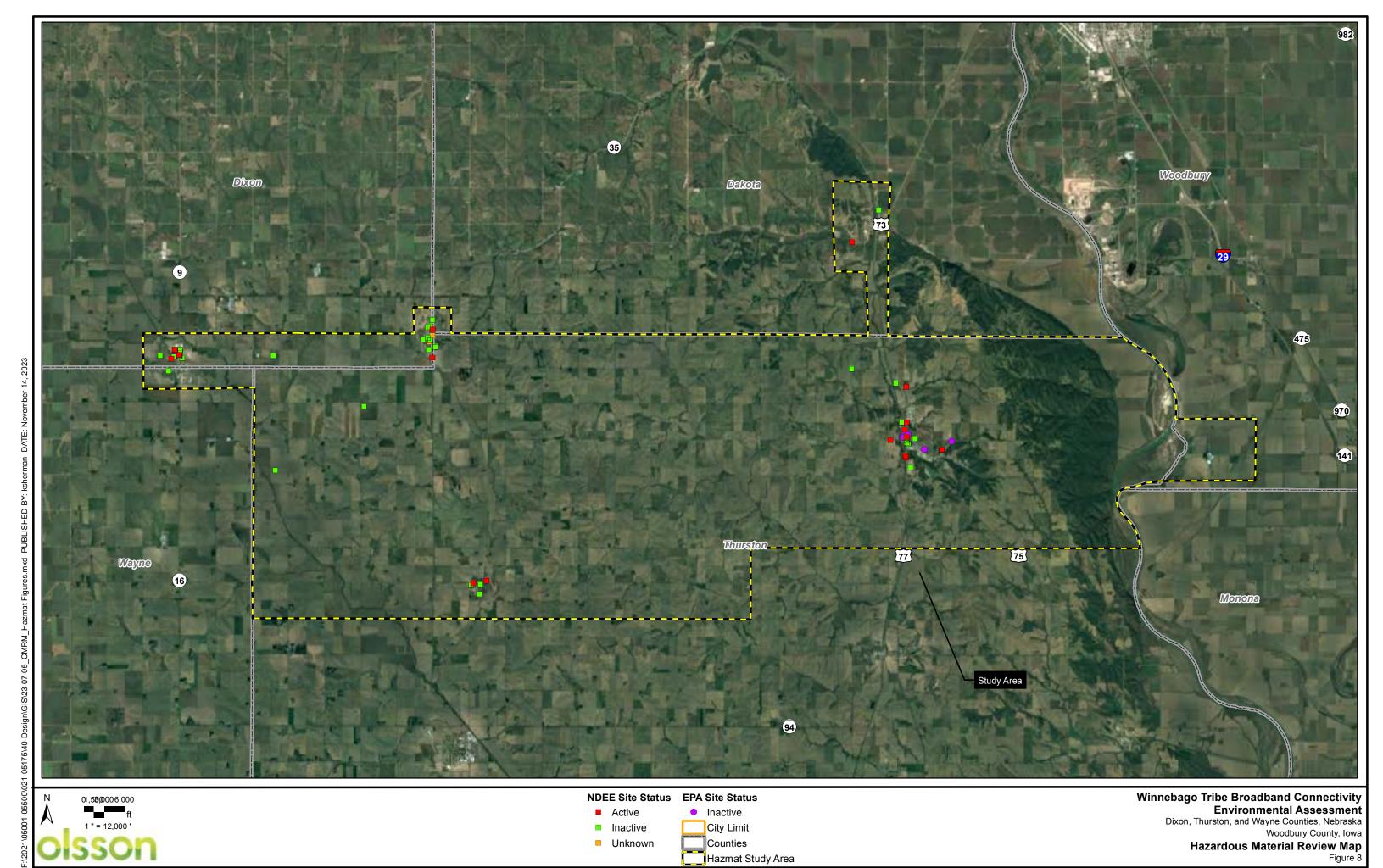
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Figure 7AA

WGS 1984 ARC System Zone 11

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Figure 7AB



WGS 1984 ARC System Zone 11

# Appendix C

Wetland Delineation/Agency Compliance

# WINNEBAGO TRIBE BROADBAND CONNECTIVITY PROJECT WETLAND DELINEATION REPORT

### PREPARED FOR:

Winnebago Tribe of Nebraska Winnebago, Nebraska

December 2023
Olsson Project No. 021-05175



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# **APPENDICES**

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Appendix D Photo Log

## 1. INTRODUCTION

Project No. 021-05175

This report documents the findings of a wetland delineation for the Winnebago Tribe Broadband Connectivity Project (Project). The Project is a broadband fiber infrastructure project. The Project is located across Dakota, Dixon, Thurston, and Wayne Counties in Nebraska and Woodbury County in Iowa. (Figures 1A-L and 2A-L, Appendix A). The Winnebago Tribe of Nebraska contracted Olsson, Inc. (Olsson) to identify and delineate wetlands, stream channels, and other waters within the proposed Project study area (Study Area). The Study Area for this report includes Staging Areas A, B, C, D, E, and F, the Wakefield Bore Sites, the North Bore Site, the South Bore Site, the Central Office Site and Alternative Location, and the Emerson Office Site. This report provides a description of the Study Area, methods used, investigation results, and a discussion of the results.

### The Study Area consists of:

- Staging Area A, approximately 26 acres located in Section 15, Township 26 North, Range 6 East in the Thurston, Nebraska Quadrangle. The geometric center of the Staging Area A is located at latitude 42.233540 degrees and longitude -96.709068 degrees.
- Staging Area B, approximately 5 acres located in Section 35, Township 27 North, Range 8 East in the Homer, Nebraska Quadrangle. The geometric center of the Staging Area B is located at latitude 42.264262 degrees and longitude -96.483658 degrees.
- Staging Area C, approximately 4 acres located in Section 12, Township 26 North, Range 8 East in the Walthill, Nebraska Quadrangle. The geometric center of the Staging Area C is located at latitude 42.235538 degrees and longitude -96.466731 degrees.
- Staging Area D, approximately 5 acres located in Section 18, Township 26 North, Range 9 East in the Walthill, Nebraska Quadrangle. The geometric center of the Staging Area A is located at latitude 42.232051 degrees and longitude -96.450191 degrees.
- Staging Area E, approximately 649 acres located in Sections 1 and 12, Township 26
  North, Range 9 East and Sections 6, 7, and 18, Township 26 North, Range 10 East in the
  Salix, Nebraska and Albaton, Iowa-Nebraska Quadrangles. The geometric center of the
  Staging Area E is located at latitude 42.241484 degrees and longitude -96.350098
  degrees.
- Staging Area F, approximately 239 acres located in Section 28 and 33, Township 86
  North, Range 47 West in the Albaton, Iowa-Nebraska Quadrangle. The geometric center
  of the Staging Area F is located at latitude 42.224327 degrees and longitude -96.316914
  degrees.
- The Wakefield Bore Sites, including seven bore points with 100-foot buffers, are located in Sections 32 and 33, Township 27 North, Range 5 East and Section 4, Township 26 North, Range 5 East in the Wakefield, Nebraska Quadrangle. Each bore point contains a 100-foot buffer around the center point.

Olsson / 1

- o Bore Point 101 is located at latitude 42.264448 and longitude -96.859325
- Bore Point 102 is located at latitude 42.264183 and longitude -96.856419
- o Bore Point 103 is located at latitude 42.270711 and longitude -96.858427
- Bore Point 104 is located at latitude 42.273748 and longitude -96.861951
- o Bore Point 105 is located at latitude 42.275534 and longitude -96.862166
- Bore Point is located at latitude 42.273477 and longitude -96.871355
- o Bore Point 107 is located at latitude 42.273147 and longitude -96.873857
- The North Bore Site, containing two bore points with 50-foot buffers, is located in Section 26, Township 29 North, Range 9 East and Section 1, Township 88 North, Range 48 West in the Sioux City South, Iowa-Nebraska-South Dakota Quadrangle.
  - The western bore point is located at latitude 42.461777 degrees and longitude -96.383915 degrees.
  - The eastern bore point is located at latitude 42.461595 degrees and longitude -96.375660 degrees.
- The South Bore Site, containing two bore points with 50-foot buffers, is located in Section 7, Township 26 North, Range 10 East and Section 28, Range 86 North, Range 47 West in the Albaton, Iowa-Nebraska Quadrangle.
  - The western bore point is located at 42.236114 latitude degrees and longitude -96.339188 degrees.
  - The eastern bore point is located at latitude 42.229677 degrees and -96.322091 longitude degrees.
- The Central Office Site and Alternative Office Site are located in Section 12, Township 26
  North, Range 8 East in the Walthill, Nebraska Quadrangle. The geometric center of the
  Central Office is located at latitude 42.245699 degrees and longitude -96.471441 degrees.
  The geometric center of the Alternative Central Office Site is located at latitude 42.235363
  degrees and longitude -96.472626 degrees.
- The Emerson Office Site is located in Section 34, Township 27 North, Range 6 East in the Emerson, Nebraska Quadrangle. The geometric center of the Emerson Office is located at latitude 42.277056 degrees and longitude -96.726490 degrees.

# 2. DESKTOP REVIEW

Olsson reviewed publicly available information to identify areas with the potential to support wetlands, streams, and other aquatic resources within the Study Area. Data sources reviewed included aerial photography (ESRI 2020; Google Earth 2022), United States Geological Survey (USGS) topographic maps (USGS 2014), U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) database (USFWS 2021), USGS National Hydrography Dataset (NHD) database (USGS 2021), U.S. Department of Agriculture (USDA) National Agricultural Imagery Program (NAIP) aerials, and Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury

County, Iowa Soil Survey data via the Soil Survey Geographic (SSURGO) database (SSURGO 2021). Data from these resources are shown on Figure 1A-L and Figure 3A-L in Appendix A. The desktop review identified areas that may have wetland indicators (e.g., mapped wetlands, areas with hydric soils, saturation visible on aerial imagery, etc.). The field investigation was not limited to or restricted to these areas identified by the desktop review. Additional points were taken for documentation of areas observed with wetland characteristics not previously identified on the desktop review.

### 2.1 USGS Topographic Maps

The Location Map (Figure 1A-L, Appendix A) indicates the relief at:

- Staging Area A is slightly sloped with elevations ranging from 1,420 feet above mean sea level (msl) in the southwest corner to 1,400 feet above msl in the northeast corner.
- Staging Area B is slightly sloped with elevations ranging from 1,160 feet above msl along the western boundary to 1,150 msl along the eastern boundary.
- Staging Area C is slightly sloped with elevations ranging from 1,260 feet above msl in the southwest corner to 1,240 feet above msl in the northeast corner.
- Staging Area D is slightly sloped with elevations ranging from 1,230 feet above msl in the northeast portion to 1,210 feet above msl in the southwest portion.
- Staging Area E is slightly sloped with elevations ranging from 1,071 feet above msl along the northern boundary to 1,064 feet above msl along the southern boundary.
- Staging Area F is slightly sloped with elevations ranging from 1,069 feet above msl within the northwest corner to 1,065 feet above msl along the eastern boundary.
- Wakefield Bore Sites
  - Slightly sloped with elevations ranging from 1,388 feet above msl at Bore Point 101 to 1,378 feet above msl at Bore Site 102
  - o Generally flat with an elevation of 1,379 feet above msl at Bore Site 103
  - Slightly sloped with elevations ranging from 1,386 feet above msl at Bore Site 105 to 1,383 feet above msl at Bore Site 104
  - Slightly sloped with elevations ranging from 1,391 feet above msl at Bore Site 107 to 1,386 feet above msl at Bore Site 106
- North Bore Site
  - Sloped with elevations ranging from 1,100 feet above msl at the western bore point to 1,160 feet above msl at the eastern bore point.
- South Bore Site
  - Generally flat with an elevation of 1,050 feet above msl on both the western and eastern bore sites of the south bore site.
- The Central Office Site is generally flat with elevations ranging from 1,180 feet above msl to 1,185 feet above msl.

• The Alternative Central Office Site is flat with elevations ranging from 1,170 feet above msl to 1,175 feet above msl.

• The Emerson Office Site is 1,473 feet above msl at the location of the existing infrastructure. The area slopes steeply to the south to 1,458 feet above msl.

The USGS topographic layer depicts one unnamed perennial stream channel extending east and west across Staging Area A. An intermittent stream channel extends from the southern boundary of Staging Area A and intersects the perennial stream channel in the eastern portion of the staging area. An intermittent stream channel crosses a small portion of Staging Area B along the southern boundary. The Missouri River, a perennial river, is located between the western and eastern bore points at the North Bore Site and South Bore Site.

### 2.2 Aerial Imagery Reviews

The Site Map (Figure 2A-L, Appendix A) shows the Study Area at:

- Staging Area A as a pastured agricultural field with a water feature surrounded by shrubs extending west to east across the area.
- Staging Area B as a monocropped agricultural field bordered on the western side by a forested area.
- Staging Area C as a monocropped agricultural field.
- Staging Area D as a monocropped agricultural field bordered on the eastern side by a forested area.
- Staging Area E as a monocropped agricultural field.
- Staging Area F as a monocropped agricultural field.
- Wakefield Bore Sites
  - o 101 Bore Point as a roadside ditch on the north side of 858th Road.
  - o 102 Bore Point as a roadside ditch on the south side of 858th Road.
  - 103 Bore Point as a vegetated field northwest of the intersection of Industrial Road and a paved walking trail along a levee.
  - 104 Bore Point as a roadside ditch on the east side of Nebraska Highway 35.
  - 105 Bore Point as a roadside ditch on the west side of Nebraska Highway 35.
  - 106 Bore Point as a gravel road (West 1st Avenue) south of a residential house.
  - 107 Bore Point as a gravel parking lot next to a baseball field.
- North Bore Site
  - Western Bore Point as a grassy area southeast of the intersection of 29th Street and Aspen Plaza.
  - Eastern Bore Point as a grassy area located east of South Lewis Boulevard.
- South Bore Site

 Western Bore Point as an agricultural field bordered by forest on the southern and eastern edges.

- Eastern Bore Point as a grassy area bordered by forest along the western edge of the area.
- Central Office Site, located southeast of the intersection of Elk Street and Buffalo Trail, as a vacant grassy field with a building abutting the area to the south.
- Alternative Central Office site, located southwest of the intersection of Bluff Street and West Mercer Street, as a gravel/patchy grass parking lot with a building on the west edge of the area.
- Emerson Office Site, located directly east of Nebraska Highway 9 and directly south of Warnock Street, as an existing building with a parking lot to the north and vacant grassy area to the south.

### 2.3 NWI and NHD Databases

On the Natural Resources Map (Figure 3A-L, Appendix A), the NHD and NWI depict the following within the Study Area:

- In Staging Area A, the NHD depicts one unnamed perennial channel extending west and east across Staging Area A and one unnamed intermittent channel which flows into the perennial channel near the eastern boundary of Staging Area A. The NWI depicts one freshwater forested/shrub wetland extending from the eastern boundary toward the western boundary where it transitions into a freshwater emergent wetland. These two wetlands are concurrent with the NHD perennial channel depiction. An NWI riverine habitat is also depicted extending south from the freshwater forested/shrub wetland near the eastern boundary of the staging area. The riverine habitat continues to the southern boundary of the Study Area and is concurrent with the intermittent channel depicted by the NHD.
- In Staging Area B, the NHD depicts one intermittent stream intersecting the small protruding section of the staging area along the southern boundary.
- In Staging Area E, the NHD depicts one intermittent stream extending northeast from the southern boundary terminating in the southeast corner of the staging area. The NWI depicts one riverine habitat consistent with the NHD depiction; however, the riverine habitat extends from the southern boundary to the eastern boundary of the staging area.
- In Staging Area F, the NHD depicts an intermittent stream extending southeast from the
  northern boundary and diverging into two intermittent steams within the southeast corner
  of the staging area. A small intermittent channel extends from the southern boundary. The
  NWI depicts riverine habitats consistent with all the NHD depictions. Near the divergence
  of the intermittent stream, the NWI depicts a freshwater pond.

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The NHD and NWI do not depict any features within Staging Areas C and D, the buffer zones at the Wakefield Bore Sites, the North Bore Site, the South Bore Site, the Central Office Site, Alternative Central Office Site, or the Emerson Office Site.

### 2.4 SSURGO Database

The Natural Resources Map (Figure 3A-L, Appendix A) identified the following SSURGO soil map units within the Study Area:

#### Staging Area A:

- 3518—Lamo silty clay loam, 0 to 2 percent slopes, occasionally flooded, 100 percent hydric rating
- 6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating
- 6813—Moody silty clay loam, 6 to 11 percent slopes, non-hydric rating
- 6814—Moody silty clay loam, 6 to 11 percent slopes eroded, non-hydric rating
- 7153—Kennebec silt loam, 0 to 3 percent slopes, rarely flooded, 2 percent hydric rating
- 7716—McPaul silt loam, occasionally flooded, 2 percent hydric rating
- 7770—Colo silty clay loam, occasionally flooded, 100 percent hydric rating
- 7788—Luton silty clay loam, rarely flooded, 100 percent hydric rating

## Staging Area B

- 6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating
- 7053—Kennebec silt loam, 0 to 3 percent slopes, occasionally flooded, overwash, 12 percent hydric rating

#### Staging Area C

- 6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating
- 8006—Ida silt loam, 11 to 17 percent slopes, eroded, non-hydric rating
- 8067—Monona silt loam, 1 to 6 percent slopes, non-hydric rating
- 8071—Monona silt loam, 11 to 17 percent slopes, non-hydric rating
- 8078—Monona silt loam, 6 to 11 percent slopes, non-hydric rating

#### Staging Area D

- 6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating
- 7716—McPaul silt loam, occasionally flooded, 2 percent hydric rating

#### Staging Area E

- 7710—Albaton silty clay, 0 to 2 percent slopes, occasionally flooded, 90 percent hydric rating
- 7744—Haynie silt loam, deep loess, 0 to 2 percent slopes, rarely flooded, non-hydric rating
- 7856—Sarpy soils, occasionally flooded, non-hydric rating
- 7876—Onawa and Haynie soils, occasionally flooded, non-hydric rating
- 7880—Onawa silty clay, occasionally flooded, non-hydric rating
- 7889—Onawet silty clay loam, frequently flooded, 100 percent hydric rating

#### Staging Area F

- 1146—Onawa silty clay, 0 to 2 percent slopes, occasionally flooded, 5 percent hydric rating
- 1237B—Sarpy loamy fine sand, 2 to 5 percent slopes, occasionally flooded, non-hydric rating
- 1238—Sarpy-Morconick complex, 0 to 2 percent slopes, occasionally flooded, non-hydric rating
- 1513—Grable-Morconick complex, 0 to 2 percent slopes, occasionally flooded, non-hydric rating
- 1524—Morconick fine sandy loam, 0 to 2 percent slopes, occasionally flooded, 5 percent hydric rating
- 2515—Percival-Albaton complex, 0 to 2 percent slopes, occasionally flooded, 32 percent hydric rating

#### **Wakefield Bore Sites**

#### Bore Point 101

o 6811—Moody silty clay loam, 2 to 6 percent slopes, 3 percent hydric rating

#### Bore Point 102

 7099—Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded, 91 percent hydric rating

#### Bore Point 103

- 7099—Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded, 91 percent hydric rating
- 7153—Kennebec silt loam, 0 to 3 percent slopes, rarely flooded, 2 percent hydric rating

#### Bore Point 104

 7153—Kennebec silt loam, 0 to 3 percent slopes, rarely flooded, 2 percent hydric rating

#### Bore Point 105

 7153—Kennebec silt loam, 0 to 3 percent slopes, rarely flooded, 2 percent hydric rating

#### Bore Point 106

6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating

#### • Bore Point 107

6603—Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating

#### **Northern Bore Site**

#### • Western Bore Point

7880—Onawa silty clay, occasionally flooded, 2 percent hydric rating

#### Eastern Bore Point

- o 1E3—Ida silt loam, 14 to 20 percent slopes, severely eroded, non-hydric rating
- o 12C—Napier silt loam, 5 to 9 percent slopes, non-hydric rating

#### **Southern Bore Site**

#### Western Bore Point

7880—Onawa silty clay, occasionally flooded, non-hydric rating

#### • Eastern Bore Point

- 1237B—Sarpy loamy fine sand, 2 to 5 percent slopes, occasionally flooded, nonhydric rating
- 1238—Sarpy-Morconick complex, 0 to 2 percent slopes, occasionally flooded, non-hydric rating

#### **Central Office Site**

- 7053—Kennebec silt loam, 0 to 3 percent slopes, occasionally flooded, overwash, 12 percent hydric rating
- 8010—Ida silt loam, 6 to 11 percent slopes, eroded, non-hydric rating
- 8079—Monona silt loam, 6 to 11 percent slopes, eroded, non-hydric rating

#### **Alternative Central Office Site**

- 6603— Alcester silty clay loam, 2 to 6 percent slopes, 1 percent hydric rating
- 7153—Kennebec silt loam, 0 to 3 percent slopes, rarely flooded, 2 percent hydric rating

#### **Emerson Office Site**

• 6750—Nora silt loam, 11 to 17 percent slopes, eroded, non-hydric rating

The hydric percentage indicates what percentage of the soil map unit meets the criteria for hydric soils, which may indicate wetland conditions.

# 2.5 Climate Analysis for Wetlands Tables

To identify potential wetland areas in farmed fields, methods identified in the USDA Natural Resources Conservation Service Part 650 Engineering Field Handbook, Chapter 19 – Hydrology Tools for Wetland Identification and Analysis (USDA NRCS 2012) were used. As part of the analysis, Climate Analysis for Wetlands Tables (WETS Tables) were completed to determine in which years NAIP aerials were taken during "normal" precipitation periods. The NAIP aerials for "normal" years were then reviewed for signs of wetland hydrology in the agricultural fields (Appendix B). Possible hydrology indicators such as saturation and inundation were then outlined and overlaid on each other. Areas where these outlines overlapped in a majority of the years were identified as Final WETS in Appendix B. The Final WETS identified during the analysis represent

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potential boundaries of farmed wetland locations based on wetland characteristics observable on NAIP aerial imagery. WETS Tables analyses were completed for Staging Areas A, B, C, D, E, and F, and Wakefield Bore Sites 101 and 102. The WETS analysis for Staging Area E also includes the western bore point of the South Bore Site. Wakefield Bore Points 101 and 102 do not contain any WETS Areas; therefore, the Combined WETS Maps and Final WETS Maps do not contain any WETS or Final WETS Areas. In 2011, Staging Area F experienced a major flood event. Although this year was considered "normal", the flood significantly affected the ability to detect signs of wetland hydrology; therefore, these signatures were not included to determine the Final WETS Map.

# 3. FIELD INVESTIGATION METHODS

Olsson staff visited the Study Area on July 11, 12, 13, 19, 26, August 1, and November 8, 2023, to complete the wetland delineation field investigation. The wetland delineation followed methodology described in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE 2010). All conditions described represent conditions at the time of the field investigation. U.S. Army Corps of Engineers Wetland Determination Data Forms are included in Appendix C. Photographs were taken during the visit and are shown in Appendix D. Sample point locations, photo locations, and delineated water features are shown on Figure 4A-L, Appendix A.

# 4. RESULTS

#### **Wetlands and Other Waters**

A total of nine water features were delineated within the Study Area. Two PEMA/C wetlands, Wetlands 4 and 6, were identified along the channel (Channel 4) within Staging Area A. Five PEMA/C wetlands, Wetlands 16, 17, 18, 23, and 25, were identified within the low-laying areas in agricultural fields in Staging Area E. One PEMA/C wetland, Wetland 42, was identified within the buffer zone of Wakefield Bore Point 104. One PEMA/C wetland, Wetland 50, was identified at the central office location in the town of Winnebago.

Table 1 summarizes the wetlands and other waters delineated within the Study Area.

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Table 1. Delineated Wetlands and Other Waters.

Feature ID	Sample Point(s)	Cowardin Classification* Photograph		Figure(s)	Size (Acres)
Wetland 4	4	PEMA/C	4a, 4b	4A	0.96
Wetland 6	6	PEMA/C	6	4A	0.19
Wetland 16	16	PEMA/C	16	4E	0.08
Wetland 17	17	PEMA/C	17	4E	0.09
Wetland 18	18	PEMA/C	18	4E	0.02
Wetland 23	23	PEMA/C	23	4E	0.05
Wetland 25	25	PEMA/C	25	4E	0.61
Wetland 42	42	PEMA/C	42	4G	0.04
Wetland 50	50	PEMA/C	50	4J	0.04
TOTAL		PEMA/C	2.08		

PEMA/C = Palustrine Emergent Temporarily Flooded / Seasonally Flooded (Cowardin et al. 1979)

#### **Stream Channels**

One intermittent channel was identified flows west to east across Staging Area A and continues outside of the Study Area. Table 2 summarizes the stream channels identified within the Study Area.

Table 2. Delineated Streams.

Feature ID	Sample Point(s)	Flow Type	Photograph(s)	Figure(s)	OHWM* Width (Feet)	Length (Linear Feet)/Acres
Channel 4	4	Intermittent	4a, 4b	4A	2	1,550/0.04
TOTAL	1,550/0.04					

<sup>\*</sup>OHWM – ordinary high-water mark

# 5. DISCUSSION

Wetlands 4 and 6 were identified as PEMA/C fringe wetlands located along the banks of Channel 4, a two-foot-wide intermittent channel in Staging Area A. Due to the surface connection of Wetlands 4 and 6 to Channel 4, these wetlands may be considered jurisdictional under the Section 404 of the Clean Water Act. Five wetlands, Wetlands 16, 17, 18, 23, and 25, were isolated PEMA/C wetlands associated with low-laying areas within agricultural fields in Staging Area E. One wetland, Wetland 42, was associated with a low-laying area within a roadside ditch at

Wakefield Bore Point 104. Wetland 50 was associated with a low-laying area at the Central Office Site.

Climatic conditions were not typical at the Sample Points (SP) taken on July 12, 13, 19, 26, and August 1, 2023, due to recent heavy rainfall events.

Sample Points (SP) 3, 12, 13, 20, 33, and 34 were identified during the WETS analysis as potential wetlands. These areas contained hydric soils but lacked dominant hydrophytic vegetation and sufficient wetland hydrology and were considered to be upland.

SP 10 was identified during the WETS analysis as a potential wetland. This area contained dominant hydrophytic vegetation but lacked hydric soils and sufficient wetland hydrology and was considered upland.

SP 19 was identified during the WETS analysis as a potential wetland. This area contained sufficient wetland hydrology but lacked dominant hydrophytic vegetation and hydric soil and was considered upland.

SPs 5, 11, 14, 21, 22, 24, 26, 27, 28, 29, 31, 32, 35, and 36 were identified during the WETS analysis as potential wetlands. However, these areas lacked all three wetland indicators and were considered upland.

SPs 17 and 18 do not contain vegetation due to farming practices; however, with the presence of hydric soils and sufficient wetland hydrology, it is likely vegetation would be hydrophytic in the absence of farming practices. These areas were considered wetlands.

SPs 19, 22, 24, 26, 27, 28, 29, 30, 31, 32, 35, 36, 37, and 48 do not contain vegetation due to farming practices. However, with the lack of hydric soils and sufficient wetland hydrology, it is unlikely vegetation would be hydrophytic in the absence of farming practices. These areas were considered upland.

SP 34 does not contain vegetation due to farming practices. This SP contained hydric soil; however, with the lack of sufficient wetland hydrology, it is unlikely vegetation would be hydrophytic in the absence of farming practices.

SP 45 contains vegetation that is significantly disturbed due to development and is not present. However, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely vegetation would be hydrophytic. This area was considered upland.

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SP 50 lacked dominant hydrophytic vegetation, but hydric soils and sufficient wetland hydrology were observed. This area was considered a wetland.

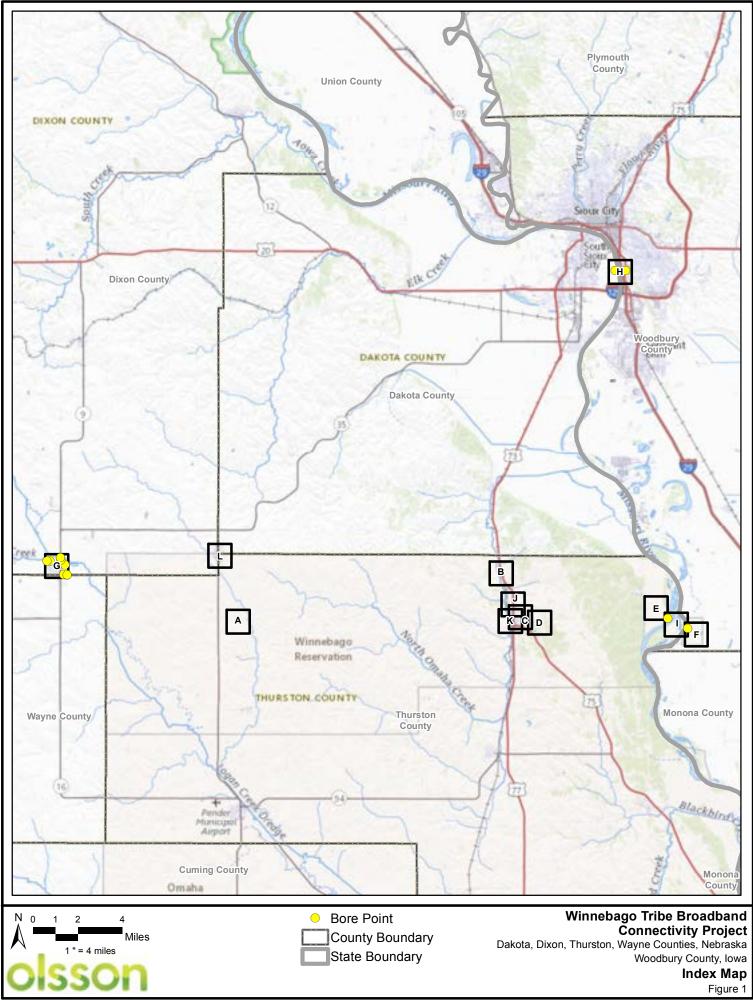
This report has been prepared for the use of the Winnebago Tribe of Nebraska. It is intended for specific application to the proposed project and has been produced in accordance with generally accepted practices. If any changes occur within the Study Area, or regarding previously outlined methodologies or regulations, the information in this report cannot be considered valid unless it has been further reviewed and verified by Olsson.

# 6. REFERENCES

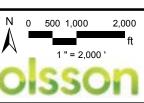
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# **APPENDIX A**

Figures



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Winnebago Tribe Broadband Connectivity Project Staging Area B Delineation

Thurston County, Nebraska

**Location Map** Figure 1B

Winnebago Tribe Broadband Connectivity Project **Staging Area C Delineation** 

Thurston County, Nebraska

**Location Map** Figure 1C

Staging Area D Delineation Thurston County, Nebraska **Location Map** Figure 1D

Thurston County, Nebraska **Location Map** Figure 1E

Figure 1F

**Location Map** Figure 1G

Dixon and Wayne Counties, Nebraska



Bore Point

Winnebago Tribe Broadband Connectivity Project **North Bore Site Delineation** 

Dakota County, Nebraska Woodbury County, Iowa

**Location Map** Figure 1H

Olsson Project # 021-05175

**Connectivity Project** South Bore Site Delineation

Thurston County, Nebraska Woodbury County, Iowa

**Location Map** 

Figure 11



Winnebago, Thurston County, Nebraska

**Location Map** Figure 1J

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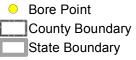


**Emerson Office Delineation** 

Emerson, Thurston County, Nebraska

**Location Map** Figure 1L



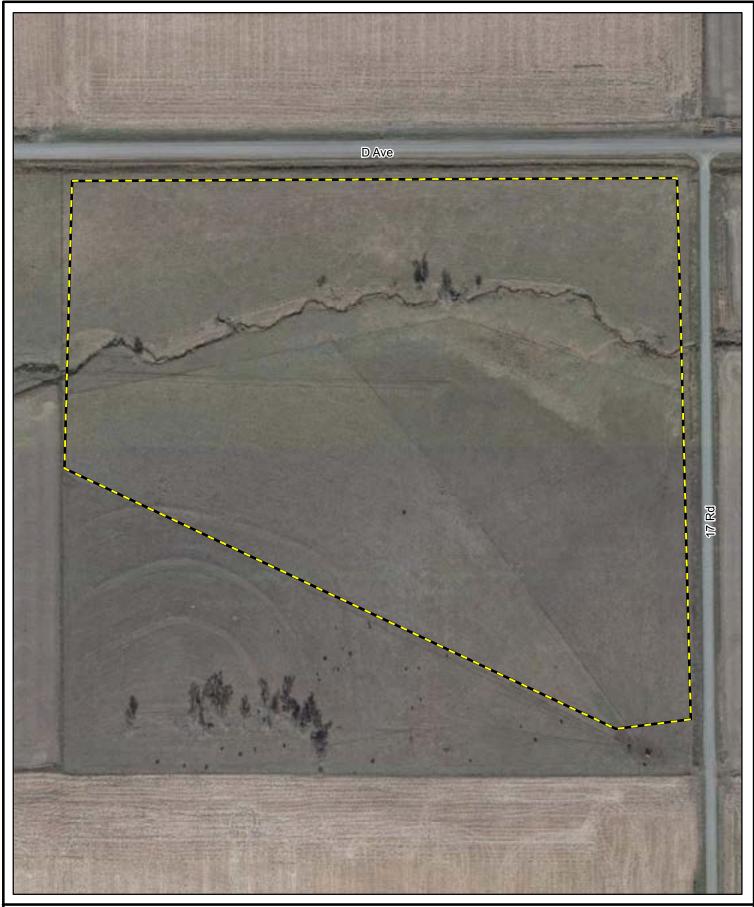


Woodbury County, Iowa

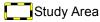
**Index Map** 

Figure 2 Basemap: Google Satellite

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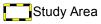
Winnebago Tribe Broadband Connectivity Project Staging Area A Delineation

Thurston County, Nebraska

Site Map Figure 2A

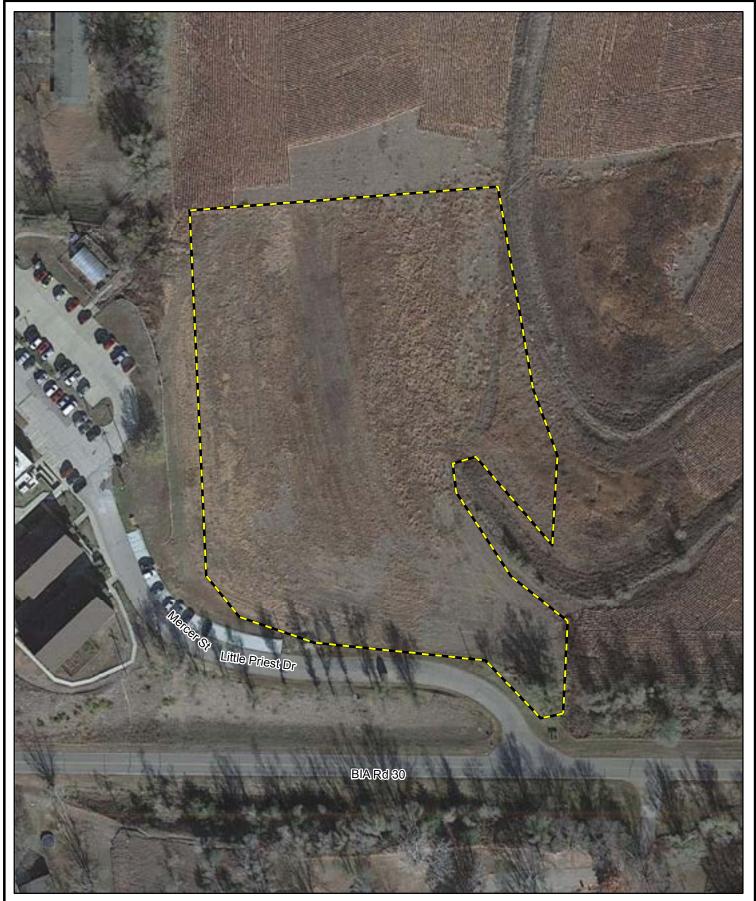




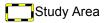


Winnebago Tribe Broadband Connectivity Project Staging Area B Delineation Thurston County, Nebraska

Site Map Figure 2B







Winnebago Tribe Broadband Connectivity Project Staging Area C Delineation

Thurston County, Nebraska

Site Map Figure 2C





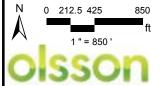


Winnebago Tribe Broadband Connectivity Project Staging Area D Delineation

Thurston County, Nebraska

Site Map Figure 2D





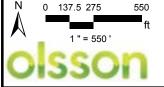
Study Area

Winnebago Tribe Broadband Connectivity Project Staging Area E Delineation

Thurston County, Nebraska

Site Map Figure 2E





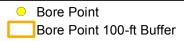


Winnebago Tribe Broadband Connectivity Project Staging Area F Delineation Woodbury County, Iowa

Site Map Figure 2F







Winnebago Tribe Broadband Connectivity Project Wakefield Bore Sites Delineation

Wakefield, Dixon and Wayne Counties, Nebraska

**Site Map** Figure 2G

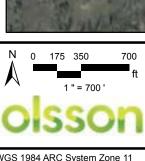




**Bore Point** Bore Point 50-ft Buffer Winnebago Tribe Broadband Connectivity Project North Bore Site Delineation Dakota County, Nebraska

Woodbury County, Iowa

Site Map Figure 2H



Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-08-07\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 17, 2023

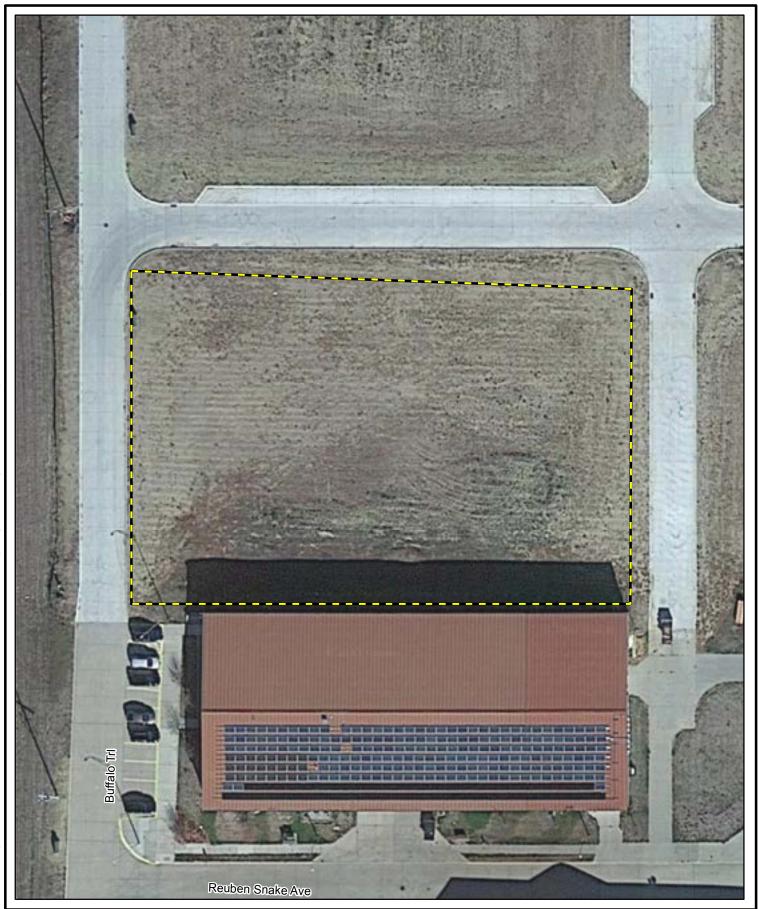
Bore Point 50-ft Buffer

Winnebago Tribe Broadband Connectivity Project South Bore Site Delineation Thurston County, Nebraska

Woodbury County, Iowa

Site Map Figure 2I

Olsson Project # 021-05175 Basemap: Google Satellite







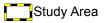
Winnebago Tribe Broadband Connectivity Project Central Office Delineation

Thurston County, Nebraska

Site Map Figure 2J





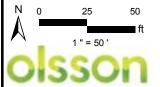


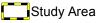
Winnebago Tribe Broadband Connectivity Project Alternate Central Office Delineation

Winnebago, Thurston County, Nebraska

Site Map Figure 2K







# Winnebago Tribe Broadband Emerson Office Delineation Thurston County, Nebraska

Olsson Project # 021-05175

Site Map Figure 2L



State Boundary

Woodbury County, Iowa

**Index Map** Figure 3

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021\050001-05500\021-05175\NTIA Tribal Broadband Connectivity Program\40-Design\GIS\GIS\GIS\GIS\GIS\GIS\GIS\LOBIneation Figures.mxd PUBLISHED BY: mczerwinski DATE: December 07, 2023

Riverine Habitat

SSURGO Soils

Thurston County, Nebraska

Natural Resources Map Figure 3A

Study Area

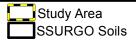
SSURGO Soils

Thurston County, Nebraska

Natural Resources Map Figure 3B







Winnebago Tribe Broadband Connectivity Project **Staging Area C Delineation** Thurston County, Nebraska
Natural Resources Map
Figure 3C

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-08-07\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 07, 2023

Freshwater Forested/Shrub Wetland

Wetland Class (NWI)

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-08-04\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 07, 2023

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-08-04\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 17, 2023

Noa.ad.oaconsulting.com/ints-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-08-07\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 17, 2023

Freshwater Emergent Wetland

Freshwater Pond

Riverine Habitat

Bore Point

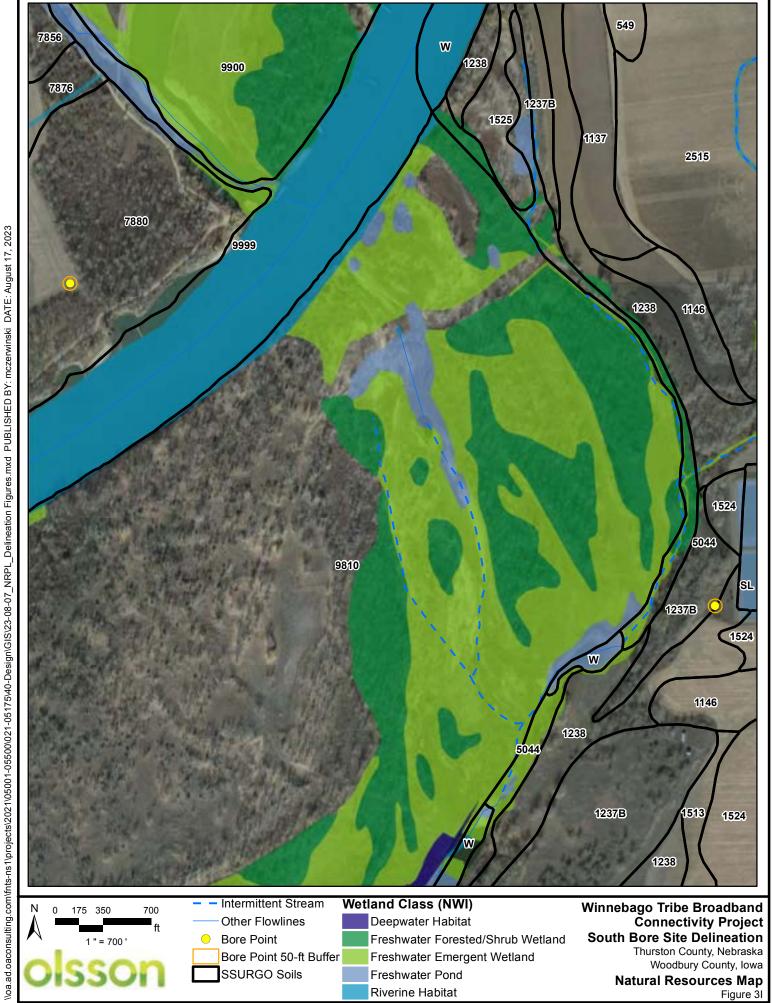
Bore Point 50-ft Buffer

SSURGO Soils

Figure 3H

Dakota County, Nebraska

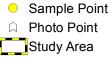
Woodbury County, Iowa
Natural Resources Map



Natural Resources Map Figure 3J

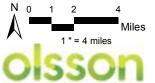
Natural Resources Map Figure 3K

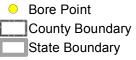




Olsson Project # 021-05175

**Delineation Map** Figure 4L





Woodbury County, Iowa

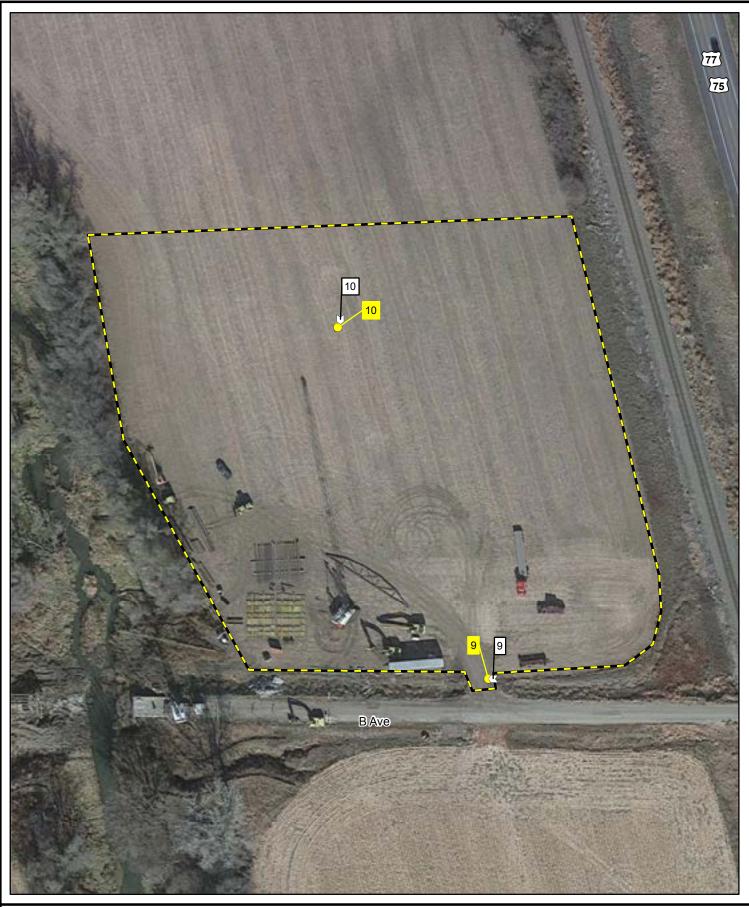
**Index Map** 

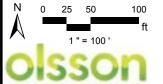
Noa.ad.oaconsulting.com/fnts-ns1/projects/2021\050001-05500\021-05175\NTIA Tribal Broadband Connectivity Program\40-Design\GIS\GIS\GIS\GIS\GIS\GIS\GIS\LOBIneation Figures.mxd PUBLISHED BY: mczerwinski DATE: December 07, 2023

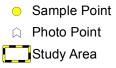
Channel

Figure 4A

Thurston County, Nebraska **Delineation Map** 



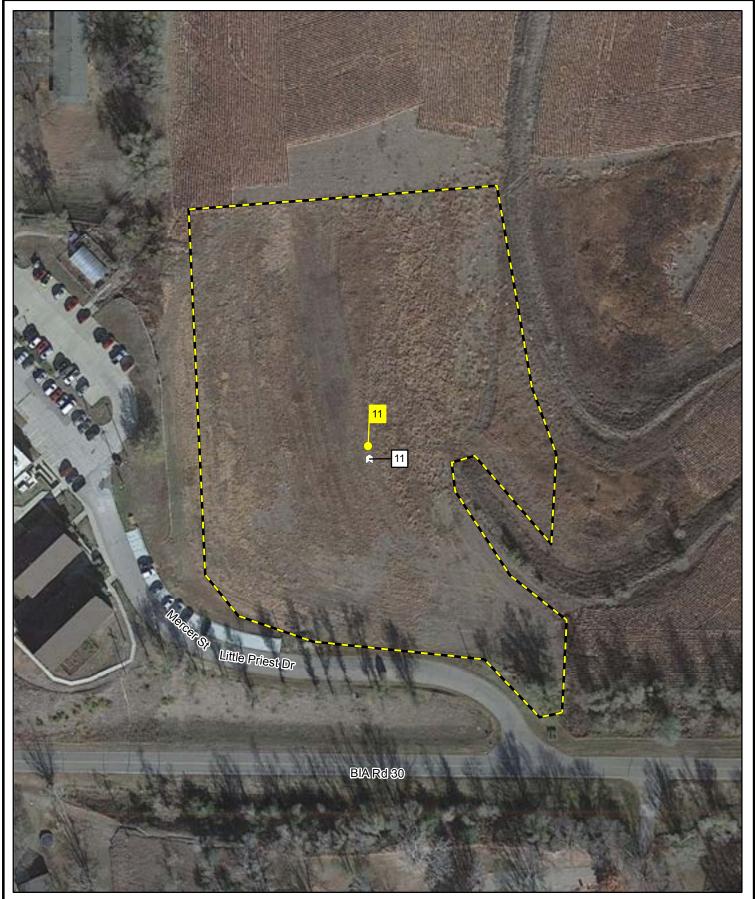




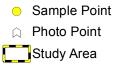
Winnebago Tribe Broadband Connectivity Project Staging Area B Delineation

Thurston County, Nebraska

Delineation Map Figure 4B



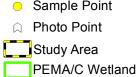




Winnebago Tribe Broadband Connectivity Project **Staging Area C Delineation** Thurston County, Nebraska

**Delineation Map** Figure 4C

Study Area



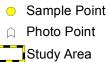
Winnebago Tribe Broadband Connectivity Project Staging Area E Delineation Thurston County, Nebraska

**Delineation Map** 

Figure 4E Basemap: Google Satellite





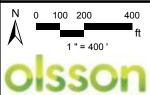


Winnebago Tribe Broadband Connectivity Project Staging Area F Delineation

Woodbury County, Iowa

**Delineation Map**Figure 4F

PEMA/C Wetland



Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500\021-05175\40-Design\GIS\23-08-07\_NRPL\_Delineation Figures.mxd PUBLISHED BY: mczerwinski DATE: August 17, 2023

- Photo Point
- Sample Point
- **Bore Point**
- Bore Point 50-ft Buffer

Winnebago Tribe Broadband Connectivity Project **North Bore Site Delineation** 

Dakota County, Nebraska Woodbury County, Iowa

**Delineation Map** 

Figure 4H Basemap: Google Satellite

WGS 1984 ARC System Zone 11

Olsson Project # 021-05175

Bore Point 50-ft Buffer

Sample Point

Bore Point

Basemap: Google Satellite

Figure 4I

Woodbury County, Iowa

**Delineation Map** 

South Bore Site Delineation Thurston County, Nebraska

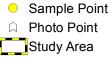


Study Area PEMA/C Wetland **Central Office Delineation** 

Thurston County, Nebraska

**Delineation Map** Figure 4J





Olsson Project # 021-05175

**Delineation Map** Figure 4L

# **APPENDIX B**

WETS Tables

# **RAINFALL DOCUMENTATION**

**USE WITH PHOTOGRAPHS** 

DATE: 6.2	Ī					PREF	PARED BY: _	Kari Sherman			
WEATHER STATION:	-	Wakefield 3N	IW								
COUNTY:	Thurston							STATE:	Nebraska		
SOIL NAME:		GROWING SEASON: May 1 - October 31									
SITE VISIT DATE:	Aerial T	aken: Augu	st 9, 2005	•							
		LONG TE	RM RAINFALL	RECORDS							
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIOR MONTH*	July	1.87	3.18	5.35	2.49	NORMAL	2	3	6		
2nd PRIOR MONTH*	June	2.78	4.43	3.85	6.58	WET	3	2	6		
3rd PRIOR MONTH*	May	2.93	4.02	4.73	3.83	NORMAL	2	1	2		
								SUM =	14		
NOTE: If sum is					CONDITION VALUE:						
6 - 9	then prior p	eriod has be	een drier than	normal							
10 - 14	then prior p					Dry Normal	= 2				
	een wetter thai	n normal		Wet	= 3						
*Photo Dat	*Photo Date										
CONCLUSIONS:											
At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal					
Prior to th	Prior to the site visit monthly precipitation observed at the Wakefield 3NW station was 5.27 inches, which would be considered heavy										

Prior to the site visit monthly precipitation observed at the Wakefield 3NW station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.



Winnebago Tribe Broadband Connectivity Project Staging Area A
Thurston County, Nebraska

WETS Map

Aerial Date: August 9, 2005 Basemap: NAIP Aerial Imagery

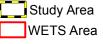
# **RAINFALL DOCUMENTATION**

**USE WITH PHOTOGRAPHS** 

DATE:	DATE: 6.27.23							Kari Sherman				
WEATHE	R STATION:		Wakefield 3N	IW								
COUNTY:		Thurston							STATE:	Nebraska		
SOIL NAME: Multiple (See Delineation Report)					-		/ 1 - October 31					
SITE VISI	T DATE:	Aerial	Taken: July	29, 2006	-							
			LONG TE	RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIO	R MONTH*	June	2.78	4.43	5.35	3.69	NORMAL	2	3	6		
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	0.76	DRY	1	2	2		
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	2.54	NORMAL	2	1	2		
									SUM =	10		
NOTE:	If sum is					CONDITION VALUE:						
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1				
	10 - 14	then prior p					Normal	= 2				
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3				
	*Photo Date											
CONCLUS	SIONS:											
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal					
	Prior to the site visit monthly precipitation observed at the Wakefield station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.											







Winnebago Tribe Broadband Connectivity Project Staging Area A Thurston County, Nebraska

WETS Map Aerial Date: July 29, 2006

# **RAINFALL DOCUMENTATION**

**USE WITH PHOTOGRAPHS** 

DATE: 6.2	27.23						PREF	PARED BY:	Kari Sherman		
WEATHER STATION:		Wakefield 3N	IW								
COUNTY:	Thurston							STATE:	Nebraska		
SOIL NAME:	Multiple (	See Delinea	ition Report)			GROWING SEASON: May 1 - October 31					
SITE VISIT DATE:	Aerial	Taken: July	v 8, 2007								
			RM RAINFALL	RECORDS							
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIOR MONTH*	June	2.78	4.43	5.35	2.38	DRY	1	3	3		
2nd PRIOR MONTH*	May	2.93	4.02	4.73	3.13	NORMAL	2	2	4		
3rd PRIOR MONTH*	April	3.77	3.12	3.77	6.23	WET	3	1	3		
								SUM =	10		
NOTE: If sum is					CONDITION VALUE:						
6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1				
10 - 14						Normal	= 2				
	<ul><li>10 - 14 then prior period has been normal</li><li>15 - 18 then prior period has been wetter than normal</li></ul>						= 3				
*Photo Dat	*Photo Date										
CONCLUSIONS:											
At the time of the site visit, hydrologic conditions for the prior period were Normal											
Prior to the	Prior to the site visit monthly precipitation observed at the Wakefield station was 5.27 inches, which would be considered heavy compared to										

the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.

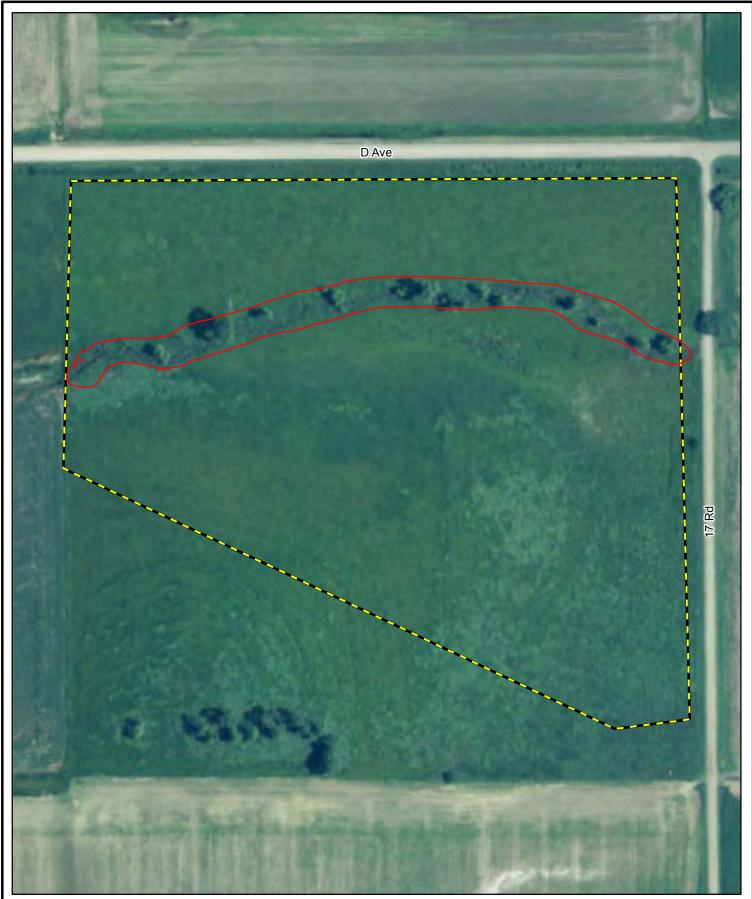
**WETS Map** 

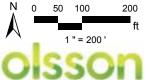
Thurston County, Nebraska

### **RAINFALL DOCUMENTATION**

**USE WITH PHOTOGRAPHS** 

DATE: 6.27.23			-					PREF	PARED BY: _	Kari Sherman	
WEATHE	R STATION:	·	Wakefield 3N	IW	<u>-</u>						
COUNTY	:	Thurston							STATE:	Nebraska	
SOIL NAME: Multiple (			See Delinea	ation Report)	-		GROV	/ 1 - October 31			
SITE VISI	T DATE:	Aerial	Taken: July	/ 1, 2009	-						
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIC	OR MONTH*	June	2.78	4.43	5.35	6.84	WET	3	3	9	
2nd PRI	OR MONTH*	May	2.93	4.02	4.73	0.85	DRY	1	2	2	
3rd PRIOR MONTH*		April	3.77	3.12	3.77	1.84	DRY	1	1	1	
									SUM =	12	
NOTE:	If sum is					CONDITION VALUE:					
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry				
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3			
	*Photo Dat	te									
CONCLU	SIONS:										
	At the time	e of the site v	visit, hydrolo	gic conditions	for the prior p	period were	Normal				
							on was 5.27 incl			red heavy compared to cators.	







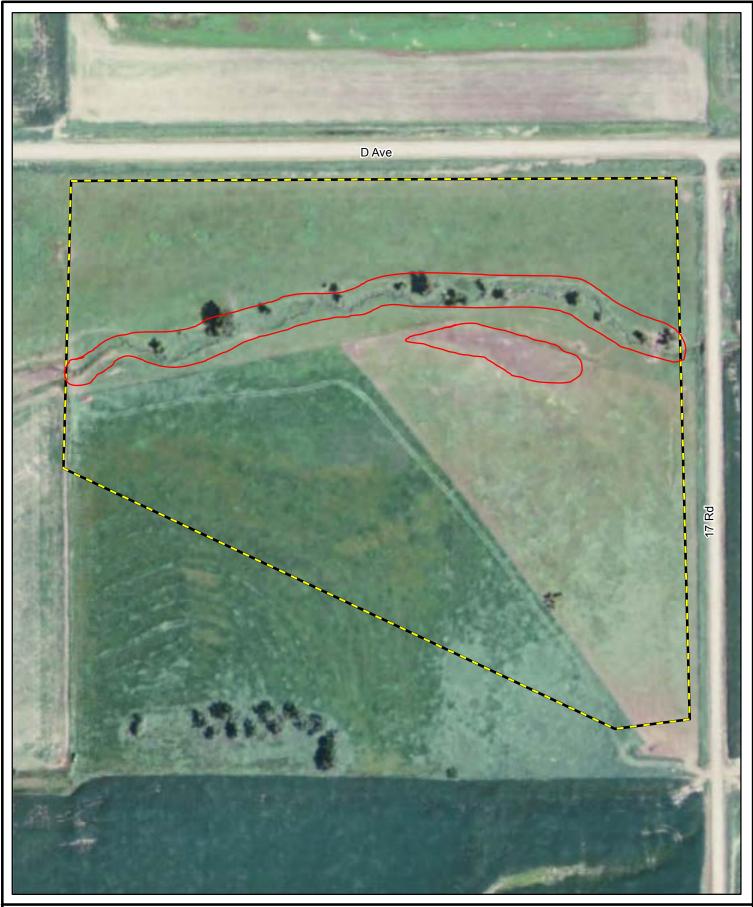
Winnebago Tribe Broadband Connectivity Project Staging Area A Thurston County, Nebraska

WETS Map Aerial Date: July 1, 2009

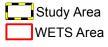
### **RAINFALL DOCUMENTATION**

**USE WITH PHOTOGRAPHS** 

DATE:	6.2	27.23	-					Kari Sherman				
WEATHE	R STATION:		Wakefield 3N	IW								
COUNTY:		Thurston							STATE:	Nebraska		
SOIL NAME: Multiple (See Delineation Report)					-		/ 1 - October 31					
SITE VISI	T DATE:	Aerial	Taken: July	10, 2010	-							
			LONG TE	RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIC	R MONTH*	June	2.78	4.43	5.35	9.18	WET	3	3	9		
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	2.51	DRY	1	2	2		
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	2.87	NORMAL	2	1	2		
									SUM =	13		
NOTE:	If sum is					CONDITION VALUE:						
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1				
	10 - 14	then prior p					Normal	= 2				
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3				
	*Photo Date											
CONCLUS	SIONS:											
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal					
	Prior to the site visit monthly precipitation observed at the Wakefield station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.											







Winnebago Tribe Broadband Connectivity Project Staging Area A

Thurston County, Nebraska
WETS Map

WETS Map Aerial Date: July 10, 2010

DATE:	6.2	27.23	-					PREF	PARED BY: _	Kari Sherman
WEATHE	R STATION:	-	Wakefield 3N	IW	<u>-</u>					
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	<b>ИЕ</b> :	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	1 - October 31
SITE VISI	IT DATE:	Aerial	Taken: July	/ 3, 2012	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	June	2.78	4.43	5.35	0.82	DRY	1	3	3
2nd PRI	OR MONTH*	May	2.93	4.02	4.73	5.15	WET	3	2	6
3rd PRIC	OR MONTH*	April	1.93	3.12	3.77	3.26	NORMAL	2	1	2
									SUM =	11
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	te								
CONCLU	SIONS:									
	At the time	e of the site v	visit, hydrolo	gic conditions	for the prior p	period were	Normal			
							on was 5.27 inch			red heavy compared to cators.







Winnebago Tribe Broadband Connectivity Project Staging Area A

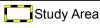
Thurston County, Nebraska

WETS Map Aerial Date: July 3, 2012

DATE:	6.2	27.23	-					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISI	T DATE:	Aerial Tak	en: Septem	ber 16, 2014						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	August	1.86	3.14	3.81	5.88	WET	3	3	9
2nd PRIC	OR MONTH*	July	1.87	3.18	3.85	4.35	WET	3	2	6
3rd PRIO	R MONTH*	June	2.78	4.43	5.35	12.79	WET	3	1	3
									SUM =	18
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
		then prior p					Normal	= 2		
				een wetter than	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	ONCLUSIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Wet			
			, , ,				on was 5.27 incl ved during the s	,		red heavy compared to cators.







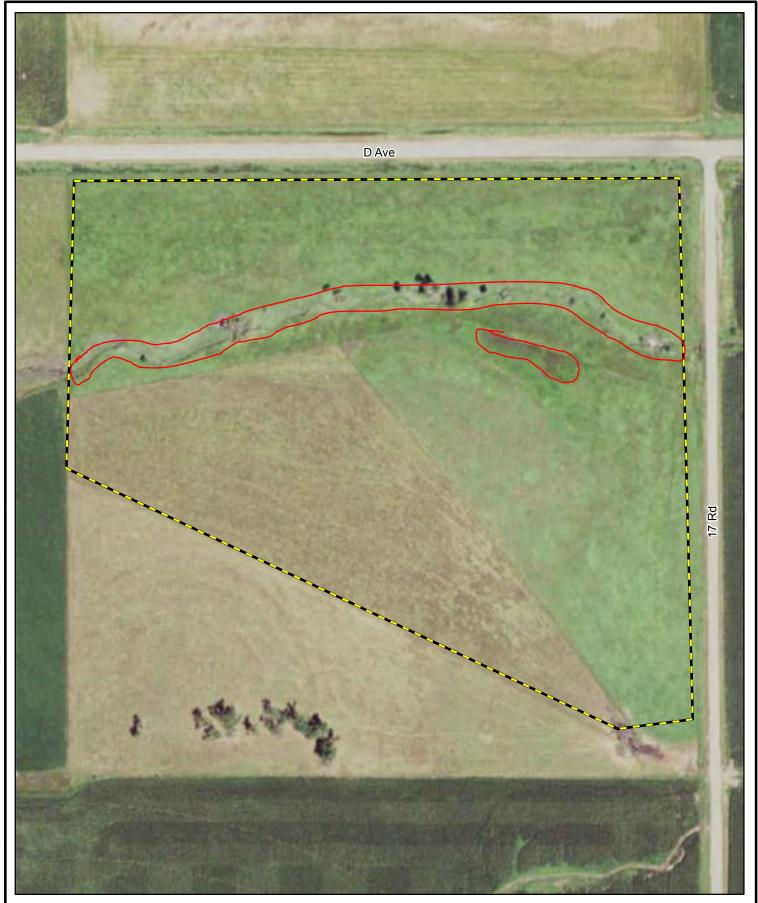
Winnebago Tribe Broadband Connectivity Project Staging Area A

Thurston County, Nebraska

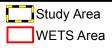
WETS Map

Aerial Date: September 16, 2014

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHER	R STATION:		Lyons		-					
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	IE:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISIT	ΓDATE:	Aerial T	aken: Augus	st 13, 2016	-					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	2.13	3.32	4.00	4.78	WET	3	3	9
2nd PRIO	R MONTH*	June	2.55	4.17	5.05	1.23	DRY	1	2	2
3rd PRIO	R MONTH*	May	3.10	4.49	5.35	4.07	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is 6 - 9 10 - 14 15 - 18	then prior p	eriod has be	een drier than een normal een wetter thal			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior	period were:	Normal			
					•		was 1.51 inches			light compared to the







Winnebago Tribe Broadband Connectivity Project Staging Area A
Thurston County, Nebraska

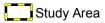
**WETS Map** 

Aerial Date: August 13, 2016

DATE:	6.2	28.23	•					PREF	PARED BY:	Kari Sherman
WEATHER	STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAME	Ξ:	Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	Мау	y 1 - October 31
SITE VISIT	DATE:	Aerial T	aken: Augus	st 15, 2020						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOF	* MONTH	July	1.87	3.18	3.85	3.82	NORMAL	2	3	6
2nd PRIOF	R MONTH*	June	2.78	4.43	5.35	1.29	DRY	1	2	2
3rd PRIOF	R MONTH*	May	2.93	4.02	4.73	2.80	DRY	1	1	1
									SUM =	9
NOTE:		then prior p	eriod has be	een drier than een normal een wetter thai			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat	е								
CONCLUSIONS:										
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Dry			
								nes, which would		red heavy compared to cators.







Winnebago Tribe Broadband Connectivity Project Staging Area A Thurston County, Nebraska

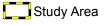
**WETS Map** 

Aerial Date: August 15, 2020

DATE:	6.2	8.23	-					PREP	ARED BY:	Kari Sherman
WEATHER	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	IE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	Γ DATE:	Aerial 1	aken: Augu	ıst 4, 2022						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.87	3.18	3.85	1.54	DRY	1	3	3
2nd PRIC	R MONTH*	June	2.78	4.43	5.35	1.18	DRY	1	2	2
3rd PRIO	R MONTH*	May	2.93	4.02	4.73	3.22	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Date	е								
CONCLUS	SIONS:									
	At the time of the site visit, hydrologic conditions					period were	Dry			
			, , ,				on was 5.27 inch	•		red heavy compared to cators.





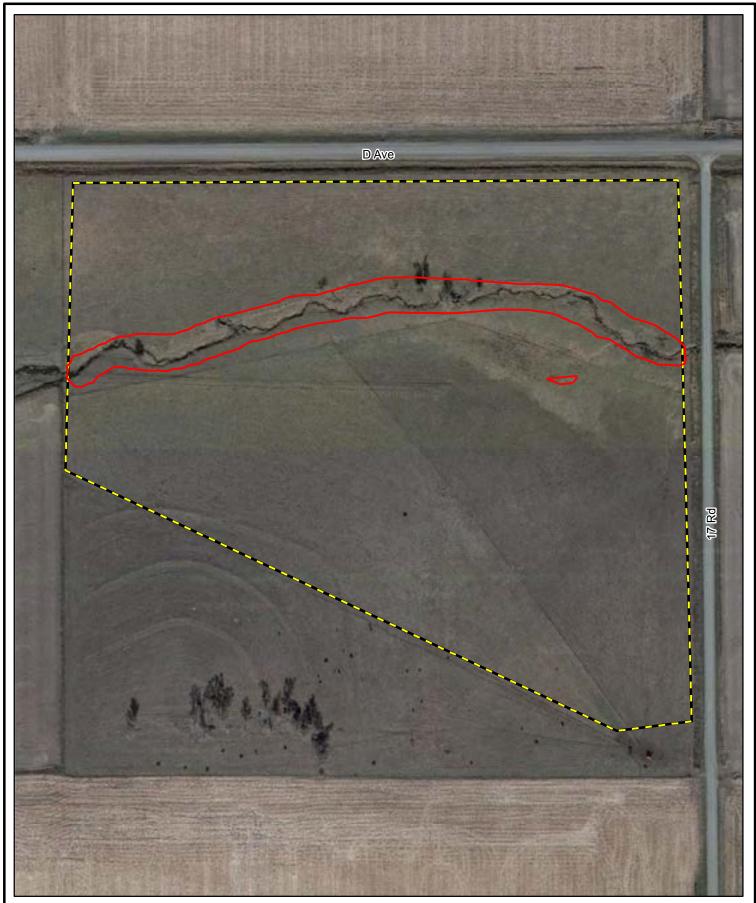


Winnebago Tribe Broadband Connectivity Project Staging Area A

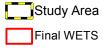
Thurston County, Nebraska

WETS Map

Aerial Date: August 4, 2022





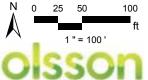


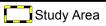
Winnebago Tribe Broadband Connectivity Project Staging Area A Thurston County, Nebraska

Final WETS Map

DATE:	6.2	28.23	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial 7	aken: Augu	st 6, 2005						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.87	3.18	3.85	2.49	NORMAL	2	3	6
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	6.58	WET	3	2	6
3rd PRIC	R MONTH*	May	2.93	4.02	4.73	3.83	NORMAL	2	1	2
									SUM =	14
NOTE:		then prior p	eriod has be	een drier than een normal een wetter thai			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat		onou nuo o	on wotter trial	Triomia		Wot	ŭ		
CONCLUSIONS:										
	At the time of the site visit, hydrologic conditions for the prior						Normal			
										e considered heavy of reliable indicators.







Winnebago Tribe Broadband Connectivity Project Staging Area B

Thurston County, Nebraska

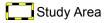
WETS Map

Aerial Date: August 6, 2005

DATE:	6.2	28.23	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	28, 2006						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.78	4.43	5.35	3.69	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	0.76	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	2.54	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.





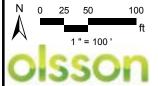


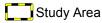
Winnebago Tribe Broadband Connectivity Project Staging Area B Thurston County, Nebraska

WETS Map Aerial Date: July 28, 2006

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	ИE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 27, 2007						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.43	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	2.38	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.93	4.02	4.73	3.13	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thar	n normal		Wet	= 3		
	*Photo Date	e								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
			• • •							ne considered heavy







Winnebago Tribe Broadband Connectivity Project Staging Area B Thurston County, Nebraska

WETS Map Aerial Date: August 27, 2007

DATE: 6	5.28.23	_					PREF	PARED BY:	Kari Sherman
WEATHER STATION	N:	Wakefield 3N	IW	-					
COUNTY:	Thurston							STATE:	Nebraska
SOIL NAME:	Multiple (	See Delinea	ation Report)	<u>-</u>		GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISIT DATE:	Aerial	Taken: June	22, 2009	<u>.</u>					
			RM RAINFALL	RECORDS					
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MONTH	* May	2.93	4.02	4.73	0.85	DRY	1	3	3
2nd PRIOR MONTH	I* April	1.93	3.12	3.77	1.84	DRY	1	2	2
3rd PRIOR MONTH	* March	1.03	2.07	2.53	1.29	NORMAL	2	1	2
								SUM =	7
NOTE: If sum is						CONDITION VA	ALUE:		
6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*Photo D	ate								
CONCLUSIONS:									
At the tir	At the time of the site visit, hydrologic conditions for					Dry			
						•			e considered heavy ot reliable indicators.

DATE:	6.2	28.23	-					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	E:	Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISIT	DATE:	Aerial	Taken: July	27, 2010						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOF	R MONTH*	June	2.78	4.43	5.35	9.18	WET	3	3	9
2nd PRIO	R MONTH*	May	2.93	4.02	4.73	2.51	DRY	1	2	2
3rd PRIO	R MONTH*	April	1.93	3.12	3.77	2.87	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	IONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal	<u>-</u>		
										e considered heavy ot reliable indicators.

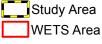
DATE:	6.2	28.23	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	ΛΕ:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	4, 2012						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.78	4.43	5.35	0.82	DRY	1	3	3
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	5.15	WET	3	2	6
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	3.26	NORMAL	2	1	2
									SUM =	11
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	en drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	en normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.

WGS 1984 ARC System Zone 11

DATE:	6.2	6.28.23						PREP	ARED BY:	Kari Sherman
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial Tak	en: Septem	ber 16, 2014						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	August	1.86	3.14	3.81	5.88	WET	3	3	9
2nd PRIC	OR MONTH*	July	1.87	3.18	3.85	4.35	WET	3	2	6
3rd PRIC	R MONTH*	June	2.78	4.43	5.35	12.79	WET	3	1	3
									SUM =	18
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14	then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Date	е								
CONCLUS	SIONS:									
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Wet			
										e considered heavy ot reliable indicators.

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-06-26\_NRPL\_WETS Analysis.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023

DATE: 6.28.23		-					PARED BY:	Kari Sherman				
WEATHER STATION:Lyo			Lyons									
COUNTY:		Thurston							STATE:	Nebraska		
SOIL NAME: Multiple (Se			See Delinea	ation Report)	-		GROW	/ING SEASON:	ay 1 - October 31			
SITE VISIT DATE: Aerial Ta			aken: Augus	st 13, 2016	-							
			LONG TE	RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIO	R MONTH*	July	2.13	3.32	4.00	4.78	WET	3	3	9		
2nd PRIC	OR MONTH*	June	2.55	4.17	5.05	1.23	DRY	1	2	2		
3rd PRIOR MONTH*		May	3.10	4.49	5.35	4.07	NORMAL	2	1	2		
									SUM =	13		
NOTE:	If sum is					CONDITION VALUE:						
6 - 9 then prior period h				een drier than	normal		Dry	= 1				
	10 - 14 then prior period has been normal						Normal	= 2				
15 - 18 then prior period has been wetter than normal					n normal		Wet	= 3				
	*Photo Date											
CONCLUS	SIONS:											
	At the time of the site visit, hydrologic conditions for the prior period were Normal											
	Prior to the site visit monthly precipitation observed at the Lyons, NE station was 1.51 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.											



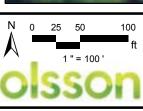
Winnebago Tribe Broadband Connectivity Project Staging Area B

Thurston County, Nebraska

**WETS Map** 

Aerial Date: August 13, 2016

DATE:	E: 6.28.23							Kari Sherman			
WEATHER ST	ATION:		Wakefield 3N	IW							
COUNTY:		Thurston							STATE:	Nebraska	
SOIL NAME: Multiple			See Delinea	ation Report)			GROW	y 1 - October 31			
SITE VISIT DA	ATE:	Aerial T	aken: Augus	st 15, 2020							
LONG TERM RAINFALL RECORDS											
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIOR M	ONTH*	July	1.87	3.18	3.85	3.82	NORMAL	2	3	6	
2nd PRIOR MONTH*		June	2.78	4.43	5.35	1.29	DRY	1	2	2	
3rd PRIOR MONTH*		May	2.93	4.02	4.73	2.80	DRY	1	1	1	
		,	•						SUM =	9	
NOTE: If	OTE: If sum is CONDITION VALUE:										
	6 - 9 10 - 14				Homai		Dry Normal	= 1 = 2			
	<ul><li>10 - 14 then prior period has been normal</li><li>15 - 18 then prior period has been wetter than normal</li></ul>						Wet	= 3			
*Photo Date											
CONCLUSION	IS:										
At the time of the site visit, hydrologic conditions for the prior period were Dry											
	Prior to the site visit monthly precipitation observed at the Wakefield 3NW, NE station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										



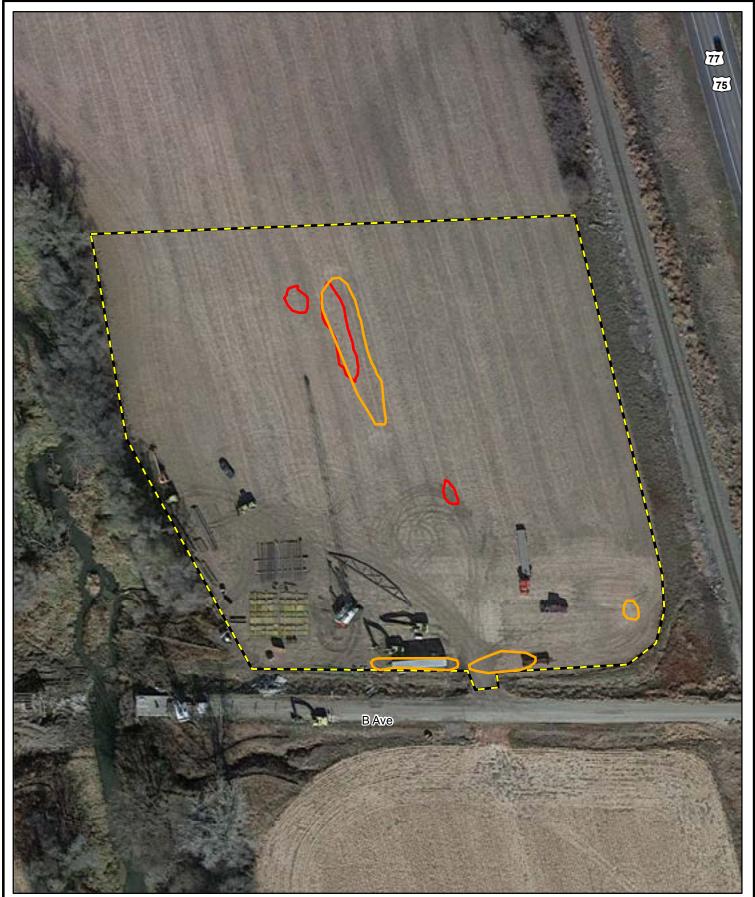
Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-06-26\_NRPL\_WETS Analysis.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023

Study Area

Winnebago Tribe Broadband Connectivity Project Staging Area B
Thurston County, Nebraska
WETS Map
Aerial Date: August 15, 2020

DATE:	6.2	28.23	-					PREF	PARED BY:	Kari Sherman		
WEATHE	R STATION:		Wakefield 3N	IW								
COUNTY	:	Thurston							STATE:	Nebraska		
SOIL NAME:		Multiple (	See Delinea	tion Report)			GROW	y 1 - October 31				
SITE VISIT DATE: Aeria			aken: Augu	st 4, 2022								
			LONG TE	RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.54	DRY	1	3	3		
2nd PRIOR MONTH*		June	2.78	4.43	5.35	1.18	DRY	1	2	2		
3rd PRIOR MONTH*		May	2.93	4.02	4.73	3.22	NORMAL	2	1	2		
									SUM =	7		
NOTE:	If sum is					CONDITION VALUE:						
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1				
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2				
	15 - 18	then prior p	eriod has be	een wetter thar	n normal		Wet	= 3				
	*Photo Date	е										
CONCLU	SIONS:											
	At the time of the site visit, hydrologic conditions for the prior period wereDry											
			•							pe considered heavy		

**WETS Map** Aerial Date: August 4, 2022

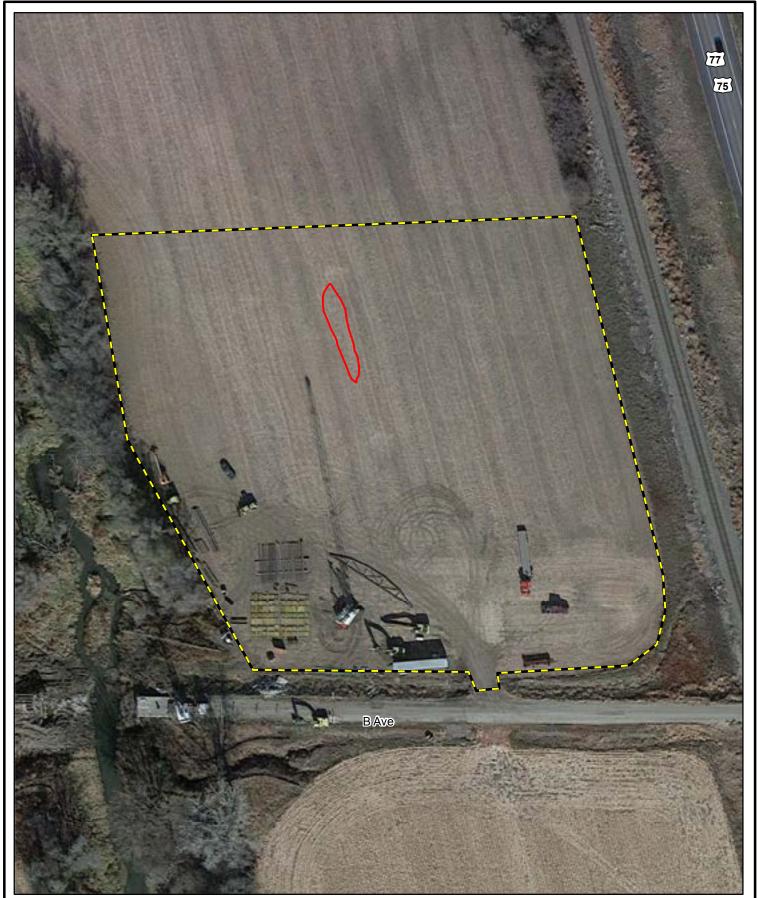




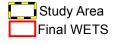


Winnebago Tribe Broadband Connectivity Project Staging Area B Thurston County, Nebraska

**Combined WETS Map** 





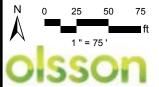


Winnebago Tribe Broadband Connectivity Project Staging Area B

Thurston County, Nebraska
Final WETS Map

DATE: 6.28.23		•					Kari Sherman				
WEATHER STATION:		Wakefield 3N	IW								
COUNTY:		Thurston							STATE:	Nebraska	
SOIL NAME:		Multiple (	See Delinea	ition Report)			GROW	y 1 - October 31			
SITE VISIT DATE:		Aerial 7	aken: Augu	st 6, 2005							
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIO	R MONTH*	July	1.87	3.18	3.85	2.49	NORMAL	2	3	6	
2nd PRIOR MONTH*		June	2.78	4.43	5.35	6.58	WET	3	2	6	
3rd PRIOR MONTH*		May	2.93	4.02	4.73	3.83	NORMAL	2	1	2	
,									SUM =	14	
NOTE: If sum is							CONDITION VA	ALUE:			
	6 - 9			een drier than	normal		Dry	= 1			
	10 - 14 then prior period has been normal						Normal	= 2			
15 - 18 then prior period has been wetter than normal					n normal		Wet	= 3			
	*Photo Dat	e									
CONCLUS	SIONS:										
At the time of the site visit, hydrologic conditions for the prior period were Normal											
	Prior to the site visit monthly precipitation observed at the Wakefield 3NW, NE station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										





Study Area

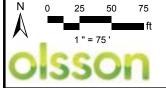
Winnebago Tribe Broadband Connectivity Project Staging Area C

Thurston County, Nebraska

WETS Map
Aerial Date: August 6, 2005

DATE:	E: 6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:									
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	28, 2006						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.78	4.43	5.35	3.69	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	0.76	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	2.54	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.





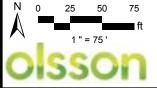
Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska

**WETS Map** 

Aerial Date: July 28, 2006

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	ИE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 27, 2007						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.43	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	2.38	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.93	4.02	4.73	3.13	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thar	n normal		Wet	= 3		
	*Photo Date	e								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
			• • •							ne considered heavy





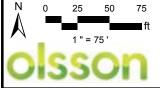
Winnebago Tribe Broadband Connectivity Project Staging Area C

Thurston County, Nebraska WETS Map

Aerial Date: August 27, 2007

DATE: 6	6.28.23						PREF	PARED BY:	Kari Sherman
WEATHER STATION	N:	Wakefield 3N	IW	-					
COUNTY:	Thurston							STATE:	Nebraska
SOIL NAME:	Multiple (	See Delinea	ation Report)	<u>-</u>		GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISIT DATE:	Aerial	Taken: June	22, 2009	<u>.</u>					
			RM RAINFALL	RECORDS					
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MONTH	* May	2.93	4.02	4.73	0.85	DRY	1	3	3
2nd PRIOR MONTH	I* April	1.93	3.12	3.77	1.84	DRY	1	2	2
3rd PRIOR MONTH	* March	1.03	2.07	2.53	1.29	NORMAL	2	1	2
								SUM =	7
NOTE: If sum is						CONDITION VA	ALUE:		
6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*Photo D	ate								
CONCLUSIONS:									
At the tir	ne of the site \	/isit, hydrolo	gic conditions	for the prior p	period were	Dry			
						•			e considered heavy ot reliable indicators.





Winnebago Tribe Broadband Connectivity Project Staging Area C

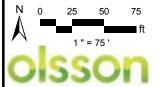
Thurston County, Nebraska

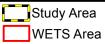
WETS Map

Aerial Date: June 22, 2009

DATE:	<del></del>									
WEATHER	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	E:	Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISIT	DATE:	Aerial	Taken: July	27, 2010						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOF	R MONTH*	June	2.78	4.43	5.35	9.18	WET	3	3	9
2nd PRIO	R MONTH*	May	2.93	4.02	4.73	2.51	DRY	1	2	2
3rd PRIO	R MONTH*	April	1.93	3.12	3.77	2.87	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	IONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal	<u>-</u>		
										e considered heavy ot reliable indicators.







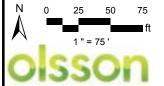
Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska

**WETS Map** 

Aerial Date: July 27, 2010

DATE: 6.28.23 PREPARED BY: Kari Sherman								Kari Sherman		
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY		Thurston							STATE:	Nebraska
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	<u>-</u>		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 4, 2012						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.78	4.43	5.35	0.82	DRY	1	3	3
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	5.15	WET	3	2	6
3rd PRIC	OR MONTH*	April	1.93	3.12	3.77	3.26	NORMAL	2	1	2
									SUM =	11
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLU	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.





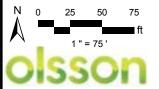
Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska

**WETS Map** 

Aerial Date: July 4, 2012

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial Tak	en: Septem	ber 16, 2014						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	August	1.86	3.14	3.81	5.88	WET	3	3	9
2nd PRIC	OR MONTH*	July	1.87	3.18	3.85	4.35	WET	3	2	6
3rd PRIC	R MONTH*	June	2.78	4.43	5.35	12.79	WET	3	1	3
									SUM =	18
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14	then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Date	e								
CONCLUS	SIONS:									
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Wet			
										e considered heavy ot reliable indicators.



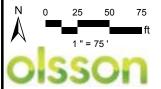


Winnebago Tribe Broadband **Connectivity Project** Staging Area C
Thurston County, Nebraska

**WETS Map** Aerial Date: September 16, 2014

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHER	R STATION:		Lyons							
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 13, 2016	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	2.13	3.32	4.00	4.78	WET	3	3	9
2nd PRIC	OR MONTH*	June	2.55	4.17	5.05	1.23	DRY	1	2	2
3rd PRIO	R MONTH*	May	3.10	4.49	5.35	4.07	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	CONCLUSIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ion was 1.51 inc			red light compared to cators.







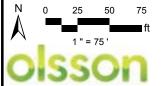
Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska

**WETS Map** Aerial Date: August 13, 2016

Basemap: NAIP Aerial Imagery

DATE:	6.2	6.28.23 PREPARED BY: Kari Sherman								
WEATHER STA	ATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAME:		Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	Мау	y 1 - October 31
SITE VISIT DAT	E:	Aerial Ta	aken: Augus	st 15, 2020						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MO	NTH*	July	1.87	3.18	3.85	3.82	NORMAL	2	3	6
2nd PRIOR MC	*HTMC	June	2.78	4.43	5.35	1.29	DRY	1	2	2
3rd PRIOR MC	NTH*	May	2.93	4.02	4.73	2.80	DRY	1	1	1
									SUM =	9
NOTE: If su	um is						CONDITION VA	ALUE:		
(				een drier than	normal		Dry	= 1		
		then prior p					Normal	= 2		
15	5 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
*Pho	oto Date	e								
CONCLUSIONS	S:									
At t	he time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
										e considered heavy ot reliable indicators.





Winnebago Tribe Broadband Connectivity Project Staging Area C

Thurston County, Nebraska

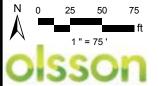
WETS Map

Aerial Date: August 15, 2020

Basemap: NAIP Aerial Imagery

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	ИE:	Multiple (	See Delinea	tion Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augu	st 4, 2022						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.54	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	1.18	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.93	4.02	4.73	3.22	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Date	е								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
			•							e considered heavy

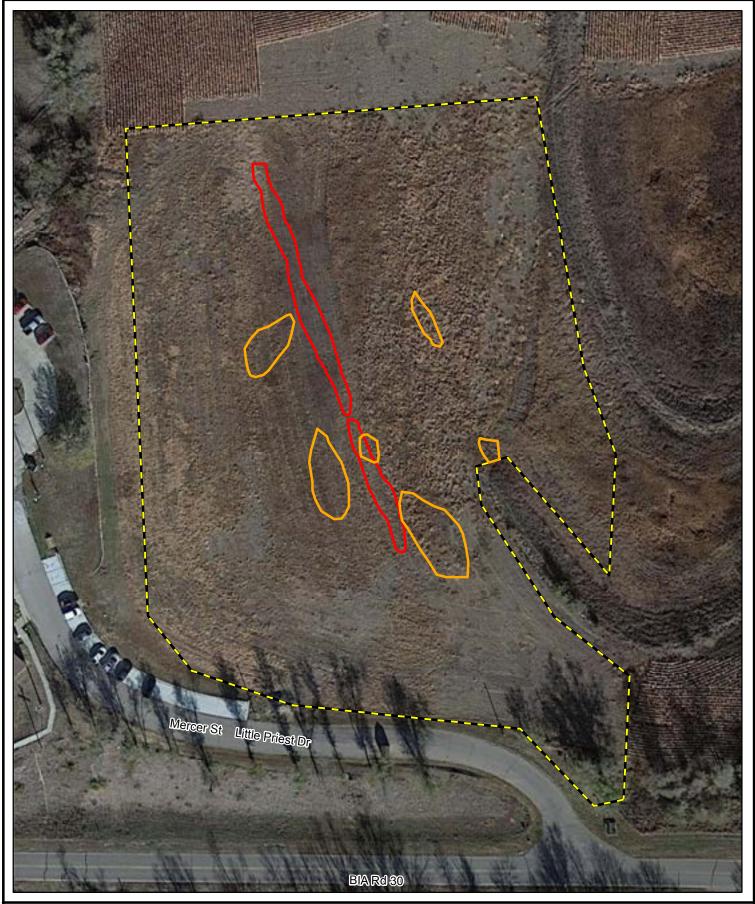


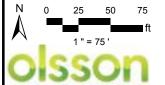


Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska

Thurston County, Nebraska **WETS Map** 

Aerial Date: August 4, 2022

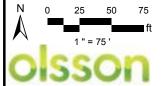


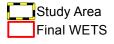




Winnebago Tribe Broadband Connectivity Project Staging Area C Thurston County, Nebraska Combined WETS Map





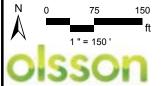


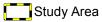
Winnebago Tribe Broadband Connectivity Project Staging Area C

Thurston County, Nebraska Final WETS Map

DATE:	: 6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial 7	aken: Augu	st 6, 2005						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.87	3.18	3.85	2.49	NORMAL	2	3	6
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	6.58	WET	3	2	6
3rd PRIC	R MONTH*	May	2.93	4.02	4.73	3.83	NORMAL	2	1	2
									SUM =	14
NOTE:		then prior p	eriod has be	een drier than een normal een wetter thai			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat		onou nuo bi	on wotter trial	Triomia		Wot	ŭ		
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy of reliable indicators.







Winnebago Tribe Broadband Connectivity Project Staging Area D Thurston County, Nebraska

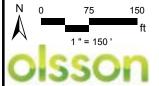
WETS Map Aerial Date: August 6, 2005

DATE:	E: 6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:									
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ition Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	28, 2006						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.78	4.43	5.35	3.69	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	0.76	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	2.54	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.

WGS 1984 ARC System Zone 11

DATE:	6.28.23 PREPARED BY: Kari Sherman									
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	ИE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 27, 2007						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.43	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	2.38	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.93	4.02	4.73	3.13	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thar	n normal		Wet	= 3		
	*Photo Date	e								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
			• • •							ne considered heavy





Winnebago Tribe Broadband Connectivity Project Staging Area D Thurston County, Nebraska

**WETS Map** Aerial Date: August 27, 2007

DATE:	ATE: 6.28.23						PREF	PARED BY:	Kari Sherman	
WEATHER STATION	N:	Wakefield 3N	IW	-						
COUNTY:	Thurston							STATE:	Nebraska	
SOIL NAME: Multiple (See Delineation Report)			<u>-</u>		GROW	y 1 - October 31				
SITE VISIT DATE: Aerial Taken: June 22, 2009			22, 2009	-						
			RM RAINFALL	RECORDS						
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIOR MONTH	* May	2.93	4.02	4.73	0.85	DRY	1	3	3	
2nd PRIOR MONTH	ł* April	1.93	3.12	3.77	1.84	DRY	1	2	2	
3rd PRIOR MONTH	l* March	1.03	2.07	2.53	1.29	NORMAL	2	1	2	
								SUM =	7	
NOTE: If sum is						CONDITION VA	ALUE:			
6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1			
10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
15 - 18 then prior period has been wetter than nor						Wet	= 3			
*Photo D	ate									
CONCLUSIONS:										
At the time of the site visit, hydrologic conditions for the prior period were Dry										
	Prior to the site visit monthly precipitation observed at the Wakefield 3NW, NE station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.									

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/G/S/23-06-26\_NRPL\_WETS Analysis\_C\_D.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023

DATE: 6.28.23		-					PREP	'ARED BY:	Kari Sherman	
WEATHER	R STATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAME: Multiple (See Delineat			ation Report)			GROW	VING SEASON:	: May 1 - October 31		
SITE VISIT DATE: Aerial T			Taken: July	27, 2010						
LONG				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOF	R MONTH*	June	2.78	4.43	5.35	9.18	WET	3	3	9
2nd PRIO	R MONTH*	May	2.93	4.02	4.73	2.51	DRY	1	2	2
3rd PRIO	R MONTH*	April	1.93	3.12	3.77	2.87	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
15 - 18 then prior period has been wetter than n					n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	IONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
										e considered heavy ot reliable indicators.

WGS 1984 ARC System Zone 11

Noa.ad.oaconsulting.com\fnts-ns1\projects\2021\05001-05500\021-05175\40-Design\GIS\23-06-26\_NRPL\_WETS Analysis\_C\_D.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023



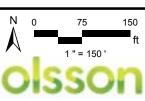
Winnebago Tribe Broadband Connectivity Project Staging Area D Thurston County, Nebraska

**WETS Map** 

Aerial Date: July 27, 2010

DATE: 6.28.23			•					Kari Sherman			
WEATHE	R STATION:		Wakefield 3N	IW							
COUNTY:		Thurston							STATE:	Nebraska	
SOIL NAME: Multiple (See Delineation Report)						GROW	y 1 - October 31				
SITE VISIT DATE: Aerial			Taken: July	4, 2012							
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIC	R MONTH*	June	2.78	4.43	5.35	0.82	DRY	1	3	3	
2nd PRIC	OR MONTH*	May	2.93	4.02	4.73	5.15	WET	3	2	6	
3rd PRIC	R MONTH*	April	1.93	3.12	3.77	3.26	NORMAL	2	1	2	
									SUM =	11	
NOTE:	If sum is						CONDITION VA	ALUE:			
	6 - 9	then prior p	eriod has be	en drier than	normal		Dry	= 1			
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
15 - 18 then prior period has been wetter than normal					n normal		Wet	= 3			
	*Photo Dat	e									
CONCLUS	SIONS:										
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal				
	Prior to the site visit monthly precipitation observed at the Wakefield 3NW, NE station was 5.27 inches, which would be considered heavy compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										

DATE: 6.28.23		-					Kari Sherman					
WEATHE	R STATION:		Wakefield 3N	IW								
COUNTY:		Thurston							STATE:	Nebraska		
SOIL NAME: Multiple		Multiple (	See Delinea	ation Report)			GROW	VING SEASON:	May	May 1 - October 31		
SITE VISIT DATE:		Aerial Tak	en: Septem	ber 16, 2014								
			LONG TE	RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIC	R MONTH*	August	1.86	3.14	3.81	5.88	WET	3	3	9		
2nd PRIC	OR MONTH*	July	1.87	3.18	3.85	4.35	WET	3	2	6		
3rd PRIOR MONTH*		June	2.78	4.43	5.35	12.79	WET	3	1	3		
									SUM =	18		
NOTE:	If sum is				CONDITION VALUE:							
	6 - 9			een drier than	normal		Dry	= 1				
	10 - 14	then prior p					Normal	= 2				
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3				
	*Photo Date	e										
CONCLUS	SIONS:											
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Wet					
										e considered heavy ot reliable indicators.		



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Winnebago Tribe Broadband Connectivity Project Staging Area D Thurston County, Nebraska

**WETS Map** 

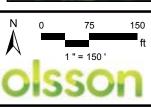
Aerial Date: September 16, 2014

DATE: 6.28.23								PARED BY:	Kari Sherman		
WEATHER	R STATION:		Lyons								
COUNTY:		Thurston							STATE:	Nebraska	
SOIL NAM	OIL NAME: Multiple (See Delineation Report)						y 1 - October 31				
SITE VISIT DATE: Aerial Taken: August 13, 2016					-						
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIO	R MONTH*	July	2.13	3.32	4.00	4.78	WET	3	3	9	
2nd PRIC	OR MONTH*	June	2.55	4.17	5.05	1.23	DRY	1	2	2	
3rd PRIO	R MONTH*	May	3.10	4.49	5.35	4.07	NORMAL	2	1	2	
									SUM =	13	
NOTE:	If sum is						CONDITION VA	ALUE:			
	6 - 9	then prior p	eriod has be	een drier than	normal	normal Dry = 1					
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
15 - 18 then prior period has been wetter than norma					n normal		Wet	= 3			
	*Photo Dat	е									
CONCLUS	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were Normal										
	Prior to the site visit monthly precipitation observed at the Lyons, NE station was 1.51 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										

Noa.ad.oaconsulting.com\fnts-ns1\projects\2021\05001-05500\021-05175\40-Design\GIS\23-06-26\_NRPL\_WETS Analysis\_C\_D.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023

**WETS Map** Aerial Date: August 13, 2016

DATE:	6.2	8.23	ī					PREF	PARED BY:	Kari Sherman
WEATHER STA	ATION:		Wakefield 3N	IW						
COUNTY:		Thurston							STATE:	Nebraska
SOIL NAME:		Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	Мау	y 1 - October 31
SITE VISIT DAT	E:	Aerial Ta	aken: Augus	st 15, 2020						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MO	NTH*	July	1.87	3.18	3.85	3.82	NORMAL	2	3	6
2nd PRIOR MC	*HTMC	June	2.78	4.43	5.35	1.29	DRY	1	2	2
3rd PRIOR MC	NTH*	May	2.93	4.02	4.73	2.80	DRY	1	1	1
									SUM =	9
NOTE: If su	um is						CONDITION VA	ALUE:		
(				een drier than	normal		Dry	= 1		
		then prior p					Normal	= 2		
15	5 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
*Pho	oto Date	e								
CONCLUSIONS	S:									
At t	he time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
										e considered heavy ot reliable indicators.



Winnebago Tribe Broadband Connectivity Project Staging Area D Thurston County, Nebraska

**WETS Map** Aerial Date: August 15, 2020

Basemap: NAIP Aerial Imagery

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DATE:	6.2	28.23	-					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wakefield 3N	IW						
COUNTY	:	Thurston							STATE:	Nebraska
SOIL NAM	ИE:	Multiple (	See Delinea	tion Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augu	st 4, 2022						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.87	3.18	3.85	1.54	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.78	4.43	5.35	1.18	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.93	4.02	4.73	3.22	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Date	е								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
			•							e considered heavy

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/G/S/23-06-26\_NRPL\_WETS Analysis\_C\_D.mxd PUBLISHED BY: mczerwinski DATE: June 27, 2023

WETS Map Aerial Date: August 4, 2022

DATE:	: 7/17/2023 PREPARED BY: Kari Sherman									
WEATHER STATIO	ON: _	S	Sioux City AP	, IA						
COUNTY:		Woodbury							STATE:	lowa
SOIL NAME:	_	Multiple (S	See Delinea	ation Report)			GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISIT DATE:	_	Aerial T	aken: Augu	st 6, 2005						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MONT	H*	July	1.77	3.22	3.93	2.51	NORMAL	2	3	6
2nd PRIOR MONT	ГН*	June	2.33	3.74	4.52	4.13	NORMAL	2	2	4
3rd PRIOR MONT	'H*	May	2.73	3.77	4.44	3.39	NORMAL	2	1	2
	_								SUM =	12
NOTE: If sum	is						CONDITION VA	ALUE:		
6 - 9	9 1	then prior pe	eriod has be	een drier than	normal		Dry	= 1		
10 - 1		then prior pe					Normal	= 2		
15 - 1	18 1	then prior pe	eriod has be	een wetter tha	n normal		Wet	= 3		
*Photo	Date									
CONCLUSIONS:	CONCLUSIONS:									
At the	time (	of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Normal			
			, , ,			•	tation was 1.79 in during the site vi			dered light compared to s.

F\2021\05001-05500\021-05175\40-Design\G\S\23-07-17\_NRPL\_WETS Analysis\_B-107\_Staging\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

**WETS Map** 

DATE:	7/17	7/2023	_					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AF	P, IA						
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	<u>.</u>		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	28, 2006						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.33	3.74	4.52	3.23	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.73	3.77	4.44	0.87	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.76	2.83	3.42	3.37	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is 6 - 9 10 - 14 15 - 18	then prior p	eriod has be	een drier than een normal een wetter thal			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat	е								
CONCLUS	SIONS:									
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior	period were:	Normal			
							station was 1.79 ved during the si			sidered light compared cators.







Winnebago Tribe Broadband Connectivity Project Staging Area E

Thurston County, Nebraska

WETS Map Aerial Date: July 28, 2006

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman	
WEATHE	R STATION:		Sioux City AF	P, IA	-						
COUNTY:		Woodbury							STATE:	lowa	
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	Ma	y 1 - October 31	
SITE VISI	T DATE:	Aerial	Taken: July	17, 2007	_						
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIC	st PRIOR MONTH* June 2.33 3.74 4.52 2.70 NORMAL 2 3 6										
2nd PRIC	OR MONTH*	May	2.73	3.77	4.44	4.74	WET	3	2	6	
3rd PRIC	R MONTH*	April	1.76	2.83	3.42	4.64	WET	3	1	3	
									SUM =	15	
NOTE:	If sum is						CONDITION VA				
	6 - 9			een drier than	normal		Dry	= 1			
	10 - 14						Normal	= 2			
	15 - 18	then prior p	eriod has b	een wetter tha	n normal		Wet	= 3			
	*Photo Dat	е									
CONCLUS	SIONS:										
At the time of the site visit, hydrologic conditions for the prior period						period were:	Wet				
							tation was 1.79 itation			idered light compared to	





Study Area

Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

WETS Map Aerial Date: July 17, 2007

DATE: 7	/17/2023	_					PREF	PARED BY:	Kari Sherman
WEATHER STATIC	N:	Sioux City AF	P, IA	_					
COUNTY:	Woodbury							STATE:	lowa
SOIL NAME:	Multiple	(See Delinea	ation Report)	_		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISIT DATE:	Aerial	Taken: June	30, 2009	_					
		LONG TE	RM RAINFALL	RECORDS					
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR MONTI	H* May	2.73	3.77	4.44	1.00	DRY	1	3	3
2nd PRIOR MONT	H* April	1.76	2.83	3.42	1.62	DRY	1	2	2
3rd PRIOR MONT	H* March	1.07	1.96	2.39	1.44	NORMAL	2	1	2
								SUM =	7
NOTE: If sum i	S					CONDITION VA	ALUE:		
6 - 9	then prior p	period has b	een drier than	normal		Dry	= 1		
10 - 1	4 then prior p	period has b	een normal			Normal	= 2		
15 - 1	8 then prior p	period has b	een wetter tha	n normal		Wet	= 3		
*Photo [	Date								
CONCLUSIONS:									
At the t	me of the site	visit, hydrolo	gic conditions	for the prior p	period were:	Dry			
					ux City AP, IA sta				ered light compared to



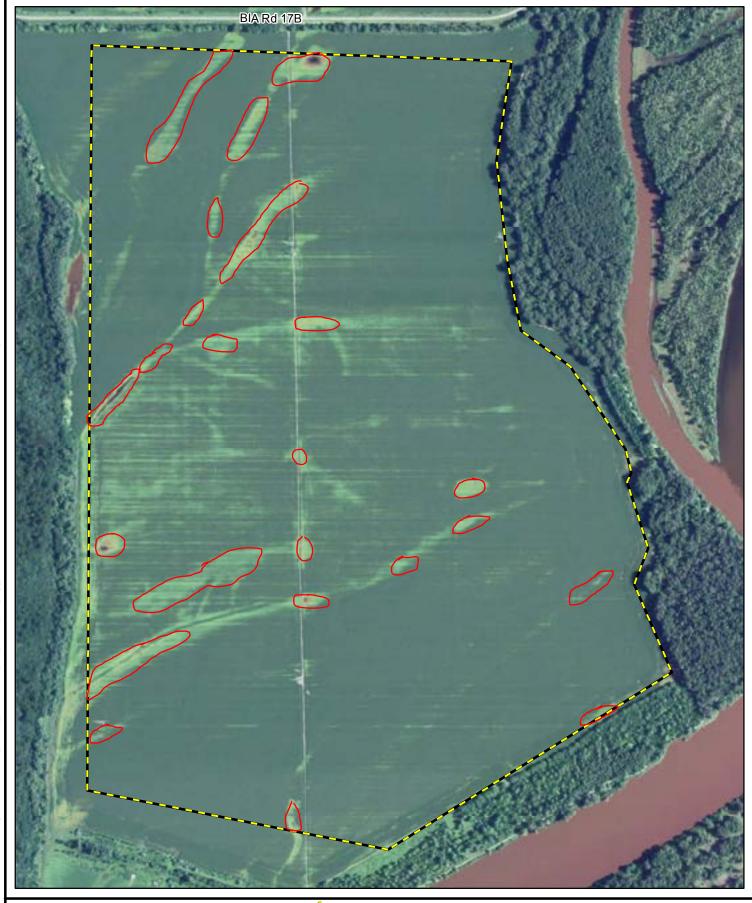


Study Area

Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

WETS Map Aerial Date: June 30, 2009

DATE:	7/17	PREPARED BY: Kari Sherman								
WEATHER ST	ΓΑΤΙΟΝ:		Sioux City AF	, IA						
COUNTY:		Woodbury							STATE:	lowa
SOIL NAME:		Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISIT DA	ATE:	Aerial	Taken: July	27, 2010						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR M	IONTH*	June	2.33	3.74	4.52	6.40	WET	3	3	9
2nd PRIOR M	*HTMON	May	2.73	3.77	4.44	1.41	DRY	1	2	2
3rd PRIOR M	1ONTH*	April	1.76	2.83	3.42	1.49	DRY	1	1	1
									SUM =	12
NOTE: If	sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*P	hoto Dat	е								
CONCLUSION	ONCLUSIONS:									
At	t the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Normal			
			, , ,			•	tation was 1.79 i during the site vi			dered light compared to



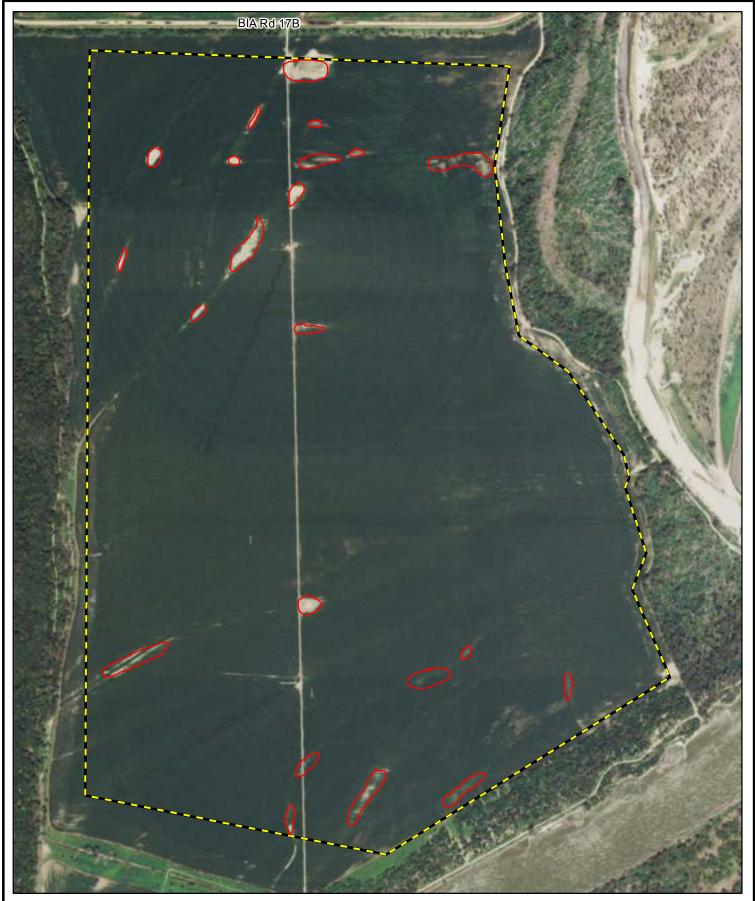




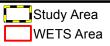
Winnebago Tribe Broadband Connectivity Project

Staging Area E
Thurston County, Nebraska
WETS Map
Aerial Date: July 27, 2010

DATE:	7/17	/2023	<u>.</u>					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Sioux City AP	P, IA	_					
COUNTY:		Woodbury							STATE:	Iowa
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 4, 2012	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.33	3.74	4.52	2.16	DRY	1	3	3
2nd PRIC	R MONTH*	May	2.73	3.77	4.44	6.20	WET	3	2	6
3rd PRIO	R MONTH*	April	1.76	2.83	3.42	4.82	WET	3	1	3
									SUM =	12
NOTE:	If sum is						CONDITION VA	LUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Date	Э								
CONCLUS	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Normal			
						ux City AP, IA sta				dered light compared to s.







Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

**WETS Map** 

Aerial Date: July 4, 2012

DATE:	: 7/17/2023 PREPARED BY: Kari Sherman									
WEATHER S	TATION:		Sioux City AF	, IA						
COUNTY: _		Woodbury							STATE:	lowa
SOIL NAME:		Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISIT DA	ATE:	Aerial Tak	en: Septem	ber 16, 2014	<u>-</u>					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR M	/ONTH*	August	1.90	3.43	4.18	10.12	WET	3	3	9
2nd PRIOR N	*HTNON	July	1.77	3.22	3.93	3.61	NORMAL	2	2	4
3rd PRIOR N	/ONTH*	June	2.33	3.74	4.52	16.65	WET	3	1	3
									SUM =	16
NOTE: If	sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*P	hoto Dat	e								
CONCLUSION	ONCLUSIONS:									
А	t the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Wet			
						ux City AP, IA sta ators observed o				lered light compared to



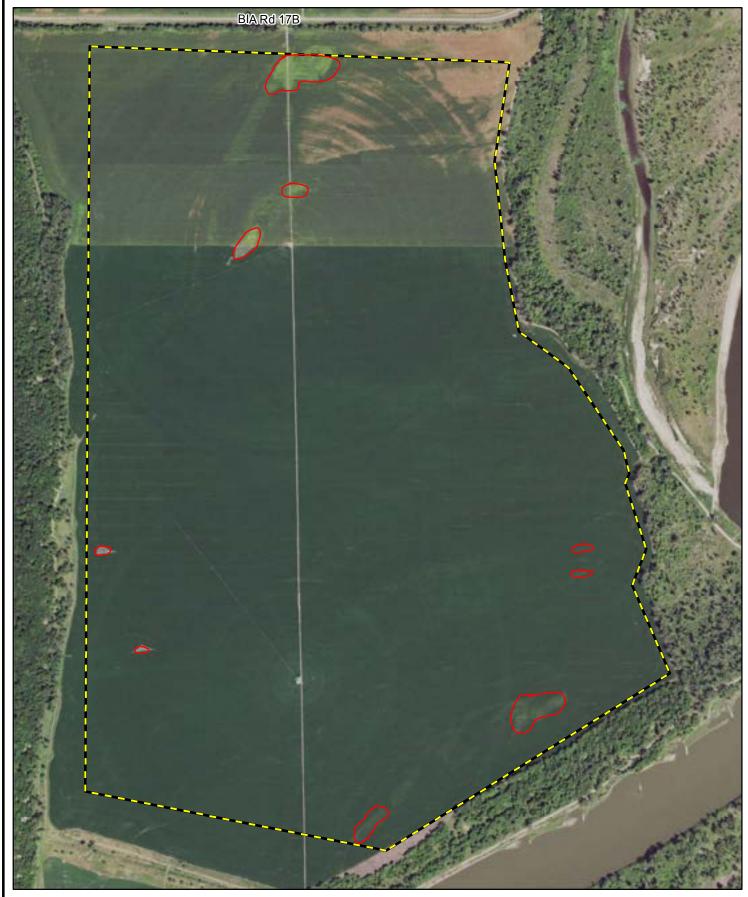


Study Area

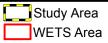
Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

WETS Map Aerial Date: September 16, 2014

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER S	TATION:									
COUNTY: _		Woodbury							STATE:	lowa
SOIL NAME:		Multiple (	See Delinea	ation Report)	<u>.</u>		GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISIT D	ATE:	Aerial Ta	aken: Augu	st 13, 2016	<u>-</u>					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR N	MONTH*	July	1.77	3.22	3.93	2.19	NORMAL	2	3	6
2nd PRIOR I	*HTNOM	June	2.33	3.74	4.52	1.38	DRY	1	2	2
3rd PRIOR N	*HTNON	May	2.73	3.77	4.44	5.02	WET	3	1	3
									SUM =	11
NOTE: If	f sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*F	Photo Dat	е								
CONCLUSIO	NS:									
Δ	at the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Normal			
						•	tation was 1.79 i			idered light compared to



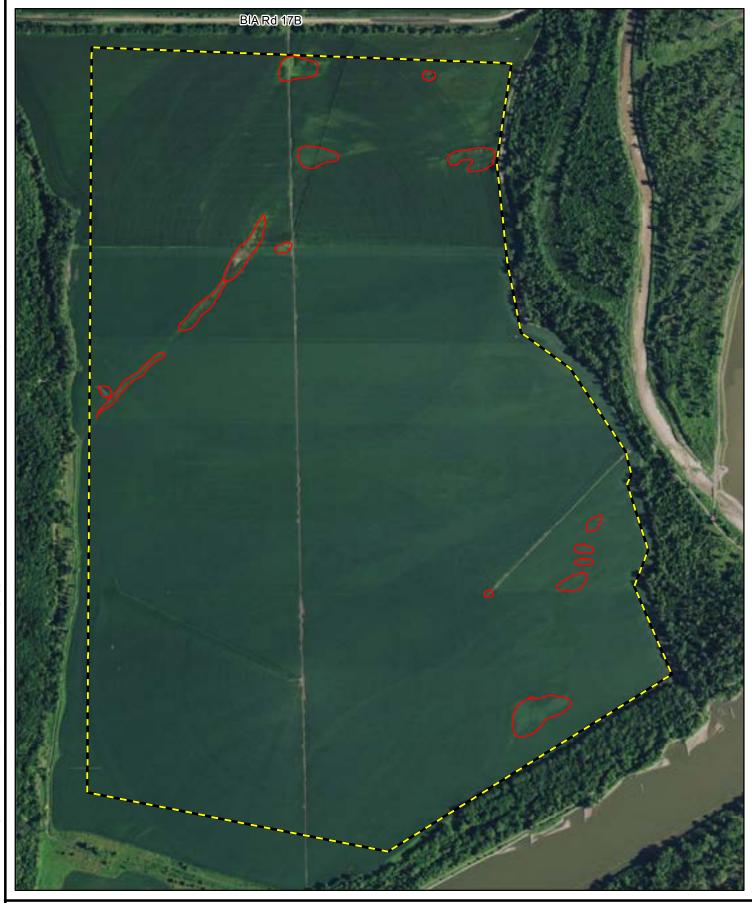




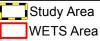
Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

WETS Map Aerial Date: August 13, 2016

	DATE:	7/17	/2023						PREF	PARED BY:	Kari Sherman
	WEATHER	STATION:		Sioux City AP	, IA						
	COUNTY:		Woodbury	_						STATE:	lowa
	SOIL NAME	Ξ:	Multiple (	See Delinea	tion Report)			GROW	VING SEASON:	Ma	y 1 - October 31
	SITE VISIT	DATE:	Aerial Ta	aken: Augus	st 15, 2020						
				LONG TE	RM RAINFALL	RECORDS					
			MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
oject # 021-05175	st PRIOF	R MONTH*	July	1.77	3.22	3.93	4.15	WET	3	3	9
	2nd PRIOF	R MONTH*	June	2.33	3.74	4.52	1.56	DRY	1	2	2
	3rd PRIOF	R MONTH*	May	2.73	3.77	4.44	2.56	DRY	1	1	1
			,							SUM =	12
	NOTE:	If sum is						CONDITION VA	ALUE:		
		6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
		10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
		15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
		*Photo Date	Э								
	CONCLUSI	ONS:									
	At the time of the site visit, hydrologic condition					for the prior p	eriod were:	Normal			
								ation was 1.79 in luring the site vis			lered light compared to







Winnebago Tribe Broadband Connectivity Project

Staging Area E
Thurston County, Nebraska
WETS Map

Basemap: NAIP Aerial Imagery

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AF	P, IA	_					
COUNTY	:	Woodbury							STATE:	Iowa
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial 7	aken: Augu	ıst 4, 2022	-					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	July	1.77	3.22	3.93	1.86	NORMAL	2	3	6
2nd PRIC	OR MONTH*	June	2.33	3.74	4.52	1.15	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.73	3.77	4.44	2.18	DRY	1	1	1
									SUM =	9
NOTE:	If sum is						CONDITION VA			
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLU	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior	period were:	Dry			
						•	station was 1.79 ved during the si			sidered light compared cators.

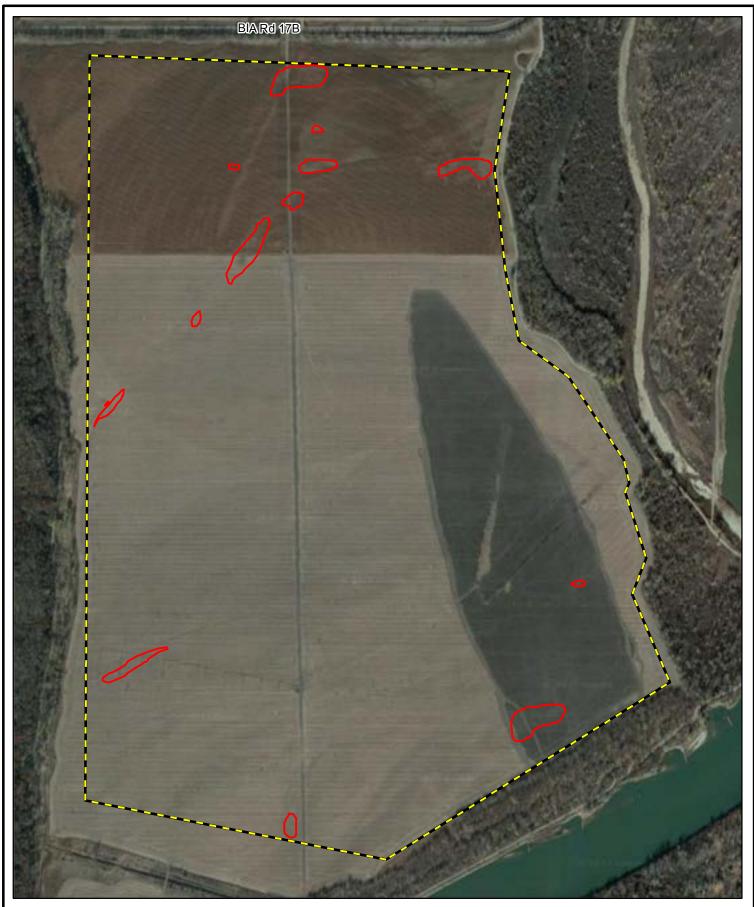




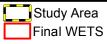
Study Area

Winnebago Tribe Broadband Connectivity Project Staging Area E Thurston County, Nebraska

WETS Map Aerial Date: August 4, 2022 Basemap: NAIP Aerial Imagery Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-17\_NRPL\_WETS Analysis\_B-107\_Staging\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 18, 2023





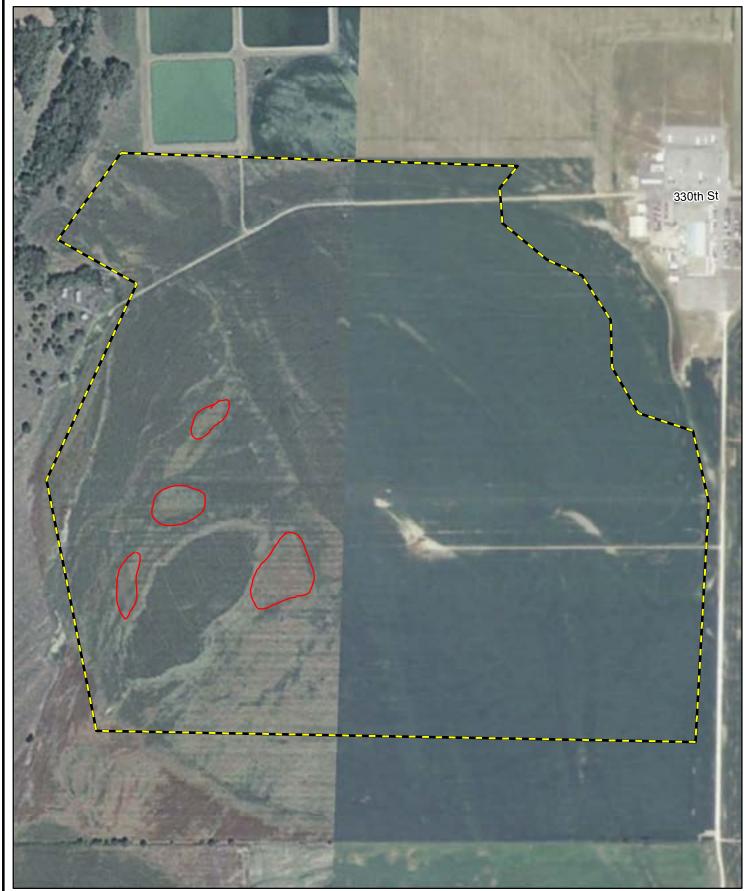


Winnebago Tribe Broadband Connectivity Project Staging Area E

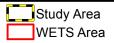
Thurston County, Nebraska Final WETS Map

DATE: 7/17/2023							Kari Sherman				
WEATHER STATION:			Sioux City AF	P, IA	<u>-</u>						
COUNTY: Woodbury							STATE:	Iowa			
SOIL NAME:		Multiple (	See Delinea	ation Report)	_		GROW	y 1 - October 31			
SITE VISIT DATE:		Aerial Tal	ken: Septen	nber 3, 2004	-						
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIOR MONTH*		August	1.90	3.43	4.18	2.93	NORMAL	2	3	6	
2nd PRIC	R MONTH*	July	1.77	3.22	3.93	4.12	WET	3	2	6	
3rd PRIOR MONTH*		June	2.33	3.74	4.52	4.32	NORMAL	2	1	2	
									SUM =	14	
NOTE:	If sum is						CONDITION VA				
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1			
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3			
	*Photo Dat	е									
CONCLUS	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were:  Normal										
	Prior to the site visit monthly precipitation observed at the Sioux City AP, IA station was 1.79 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										

DATE: 7/				Kari Sherman							
WEATHER STATION	P, IA	<u>-</u>									
COUNTY: Woodbury							STATE:	lowa			
SOIL NAME:	Multiple (	See Delinea	ation Report)	_		GROW	y 1 - October 31				
SITE VISIT DATE:	Aerial <sup>-</sup>	Taken: Augı	ıst 5, 2005	-							
		LONG TE	RM RAINFALL	RECORDS							
	MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIOR MONTH	* July	1.77	3.22	3.93	2.51	NORMAL	2	3	6		
2nd PRIOR MONTH		2.33	3.74	4.52	4.13	NORMAL	2	2	4		
3rd PRIOR MONTH	* May	2.73	3.77	4.44	3.39	NORMAL	2	1	2		
								SUM =	12		
NOTE: If sum is 6 - 9		period has b	een drier than	normal		CONDITION VALUE: Dry = 1					
10 - 14	•			Homai		Normal	= 2				
			een wetter tha	n normal		Wet	= 3				
*Photo Date											
CONCLUSIONS:											
At the tir	At the time of the site visit, hydrologic conditions for the prior period were:  Normal										
	Prior to the site visit monthly precipitation observed at the Sioux City AP, IA station was 1.79 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										





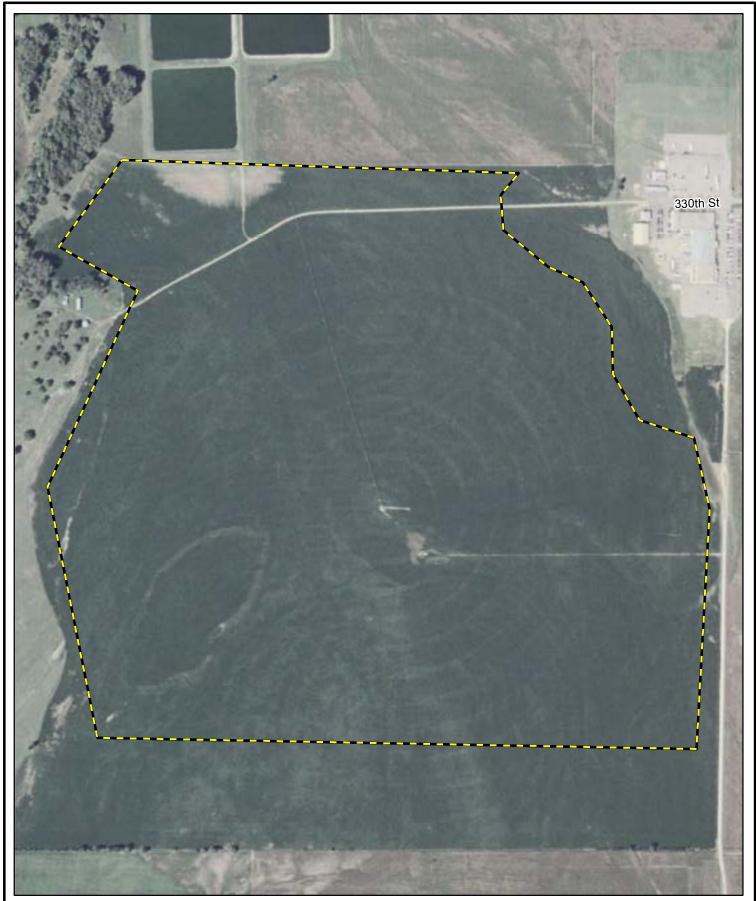


Winnebago Tribe Broadband Connectivity Project Staging Area F

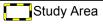
Woodbury County, Iowa

WETS Map
Aerial Date: August 5, 2005

DATE:	7/17	7/2023	•				Kari Sherman				
WEATHER STATION: Sioux City AP, IA			P, IA	-							
COUNTY:		Woodbury							STATE:	lowa	
SOIL NAME:		Multiple (	See Delinea	ation Report)	-		GROWING SEASON: May				
SITE VISIT DATE:		Aerial T	aken: Augu	st 30, 2006	-						
				RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIOR MONTH*		July	1.77	3.22	3.93	0.36	DRY	1	3	3	
2nd PRIOR MONTH*		June	2.33	3.74	4.52	3.23	NORMAL	2	2	4	
3rd PRIOR MONTH*		May	2.73	3.77	4.44	0.87	DRY	1	1	1	
									SUM =	8	
NOTE:	If sum is						CONDITION VA	ALUE:			
	6 - 9	then prior p	eriod has b	een drier than	normal		Dry	= 1			
	10 - 14	then prior p	eriod has b	een normal			Normal	= 2			
	15 - 18	then prior p	eriod has b	een wetter tha	n normal		Wet	= 3			
	*Photo Date										
CONCLUS	IONS:										
	At the time of the site visit, hydrologic conditions for the prior period were:  Dry										
	Prior to the site visit monthly precipitation observed at the Sioux City AP, IA station was 1.79 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										





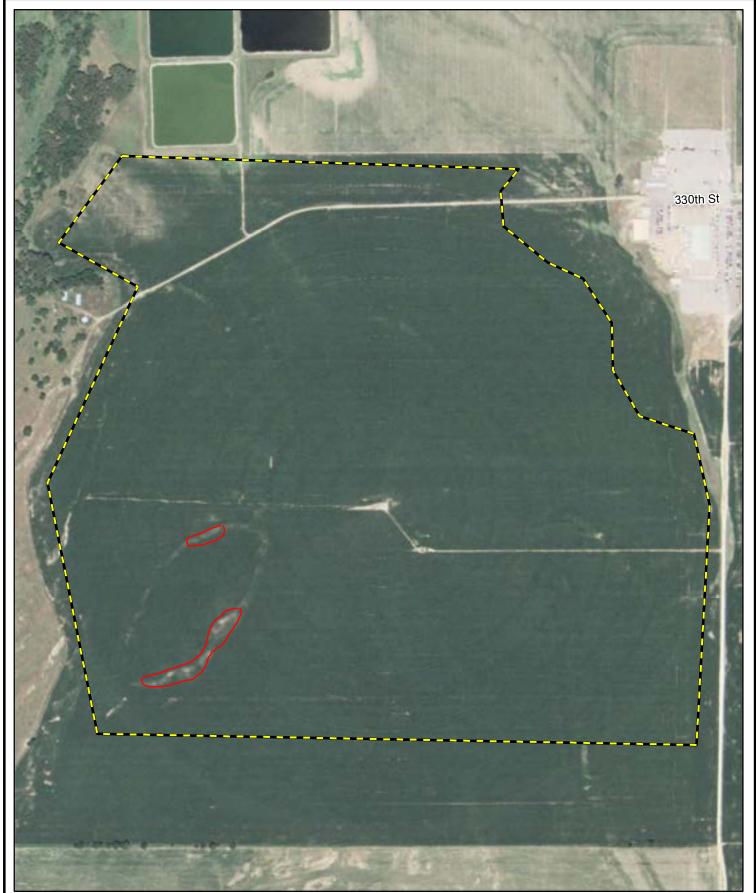


Winnebago Tribe Broadband Connectivity Project Staging Area F

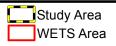
Woodbury County, Iowa

WETS Map Aerial Date: August 30, 2006

DATE:	7/17	7/2023	•				Kari Sherman				
WEATHER STATION:			Sioux City AF	P, IA	-						
COUNTY:		Woodbury							STATE:	lowa	
SOIL NAME:		Multiple (	See Delinea	ation Report)	-		y 1 - October 31				
SITE VISIT DATE:		Aerial	Taken: July	13, 2008	-						
LONG TERM RAINI				RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIOR MONTH*		June	2.33	3.74	4.52	3.35	NORMAL	2	3	6	
2nd PRIOR MONTH*		May	2.73	3.77	4.44	5.20	WET	3	2	6	
3rd PRIOR MONTH*		April	1.76	2.83	3.42	2.79	NORMAL	2	1	2	
									SUM =	14	
NOTE:	If sum is 6 - 9 10 - 14 15 - 18	then prior p	eriod has b	een drier than een normal een wetter tha			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3			
	*Photo Date										
CONCLUS	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were:  Normal										
	Prior to the site visit monthly precipitation observed at the Sioux City AP, IA station was 1.79 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										



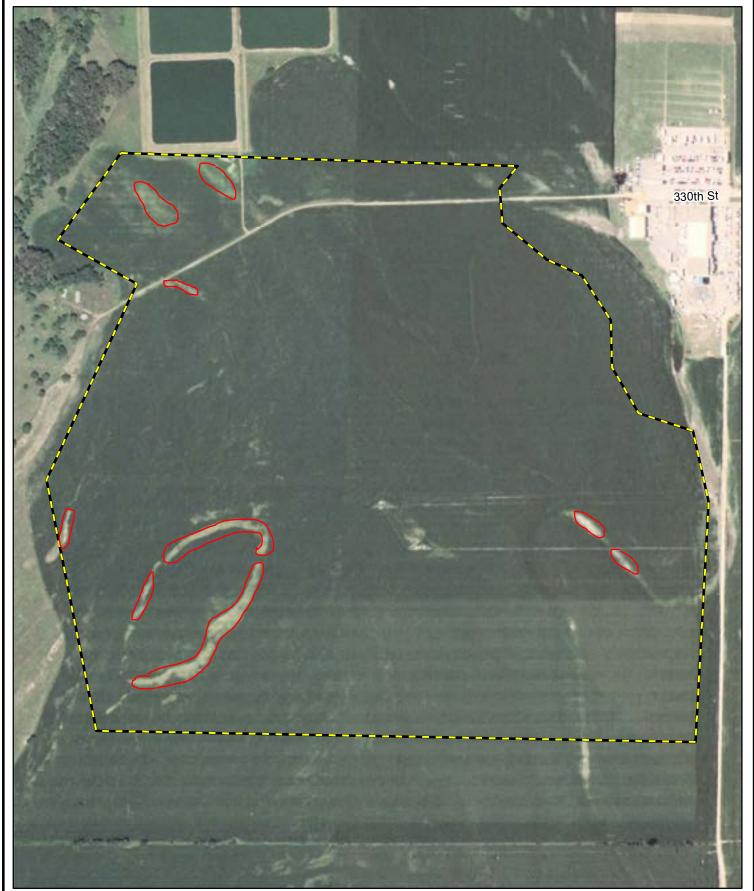




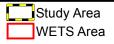
Winnebago Tribe Broadband Connectivity Project Staging Area F Woodbury County, Iowa

WETS Map Aerial Date: July 13, 2008

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AF	P, IA	_					
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	19, 2009	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.33	3.74	4.52	5.26	WET	3	3	9
2nd PRIC	OR MONTH*	May	2.73	3.77	4.44	1.00	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.76	2.83	3.42	1.62	DRY	1	1	1
									SUM =	12
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
		then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were:	Normal			
							station was 1.79 during the site v			sidered light compared to







Winnebago Tribe Broadband Connectivity Project Staging Area F Woodbury County, Iowa

WETS Map Aerial Date: July 19, 2009

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER ST	TATION:		Sioux City AP	P, IA						
COUNTY: _		Woodbury							STATE:	Iowa
SOIL NAME:		Multiple (	See Delinea	ation Report)	<u>.</u>		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISIT DA	ATE:	Aerial Tak	en: Septem	ber 20, 2010	<u>-</u>					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIOR M	1ONTH*	August	1.90	3.43	4.18	4.50	WET	3	3	9
2nd PRIOR N	*HTNON	July	1.77	3.22	3.93	9.23	WET	3	2	6
3rd PRIOR M	MONTH*	June	2.33	3.74	4.52	6.40	WET	3	1	3
									SUM =	18
NOTE: If	sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
*P	hoto Dat	е								
CONCLUSIONS:										
А	t the time	of the site v	isit, hydrolo	gic conditions	for the prior	period were:	Wet			
						•	station was 1.79			sidered light compared

Woodbury County, Iowa

WETS Map

DATE:	7/17	72023	<u>-</u>					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Sioux City AF	P, IA	-					
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	IE:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISIT	ΓDATE:	Aerial T	aken: Augu	st 24, 2011	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.77	3.22	3.93	0.78	DRY	1	3	3
2nd PRIO	R MONTH*	June	2.33	3.74	4.52	5.03	WET	3	2	6
3rd PRIO	R MONTH*	May	2.73	3.77	4.44	6.67	WET	3	1	3
									SUM =	12
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	SIONS:									
At the time of the site visit, hydrologic conditions for the price					for the prior p	period were:	Normal			
							tation was 1.79 i during the site vi			dered light compared to

F:\2021\05001-05500\021-05175\40-Design\G\S\23-07-17\_NRPL\_WETS Analysis\_B-107\_Staging\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

2011 Flood Event Signatures\*

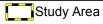
Woodbury County, Iowa

**WETS Map** 

DATE:	7/17	7/2023	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AP	P, IA	_					
COUNTY		Woodbury							STATE:	lowa
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	Ma <sub>y</sub>	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	11, 2013	_					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.33	3.74	4.52	3.13	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.73	3.77	4.44	5.28	WET	3	2	6
3rd PRIC	OR MONTH*	April	1.76	2.83	3.42	4.85	WET	3	1	3
									SUM =	15
NOTE:	If sum is						CONDITION VA	LUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLU	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior	period were:	Wet			
						•	station was 1.79 red during the sit			sidered light compared cators.







Winnebago Tribe Broadband Connectivity Project Staging Area F

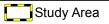
Woodbury County, Iowa

WETS Map Aerial Date: July 11, 2013

DATE:	7/17	7/2023	-					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Sioux City AP	P, IA	-					
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 23, 2015	-					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.77	3.22	3.93	5.68	WET	3	3	9
2nd PRIOR MONTH* June 2.33 3.74 4.52 4.19 NORMAL 2 2								4		
3rd PRIO	R MONTH*	May	2.73	3.77	4.44	3.53	NORMAL	2	1	2
									SUM =	15
NOTE:	15 - 18	then prior p	eriod has be	een drier than een normal een wetter thal			CONDITION VA Dry Normal Wet	ALUE: = 1 = 2 = 3		
	*Photo Dat	е								
CONCLUSIONS:										
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior	period were:	Wet			
							station was 1.79 ved during the si			sidered light compared cators.







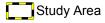
Winnebago Tribe Broadband Connectivity Project Staging Area F Woodbury County, lowa

**WETS Map** Aerial Date: August 23, 2015

DATE:	7/17	7/2023						PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AP	, IA						
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	16, 2017						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.33	3.74	4.52	1.72	DRY	1	3	3
2nd PRIC	OR MONTH*	May	2.73	3.77	4.44	3.44	NORMAL	2	2	4
3rd PRIC	OR MONTH*	April	1.76	2.83	3.42	2.93	NORMAL	2	1	2
									SUM =	9
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
		then prior p					Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thar	n normal		Wet	= 3		
	*Photo Date	e								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
							IA station was 1			considered light



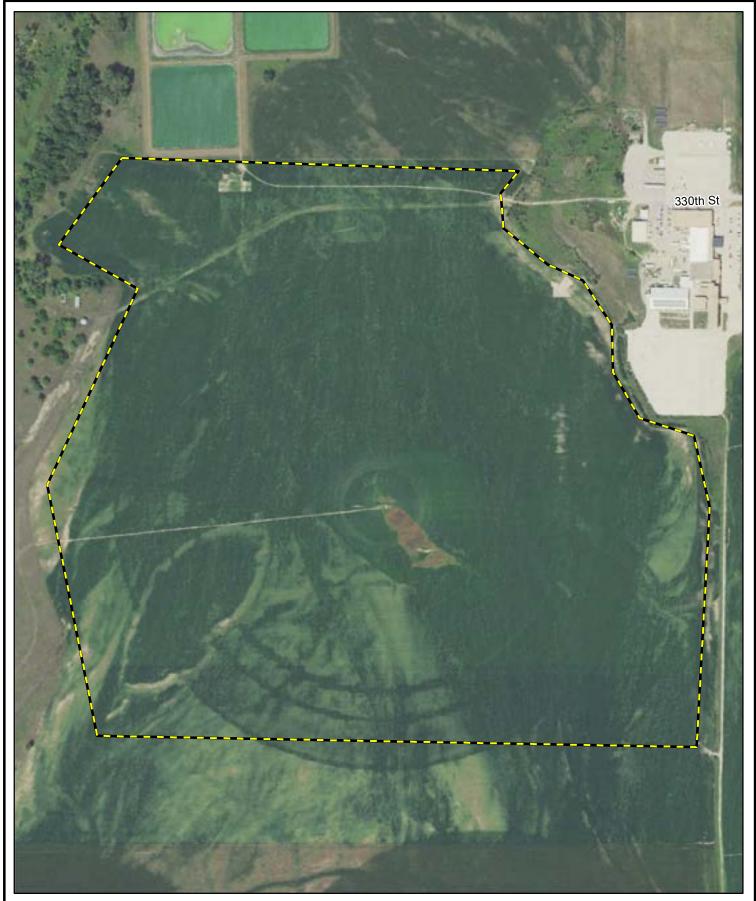




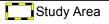
Winnebago Tribe Broadband Connectivity Project Staging Area F Woodbury County, Iowa

**WETS Map** Aerial Date: July 16, 2017

DATE:	7/17	7/2023						PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Sioux City AP	, IA						
COUNTY:		Woodbury							STATE:	lowa
SOIL NAM	ΛΕ:	Multiple (	See Delinea	ition Report)			GROW	VING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 12, 2021						
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	July	1.77	3.22	3.93	1.43	DRY	1	3	3
2nd PRIC	OR MONTH*	June	2.33	3.74	4.52	1.31	DRY	1	2	2
3rd PRIC	OR MONTH*	May	2.73	3.77	4.44	2.77	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Date	e								
CONCLU	SIONS:									
	At the time	of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Dry			
							IA station was 1			considered light







Winnebago Tribe Broadband Connectivity Project Staging Area F

Woodbury County, Iowa
WETS Map

Aerial Date: August 12, 2021

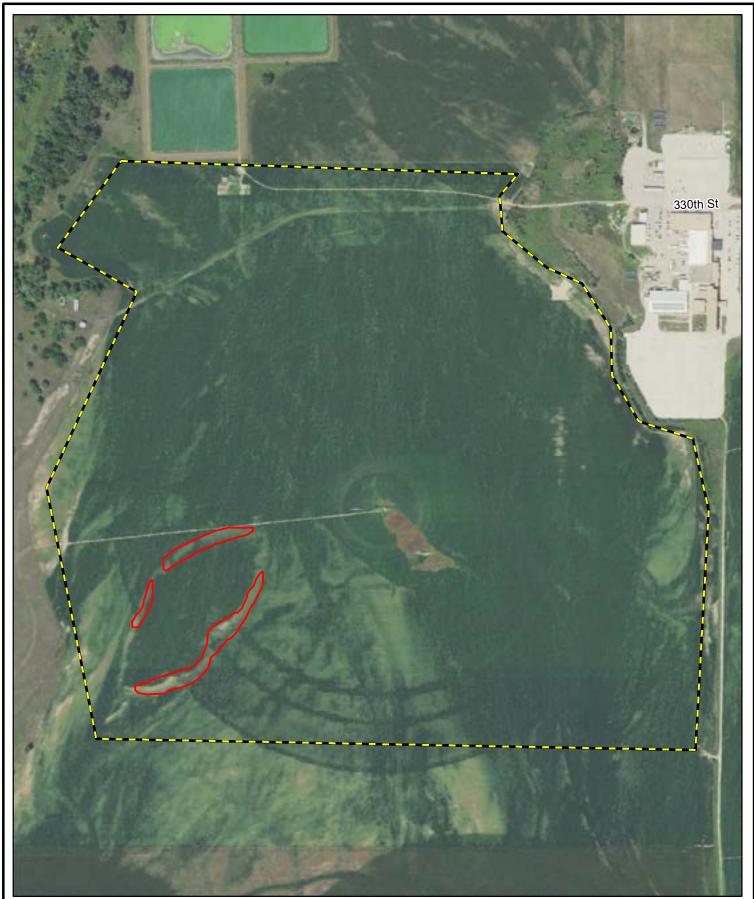
WGS 1984 ARC System Zone 11

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-17\_NRPL\_WETS Analysis\_B-107\_Staging\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 77, 2023

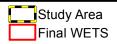
2004

2009

Woodbury County, Iowa **Combined WETS Map** 







Winnebago Tribe Broadband Connectivity Project Staging Area F

Woodbury County, Iowa

**Final WETS Map** 

DATE:	7/14	1/2023	-					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	ΛΕ:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augu	st 8, 2005	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	July	1.69	2.79	3.36	2.57	NORMAL	2	3	6
2nd PRIC	OR MONTH*	June	2.57	4.01	4.83	6.64	WET	3	2	6
3rd PRIC	R MONTH*	May	2.82	4.07	4.84	3.67	NORMAL	2	1	2
									SUM =	14
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.

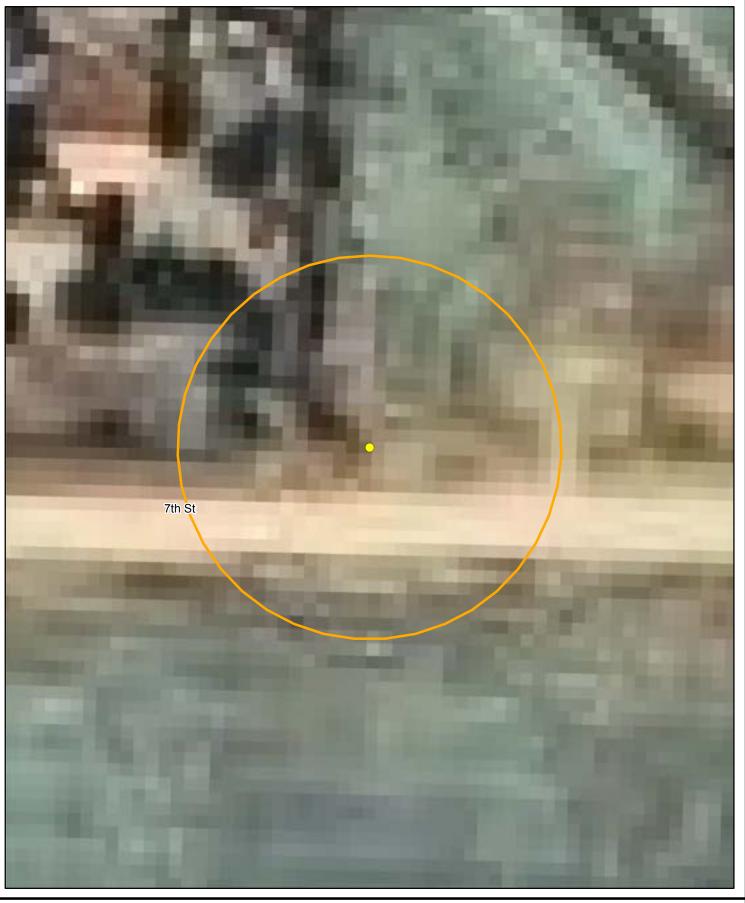




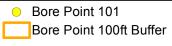
Bore Point 101 Bore Point 100ft Buffer Winnebago Tribe Broadband Connectivity Project Bore Point 101 Dixon County, Nebraska

WETS Map Aerial Date: August 8, 2005

DATE:	7/14	1/2023	_					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>	<u>-</u>					
COUNTY	:	Wayne							STATE:	Nebraska
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	19, 2006	_					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	June	2.57	4.01	4.83	3.02	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	1.49	DRY	1	2	2
3rd PRIC	OR MONTH*	April	1.54	2.80	3.41	2.13	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18			een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUSIONS:										
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.





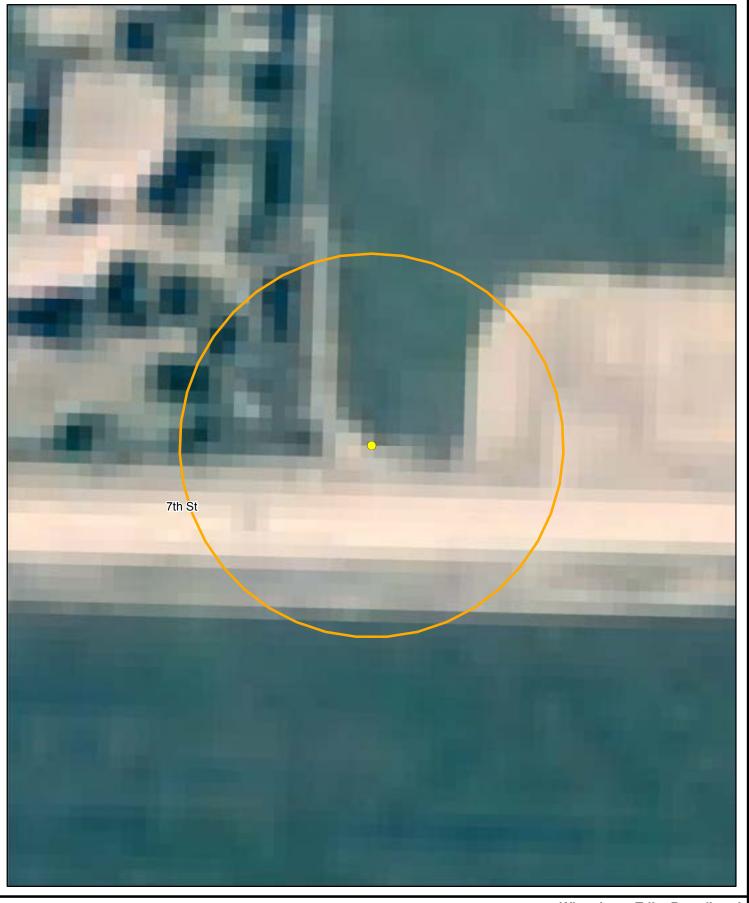


Winnebago Tribe Broadband Connectivity Project Bore Point 101

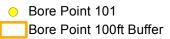
Dixon County, Nebraska

WETS Map Aerial Date: July 19, 2006

DATE:	7/14	1/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	<u> </u>	_					
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ntion Report)	-		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 8, 2007	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.57	4.01	4.83	1.54	DRY	1	3	3
2nd PRIC	R MONTH*	May	2.82	4.07	4.84	3.37	NORMAL	2	2	4
3rd PRIO	R MONTH*	April	1.54	2.80	3.41	6.14	WET	3	1	3
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUSIONS:										
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			lered light compared to cators.







Winnebago Tribe Broadband Connectivity Project Bore Point 101

Dixon County, Nebraska

WETS Map Aerial Date: July 8, 2007

DATE:	7/14	1/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	<u> </u>	_					
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ntion Report)	-		GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 1, 2009	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.57	4.01	4.83	5.54	WET	3	3	9
2nd PRIC	R MONTH*	May	2.82	4.07	4.84	0.61	DRY	1	2	2
3rd PRIO	R MONTH*	April	1.54	2.80	3.41	1.87	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUSIONS:										
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.

WGS 1984 ARC System Zone 11

Olsson Project # 021-05175

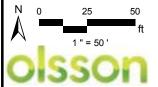
WETS Map

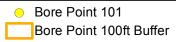
Dixon County, Nebraska

Aerial Date: July 1, 2009

DATE:	7/14	1/2023	-					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	Мау	/ 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	10, 2010	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.57	4.01	4.83	7.60	WET	3	3	9
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	2.12	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.54	2.80	3.41	2.24	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in			ered light compared to cators.





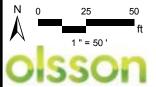


Winnebago Tribe Broadband Connectivity Project Bore Point 101 Dixon County, Nebraska

WETS Map Aerial Date: July 10, 2010

DATE: 7/14/2023			_					PREF	PARED BY: _	Kari Sherman		
WEATHER STATION: Wayne, N				<u> </u>								
COUNTY		Wayne							STATE:	Nebraska		
SOIL NAME: N		Multiple (	See Delinea	ation Report)	-	GROWING SEASON: May 1 - Octo						
SITE VISIT DATE:		Aerial	Taken: July	/ 3, 2012	-							
				RM RAINFALL	RECORDS							
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS		
1st PRIC	R MONTH*	June	2.57	4.01	4.83	0.67	DRY	1	3	3		
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	5.96	WET	3	2	6		
3rd PRIOR MONTH*		April	1.54	2.80	3.41	3.09	NORMAL	2	1	2		
									SUM =	11		
NOTE:	If sum is					CONDITION VALUE:						
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1				
	10 - 14						Normal	= 2				
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3				
	*Photo Date											
CONCLU	SIONS:											
	At the time of the site visit, hydrologic conditions for the prior period were Normal											
	Prior to the site visit monthly precipitation observed at the Wayne, NE station was 2.67 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.											





Bore Point 101Bore Point 100ft Buffer

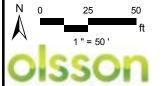
Winnebago Tribe Broadband Connectivity Project Bore Point 101

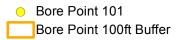
Dixon County, Nebraska

WETS Map Aerial Date: July 3, 2012

DATE:	7/14	1/2023	•					PARED BY:	Kari Sherman		
WEATHER STATION:			Wayne, NE	<u> </u>	_						
COUNTY		Wayne							STATE:	Nebraska	
SOIL NAME:		Multiple (	See Delinea	ntion Report)	-		GROW	/ING SEASON:	y 1 - October 31		
SITE VISIT DATE:		Aerial Tal	ken: Septen	nber 7, 2014	_						
			LONG TE	RM RAINFALL	RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIC	R MONTH*	August	1.75	3.09	3.76	5.53	WET	3	3	9	
2nd PRIC	OR MONTH*	July	1.69	2.79	3.36	3.15	NORMAL	2	2	4	
3rd PRIC	OR MONTH*	June	2.57	4.01	4.83	12.58	WET	3	1	3	
									SUM =	16	
NOTE:	If sum is					CONDITION VALUE:					
	6 - 9			een drier than	normal		Dry	= 1			
							Normal	= 2			
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3			
	*Photo Date	е									
CONCLU	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were Wet										
	Prior to the site visit monthly precipitation observed at the Wayne, NE station was 2.67 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										





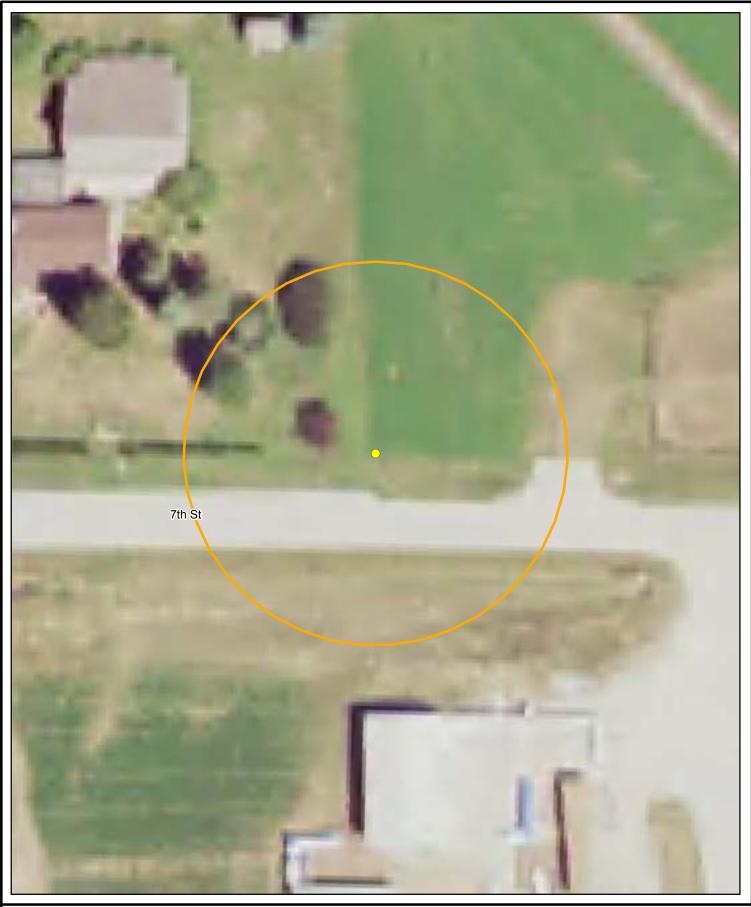


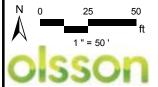
Winnebago Tribe Broadband Connectivity Project Bore Point 101

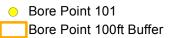
Dixon County, Nebraska **WETS Map** 

Aerial Date: September 7, 2014

DATE: 7/14/2023							PARED BY:	Kari Sherman			
WEATHER STATION: Wayne, NE				≣							
COUNTY:		Wayne							STATE:	Nebraska	
SOIL NAME:		Multiple (	See Delinea	ation Report)	•		y 1 - October 31				
SITE VISIT DATE:		Aerial T	aken: Augus	st 14, 2016							
LONG TERM RAINFALL					RECORDS						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIO	R MONTH*	July	1.69	2.79	3.36	1.62	DRY	1	3	3	
2nd PRIC	R MONTH*	June	2.57	4.01	4.83	3.08	NORMAL	2	2	4	
3rd PRIOR MONTH*		May	2.82	4.07	4.84	4.35	NORMAL	2	1	2	
<u> </u>									SUM =	9	
NOTE:	If sum is						CONDITION VA	ALUE:			
	6 - 9			een drier than	normal		Dry	= 1			
	10 - 14						Normal	= 2			
15 - 18 then prior period has been wetter than no					n normal		Wet	= 3			
	*Photo Date										
CONCLUS	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were Dry										
	Prior to the site visit monthly precipitation observed at the Wayne, NE station was 2.67 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										







Winnebago Tribe Broadband Connectivity Project Bore Point 101

Dixon County, Nebraska

**WETS Map** Aerial Date: August 14, 2016

DATE: 7/14/2023			-					Kari Sherman			
WEATHER STATION: Wayne, NE				<u> </u>							
COUNTY:		Wayne							STATE:	Nebraska	
SOIL NAME: Multiple (See Delineation Report)			-	GROWING SEASON: May 1 - October 3							
SITE VISIT DATE: Aerial Ta			aken: Augus	st 15, 2020	-						
	LONG TERM RAINFALL RECO										
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIO	R MONTH*	July	1.69	2.79	3.36	4.07	WET	3	3	9	
2nd PRIC	OR MONTH*	June	2.57	4.01	4.83	1.60	DRY	1	2	2	
3rd PRIOR MONTH*		May	2.82	4.07	4.84	3.81	NORMAL	2	1	2	
									SUM =	13	
NOTE:	If sum is						CONDITION VA	ALUE:			
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1			
	10 - 14						Normal	= 2			
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3			
	*Photo Date										
CONCLUS	SIONS:										
	At the time of the site visit, hydrologic conditions for the prior period were Normal										
	Prior to the site visit monthly precipitation observed at the Wayne, NE station was 2.67 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										

WGS 1984 ARC System Zone 11

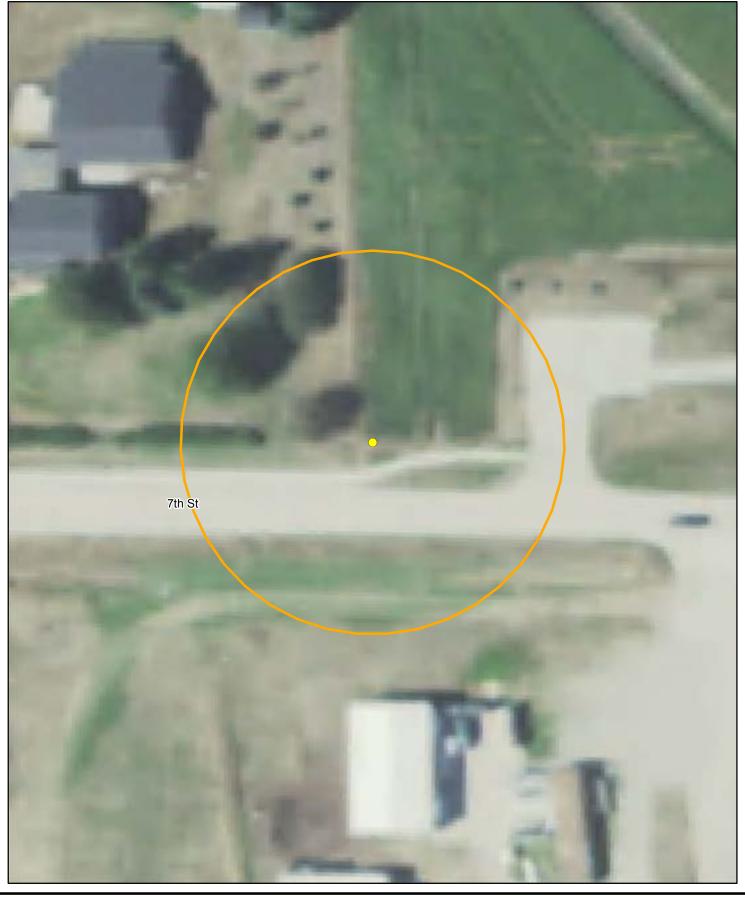
Olsson Project # 021-05175

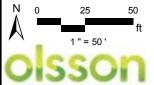
Basemap: NAIP Aerial Imagery

Aerial Date: August 15, 2020

**WETS Map** 

DATE: 7/14/2023							PARED BY:	Kari Sherman			
WEATHER STATION: Wayne, N				≣							
COUNTY:		Wayne							STATE:	Nebraska	
SOIL NAME: Multiple (See			See Delinea	ation Report)			GROW	y 1 - October 31			
SITE VISIT	DATE:	Aerial T	aken: Augu	ıst 9, 2022							
LONG TERM RAINFALL R											
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS	
1st PRIO	R MONTH*	July	1.69	2.79	3.36	1.05	DRY	1	3	3	
2nd PRIO	R MONTH*	June	2.57	4.01	4.83	1.75	DRY	1	2	2	
3rd PRIOR MONTH*		May	2.82	4.07	4.84	4.55	NORMAL	2	1	2	
									SUM =	7	
NOTE:	If sum is 6 - 9	then prior p	eriod has be	een drier than	normal		CONDITION VA	ALUE: = 1			
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2			
	15 - 18 then prior period has been wetter than normal						Wet	= 3			
	*Photo Date										
CONCLUS	IONS:										
	At the time of the site visit, hydrologic conditions for the prior period were Dry										
	Prior to the site visit monthly precipitation observed at the Wayne, NE station was 2.67 inches, which would be considered light compared to the monthly average. These data indicate that hydrology indicators observed during the site visit were not reliable indicators.										



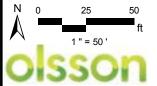


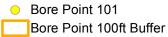
Bore Point 101 Bore Point 100ft Buffer Winnebago Tribe Broadband Connectivity Project Bore Point 101

Dixon County, Nebraska

**WETS Map** Aerial Date: August 9, 2022



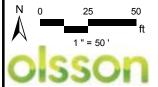


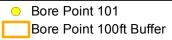


Winnebago Tribe Broadband Connectivity Project Bore Point 101 Dixon County, Nebraska

Combined WETS Map







Winnebago Tribe Broadband Connectivity Project Bore Point 101

Dixon County, Nebraska

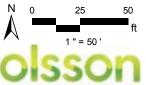
**Final WETS Map** 

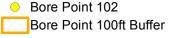
DATE:	7/14	1/2023	-					PREF	PARED BY: _	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>	<u>-</u>					
COUNTY	:	Wayne							STATE:	Nebraska
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial 7	aken: Augu	st 8, 2005	-					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	July	1.69	2.79	3.36	2.57	NORMAL	2	3	6
2nd PRIC	OR MONTH*	June	2.57	4.01	4.83	6.64	WET	3	2	6
3rd PRIC	OR MONTH*	May	2.82	4.07	4.84	3.67	NORMAL	2	1	2
									SUM =	14
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18			een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLU	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.

Dixon County, Nebraska

**WETS Map** Aerial Date: August 8, 2005

DATE:	7/14	1/2023	_					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>	<u>-</u>					
COUNTY	:	Wayne							STATE:	Nebraska
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	_		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	19, 2006	_					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	OR MONTH*	June	2.57	4.01	4.83	3.02	NORMAL	2	3	6
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	1.49	DRY	1	2	2
3rd PRIC	OR MONTH*	April	1.54	2.80	3.41	2.13	NORMAL	2	1	2
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18			een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLU	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.





Winnebago Tribe Broadband Connectivity Project Bore Point 102

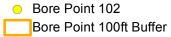
Dixon County, Nebraska **WETS Map** 

Aerial Date: July 19, 2006

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-13\_NRPL\_WETS Analysis\_Confirmed\_Boring\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

DATE:	7/14	1/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	<u> </u>	_					
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ntion Report)	-		GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 8, 2007	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.57	4.01	4.83	1.54	DRY	1	3	3
2nd PRIC	R MONTH*	May	2.82	4.07	4.84	3.37	NORMAL	2	2	4
3rd PRIO	R MONTH*	April	1.54	2.80	3.41	6.14	WET	3	1	3
									SUM =	10
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			lered light compared to cators.





Connectivity Project Bore Point 102

Dixon County, Nebraska

**WETS Map** 

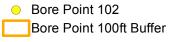
Aerial Date: July 8, 2007

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-13\_NRPL\_WETS Analysis\_Confirmed\_Boring\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

DATE:	7/14	1/2023	•					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	<u> </u>	_					
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ntion Report)	-		GROW	VING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 1, 2009	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	June	2.57	4.01	4.83	5.54	WET	3	3	9
2nd PRIC	R MONTH*	May	2.82	4.07	4.84	0.61	DRY	1	2	2
3rd PRIO	R MONTH*	April	1.54	2.80	3.41	1.87	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	isit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.

DATE:	7/14	1/2023	-					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	ΛΕ:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	/ 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	12, 2010	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.57	4.01	4.83	7.60	WET	3	3	9
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	2.12	DRY	1	2	2
3rd PRIC	R MONTH*	April	1.54	2.80	3.41	2.24	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18			een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 increase the s			ered light compared to cators.





Winnebago Tribe Broadband Connectivity Project **Bore Point 102** 

Dixon County, Nebraska

**WETS Map** 

Aerial Date: July 12, 2010

DATE:	7/14	1/2023	_					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>	<u>-</u>					
COUNTY		Wayne							STATE:	Nebraska
SOIL NAM	ΛE:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial	Taken: July	/ 3, 2012	-					
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	June	2.57	4.01	4.83	0.67	DRY	1	3	3
2nd PRIC	OR MONTH*	May	2.82	4.07	4.84	5.96	WET	3	2	6
3rd PRIC	OR MONTH*	April	1.54	2.80	3.41	3.09	NORMAL	2	1	2
									SUM =	11
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLU	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.

WGS 1984 ARC System Zone 11

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-13\_NRPL\_WETS Analysis\_Confirmed\_Boring\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

Winnebago Tribe Broadband Connectivity Project Bore Point 102

Dixon County, Nebraska WETS Map

DATE:	7/14	1/2023	•					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>	_					
COUNTY		Wayne							STATE:	Nebraska
SOIL NAM	ΛΕ:	Multiple (	See Delinea	ation Report)	-		GROV	VING SEASON:	Ma	y 1 - October 31
SITE VISI	T DATE:	Aerial Tal	ken: Septen	nber 7, 2014	_					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIC	R MONTH*	August	1.75	3.09	3.76	5.53	WET	3	3	9
2nd PRIC	OR MONTH*	July	1.69	2.79	3.36	3.15	NORMAL	2	2	4
3rd PRIC	OR MONTH*	June	2.57	4.01	4.83	12.58	WET	3	1	3
									SUM =	16
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
							Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Date	е								
CONCLU	SIONS:									
	At the time	of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Wet			
							ation was 2.67 in ved during the s			ered light compared to cators.

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-13\_NRPL\_WETS Analysis\_Confirmed\_Boring\_Locations.mxd PUBLISHED BY: mczerwinski DATE: July 17, 2023

**Bore Point 102** 

Dixon County, Nebraska

Basemap: NAIP Aerial Imagery

**WETS Map** 

DATE:	7/14	1/2023	_					PREP	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	≣						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	IE:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISIT	ΓDATE:	Aerial T	aken: Augus	st 14, 2016						
				RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.69	2.79	3.36	1.62	DRY	1	3	3
2nd PRIC	R MONTH*	June	2.57	4.01	4.83	3.08	NORMAL	2	2	4
3rd PRIO	R MONTH*	May	2.82	4.07	4.84	4.35	NORMAL	2	1	2
									SUM =	9
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9			een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Dry			
			, , ,			•	tion was 2.67 inved during the s	•		ered light compared to cators.

**Bore Point 102** 

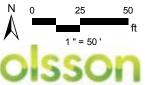
Dixon County, Nebraska

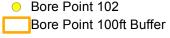
Basemap: NAIP Aerial Imagery

**WETS Map** 

Aerial Date: August 14, 2016

DATE:	7/14	1/2023	-					PREF	PARED BY:	Kari Sherman
WEATHE	R STATION:		Wayne, NE	<u> </u>						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	1E:	Multiple (	See Delinea	ation Report)	-		GROW	/ING SEASON:	May	y 1 - October 31
SITE VISI	T DATE:	Aerial T	aken: Augus	st 15, 2020	-					
			LONG TE	RM RAINFALL	RECORDS					
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.69	2.79	3.36	4.07	WET	3	3	9
2nd PRIC	OR MONTH*	June	2.57	4.01	4.83	1.60	DRY	1	2	2
3rd PRIC	R MONTH*	May	2.82	4.07	4.84	3.81	NORMAL	2	1	2
									SUM =	13
NOTE:	If sum is						CONDITION VA	ALUE:		
	6 - 9	then prior p	eriod has be	een drier than	normal		Dry	= 1		
	10 - 14						Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter tha	n normal		Wet	= 3		
	*Photo Dat	e								
CONCLUS	SIONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Normal			
							ation was 2.67 in ved during the s			ered light compared to cators.





Winnebago Tribe Broadband Connectivity Project **Bore Point 102** 

Dixon County, Nebraska

**WETS Map** 

Noa.ad.oaconsulting.com/fnts-ns1/projects/2021/05001-05500/021-05175/40-Design/GIS/23-07-13\_NRPL\_WETS Analysis\_Confirmed\_Boring\_Locations.mxd PUBLISHED BY: mczerwinski DATE: August 15, 2023

DATE:	7/14	1/2023	_					PREF	PARED BY:	Kari Sherman
WEATHER	R STATION:		Wayne, NE	≣						
COUNTY:		Wayne							STATE:	Nebraska
SOIL NAM	E:	Multiple (	See Delinea	ation Report)			GROW	/ING SEASON:	Ma	y 1 - October 31
SITE VISIT	DATE:	Aerial T	aken: Augu	ıst 9, 2022						
				RM RAINFALL						
		MONTH	3 YRS IN 10 LESS THAN	AVERAGE	3 YRS IN 10 MORE THAN	RAIN FALL	CONDITION WET, DRY, NORMAL	CONDITION VALUE	MONTH WEIGHT VALUE	PRODUCT OF PREVIOUS TWO COLUMNS
1st PRIO	R MONTH*	July	1.69	2.79	3.36	1.05	DRY	1	3	3
2nd PRIO	R MONTH*	June	2.57	4.01	4.83	1.75	DRY	1	2	2
3rd PRIO	R MONTH*	May	2.82	4.07	4.84	4.55	NORMAL	2	1	2
									SUM =	7
NOTE:	If sum is 6 - 9	then prior p	eriod has be	een drier than	normal		CONDITION VA	ALUE: = 1		
	10 - 14	then prior p	eriod has be	een normal			Normal	= 2		
	15 - 18	then prior p	eriod has be	een wetter thai	n normal		Wet	= 3		
	*Photo Dat	е								
CONCLUS	IONS:									
	At the time	e of the site v	risit, hydrolo	gic conditions	for the prior p	period were	Dry			
			, , ,			•	tion was 2.67 inved during the s	•		ered light compared to cators.

Dixon County, Nebraska **WETS Map** 

Dixon County, Nebraska **Combined WETS Map** 

**Final WETS Map** 

# **APPENDIX C**

Wetland Determination Data Forms

# Wetland Determination Data Form - Midwest Region

	dband Connectivity	Project City/Co	ounty: Thu	ırston	Sampling Dat	te: <b>7/11/202</b>	:3
Applicant/Owner: Winnebago Tr	ribe of Nebraska			State: NE	Sampling Poir	nt: <b>1</b>	
Investigator(s): C. Booth, K. She	rman (Olsson)			Section,	, Township, Range:	S15 T26N R	6E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (conca	ive, convex, none):	None		
Slope (%): <b>0-2</b> Lat:	42.232194	Long:		-96.707792	Datum:	NAD83	
Soil Map Unit Name: 7716—McPaul	l silt loam, occasio	nally flooded		NV	NI classification:	Riverine	
Are climatic / hydrologic conditions or	the site typical for t	his time of year?	Yes >	X No (If	no, explain in Rema	rks)	
Are Vegetation , Soil , or I	Hydrology s	ignificantly disturbe	∍d? <i>F</i>	Are "Normal Circumst	tances" present? Ye	s X No	
Are Vegetation , Soil , or I	Hydrology n	aturally problemati	ic? (	If needed, explain an	nv answers in Remar	ks.)	
SUMMARY OF FINDINGS - At				•	•	,	
Hydrophytic Vegetation Present?	Yes	No X	Ť		<u> </u>	,	
Hydric Soil Present?	Yes	No X	l				
1 '	Yes	No X		ampled Area Wetland?	Yes	No. Y	
Wetland Hydrology Present?	165	NO X	Within a	vvetianu :	res	No X	
Remarks: Sample Point (SP) 1 is an upland are: (NHD) depict this area as a riverine all ordinary high-water mark (OHWM) an	nd stream channel, nd is not a wetland o	respectively. The a r stream channel.					t
VEGETATION - Use scientifi	c names of pla	nts.		<del></del>			
<u>Tree Stratum</u> (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Dominance Test v			
1.		- Орескоз:	Otatus	Number of Domina That Are OBL, FAC	•	0	(A)
2.				,	•		( )
3.				Total Number of Do	ominant		
4.				Species Across All	l Strata:	1	(B)
5.							
Sapling/Shrub Stratum (Plot size:	15' )	= Total Cover		Percent of Dominal That Are OBL, FAC	•	0	(A/B)
1				Bussialana a Indas			
2				Prevalence Index	Cover of:	Multiply by	
3.				OBL species		Multiply by:	_
5.	<del></del>			FACW species		x 2 =	_
J	<del></del>	= Total Cover		FAC species			_
Harl Otration (District)						x .3 =	
Herb Stratum (Plot size: 5'	)	<del>-</del>		•		x 3 = x 4 =	_
1. Bromus inermis	)	X	FACU	FACU species UPL species			_
	)	X	FACU	FACU species		x 4 = x 5 =	  
	)100		FACU	FACU species UPL species Column Totals:		x 4 =	 (B)
1. Bromus inermis 2.			FACU	FACU species UPL species Column Totals: Preval	lence Index = B/A =	x 4 = x 5 = (A)	(B)
1. Bromus inermis 2. 3.		X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V	lence Index = B/A =	x 4 = x 5 = (A)	(B)
1. Bromus inermis 2. 3. 4.		X 	FACU	FACU species UPL species Column Totals: Prevale Hydrophytic Vo. 1 - Rapid T	lence Index = B/A =	x 4 = x 5 = (A)	(B)
1. Bromus inermis 2. 3. 4.		X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic Vecanity 1 - Rapid T 2 - Domina	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%	x 4 = x 5 = (A)	(B)
1. Bromus inermis 2. 3. 4. 5.		X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹	x 4 = x 5 = (A) Se: Vegetation	
1. Bromus inermis 2. 3. 4. 5. 6. 7.		X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic Vo.  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations¹	x 4 = x 5 = (A)  Section  (Provide supportion)	
1. Bromus inermis 2. 3. 4. 5. 6. 7.		X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rei	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹	x 4 = x 5 = (A)  S: Vegetation  (Provide supportiate sheet)	
1. Bromus inermis 2. 3. 4. 5. 6. 7. 8.		X X	FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rei	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations¹  marks or on a separa	x 4 = x 5 = (A)  S: Vegetation  (Provide supportiate sheet)	
1. Bromus inermis 2. 3. 4. 5. 6. 7. 8.			FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V.  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rei Problemati	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations¹  marks or on a separa	x 4 = x 5 = (A)  Vegetation  (Provide supportiate sheet) tation¹ (Explain)	ing
1. Bromus inermis 2. 3. 4. 5. 6. 7. 8. 9. 10.  Woody Vine Stratum (Plot size:	100		FACU	FACU species UPL species Column Totals: Prevale  Hydrophytic V.  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rei Problemati	lence Index = B/A =  legetation Indicator  Test for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations¹ marks or on a separatic Hydrophytic Veget  ydric soil and wetland	x 4 = x 5 = (A)  Vegetation  (Provide supportiate sheet) tation¹ (Explain)	(5)

Depth (inches) Color (m  0-7 10YR 3  7-30 10YR 3	Matrix		ox Features	commm tr	ne absence of indicat	013.)
	oist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
7-30 10YR 3					Loam	Dry
	3/3 100				Loam	•
				-		
					· <del></del>	
					2, ,, ,, ,	
ype: C=Concentration, E  Hydric Soil Indicators:	•	educed Matrix, MS=M	asked Sand Grain	ns.	<sup>2</sup> Location: PL=Pore	roblematic Hydric Soils <sup>3</sup> :
		Son	dy Clayed Matrix	(84)		-
Histosol (A1)			dy Gleyed Matrix	(54)	_	rie Redox (A16)
Histic Epipedon (A2)			dy Redox (S5)		Dark Surfa	
Black Histic (A3)		Strip	oped Matrix (S6)			anese Masses (F12)
Hydrogen Sulfide (A4	<b>(</b> )	Loa	my Mucky Minera	l (F1)	Very Shallo	ow Dark Surface (TF12)
Stratified Layers (A5)	1	Loa	my Gleyed Matrix	(F2)	Other (Exp	lain in Remarks)
2 cm Muck (A10)		 Dep	leted Matrix (F3)		<del></del>	
Depleted Below Dark	Surface (A11)	Red	ox Dark Surface (	(F6)		
Thick Dark Surface (	<b>A12</b> )	— Dep	leted Dark Surfac	e (F7)	<sup>3</sup> Indicators of	hydrophytic vegetation and
Sandy Mucky Minera	l (S1)	Red	ox Depressions (I	F8)		ydrology must be present,
5 cm Mucky Peat or		_		,	unless di	sturbed or problematic.
estrictive Layer (if obse	rved):					
Type:						
Depth (inches):					Hydric Soil Present?	Yes No X
YDROLOGY						
etland Hydrology Indica Primary Indicators (mini		ired: check all that an	oly)		Secondary Indic	ators (minimum of two require
Surface Water (A1)	Thuri of one is requ	Water-Stained			Surface Soil (	· · · · · · · · · · · · · · · · · · ·
_ ` ′	_,					` '
High Water Table (A:	2)	Aquatic Fauna			Drainage Pat	, ,
Coturation (A2)		True Aquatic P				Vater Table (C2)
Saturation (A3)		Hydrogen Sulfi	de Odor (C1)		Crayfish Burr	
Water Marks (B1)					Oraylish Bank	ows (C8)
	32)	Oxidized Rhizo	spheres on Living	Roots (C	<u> </u>	ows (C8) sible on Aerial Imagery (C9)
Water Marks (B1)	32)		spheres on Living educed Iron (C4)	Roots (C	B) Saturation Vis	` ,
Water Marks (B1) Sediment Deposits (I		Presence of Re	-		B) Saturation Vis	sible on Aerial Imagery (C9) ressed Plants (D1)
Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B		Presence of Re	educed Iron (C4) duction in Tilled S		Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	4)	Presence of Re Recent Iron Re Thin Muck Surf	educed Iron (C4) duction in Tilled S face (C7)		Stunted or St	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on	4) Aerial Imagery (в7	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well	educed Iron (C4) duction in Tilled S ace (C7) Data (D9)		Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (I Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (I	4) Aerial Imagery (в7	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well	educed Iron (C4) duction in Tilled S ace (C7) Data (D9)		Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Colored)	4) Aerial Imagery (B7 Concave Surface (B8	Presence of Re Recent Iron Re Thin Muck Surl Gauge or Well Other (Explain	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)		Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Company) eld Observations: urface Water Present?	Aerial Imagery (B7 Concave Surface (B6 Yes	Presence of Re Recent Iron Re Thin Muck Surl Gauge or Well Other (Explain	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)		Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Colored Water Present?	Aerial Imagery (B7 Concave Surface (B6 Yes Yes	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)  (inches) (inches)	Soils (C6)	Saturation Vis Stunted or Sti Geomorphic FAC-Neutral	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Colored Water Present?	Aerial Imagery (B7 Concave Surface (B6 Yes Yes	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)	Soils (C6)	Saturation Vis Stunted or Stu Geomorphic F	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B5) Inundation Visible on Sparsely Vegetated (Colored Water Present? Spart Table Present? Caturation Present? Colored Water Spart (B1) Colored Water Present? Colored Water Present. Colored Water Pr	Aerial Imagery (B7 Concave Surface (B6 Yes Yes Yes Yes	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)  (inches) (inches) (inches)	Wetlan	3) Saturation Vis Stunted or St Geomorphic I FAC-Neutral	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Colored Water Present? attraction Present?	Aerial Imagery (B7 Concave Surface (B6 Yes Yes Yes Yes	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)  (inches) (inches) (inches)	Wetlan	3) Saturation Vis Stunted or St Geomorphic I FAC-Neutral	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Colored Water Present? atter Table Present? atturation Present? includes capillary fringe)	Aerial Imagery (B7 Concave Surface (B6 Yes Yes Yes Yes	Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	educed Iron (C4) duction in Tilled S face (C7) Data (D9) in Remarks)  (inches) (inches) (inches)	Wetlan	3) Saturation Vis Stunted or St Geomorphic I FAC-Neutral	sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)

# Wetland Determination Data Form - Midwest Region

Project/Site: Winnebago Tribe Broadband Co	nnectivity Project	City/County:	Thurston	Sampling Date	e: <b>7/11/202</b>	23
Applicant/Owner: Winnebago Tribe of No	ebraska	•	State: <b>NE</b>	Sampling Poin	t: <b>2</b>	
Investigator(s): C. Booth, K. Sherman (O	lsson)		Section	n, Township, Range:	S15 T26N R	6E
Landform (hillslope, terrace, etc.): Depres	sion	Local relief (co	ncave, convex, none):	Concave		
Slope (%): 2-3 Lat: 42.2	33521	Long:	-96.707037	Datum:	NAD83	
Soil Map Unit Name: 7788—Luton silty clay	loam, rarely floode		N	IWI classification:	Riverine	
Are climatic / hydrologic conditions on the site	typical for this time of	f year? Yes	X No (I	f no, explain in Remar	ks)	
Are Vegetation , Soil , or Hydrolog	v significantly	disturbed?	<del></del> ,	stances" present? Yes		
Are Vegetation , Soil , or Hydrolog				ny answers in Remark		
SUMMARY OF FINDINGS - Attach sit			•	•	•	
Hydrophytic Vegetation Present? Yes	No X			ooto, iii portaini re		
' ' ' '	X No	_				
'			Sampled Area	<b>V</b>	N. V	
Wetland Hydrology Present? Yes	No X	– Withi	n a Wetland?	Yes	No X	
Remarks:		•				
SP 2 is an upland area in an agricultural pastu						
channel, respectively; however, the area lacks				annel. Although hydric	soil is present, the	:he
area lacks dominant hydrophytic vegetation an	id sufficient wetland h	nydrology and is	upland.			
VEGETATION - Use scientific name	es of plants					
	Absolute Domir	nant Indicato	Dominance Test	worksheet:		
<u>Tree Stratum</u> (Plot size: 30' )	% Cover Speci		Number of Domin	ant Species		
1.			That Are OBL, FA	CW, or FAC:	1	(A)
2.			_	_		
3			Total Number of D			
4			Species Across A	II Strata:	2	(B)
5			_			
	= Total C	Cover	Percent of Domina	•		
Sapling/Shrub Stratum (Plot size: 15	<u>'</u> )		That Are OBL, FA	CW, or FAC:	50	(A/B)
1			Dravalance Index	r warleshaat.		
2. 3.			Prevalence Index	Cover of:	Multiply by:	
			OBL species		$\frac{\text{Multiply by:}}{\text{c 1} = 0}$	_
4			— 1 '			_
5	= Total C	Pover	FACW species		60 $63 = 15$	_
Herb Stratum (Plot size: 5' )	= Total C	Jovei	FAC species FACU species		$ \begin{array}{ccc}                                   $	_
1. Bromus inermis	55 X	FACL			$65 = \frac{240}{25}$	_
2. Cyperus esculentus	$\frac{33}{20}$ $\frac{X}{X}$	_	<b>—</b>		A) 340	— (B)
3. Phalaris arundinacea	10	FACW		alence Index = B/A =	3.40	_(D)
4. Thinopyrum intermedium	5	UPL	_ Fieva	dience index - b/A -	3.40	_
		FAC	- Hydrophytic \	Vegetation Indicators	;:	
5. Poa pratensis			1 - Rapid	Test for Hydrophytic \	/egetation	
6. Taraxacum officinale	5	FACL	2 - Domin	ance Test is >50%		
7			3 - Preval	ence Index is <3.01		
8			4 - Morph	ological Adaptations¹	(Provide support	ting
9				emarks or on a separa		
10			Problema	tic Hydrophytic Vegeta	ation¹ (Explain)	
	100 = Total C	Cover				
Woody Vine Stratum (Plot size: 30'	)			ydric soil and wetland		be
1				disturbed or problema	atic.	
2			Hydrophytic			
	= Tota	al Cover	Vegetation Present?	Yes	NoX	
Demonitor (Include whate numbers have as as	a assessate about \		Fresent:			
Remarks: (Include photo numbers here or on PP 2	a separate sneet.)					
FF 2						

0-30 10Y	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	cand Grains.  ed Matrix (S4)  ox (S5)  ttrix (S6)  ky Mineral (F1)  ed Matrix (F2)  atrix (F3)  Surface (F6)  ark Surface (F7)	Indi	con: PL=Pore Lini icators for Probl Coast Prairie R Dark Surface (\$ Iron-Manganes Very Shallow D Other (Explain	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) se Masses (F12) Dark Surface (TF12)
De: C=Concentration  Hydric Soil Indicato  Histosol (A1)  Histic Epipedon (A  Black Histic (A3)  Hydrogen Sulfide  Stratified Layers (A1)  Depleted Below D  Thick Dark Surface  Sandy Mucky Mine  5 cm Mucky Peat of  Strictive Layer (if ob  Type:  Depth (inches):  Depth (inches):  DROLOGY  Stand Hydrology Indicators (many Indicat	n, D=Depletion, RM rs: (A4) (A5) ark Surface (A11) e (A12) eral (S1) or Peat (S3)	I=Reduced Matrix, M:	S=Masked Sa Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	<sup>2</sup> Locatio	con: PL=Pore Linicators for Problems   Coast Prairie R Dark Surface (Section of Problems   Very Shallow Description of Problems   Other (Explain of Problems   Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
ydric Soil Indicato Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if oblype: Depth (inches): DROLOGY and Hydrology Indicators (may surface Water (A1)	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	Indi	Coast Prairie R Coast Prairie R Dark Surface (S Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
ydric Soil Indicato Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if oblype: Depth (inches): DROLOGY and Hydrology Indicators (may surface Water (A1)	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	Indi	Coast Prairie R Coast Prairie R Dark Surface (S Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
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Histosol (A1) Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of Surface Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Mine Trictive Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Peat of Trictive Layer (if ob) Type: Depth (inches): Depth (inches): Darks:	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	Indi	Coast Prairie R Coast Prairie R Dark Surface (S Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Histosol (A1) Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of Surface Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Mine Trictive Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Peat of Trictive Layer (if ob) Type: Depth (inches): Depth (inches): Darks:	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	Indi	Coast Prairie R Coast Prairie R Dark Surface (S Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Histosol (A1) Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of Surface Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Mine Trictive Layer (if ob) Thick Dark Surface Sandy Mucky Mine Sandy Mucky Peat of Trictive Layer (if ob) Type: Depth (inches): Depth (inches): Darks:	(A4) (A5)  ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark	ed Matrix (S4) ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	Indi	Coast Prairie R Coast Prairie R Dark Surface (S Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	Ilematic Hydric Soils <sup>3</sup> : Redox (A16) S7) Se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A 2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if ob- type: Depth (inches): DROLOGY Land Hydrology Indicators (M Surface Water (A1)	(A4) (A5) ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Dark	ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	7) 3	Coast Prairie R Dark Surface (\$ Iron-Manganes Very Shallow D Other (Explain  Indicators of hydrounless disturb	Redox (A16) S7) se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) 2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat (If ob- trictive Layer (If ob- type: Depth (Inches): DROLOGY And Hydrology Indicators (M2) Surface Water (A1)	(A4) A5) ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Dark	ox (S5) trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	7) 3	Dark Surface (Sample of Surface) Iron-Manganes Very Shallow D Other (Explain Indicators of hydrounless disturb	se Masses (F12) Dark Surface (TF12) in Remarks)  rophytic vegetation and ology must be present,
Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) 2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if ob- type: Depth (inches): DROLOGY Land Hydrology Indicators (many Indicators (many Surface Water (A1)	(A4) A5) ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Dar	trix (S6) ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	7) 3	Iron-Manganes Very Shallow D Other (Explain Indicators of hydrometrications) Wetland hydrometrications disturb	se Masses (F12) Dark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Hydrogen Sulfide Stratified Layers (A 2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if ob- trype: Depth (inches): DROLOGY And Hydrology Indicators (M Surface Water (A1	ark Surface (A11) e (A12) eral (S1) or Peat (S3)		Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Dar	ky Mineral (F1) ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	7) 3	Very Shallow D Other (Explain Indicators of hydr wetland hydro unless disturb	Oark Surface (TF12) in Remarks) rophytic vegetation and ology must be present,
Stratified Layers (And 2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if observed) Depth (inches): Depth (inches): Depth (and Hydrology Indicators (managed) Surface Water (A10)	ark Surface (A11) e (A12) eral (S1) or Peat (S3)	<u> </u>	Loamy Gleye Depleted Ma Redox Dark Depleted Dar	ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7	7) 3	Other (Explain  Indicators of hydro wetland hydro unless disturb	in Remarks) rophytic vegetation and ology must be present,
2 cm Muck (A10) Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if oblique) Depth (inches): Darks:  DROLOGY Land Hydrology Ind Surface Water (A10)	ark Surface (A11) e (A12) eral (S1) or Peat (S3)	<u> </u>	Depleted Ma Redox Dark Depleted Dar	atrix (F3) Surface (F6) ark Surface (F7	,	Indicators of hydi wetland hydro unless disturb	rophytic vegetation and ology must be present,
Depleted Below D Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if obligate) Depth (inches): DROLOGY Land Hydrology Indicators (many Indicators (many Surface Water (A1)	e (A12) eral (S1) or Peat (S3)	<u>x</u>	Redox Dark Depleted Dar	Surface (F6) ark Surface (F7	,	wetland hydro unless disturb	ology must be present,
Thick Dark Surface Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if ob Type: Depth (inches): Darks:  DROLOGY Land Hydrology Ind Surface Water (A1	e (A12) eral (S1) or Peat (S3)	<u> </u>	Depleted Dar	ark Surface (F7	,	wetland hydro unless disturb	ology must be present,
Sandy Mucky Mine 5 cm Mucky Peat of trictive Layer (if ob Type: Depth (inches): Darks:  DROLOGY Land Hydrology Ind Primary Indicators (m Surface Water (A1	eral (S1) or Peat (S3)	_		`	,	wetland hydro unless disturb	ology must be present,
5 cm Mucky Peat of trictive Layer (if observed by percent of the control of the c	or Peat (S3)		кедох Берге	essions (F8)	Hydric S	unless disturb	0,
trictive Layer (if ob Type: Depth (inches): DROLOGY Iand Hydrology Ind Primary Indicators (m					Hydric S		
Depth (inches): Depth (inches): DROLOGY  In and Hydrology Indicators (many Indicators (A1) Surface Water (A1)	served):				Hydric S	oil Present? Y	
land Hydrology Ind Primary Indicators (m Surface Water (A1							
Primary Indicators (m Surface Water (A1							
Surface Water (A1					0		
_ `		•	,	(DO)			s (minimum of two requi
Ligh Water Table	,		ned Leaves (	(B9)		Surface Soil Crac	
_ ~	(A2)	Aquatic Fa				Prainage Patterns	` ,
Saturation (A3)			tic Plants (B1			Ory-Season Wate	
Water Marks (B1)			Sulfide Odor (			Crayfish Burrows	` '
Sediment Deposits				on Living Roo			on Aerial Imagery (C9)
_ Drift Deposits (B3)	)	Presence of	of Reduced In	ron (C4)	s	Stunted or Stress	ed Plants (D1)
_Algal Mat or Crust	(B4)	Recent Iron	n Reduction i	in Tilled Soils (		Seomorphic Posit	` '
Iron Deposits (B5)			Surface (C7)	•	F	AC-Neutral Test	t (D5)
Inundation Visible		· · —	Well Data (D9				
Sparsely Vegetate	ed Concave Surface	Other (Exp	lain in Remar	rks)			
d Observations:							
ace Water Present?	Yes	No X De	epth (inches)				
er Table Present?	Yes	No X De	epth (inches)				
ration Present?	169			14/	etland Hydrolo	gy Present?	Yes No X
udes capillary fringe	Yes	No X De	epth (inches)				
cribe Recorded Data	Yes	No X De	epth (inches)	W			
	Yes	No X De			s), if available:		

# Wetland Determination Data Form - Midwest Region

Project/Site: Winnebago Tribe Broadba	and Connectivity P	roject City/C	county: Th	urston	Sampling Date	e: <b>7/11/202</b>	23
Applicant/Owner: Winnebago Tribe	of Nebraska			State: NE	Sampling Poin	nt: 3	
Investigator(s): C. Booth, K. Sherm	an (Olsson)			Section	, Township, Range:	S15 T26N R	6E
Landform (hillslope, terrace, etc.): De	epression	Local r	elief (conca	ave, convex, none):	Concave		
Slope (%): 2-3 Lat:	42.233588	Long:		-96.708003	Datum:	NAD83	
Soil Map Unit Name: 7788—Luton silty	y clay loam, rarel	y flooded		N'	WI classification:	None	
Are climatic / hydrologic conditions on th	e site typical for th	is time of year?	Yes	X No (If	no, explain in Remar	rks)	
Are Vegetation , Soil , or Hyd	drology sig	nificantly disturb	ed?	Are "Normal Circums	stances" present? Yes	s X No	
Are Vegetation , Soil , or Hyd	· · ·	turally problemat			ny answers in Remarl		
SUMMARY OF FINDINGS - Attack		, .		•	•	,	
Hydrophytic Vegetation Present?		lo X			, <b>p</b> = 1 tunio 1	<del></del>	
Hydric Soil Present?		10 <u>/                                    </u>					
				ampled Area	W	N . V	
Wetland Hydrology Present?	Yes N	10 <u>X</u>	within a	Wetland?	Yes	No X	
Remarks:			ı				
SP 3 is an upland area located in an agr	icultural pasture in	Staging Area A.	This area	was identified during	the Climates Analysis	s for Wetlands Ta	ables
(WETS Tables) analysis as a potential w	∕etland. Although tl	nis area contains	hydric soil	, it lacks dominant hy	drophytic vegetation	and sufficient we	tland
hydrology and is upland.							
VECETATION Lies esigntific	names of plan	.4-					
VEGETATION - Use scientific			l., .l.,	Dominance Test	workshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Domina			
1.	70 00001	- Сроског.	Otatao	That Are OBL, FA	•	0	(A)
2.					_		(* •)
3.				Total Number of D	)ominant		
4.				Species Across Al		2	(B)
5					-		(-)
·		= Total Cover		Percent of Domina	ant Chaolas		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FA	•	0	(A/B)
1.					_		(,,,,)
2				Prevalence Index	worksheet:		
3.					Cover of:	Multiply by:	
4				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
J		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'		- Total Govel		FACU species		x 4 =	_
1. Bromus inermis	_	X	FACU	UPL species		x 5 =	_
2. Thinopyrum intermedium	20	$\frac{\chi}{\chi}$	UPL	Column Totals:		(A)	— (B)
							— <sup>(D)</sup>
3. Cyperus esculentus			FACW	Fieva	lence Index = B/A = _		_
4. Phalaris arundinacea			FACW	Hydrophytic V	egetation Indicators	s:	
5. Mentha arvensis	10		FACW	1 - Rapid	Test for Hydrophytic \	√egetation	
6				<u> </u>	ance Test is >50%	0	
7.				<b>—</b>	ence Index is <3.01		
8	<u> </u>				ological Adaptations <sup>1</sup>	(Provide support	tina
9.					emarks or on a separa	`	ing
10.					tic Hydrophytic Veget		
	100	= Total Cover		I —	, , , ,	· · /	
Woody Vine Stratum (Plot size:	30' )			<sup>1</sup> Indicators of h	ydric soil and wetland	hydrology must	he
1.					disturbed or problem		50
2.				Hydrophytic	<u>'</u>		
		= Total Cover		Vegetation	Yes	No X	
		- Total Cover		Present?	163	_ "0	
Remarks: (Include photo numbers here	or on a separate s	heet.)					
PP 3	or orra coparato c						
' `							

Depth	Matrix		Г	Redox Featu	ıres			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-20	10YR 3/1	75	7.5YR 5/8	25	С	М	Clay	
20-30	10YR 3/1	80	7.5YR 5/8	10	С	M	Clay	
			2.5YR 8/6	10	С	M	Clay	
e: C=Conc	entration, D=Deple	tion, RM=F	Reduced Matrix, Ms	S=Masked S	Sand Grain	ıs.	<sup>2</sup> Location: PL=Poi	re Lining, M=Matrix
lydric Soil I	ndicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A	<b>A1</b> )			Sandy Gley	ed Matrix	(S4)	Coast Pra	airie Redox (A16)
– Histic Epi	pedon (A2)		_	Sandy Red	ox (S5)		— Dark Surf	face (S7)
Black Hist				Stripped Ma				ganese Masses (F12)
_	Sulfide (A4)		_	Loamy Muc		(F1)		llow Dark Surface (TF12)
_ ′ ′	Layers (A5)			Loamy Gley				plain in Remarks)
2 cm Muc				Depleted M		(-)		,piam m r tomamo)
	Below Dark Surfac	e (A11)		Redox Dark	` '	F6)		
	k Surface (A12)	- ( /	_	Depleted Da	`	,	<sup>3</sup> Indicators o	of hydrophytic vegetation and
_	icky Mineral (S1)		_	Redox Dep		` '		hydrology must be present,
_	ky Peat or Peat (S	2)	_	почох вер	1) 6110166511	0)	unless	disturbed or problematic.
trictive I av	er (if observed):							
_	o. ( oo							
	·c/·						Judria Sail Brasani	t2 Vos Y No
Depth (inche	s):					ŀ	Hydric Soil Present	t? Yes <u>X</u> No
Depth (inche						ŀ	Hydric Soil Present	t? Yes <u>X</u> No
Depth (inche arks:	SY.					ŀ	Hydric Soil Present	t? Yes <u>X</u> No
DROLOG	iY logy Indicators:	one is req	uired; check all tha	t apply)		ŀ		
DROLOG	i <b>Y</b> logy Indicators: cators (minimum of	one is req	· · · · · · · · · · · · · · · · · · ·	117/	(B9)	ŀ	Secondary Indi	icators (minimum of two requ
DROLOG land Hydro Surface W	logy Indicators: cators (minimum of /ater (A1)	one is req	Water-Stair	ned Leaves	(B9)	ŀ	Secondary Indi	icators (minimum of two requ Cracks (B6)
DROLOG land Hydro Primary India Surface W High Wate	logy Indicators: cators (minimum of /ater (A1) er Table (A2)	one is req	Water-Stail Aquatic Fa	ned Leaves una (B13)		<u> </u>	Secondary Indi Surface Soil Drainage Pa	icators (minimum of two requi Cracks (B6) atterns (B10)
DROLOG and Hydro brimary India Surface W High Wate	logy Indicators: cators (minimum of /ater (A1) er Table (A2)	one is req	Water-Stair Aquatic Fa True Aquat	ned Leaves una (B13) tic Plants (B	14)	ŀ	Secondary Indi Surface Soil Drainage Pa Dry-Season	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2)
DROLOG and Hydro brimary India Surface W High Wate Saturatior Water Ma	logy Indicators: cators (minimum of /ater (A1) er Table (A2) n (A3) rks (B1)	one is req	Water-Stain Aquatic Fa True Aquat Hydrogen S	ned Leaves una (B13) tic Plants (B Sulfide Odor	14) r (C1)		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
DROLOG  Iand Hydro  Primary Indic  Surface W  High Wate  Saturation  Water Ma  Sediment	logy Indicators: cators (minimum of Vater (A1) er Table (A2) a (A3) rks (B1) Deposits (B2)	one is req	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R	ned Leaves una (B13) cic Plants (B Sulfide Odor hizospheres	14) r (C1) s on Living		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bui	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
DROLOG land Hydro Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo	logy Indicators: cators (minimum of vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) esits (B3)	one is req	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o	ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres of Reduced	14) r (C1) s on Living Iron (C4)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
DROLOG land Hydro Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo	logy Indicators: cators (minimum of /ater (A1) er Table (A2) h (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	one is req	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of	ned Leaves una (B13) iic Plants (B Sulfide Odor hizospheres of Reduced In Reduction	14) r (C1) s on Living lron (C4) in Tilled S	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOG land Hydro Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOG and Hydro brimary Indic Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	logy Indicators: cators (minimum of /ater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced In Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requicators (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOG and Hydro brimary Indic Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requicators (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOG land Hydro Primary India Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced In Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requicators (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
DROLOG land Hydro Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely W	logy Indicators: cators (minimum of /ater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) n Visible on Aerial I Vegetated Concave	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Exp	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced In Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1)
Primary India Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatior	logy Indicators: cators (minimum of /ater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave lons: Present? Yes	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduction Reduction Surface (C7 Vell Data (D lain in Rema	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) I Test (D5)
DROLOG  Iand Hydro  Primary India  Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely W d Observation	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave lions: Present? Yes	magery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp  No X De	ned Leaves una (B13) iic Plants (B Sulfide Odor hizospheres of Reduced In Reduction Surface (C7 Vell Data (D lain in Rema	14) r (C1) s on Living Iron (C4) in Tilled S 7) 99) arks)	Roots (C3)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) I Test (D5)
DROLOG  Iand Hydro  Primary India  Surface W  High Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo Inundation  Sparsely W  d Observation  ace Water Feer Table Presudes capilla	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave lons: Present? Yes esent? Yes esent? Yes ry fringe)	magery ( B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Sas) Other (Exp	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Rema	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3) oils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutra	icators (minimum of two requi Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) fisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) I Test (D5)
DROLOG  and Hydro  Primary Indic  Surface W  High Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo Inundation  Sparsely W  d Observation  Table Presented Seques capilla	logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) n Visible on Aerial I Vegetated Concave lons: Present? Yes esent? Yes esent? Yes ry fringe)	magery ( B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp  No X De	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Rema	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3) oils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutra	icators (minimum of two requicators (B6) atterns (B10) Water Table (C2) rrows (C8) risible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) I Test (D5)

# Wetland Determination Data Form - Midwest Region

Project/Site: Winnebago Tribe Broadb	and Connectivity F	Project City/C	County: The	urston	Sampling Da	ate: 7/11/202	23
Applicant/Owner: Winnebago Trib	e of Nebraska			State: <b>NE</b>	Sampling Poi	int: 4	
Investigator(s): C. Booth, K. Sherm	nan (Olsson)			Section	, Township, Range:	S15 T26N R	₹6E
Landform (hillslope, terrace, etc.):	ank/Shelf	Local	relief (conca	ave, convex, none):	Concave	1	
Slope (%): <b>5-6</b> Lat:	42.233843	Long:		-96.707449	Datum:	NAD83	
Soil Map Unit Name: 7788—Luton silt	y clay loam, rare	ly flooded		N\	WI classification:	Riverine	)
Are climatic / hydrologic conditions on the	ne site typical for th	nis time of year?	Yes 2	X No (If	no, explain in Rema	arks)	
Are Vegetation , Soil , or Hy	drology si	gnificantly disturb	ed?	Are "Normal Circums	tances" present? Ye	es X No	
Are Vegetation , Soil , or Hy	rdrology na	aturally problemat	tic? (	If needed, explain ar	าง answers in Rema	ırks.)	
SUMMARY OF FINDINGS - Atta	<u> </u>						
Hydrophytic Vegetation Present?	.,	No	Ĭ	,			
Hydric Soil Present?		No					
Wetland Hydrology Present?		No		ampled Area Wetland?	Yes X	No	
wedand riydrology i resent:	163 <u>X</u>		within a	Wettaria:	163 /	- 10	
Remarks:							
Wetland 4 is a Palustrine Emergent Ten							
intermittent channel, within Staging Area							A.
This area was identified during the WET channel, respectively.	S Tables analysis	as a potential we	etiand. The	NVVI and NHD depict	this area as a riveri	ne and stream	
VEGETATION - Use scientific	names of plan	nts.					
	Absolute	Dominant	Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina	ant Species		
1				That Are OBL, FA	CW, or FAC:	3	(A)
2							
3				Total Number of D			<b></b> .
4		. <u></u> .		Species Across All	Strata:	4	(B)
5		= Total Cover					
Capling/Charle Ctratum (Diet size)	451	= Total Cover		Percent of Domina		7.5	(A /D)
Sapling/Shrub Stratum (Plot size:	15') 5	Χ	FACW	That Are OBL, FA	JVV, OF FAC:	75	(A/B)
2.	<u> </u>		FACVV	Prevalence Index	worksheet:		
3.		· ·			Cover of:	Multiply by:	
4		·		OBL species		x 1 =	_
5.		·		FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	-		FACU species		x 4 =	_
1. Thinopyrum intermedium	35	X	UPL	UPL species		x 5 =	_
2. Phalaris arundinacea	20	X	FACW	Column Totals:		(A)	(B)
3. Spartina pectinata	20	X	FACW	Preval	lence Index = B/A =		
4. Bromus inermis	10	· .	FACU	Llucius minutis M			
5. Rumex altissimus	10		FACW		egetation Indicator		
6. Rumex crispus	5	· .	FAC	I —	Test for Hydrophytic ance Test is >50%	vegetation	
7.				_	ence Index is <3.01		
8.		· .			ological Adaptations	1 (Provide suppor	tina
9.		· .		•	emarks or on a separ	, , , , , , ,	ung
10.				Problemat	tic Hydrophytic Vege	etation <sup>1</sup> (Explain)	
	100	= Total Cover		-			
Woody Vine Stratum (Plot size:	30' )	•		<sup>1</sup> Indicators of hy	dric soil and wetlan	d hydrology must	be
1.				present, unless	disturbed or probler	natic.	
2.				Hydrophytic			
		= Total Cove	r	Vegetation	Yes X	No	-
Damandar (Incl. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		-l 4 \		Present?			
Remarks: (Include photo numbers here	or on a separate	sneet.)					
PP 4a and 4b							

ofile Description: (Describe to th Depth Matrix	- aop		dox Featu	res			
(inches) Color (moist)	% Color	r (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-9 10YR 3/1	98 7.5	YR 4/6	2	С	M	Clay Loam	
9-22 10YR 3/1	95 7.5	YR 4/6	5	С	М	Clay Loam	
<u> </u>							
<u> </u>							
pe: C=Concentration, D=Depletio	n, RM=Reduced	Matrix, MS=	Masked S	and Grain	S.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:						Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sa	andy Gleye	ed Matrix (	(S4)	Coast Pr	rairie Redox (A16)
Histic Epipedon (A2)		— Sa	andy Redo	ox (S5)		— Dark Sur	rface (S7)
Black Histic (A3)		— St	tripped Ma	ıtrix (S6)		Iron-Mar	nganese Masses (F12)
Hydrogen Sulfide (A4)		Lc	oamy Mucl	kv Mineral	(F1)	_	allow Dark Surface (TF12)
Stratified Layers (A5)			pamy Gley				xplain in Remarks)
2 cm Muck (A10)			epleted Ma		. ,	_ `	. ,
Depleted Below Dark Surface (	A11)		· edox Dark		F6)		
Thick Dark Surface (A12)	,	_	epleted Da	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			edox Depr				d hydrology must be present,
5 cm Mucky Peat or Peat (S3)		_	•	,	,	unless	disturbed or problematic.
strictive Layer (if observed):							
strictive Layer (if observed):  Type:  Depth (inches):  marks:		_				Hydric Soil Preser	nt? Yes X No
Type: Depth (inches):						Hydric Soil Preser	nt? Yes <u>X</u> No
Type:  Depth (inches):  marks:		_				Hydric Soil Preser	nt? Yes <u>X</u> No
Type: Depth (inches):						Hydric Soil Preser	nt? Yes <u>X</u> No
Type: Depth (inches): marks:	ne is required; ch	eck all that a	apply)				nt? Yes X No
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:		eck all that a		(B9)		Secondary Inc	
Type:  Depth (inches):  marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of or  Surface Water (A1)	V	Vater-Staine	d Leaves	(B9)		Secondary Inc.	dicators (minimum of two requir il Cracks (B6)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2)	v	Vater-Staine Aquatic Faun	ed Leaves na (B13)			Secondary Inc Surface So Drainage P	dicators (minimum of two requir il Cracks (B6) latterns (B10)
Type: Depth (inches): marks:   **TDROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of or  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	v r	Vater-Staine Aquatic Faun Frue Aquatic	ed Leaves na (B13) Plants (B1	14)		Secondary Inc Surface So Drainage P Dry-Seasor	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	V 7 T	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su	ed Leaves na (B13) Plants (B1 ulfide Odor	14) (C1)		Secondary Inc. Surface So Drainage P Dry-Seasor Crayfish Bu	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	V T T C	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Oxidized Rhiz	ed Leaves na (B13) Plants (B´ ulfide Odor zospheres	14) (C1) on Living		Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation	dicators (minimum of two requinum of two requi
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	V 	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Oxidized Rhiz Presence of I	ed Leaves na (B13) Plants (B <sup>2</sup> ulfide Odor zospheres Reduced I	14) (C1) on Living ron (C4)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation Stunted or St	dicators (minimum of two require il Cracks (B6) latterns (B10) in Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	v r r f f	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F	d Leaves na (B13) Plants (B' nlifide Odor zospheres Reduced In	(C1) on Living ron (C4) in Tilled So	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two require il Cracks (B6) satterns (B10) n Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	V T H C F T	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su	ed Leaves (a (B13) Plants (B' Ilfide Odor zospheres Reduced II Reduction urface (C7	(C1) con Living ron (C4) in Tilled So	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation Stunted or St	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of or Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Images.		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su Gauge or We	d Leaves a (B13) Plants (B' alfide Odor zospheres Reduced II Reduction urface (C7	(C1) con Living ron (C4) in Tilled Sc )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two required il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su	d Leaves a (B13) Plants (B' alfide Odor zospheres Reduced II Reduction urface (C7	(C1) con Living ron (C4) in Tilled Sc )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two require il Cracks (B6) satterns (B10) n Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Images Sparsely Vegetated Concave S  Id Observations:	— V — A — T — C — F — F — T agery (B7) — C	Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su Gauge or We Other (Explai	ed Leaves ha (B13) Plants (B' lifide Odor zospheres Reduced II Reduction urface (C7 ell Data (D) in in Rema	14) (C1) on Living ron (C4) in Tilled So ) 9) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Id Observations: face Water Present?  Yes		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su Gauge or We Other (Explai	d Leaves and (B13) Plants (B' Ilfide Odor Zospheres Reduced In Reduction Jurface (C7 Ell Data (D) Jin in Rema	14) (C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S  Id Observations: face Water Present? Yes ter Table Present?		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su Gauge or We Other (Explai	d Leaves and (B13) Plants (B' Ilfide Odor Zospheres Reduced In Reduction Jurface (C7 Ell Data (D6) Jin in Rema	(C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3	Secondary Inc. Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphic X FAC-Neutra	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Id Observations: face Water Present? ter Table Present? Yes curation Present?		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Fhin Muck Su Gauge or We Other (Explai	d Leaves and (B13) Plants (B' Ilfide Odor Zospheres Reduced In Reduction Jurface (C7 Ell Data (D) Jin in Rema	(C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation V Stunted or S X Geomorphi	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave State Water Present?  Id Observations: face Water Present?  Yes Euration Present?  Yes Edudes capillary fringe)		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Thin Muck Su Gauge or We Dther (Explai	ed Leaves ana (B13) Plants (B' Ilfide Odor zospheres Reduced In Reduction urface (C7 Ill Data (Di in in Rema Ith (inches) th (inches)	14) (C1) on Living ron (C4) in Tilled So ) 9) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation Stunted or S X Geomorphi X FAC-Neutra	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ima Sparsely Vegetated Concave S Id Observations: face Water Present? ter Table Present? Yes curation Present?		Water-Staine Aquatic Faun Frue Aquatic Hydrogen Su Dxidized Rhiz Presence of I Recent Iron F Thin Muck Su Gauge or We Dther (Explai	ed Leaves ana (B13) Plants (B' Ilfide Odor zospheres Reduced In Reduction urface (C7 Ill Data (Di in in Rema Ith (inches) th (inches)	14) (C1) on Living ron (C4) in Tilled So ) 9) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu X Saturation Stunted or S X Geomorphi X FAC-Neutra	dicators (minimum of two requir il Cracks (B6) ratterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)

# Wetland Determination Data Form - Midwest Region

Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Thu	urston	Sampling Da	ate: <b>7/11/20</b> 2	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: <b>NE</b>	Sampling Po	int: 5	
Investigator(s): C. Booth, K. She	erman (Olsson)			Section	n, Township, Range:	S15 T26N R	₹6E
Landform (hillslope, terrace, etc.):	Shelf	Local re	elief (conca	ave, convex, none):	Convex	1	
Slope (%): 1-2 Lat:	42.233886	Long:		-96.707545	Datum:	NAD83	
Soil Map Unit Name: 7788—Luton	silty clay loam, rare	ly flooded		N	WI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for t	his time of year?	Yes >	X No (I	f no, explain in Rema	arks)	
Are Vegetation , Soil , or	Hydrology si	ignificantly disturbe	ed? /	Are "Normal Circums	stances" present? Ye	es X No	
Are Vegetation , Soil , or	Hydrology n	aturally problemati			ny answers in Rema		
SUMMARY OF FINDINGS - A	<i>.</i>						
Hydrophytic Vegetation Present?	Yes	No X	1		,,		
Hydric Soil Present?	Yes	No X					
*		<del></del>		ampled Area	V	N. V	
Wetland Hydrology Present?	Yes	No X	within a	Wetland?	Yes	No X	
Remarks:							
wetland; however, the area lacks all  VEGETATION - Use scientif							
	Absolute	Dominant	Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina	•		
1				That Are OBL, FA	CW, or FAC:	0	(A)
2							
3.				Total Number of D		4	(D)
5.				Species Across Al	ii Silaia.	1	(B)
5.		= Total Cover					
Sapling/Shrub Stratum (Plot size	e: 15' )	-		Percent of Domina That Are OBL, FA	•	0	(A/B)
1.				111017110 052,171			. (/ (/ D)
2.				Prevalence Index	worksheet:		
3.					Cover of:	Multiply by:	
4.	<del></del>			OBL species		x 1 =	_
5.	<del></del>			FACW species		x 2 =	_
	<del></del>	= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	-		FACU species		x 4 =	_
1. Bromus inermis	80	X	FACU	UPL species		x 5 =	
2. Phalaris arundinacea	10		FACW	Column Totals:		(A)	(B)
3. Asclepias syriaca	10		FACU	Preva	lence Index = B/A =		
4.				Hydrophytic \	logatation Indicate		
5.					/egetation Indicato Test for Hydrophytic		
6.				<u> </u>	, , ,	vegetation	
7.				<del>-</del>	ance Test is >50% ence Index is <3.01		
8.					ence index is <u>&lt;</u> 3.0 ological Adaptations	1 (Provide suppor	tina
9.				•	emarks or on a sepa	\	ung
10.					tic Hydrophytic Vege	•	
	100	= Total Cover		-			
Woody Vine Stratum (Plot size:	30' )	-			ydric soil and wetlan disturbed or probler		be
2.				Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	NoX	
Remarks: (Include photo numbers h PP 5	ere or on a separate	sheet.)					

ofile Description: ( Depth	Matrix		needed to di	Redox Fea	atures			
	or (moist)	%	Color (moi	ist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10 10	YR 3/1	100					Clay Loam	
10-22 10	YR 3/1	98	7.5YR 4/	6 2	С	М	Clay Loam	
pe: C=Concentrati	on, D=Depleti	on, RM=R	educed Matri	ix, MS=Masked	l Sand Grain	ıs.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil Indica	tors:						Indicators fo	or Problematic Hydric Soils <sup>3</sup>
Histosol (A1)				Sandy Gle	eyed Matrix	(S4)	Coast F	Prairie Redox (A16)
Histic Epipedon	(A2)			Sandy Re	dox (S5)		Dark Su	urface (S7)
Black Histic (A3)	)			Stripped N	Matrix (S6)		Iron-Ma	nganese Masses (F12)
— Hydrogen Sulfid	e (A4)			Loamy Mu	ucky Mineral	(F1)	Very Sh	nallow Dark Surface (TF12)
Stratified Layers	(A5)			Loamy Gl	eyed Matrix	(F2)	Other (I	Explain in Remarks)
2 cm Muck (A10					Matrix (F3)		_ `	
Depleted Below	Dark Surface	(A11)			ırk Surface (	F6)		
Thick Dark Surfa	ace (A12)			 Depleted	Dark Surfac	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mi	ineral (S1)			Redox De	pressions (F	<del>-</del> 8)		nd hydrology must be present,
5 cm Mucky Pea				_			unless	s disturbed or problematic.
	haamrad\.							
-4-1-41   /:4 -								
strictive Layer (if o	observea):							
Туре:	observed):						Hydric Soil Proso	nt? Vas No
-	observed):						Hydric Soil Prese	nt? Yes No
Type: Depth (inches):	poservea):						Hydric Soil Prese	nt? Yes No
Type: Depth (inches): marks:  /DROLOGY etland Hydrology In	ndicators:							
Type: Depth (inches): marks:  /DROLOGY tland Hydrology In	ndicators: (minimum of c	one is requ					Secondary Ir	ndicators (minimum of two req
Type: Depth (inches): marks:  /DROLOGY etland Hydrology In	ndicators: (minimum of c	one is requ		ıll that apply) -Stained Leave	es (B9)		Secondary Ir	
Type: Depth (inches): marks:  /DROLOGY tland Hydrology In	ndicators: (minimum of c	one is requ	Water				Secondary Ir	ndicators (minimum of two req
Type: Depth (inches): marks:  /DROLOGY etland Hydrology Inches   Primary Indicators   Surface Water (inches):	ndicators: (minimum of c	one is requ	Water Aquat	-Stained Leave			Secondary Ir Surface So Drainage I	ndicators (minimum of two req
Type: Depth (inches): marks:  /DROLOGY tland Hydrology In Primary Indicators Surface Water ( High Water Tabl	ndicators: (minimum of c A1) e (A2)	one is requ	Water Aquat True A	-Stained Leave ic Fauna (B13)	B14)		Secondary In Surface So Drainage I Dry-Seaso	ndicators (minimum of two requil Cracks (B6) Patterns (B10)
Type: Depth (inches): marks:  /DROLOGY  tland Hydrology It Primary Indicators Surface Water ( High Water Tabl Saturation (A3)	ndicators: (minimum of c A1) e (A2)	one is requ	Water Aquat True A	-Stained Leave ic Fauna (B13) Aquatic Plants (	B14) or (C1)	Roots (C3	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B	ndicators (minimum of two requipoli Cracks (B6) Patterns (B10) on Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  Itland Hydrology In Primary Indicators Surface Water (A) High Water Tabl Saturation (A3) Water Marks (B)	ndicators: (minimum of c A1) e (A2) I) sits (B2)	one is requ	Water Aquati True A Hydro Oxidiz	-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od	B14) or (C1) es on Living	Roots (C3	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation	ndicators (minimum of two requiple Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8)
Type: Depth (inches): marks:  TDROLOGY  Itland Hydrology Inches I	ndicators: (minimum of c A1) e (A2) I) sits (B2) 3)	one is requ	Water Aquati True A Hydro Oxidiz Prese	-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher	B14) or (C1) es on Living d Iron (C4)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ndicators (minimum of two requil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (CS
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (i) High Water Tabl Saturation (A3) Water Marks (B') Sediment Depos Drift Deposits (B	ndicators: (minimum of c A1) e (A2) I) sits (B2) 3) st (B4)	one is requ	Water Aquat True A Hydro Oxidiz Prese	-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher nce of Reduced	B14) or (C1) es on Living d Iron (C4) on in Tilled S		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (CS) Stressed Plants (D1)
Type: Depth (inches): marks:   /DROLOGY  tland Hydrology In Primary Indicators Surface Water (/ High Water Tabl Saturation (A3) Water Marks (B' Sediment Depos Drift Deposits (B Algal Mat or Cru	ndicators: (minimum of c A1) e (A2) I) sits (B2) 3) st (B4)		Water Aquat True A Hydro Oxidiz Prese Recer	-Stained Leave ic Fauna (B13) Aquatic Plants ( igen Sulfide Od ted Rhizospher ince of Reduced at Iron Reductic	B14) or (C1) es on Living d Iron (C4) on in Tilled S		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:   /DROLOGY tland Hydrology In Primary Indicators Surface Water (A) High Water Tabl Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B)	ndicators: (minimum of c A1) e (A2) I) sits (B2) 3) st (B4) 5) le on Aerial Im	nagery (B7	Water Aquati True A Hydro Oxidiz Prese Recer Thin N	-Stained Leave ic Fauna (B13) Aquatic Plants ( igen Sulfide Od zed Rhizospher nce of Reduced It Iron Reductic Muck Surface ((	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  /DROLOGY  tland Hydrology In Primary Indicators Surface Water (A) High Water Table Saturation (A3) Water Marks (B' Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Inundation Visib	ndicators: (minimum of c A1) e (A2) I) sits (B2) 3) st (B4) 5) le on Aerial Im	nagery (B7	Water Aquati True A Hydro Oxidiz Prese Recer Thin N	-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher nce of Reduced nt Iron Reductic Muck Surface (0 e or Well Data (	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (A High Water Tabl Saturation (A3) Water Marks (BA Sediment Deposits (BA Algal Mat or Cru Iron Deposits (BA Inundation Visible Sparsely Vegeta	ndicators: (minimum of control A1) e (A2) bits (B2) 3) st (B4) 5) le on Aerial Intel atted Concave	nagery (B7	Water Aquati True A Hydro Oxidiz Prese Recer Thin N Gauge 8) Other	r-Stained Leave ic Fauna (B13) Aquatic Plants ( igen Sulfide Od zed Rhizospher ince of Reduced int Iron Reductio Muck Surface (C e or Well Data ( (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (inches): Mater Marks (British Water Marks	ndicators: (minimum of control A1) e (A2) bits (B2) 3) st (B4) 5) le on Aerial Intel Concave	nagery (B7	Water Aquati True A Hydro Oxidiz Prese Recer Thin N Gauge Other	r-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher nce of Reduced nt Iron Reductic Muck Surface (C e or Well Data ( (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  /DROLOGY  Itland Hydrology In Primary Indicators Surface Water (A) Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) Inundation Visib Sparsely Vegeta	ndicators: (minimum of control A1) e (A2) bits (B2) 3) st (B4) 5) le on Aerial Intel atted Concave	nagery (B7	Water Aquati True A Hydro Oxidiz Prese Recer Thin N Gauge Other	-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher nce of Reduced nt Iron Reductic Muck Surface (C e or Well Data ( (Explain in Rer Depth (inches	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks)	oils (C6)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	ndicators (minimum of two requiple Cracks (B6) Patterns (B10) on Water Table (C2) currows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) onic Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (inches): Mater Marks (Br. Sediment Deposits (Br. Algal Mat or Crulon Deposits (Br. Iron Deposits (Br. Inundation Visible Sparsely Vegeta  Itld Observations: Itler Table Present?	ndicators: (minimum of contact A1) e (A2) l) sits (B2) 3) st (B4) 5) le on Aerial Imited Concave t? Yes Yes Yes Yes	nagery (B7	Water Aquat Aquat True A Hydro Oxidiz Prese Recer Thin N Other  No X No X	r-Stained Leave ic Fauna (B13) Aquatic Plants ( gen Sulfide Od zed Rhizospher nce of Reduced nt Iron Reductic Muck Surface (C e or Well Data ( (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks)	oils (C6)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	ndicators (minimum of two requiple Cracks (B6) Patterns (B10) on Water Table (C2) currows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) onic Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (inches): Water Marks (Br. Sediment Deposits (Br. Algal Mat or Crule Iron Deposits (Br. Inundation Visible Sparsely Vegeta Ind Observations: Inface Water Present ther Table Present? Ituration Present?	ndicators: (minimum of contact A1) e (A2) I) sits (B2) 3) st (B4) 5) le on Aerial Inted Concave  Yes Yes Yes Jes	nagery ( B7 Surface (B	Water Aquati True A Hydro Oxidiz Prese Recer Thin N Gauge 8) Other  No X No X No X	r-Stained Leave ic Fauna (B13) Aquatic Plants ( igen Sulfide Od zed Rhizospher ince of Reduced in Iron Reduction Muck Surface (C e or Well Data ( (Explain in Rer Depth (inched Depth (inched	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks) es)	wetland	Secondary In Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	ndicators (minimum of two requiple Cracks (B6) Patterns (B10) on Water Table (C2) currows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) onic Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY  Itland Hydrology In Primary Indicators Surface Water (inches): Water Marks (Br. Sediment Deposits (Br. Algal Mat or Crule Iron Deposits (Br. Inundation Visible Sparsely Vegeta  Itld Observations: Inface Water Present (Inches Capillary fring Cludes capillary fring Cludes capillary fring Inches (Inches Inches Capillary fring Inches (Inches Inches Capillary fring Inches (Inches Inches Inch	ndicators: (minimum of contact A1) e (A2) I) sits (B2) 3) st (B4) 5) le on Aerial Inted Concave  Yes Yes Yes Jes	nagery ( B7 Surface (B	Water Aquati True A Hydro Oxidiz Prese Recer Thin N Gauge 8) Other  No X No X No X	r-Stained Leave ic Fauna (B13) Aquatic Plants ( igen Sulfide Od zed Rhizospher ince of Reduced in Iron Reduction Muck Surface (C e or Well Data ( (Explain in Rer Depth (inched Depth (inched	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) (D9) marks) es)	wetland	Secondary In Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	ndicators (minimum of two requiple Cracks (B6) Patterns (B10) on Water Table (C2) currows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) onic Position (D2) ral Test (D5)

# Wetland Determination Data Form - Midwest Region

Project/Site: Winnebago Tribe Broadban	d Connectivity F	Project City/C	County: The	urston	Sampling Da	ate: 7/11/20	23
Applicant/Owner: Winnebago Tribe of	of Nebraska			State: <b>NE</b>	Sampling Po	int: 6	
Investigator(s): C. Booth, K. Sherman	n (Olsson)			Section	, Township, Range:	S15 T26N F	R6E
Landform (hillslope, terrace, etc.): Bar	nk/Shelf	Local ı	relief (conca	ave, convex, none):	Concave		
Slope (%): 2-3 Lat:	42.233911	Long:		-96.707454	Datum:	NAD83	
Soil Map Unit Name: 7788—Luton silty	clay loam, rare	ly flooded		N\	VI classification:	Riverine	a
Are climatic / hydrologic conditions on the	site typical for th	nis time of year?	Yes 2	X No (If	no, explain in Rema	arks)	
Are Vegetation , Soil , or Hydro	ology się	gnificantly disturb	ed?	Are "Normal Circums	tances" present? Ye	es X No	)
Are Vegetation , Soil , or Hydro	ology na	aturally problemat	tic? (	If needed, explain ar	ny answers in Rema	ırks.)	
SUMMARY OF FINDINGS - Attach	<u> </u>						
	.,	No	Ť.	,,	, ,		
, , , ,		No					
•		No		ampled Area Wetland?	Yes X	No	
Welland Hydrology Fresent!	<u> </u>		Within a	vvetianu:	Tes /	_ 140	
Remarks:							
Wetland 6 is a PEMA/C wetland fringe alo							
approximately two feet wide at the OHWM					dentified during the	WETS Tables an	alysis
as a potential wetland. The NWI and NHD	depict this area	as a riverine and	d stream cha	annel, respectively.			
VEGETATION - Use scientific na	ames of nlar	nte					
VEGETATION - 03c Scientific III	Absolute	Dominant	Indicator	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina			
1.			-	That Are OBL, FAC	CW, or FAC:	2	(A)
2.						1	-
3.				Total Number of D	ominant		
4.				Species Across All	l Strata:	2	(B)
5.		·					
		= Total Cover		Percent of Domina			
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FAC	CW, or FAC:	100	(A/B)
1				B			
2		. <u> </u>		Prevalence Index		N de eldine le collecció	
3					Cover of:	Multiply by:	
4.				OBL species		x 1 =	
5		= Total Cover		FACW species		x 2 =	
Herb Stratum (Plot size: 5')		- Total Cover		FAC species FACU species		x 3 = x 4 =	
1. Phalaris arundinacea	65	X	FACW	UPL species		x 5 =	
Spartina pectinata	20	<u>X</u>	FACW	Column Totals:		(A)	(B)
3. Thinopyrum intermedium	10	· <u> </u>	UPL		lence Index = B/A =	` '	—(-)
4. Bromus inermis		· —— ·	FACU	110741	ionico maox Birt		_
5.	- —	· <del></del> -	17100	Hydrophytic V	egetation Indicato	rs:	
6.		· <del></del>		•	Test for Hydrophytic	Vegetation	
7.		· <del></del> -		X 2 - Domina	ance Test is >50%		
8.		· <del></del> -			ence Index is <3.01		
		· <del></del> -		•	ological Adaptations	\	rting
9.					marks or on a sepa	,	
10		<del></del>		Problemat	ic Hydrophytic Vege	tation (Explain)	
Woody Vine Stratum (Plot size: 5	100	= Total Cover		1			
	30' )				dric soil and wetlan disturbed or probler		t be
1					disturbed or probler	nauc.	
2				Hydrophytic Vegetation	v V	NI -	
		= Total Cover	ſ	Present?	Yes X	No	-
Remarks: (Include photo numbers here or	r on a separate	sheet )					
PP 6	•	,					

ofile Description: (Describe to the deposit Depth Matrix	th needed to doc	Redox Featu				··· · · ,
(inches) Color (moist) %	Color (moist)	) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4 10YR 2/1 100					Silty Clay	
4-22 10YR 2/1 80	7.5YR 5/8	20	С	М	Silty Clay	
ype: C=Concentration, D=Depletion, RM	=Reduced Matrix,	MS=Masked S	Sand Grain	ıs.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:					Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gley	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)	-	Sandy Redo	ox (S5)		Dark Sur	face (S7)
Black Histic (A3)	-	Stripped Ma				ganese Masses (F12)
Hydrogen Sulfide (A4)	-	Loamy Muc	` '	(F1)		allow Dark Surface (TF12)
Stratified Layers (A5)	-	Loamy Gley	•	, ,		xplain in Remarks)
2 cm Muck (A10)	-	Depleted Ma		· -/		
Depleted Below Dark Surface (A11)	-	X Redox Dark	, ,	F6)		
Thick Dark Surface (A12)	-	Depleted Da	,	,	3Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Redox Depr				of nydrophytic vegetation and hydrology must be present,
	-	Redox Depi	essions (F	-0)		disturbed or problematic.
5 cm Mucky Peat or Peat (S3)						
Type: Depth (inches):				ŀ	lydric Soil Presen	nt? Yes <u>X</u> No
· ·				ŀ	lydric Soil Presen	nt? Yes <u>X</u> No
Type: Depth (inches): emarks:  YDROLOGY				ŀ	lydric Soil Presen	nt? Yes <u>X</u> No
Type: Depth (inches):  Pmarks:  YDROLOGY  etland Hydrology Indicators:		that apply)		ŀ		
Type: Depth (inches):  Primary Indicators (minimum of one is re			(PO)	ŀ	Secondary Inc	licators (minimum of two require
Type: Depth (inches):  PMARCHAIN STATES Surface Water (A1)	Water-S	tained Leaves	(B9)	<u> </u>	Secondary Inc	licators (minimum of two require
Type: Depth (inches):  Pmarks:  PMOLOGY  etland Hydrology Indicators:  Primary Indicators (minimum of one is resulted by the second of the sec	Water-Si Aquatic I	tained Leaves Fauna (B13)		<u> </u>	Secondary Inc Surface Soi	licators (minimum of two require il Cracks (B6) atterns (B10)
Type: Depth (inches):  PMAROLOGY  Etland Hydrology Indicators:  Primary Indicators (minimum of one is reconstructed by the second by the secon	Water-Si Aquatic I True Aqu	tained Leaves Fauna (B13) uatic Plants (B	14)	<b>I</b>	Secondary Inc Surface Soi Drainage Po	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches):  Primarks:  Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	Water-Si Aquatic I True Aqu Hydroge	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor	14) (C1)		Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu	dicators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) errows (C8)
Type: Depth (inches):  PMOLOGY  Petland Hydrology Indicators:  Primary Indicators (minimum of one is result of the second of the	— Water-Si — Aquatic I — True Aqu — Hydroge — Oxidized	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor I Rhizospheres	14) (C1) on Living		Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches):  PAROLOGY  Petland Hydrology Indicators:  Primary Indicators (minimum of one is reconstructed by the second by the secon	— Water-Si — Aquatic I — True Aqu — Hydroge — Oxidized	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor	14) (C1) on Living		Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) errows (C8)
Type: Depth (inches):  PMOLOGY  Petland Hydrology Indicators:  Primary Indicators (minimum of one is result of the second of the	Water-Si Aquatic I True Aqu Hydroge Oxidized	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor I Rhizospheres	14) (C1) s on Living ron (C4)	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches):  PMOLOGY  Etland Hydrology Indicators: Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor I Rhizospheres e of Reduced I	14) (C1) s on Living ron (C4) in Tilled So	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V	licators (minimum of two require II Cracks (B6) atterns (B10) water Table (C2) wrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches):  PMOLOGY  Petland Hydrology Indicators: Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Mud	tained Leaves Fauna (B13) uatic Plants (Bon Sulfide Odor d Rhizospheres e of Reduced I	14) (C1) s on Living ron (C4) in Tilled Se	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require II Cracks (B6) atterns (B10) water Table (C2) wrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches):  PMAROLOGY  Patland Hydrology Indicators: Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc	tained Leaves Fauna (B13) uatic Plants (Ben Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7	14) (C1) s on Living ron (C4) in Tilled Sc ()	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require of the control of two requires (B10) of two rows (C8) of two rows (C8) of two rows (C8) of two rows (C9)
Type: Depth (inches):  PMOLOGY  Petland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Compared) Sparsely Vegetated Concave Surface	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor d Rhizospheres e of Reduced I eron Reduction ck Surface (C7 or Well Data (D	14) (C1) s on Living ron (C4) in Tilled Sc ()	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require of the control of two requires (B10) of two rows (C8) of two rows (C8) of two rows (C8) of two rows (C9)
Type: Depth (inches):  Primarks:  Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface) Inches Sparsely Vegetated Concave Surface	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc (B7) Gauge o Other (E	tained Leaves Fauna (B13) uatic Plants (Bien Sulfide Odor d Rhizospheres e of Reduced I dron Reduction ck Surface (C7 or Well Data (Diexplain in Rema	14) (C1) s on Living ron (C4) in Tilled So () 9) arks)	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require of the control of two requires (B10) of two rows (C8) of two rows (C8) of two rows (C8) of two rows (C9)
Type: Depth (inches):  Primarks:  Primary Indicators (minimum of one is result of the second of the	Water-Si Aquatic I True Aqu Hydroge Oxidized Presenci Recent I Thin Muc (B7) Gauge of Other (E	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7 or Well Data (D explain in Rema	14) (C1) s on Living ron (C4) in Tilled S () 9) arks)	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require II Cracks (B6) atterns (B10) water Table (C2) wrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches):  PMROLOGY  Petland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surfaced) Indicator Visible on Aerial Imagery (Sparsely Vegetated Concave Surfaced)  Peter Concave Surfaced  Peter Concave S	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc (B7) Gauge of Other (E	tained Leaves Fauna (B13) uatic Plants (Bin Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7 or Well Data (Di explain in Remain	14) (C1) s on Living ron (C4) in Tilled Sc () 9) arks)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic X FAC-Neutra	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches):  PMROLOGY  Setland Hydrology Indicators: Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Company)  Sparsely Vegetated Concave Surface (Company)  Seld Observations:  Inface Water Present? Yes  Inturation Present? Yes  Inturation Present? Yes	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc (B7) Gauge of Other (E	tained Leaves Fauna (B13) uatic Plants (B en Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7 or Well Data (D explain in Rema	14) (C1) s on Living ron (C4) in Tilled Sc () 9) arks)	Roots (C3)	Secondary Inc Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches):  PMROLOGY  Etland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface and Observations: Inface Water Present? Inface Wate	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc (B7) Gauge o e (B8) Other (E	tained Leaves Fauna (B13) uatic Plants (Bin Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7 or Well Data (Di explain in Remainance) Depth (inches) Depth (inches)	14) (C1) s on Living ron (C4) in Tilled Si ) 9) arks)	Roots (C3)	Secondary Inc. Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic X FAC-Neutra	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches):  PMROLOGY  Setland Hydrology Indicators: Primary Indicators (minimum of one is researched)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Company)  Sparsely Vegetated Concave Surface (Company)  Seld Observations:  Inface Water Present? Yes  Inturation Present? Yes  Inturation Present? Yes	Water-Si Aquatic I True Aqu Hydroge Oxidized Presence Recent I Thin Muc (B7) Gauge o e (B8) Other (E	tained Leaves Fauna (B13) uatic Plants (Bin Sulfide Odor d Rhizospheres e of Reduced I ron Reduction ck Surface (C7 or Well Data (Di explain in Remainance) Depth (inches) Depth (inches)	14) (C1) s on Living ron (C4) in Tilled Si ) 9) arks)	Roots (C3)	Secondary Inc. Surface Soi Drainage P. Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic X FAC-Neutra	licators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) prows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) to Position (D2) al Test (D5)

	adband Connectivi	ty Project City/C	County: Thu	urston	Sampling Da	ate: 7/11/20	23
Applicant/Owner: Winnebago	Tribe of Nebraska			State: <b>NE</b>	Sampling Po	oint: 7	
Investigator(s): C. Booth, K. Sh	herman (Olsson)			Section,	Township, Range	S15 T26N F	R6E
_andform (hillslope, terrace, etc.):	Field	Local	relief (conca	ave, convex, none):	None		
Slope (%): <b>0</b> Lat:	42.233954	Long:		-96.707348	Datum:	NAD83	
Soil Map Unit Name: 3518—Lamo	silty clay loam, 0	to 2 percent slopes	s, occasion	nally flooded NV	VI classification:	None	
Are climatic / hydrologic conditions	on the site typical fo	or this time of year?	Yes	X No(If	no, explain in Rem	narks)	
Are Vegetation , Soil , o	or Hydrology	significantly disturb	ped?	Are "Normal Circumst	ances" present? Y	es X No	
Are Vegetation , Soil , o	r Hydrology	naturally problemat	tic? (	(If needed, explain an	y answers in Rema	arks.)	
SUMMARY OF FINDINGS - A	Attach site map	showing sampl	ing point	locations, transe	cts, important	features, etc.	
Hydrophytic Vegetation Present?	Yes	No X					
Hydric Soil Present?	Yes	No X	le the S:	ampled Area			
Vetland Hydrology Present?	Yes	No X		Wetland?	Yes	No X	
Remarks: SP 7 is an upland outpoint for Wetla	and 6 (PEMA/C) wit	:hin a grassy field ab	outting the no	orthern edge of the we	etland in Staging A	vrea A.	
VEGETATION - Use scienti	ific names of p	lants.					
	Absolu		Indicator	Dominance Test w			
Tree Stratum (Plot size: 30'	'	er Species?	Status	Number of Domina That Are OBL, FAC	•	0	(A)
2.				That Are Obl., I Ac	7W, 011 AC.		(A)
3.	<del></del>	<del>_</del> ·		Total Number of Do	ominant		
4.		<del></del>		Species Across All		1	(B)
5.		·					• ` ´
		= Total Cover		Percent of Dominar	nt Species		
Sapling/Shrub Stratum (Plot siz	re: 15' )	<del></del>		That Are OBL, FAC	•	0	(A/B)
1							
2				Prevalence Index			
3				Total % 0	Cover of:	Multiply by:	
4.	<del></del>	<del></del> .		OBL species		x 1 =	
-						x 2 =	
5.		— <del> </del> -		FACW species			
		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	′		FACII	FAC species FACU species		x 3 = x 4 =	<u> </u>
Herb Stratum (Plot size: 5'  1. Bromus inermis	90	= Total Cover	FACU	FAC species FACU species UPL species		x 3 = x 4 = x 5 =	— — — (B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium	′		FACU UPL	FAC species FACU species UPL species Column Totals:	ence Index = R/A -	x 3 = x 4 = x 5 = (A)	(B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3.	90			FAC species FACU species UPL species Column Totals:	ence Index = B/A =	x 3 = x 4 = x 5 = (A)	(B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3.  4.	90			FAC species FACU species UPL species Column Totals: Prevale	egetation Indicato	x 3 = x 4 = x 5 = (A) = prs:	(B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3.  4.	90			FAC species FACU species UPL species Column Totals: Prevale		x 3 = x 4 = x 5 = (A) = prs:	(B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6.	90			FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Vo	egetation Indicato	x 3 = x 4 = x 5 = (A) = prs:	(B)
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6. 7.	90			FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Ve  1 - Rapid T  2 - Domina  3 - Prevale	egetation Indicator est for Hydrophytion ance Test is >50% ance Index is <u>&lt;</u> 3.01	x 3 = x 4 = x 5 = (A) = c Vegetation	
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3.  4.  5.  6.  7.	90			FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Vo  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho	egetation Indicator est for Hydrophytionce Test is >50% nce Index is ≤3.01 logical Adaptations	x 3 = x 4 = x 5 = (A)  c Vegetation  s¹ (Provide suppor	
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6. 7. 8. 9.	90			FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Ve  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rer	egetation Indicator Test for Hydrophytic Ince Test is >50% Ince Index is <3.01 Ilogical Adaptations marks or on a sepa	x 3 = x 4 = x 5 = (A)  c Vegetation  1 (Provide suppor	
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6. 7. 8. 9.	90 10	X		FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Ve  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rer	egetation Indicator est for Hydrophytionce Test is >50% nce Index is ≤3.01 logical Adaptations	x 3 = x 4 = x 5 = (A)  c Vegetation  1 (Provide suppor	
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6. 7. 8. 9. 0.	90	X		FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Ve  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rer Problemati	egetation Indicator Test for Hydrophytic Ince Test is >50% Ince Index is <3.01 Ilogical Adaptations marks or on a sepa	x 3 = x 4 = x 5 = (A)  c Vegetation  x1 (Provide support arate sheet) etation (Explain)  and hydrology must	ting
Herb Stratum (Plot size: 5'  1. Bromus inermis  2. Thinopyrum intermedium  3. 4. 5. 6. 7. 8. 9. 0. Woody Vine Stratum (Plot size:	90 10	X		FAC species FACU species UPL species Column Totals: Prevale  Hydrophytic Ve  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho data in Rer Problemati	egetation Indicator Test for Hydrophytic Ince Test is >50% Ince Index is <3.01 Ilogical Adaptations Test or on a sepa Test Hydrophytic Veg	x 3 = x 4 = x 5 = (A)  c Vegetation  x1 (Provide support arate sheet) etation (Explain)  and hydrology must	ting

file Description: (Describe to Depth Matrix			Redox Featu	ires			
(inches) Color (moist)	%	Color (mois	t) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22 10YR 3/2	100					Silty Clay	
			<u> </u>				
pe: C=Concentration, D=Deple	etion, RM=Re	educed Matrix	, MS=Masked S	Sand Grains		<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gley	ed Matrix (S	64)	Coast Pra	airie Redox (A16)
Histic Epipedon (A2)			Sandy Redo	ox (S5)		Dark Sur	face (S7)
Black Histic (A3)			Stripped Ma	trix (S6)		Iron-Man	ganese Masses (F12)
Hydrogen Sulfide (A4)			Loamy Muc	ky Mineral (	F1)	Very Sha	llow Dark Surface (TF12)
Stratified Layers (A5)			Loamy Gley			Other (Ex	rplain in Remarks)
2 cm Muck (A10)			Depleted Ma	atrix (F3)		<del>_</del>	
Depleted Below Dark Surface	ce (A11)		Redox Dark	Surface (F	6)		
Thick Dark Surface (A12)			Depleted Da	ark Surface	(F7)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Redox Depr	essions (F8	3)		hydrology must be present,
5 cm Mucky Peat or Peat (S	3)		_			unless	disturbed or problematic.
Type: Depth (inches): marks:					Н	lydric Soil Presen	t? Yes No X
Type: Depth (inches): marks:					H	lydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches): marks:  DROLOGY					H	lydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators:	f one is requi	ired: check all	that apply)		H		
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum o	f one is requi			(B9)	H	Secondary Ind	icators (minimum of two requii
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum o	f one is requi	Water-S	Stained Leaves	(B9)	H	Secondary Ind	icators (minimum of two requin
Type: Depth (inches):  narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2)	f one is requi	Water-S Aquatio	Stained Leaves Fauna (B13)		H	Secondary Ind Surface Soi Drainage Pa	icators (minimum of two requir I Cracks (B6) atterns (B10)
Type:  Depth (inches):  DROLOGY  Iland Hydrology Indicators:  Primary Indicators (minimum o  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	f one is requi	Water-S Aquatic True Ad	Stained Leaves Fauna (B13) quatic Plants (B	14)	H	Secondary Ind Surface Soi Drainage Pa	icators (minimum of two requi I Cracks (B6) atterns (B10) Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	f one is requi	Water-S Aquatic True Ad Hydrog	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor	14) (C1)		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu	icators (minimum of two requin I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	f one is requi	Water-S Aquatic True Ad Hydrog Oxidize	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres	14) (C1) on Living F		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \	icators (minimum of two requin I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	f one is requi	Water-S Aquatic True Ac Hydrog Oxidize Presence	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I	14) (C1) on Living F ron (C4)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	f one is requi	Water-S Aquatic True Ac Hydrog Oxidize Present	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction	14) (C1) s on Living F ron (C4) in Tilled So	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin Mu	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7	(C1) s on Living F ron (C4) in Tilled So	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Imagery (B7)	Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin Mc	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction	14) (C1) s on Living F ron (C4) in Tilled So () 9)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required lacterns (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concave	Imagery (B7)	Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin Mc	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D	14) (C1) s on Living F ron (C4) in Tilled So () 9)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelld Observations:	Imagery ( <sub>B7</sub> ) e Surface ( <sub>B8</sub>	Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema	14) (C1) s on Living F ron (C4) in Tilled So () 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concaveld Observations: face Water Present?	Imagery (B7) e Surface (B8	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema	14) s (C1) s on Living F ron (C4) in Tilled So s) 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concaveltd Observations: face Water Present? Yes ter Table Present?	Imagery (B7) e Surface (B8	Water-S Aquatic True Ac Hydrog Oxidize Present Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema  Depth (inches)	14) (C1) s on Living F ron (C4) in Tilled So () 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
Type: Depth (inches):  marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Iron Deposits (	Imagery (B7) e Surface (B8	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema	14) (C1) s on Living F ron (C4) in Tilled So () 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavel (B4) Id Observations: face Water Present?  yes face Water Present?  yes eludes capillary fringe)	Imagery (B7) e Surface (B8	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema  Depth (inches) Depth (inches)	14) (C1) s on Living F ron (C4) in Tilled So ) 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)
Type: Depth (inches):  marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Inundation Visible on Aerial Sparsely Vegetated Concavelt (B4) Iron Deposits (B5) Iron Deposits (	Imagery (B7) e Surface (B8	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odor d Rhizospheres ce of Reduced I Iron Reduction uck Surface (C7 or Well Data (D Explain in Rema  Depth (inches) Depth (inches)	14) (C1) s on Living F ron (C4) in Tilled So ) 9) arks)	Roots (C3)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) Il Test (D5)

Project/Site: Winnebago Tribe Broadband	Connectivity Projec	t City/Cou	unty: Thur	rston	Sampling Date	te: 7/11/202	23
Applicant/Owner: Winnebago Tribe of	Nebraska			State: <b>NE</b>	Sampling Poi	nt: <b>8</b>	
nvestigator(s): C. Booth, K. Sherman	(Olsson)			Section, To	ownship, Range:	S15 T26N R	R6E
_andform (hillslope, terrace, etc.): Field		Local reli	ief (concav	e, convex, none): Co	oncave		
Slope (%): 2-3 Lat: 42	2.234352	Long:	-9	96.711639	Datum:	NAD83	
Soil Map Unit Name: 3518—Lamo silty cl	ay loam, 0 to 2 per	cent slopes,	occasiona	Ily flooded NWI	classification:	None	
Are climatic / hydrologic conditions on the si	te typical for this tim	ne of year?	Yes X	No (If no	, explain in Rema	arks)	
Are Vegetation , Soil , or Hydrol	ogy significa	antly disturbed	d? Ar	e "Normal Circumstan	ices" present? Ye	es X No	
Are Vegetation , Soil , or Hydrol	ogy naturally	y problematic	? (If	needed, explain any a	answers in Remai	rks.)	
SUMMARY OF FINDINGS - Attach	site map showir	ng samplin	g point lo	ocations, transect	ts, important f	features, etc.	
Hydrophytic Vegetation Present? Ye	s No	Χ					
Hydric Soil Present? Ye	s No	Χ	Is the San	npled Area			
Wetland Hydrology Present? Ye	s No	Χ	within a W	•	Yes	No X	
· · · · · · · · · · · · · · · · · · ·					-	· · · · · · · · · · · · · · · · · · ·	
Remarks:	hin a dansaasian ala	one the western	(	Ctoring Area A			
SP 8 documents an upland area located wit	nin a depression aio	ing the wester	rn eage of 8	Staging Area A.			
VEGETATION - Use scientific na	-		1	In	1 -1 4		
<u>Tree Stratum</u> (Plot size: 30' )			ndicator Status	Dominance Test wo Number of Dominant			
1.	70 00 001		Ciaiao	That Are OBL, FACW	•	1	(A)
2.				,			/
3.				Total Number of Dom	ninant		
4.				Species Across All St	trata:	2	(B)
5.							
	= Tot	tal Cover		Percent of Dominant	•		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FACW	/, or FAC:	50	(A/B)
1.				Prevalence Index we	aulta la a a tr		
2. 3.				Total % Co		Multiply by:	
4				OBL species		x 1 = 0	
<sup>4.</sup> 5.				FACW species		x 2 = 120	_
o	= Tot	tal Cover		FAC species		x = 3 = 0	
Herb Stratum (Plot size: 5')				FACU species		x 4 = 40	
Phalaris arundinacea	60	X	FACW	UPL species	30	x 5 = 150	
2. Thinopyrum intermedium	30	X	UPL	Column Totals:	100	(A) 310	(B)
3. Bromus inermis	10		FACU		ce Index = B/A =	3.10	
				Prevalen	ce index - b/A -		
4					•		
4. 5.				Hydrophytic Veg	etation Indicator	rs:	
				Hydrophytic Veg	etation Indicator	rs:	
5.				Hydrophytic Veg 1 - Rapid Tes 2 - Dominanc	etation Indicator st for Hydrophytic ce Test is >50%	rs:	
5. 6.				Hydrophytic Veg 1 - Rapid Tes 2 - Dominanc 3 - Prevalence	etation Indicator st for Hydrophytic se Test is >50% se Index is ≤3.01	rs: Vegetation	tina
5. 6. 7.				Hydrophytic Veg  1 - Rapid Tes 2 - Dominanc 3 - Prevalence 4 - Morpholog	etation Indicator st for Hydrophytic ce Test is >50%	rs: Vegetation  (Provide support	ting
5. 6. 7. 8.				Hydrophytic Veg  1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog data in Rema	etation Indicators for Hydrophytic ce Test is >50% ce Index is ≤3.01 gical Adaptations	rs: Vegetation  (Provide supportate sheet)	ting
5. 6. 7. 8.	100 = Tot	tal Cover		Hydrophytic Veg  1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog data in Rema	etation Indicators of for Hydrophytic ce Test is >50% of Index is ≤3.01 gical Adaptations of the street of the str	rs: Vegetation  (Provide supportate sheet)	ting
5. 6. 7. 8. 9. 0.  Woody Vine Stratum (Plot size: 30		tal Cover		Hydrophytic Veg  1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog data in Rema Problematic I	etation Indicators for Hydrophytic the Test is >50% the Index is <3.01 the Index is <3.01 the Index is selected and the Indicators for I	vegetation  (Provide support ate sheet)  (tation 1 (Explain)  d hydrology must	-
5		tal Cover		Hydrophytic Veg  1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog data in Rema Problematic I	etation Indicators for Hydrophytic the Test is >50% the Index is <3.01 the Index is <3.01 the Index is selected and the Indicators for I	vegetation  (Provide support ate sheet)  (tation 1 (Explain)  d hydrology must	-

Depth (inches)	Matrix	•		ent the ind Redox Featu		confirm th	ne absence of indi	cators.)
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR 3/1	100					Silty Loam	
16-28	10YR 3/1	99	7.5YR 4/6	1	С	М	Silty Loam	
							·	
						-		
ype: C=Conce	entration, D=Deple	etion, RM=R	Reduced Matrix, MS	S=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil I	ndicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A	<b>A1</b> )			Sandy Gley	ed Matrix (	S4)	Coast F	Prairie Redox (A16)
Histic Epip	•			Sandy Red		/	_	urface (S7)
Black Histi				Stripped Ma				inganese Masses (F12)
_	Sulfide (A4)		_	Loamy Muc	` '	(E1)		nallow Dark Surface (TF12)
<b>—</b> ' ~	_ayers (A5)			Loamy Gley				Explain in Remarks)
2 cm Muck			_	Depleted M		(1 <del>2</del> )		-Apiain in Remarks)
	Selow Dark Surfac	e (Δ11)		Redox Dark	` '	<del>-</del> 6)		
	Surface (A12)	~ (/ ( / / / /		Depleted Da	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
_	cky Mineral (S1)			Redox Dep				nd hydrology must be present,
	ky Peat or Peat (S	3)		течех Вер	1) 611016601	0)	unless	s disturbed or problematic.
		-,						
estrictive Laye	er (if observed):							
Type:								
Depth (inches	s):						Hydric Soil Prese	nt? Yes No X
emarks:								
	Υ							
YDROLOG								
YDROLOG	ogy Indicators:	f one is requ	iired: check all that	apply)			Secondary Ir	udicators (minimum of two require
YDROLOG etland Hydrol Primary Indic	ogy Indicators: ators (minimum of	f one is requ	uired; check all that Water-Stair		(B9)			idicators (minimum of two require
YDROLOG etland Hydrol Primary Indic	ogy Indicators: eators (minimum of ater (A1)	f one is requ	Water-Stair	ned Leaves	(B9)		Surface So	oil Cracks (B6)
YDROLOG etland Hydrol Primary Indic Surface W High Wate	logy Indicators: eators (minimum of ater (A1) er Table (A2)	f one is requ	Water-Stair Aquatic Fau	ned Leaves una (B13)	` /		Surface So Drainage I	pil Cracks (B6) Patterns (B10)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation	logy Indicators: sators (minimum of later (A1) or Table (A2) (A3)	f one is requ	Water-Stair Aquatic Fau True Aquat	ned Leaves una (B13) ic Plants (B	14)		Surface So Drainage I Dry-Seaso	pil Cracks (B6) Patterns (B10) on Water Table (C2)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar	logy Indicators: eators (minimum of later (A1) er Table (A2) (A3) ks (B1)	f one is requ	Water-Stair Aquatic Fau True Aquat Hydrogen S	ned Leaves una (B13) ic Plants (B Sulfide Odor	14) · (C1)	Roots (C	Surface So Drainage I Dry-Seaso Crayfish B	oil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment	logy Indicators: leators (minimum of later (A1) ler Table (A2) (A3) leks (B1) Deposits (B2)	f one is requ	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres	14) (C1) s on Living	Roots (C	Surface So Drainage I Dry-Seaso Crayfish B Saturation	oil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment	logy Indicators: lators (minimum of later (A1) ler Table (A2) (A3) leks (B1) Deposits (B2) sits (B3)	f one is requ	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres f Reduced	14) (C1) s on Living lron (C4)		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos	ogy Indicators: cators (minimum of later (A1) or Table (A2) (A3) cks (B1) Deposits (B2) sits (B3) or Crust (B4)	f one is requ	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror	ned Leaves una (B13) ic Plants (B Gulfide Odor nizospheres f Reduced I Reduction	14) (C1) s on Living fron (C4) in Tilled So		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Gulfide Odor hizospheres f Reduced Reduction Surface (C7	14) (C1) s on Living lron (C4) in Tilled So		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation	logy Indicators: leators (minimum of later (A1) ler Table (A2) leators (B1) lest (B2) leators (B2) leators (B3) leator (B4) leators (B5) leators (B5) leators (B5) leators (Binimum of later (A2) leators (B4) leators (B5) leators (B1) leators (B2) leators (B1) leators (B2) leators (B3) leators (B1) leators (B1) leators (B2) leators (B1) leators (B2) leators (B3) leators (B4) leators (B3) leators (B4) leator	lmagery (B7	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced I Reduction Surface (C7 Vell Data (D	14) r (C1) s on Living lron (C4) in Tilled So r)		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely V	logy Indicators: leators (minimum of later (A1) ler Table (A2) leators (B1) leators (B2) leators (B3) leators (B3) leators (B4) leators (B5) leators (B5) leators (B5) leators (B6) leators	lmagery (B7	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced I Reduction Surface (C7 Vell Data (D	14) r (C1) s on Living lron (C4) in Tilled So r)		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
YDROLOG  etland Hydrol  Primary Indic  Surface W  High Wate  Saturation  Water Mar  Sediment I  Drift Depos  Iron Depos  Inundation	logy Indicators: leators (minimum of later (A1) ler Table (A2) leators (B1) leators (B2) leators (B3) leators (B3) leators (B4) leators (B5) leators (B5) leators (B5) leators (B6) leators	lmagery (B7	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres f Reduced I Reduction Surface (C7 Vell Data (D ain in Rema	14) s on Living lron (C4) in Tilled So y 9) arks)		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
YDROLOG  etland Hydrol  Primary Indic  Surface W  High Wate  Saturation  Water Mar  Sediment I  Drift Depos  Iron Depos Inundation  Sparsely V  eld Observation	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) erks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial legetated Concavions: eresent? Yes	Imagery ( B7 e Surface (B	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	14) r (C1) s on Living lron (C4) in Tilled So r) 9) arks)		Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
YDROLOG  etland Hydrol  Primary Indice  Surface W  High Wate  Saturation  Water Mar  Sediment  Drift Depos  Iron Depos Inundation  Sparsely V  eld Observation  urface Water Pater Table Pre	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) erks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial legetated Concavions: legetated? Yes sent? Yes	lmagery (B7	Water-Stair  Aquatic Fat  True Aquat  Hydrogen S  Oxidized R  Presence o  Recent Iror  Thin Muck  Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres if Reduced Reduction Surface (C7 Vell Data (D ain in Rema	14) (C1) s on Living lron (C4) in Tilled So (Y) 9) arks)	pils (C6)	Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph FAC-Neut	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2) ral Test (D5)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat o Iron Depos Inundation Sparsely W eld Observation urface Water P ater Table Prese	logy Indicators: leators (minimum of later (A1) leators (A2) leators (A3) leators (A3) leators (A3) leators (A3) leators (B4) leators (B4) leators (B4) leators (B5) leators (B5) leators (B6) leators (	lmagery (B7	Water-Stair  Aquatic Fat  True Aquat  Hydrogen S  Oxidized R  Presence o  Recent Iror  Thin Muck  Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	14) (C1) s on Living lron (C4) in Tilled So (Y) 9) arks)	pils (C6)	Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2) ral Test (D5)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely Weld Observation urface Water Pater Table Preservation Preservation Preservation	logy Indicators: leators (minimum of later (A1) leators (A2) leators (A3) leators (A2) leators (A3) leators (A3) leators (B4) leators (B4) leators (B4) leators (B5) leators (	Imagery (B7 e Surface (B	Water-Stair  Aquatic Fat  True Aquat  Hydrogen S  Oxidized R  Presence o  Recent Iror  Thin Muck  Gauge or V  8)  Other (Expl  No  X  De  No  X  De	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	14) (C1) s on Living lron (C4) in Tilled So (7) (9) arks)	wetlan	Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph FAC-Neut	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2) ral Test (D5)
YDROLOG etland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely Weld Observation urface Water Pater Table Preservation Preservation Preservation	logy Indicators: leators (minimum of later (A1) leators (A2) leators (A3) leators (A2) leators (A3) leators (A3) leators (B4) leators (B4) leators (B4) leators (B5) leators (	Imagery (B7 e Surface (B	Water-Stair  Aquatic Fat  True Aquat  Hydrogen S  Oxidized R  Presence o  Recent Iror  Thin Muck  Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	14) (C1) s on Living lron (C4) in Tilled So (7) (9) arks)	wetlan	Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph FAC-Neut	poil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2) ral Test (D5)

Applicant/Owner: Winnebago Tribe of Nebraska State: NE Sampling Point: 9 Investigator(s): C. Booth, K. Sherman (Oisson) Section, Trownship, Range: S35 T27N R8E Landform (hillslope, terrace, etc.): Slope Long: 96,483,274 Datum: NAD83 Soil Map Unit Name: 7053—Kennebec sitt loam, 0 to 3 percent slopes, occasionally flooded, overwash NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.    Vegetation   Absolute   Dominant   Indicator   Status   Shecked   Dominant   Species   That Are OBL, FACW, or FAC: 0 (A)
Landform (hillslope, terrace, etc.): Slope
Slope (%): 2-3 Lat: 42.263578 Long: -96,483,274 Datum: NADB3  Soil Map Unit Name: 7053—Kennebec silt loam, 0 to 3 percent slopes, occasionally flooded, overwash NVI classification: None  Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)  Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No  Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30') Absolute Dominant Species Tata Are OBL, FACW, or FAC: 0 (A)  1.
Soil Map Unit Name: 7053—Kennebec sit toam, 0 to 3 percent stopes, occasionally flooded, overwash NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X  Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30') Absolute Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  2 3 Total Number of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  5 - Total Number of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30') Absolute Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  1.
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X   No   Is the Sampled Area   Wetland Hydrology Present? Yes No X   No X   Within a Wetland? Yes No X   No X   Wetland Hydrology Present? Yes No X   No X   Wetland Hydrology Present? Yes No X   No X   No X   Wetland Hydrology Present? Yes No X   No X   Wetland Hydrology Hydrology Present? Yes No X   No X   Wetland Hydrology Hyd
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X No Within a Wetland? Yes No X  Wetland Hydrology Present? Yes No X No X Within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  2.
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No X No Within a Wetland? Yes No X  Wetland Hydrology Present? Yes No X No X Within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  2.
Hydrophytic Vegetation Present? Yes X No X Wetland Hydrology Present? Yes X No X Within a Wetland? Yes
Hydric Soil Present?  Wetland Hydrology Present?  Yes No X  No X  Is the Sampled Area within a Wetland?  Wetland?  Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  WEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Species?  I. Dominant Indicator Species?  Status Number of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Percent of Dominant Species  That Are OBL, FACW, or FAC: 0 (A)  Multiply by:
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks:  SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Species? Status Number of Dominant Species  1.
Remarks: SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' )
SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.    VEGETATION - Use scientific names of plants.
lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.    VEGETATION - Use scientific names of plants.   Dominant Species   Status   Dominant Species   Status   S
Tree Stratum     (Plot size:     30'     )     Absolute % Cover     Dominant Species?     Indicator Status     Number of Dominant Species       1.     2.       3.     Total Number of Dominant Species That Are OBL, FACW, or FAC:     0     (A)       5.     Percent of Dominant Species Across All Strata:     3     (B)       5.     Percent of Dominant Species That Are OBL, FACW, or FAC:     0     (A/E)       1.     Prevalence Index worksheet:       Total % Cover of:     Multiply by:
Tree Stratum         (Plot size:         30'         )         % Cover         Species?         Status         Number of Dominant Species           1.         2.         3.         Total Number of Dominant         3         (B)           5.         8         4         Species Across All Strata:         3         (B)           5.         9         Percent of Dominant Species         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1
1.
4.
4. Species Across All Strata: 3 (B)  5. Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/E)  1. Prevalence Index worksheet: Total % Cover of: Multiply by:
5 = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/E 2 2 3 2 15' 10
Sapling/Shrub Stratum (Plot size: 15' )  1. 2. 3. Prevalence Index worksheet: Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15' )  That Are OBL, FACW, or FAC: 0 (A/E)  Prevalence Index worksheet:  Total % Cover of: Multiply by:
1. 2. 3. Prevalence Index worksheet: Total % Cover of: Multiply by:
2. Prevalence Index worksheet: Total % Cover of: Multiply by:
3. Total % Cover of: Multiply by:
4. OBL species x1 =
5. FACW species x 2 =
= Total Cover
1. Abutilon theophrasti 10 X FACU UPL species x 5 =
2. Bromus inermis 5 X FACU Column Totals: (A) (B)
3. Cirsium arvense 5 X FACU Prevalence Index = B/A =
4.
5. Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
6 2 - Dominance Test is >50%
7 3 - Prevalence Index is <3.01
8 4 - Morphological Adaptations¹ (Provide supporting
9 data in Remarks or on a separate sheet)
10 Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum (Plot size: 30' ) = Total Cover    Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Hydrophytic
= Total Cover Vegetation Yes No X Present?

ne Booon, Depth	otion: (Describe to Matrix			Redox Featu	ıres			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 2/1	100					Loam	
4-8	10YR 2/1	95	7.5YR 4/6	5	С	М	Loam	Small rocks throughout
e: C=Cond	centration, D=Deple	etion RM=	Reduced Matrix	MS=Masked S	Sand Grain		<sup>2</sup> l ocation: Pl =	Pore Lining, M=Matrix
	Indicators:		. toudood maan,					or Problematic Hydric Soils <sup>3</sup> :
Histosol (				Sandy Gley	ed Matrix	(S4)		Prairie Redox (A16)
	ipedon (A2)		<del>-</del>	Sandy Red		(0.)		urface (S7)
Black His			_	Stripped Ma				anganese Masses (F12)
_	n Sulfide (A4)		_	Loamy Muc	` '	(E1)		hallow Dark Surface (TF12)
_ ′ ′	Layers (A5)		_	Loamy Gley				Explain in Remarks)
2 cm Mud			-	Depleted M		·· -/		
	Below Dark Surfac	e (A11)	7	X Redox Dark	` '	F6)		
	rk Surface (A12)	( ( , , , )	_	Depleted Da	,	,	<sup>3</sup> Indicator	s of hydrophytic vegetation and
_	ucky Mineral (S1)		_	Redox Depi		` '		nd hydrology must be present,
_	cky Peat or Peat (S	3)	_	_	`	,	unles	s disturbed or problematic.
- 	row (if a boom to d).							
rictive Lay	yer (if observed):							
wo.	Corr	nact						
ype: Depth (inche		npact 8					lydric Soil Pres	ent? Yes X No
		•				F	lydric Soil Pres	ent? Yes <u>X</u> No
Depth (inche	es): 	•				F	lydric Soil Pres	ent? Yes X No
Depth (inchestarks:	es):	•				ŀ	lydric Soil Pres	ent? Yes <u>X</u> No
DROLOG	es): 	8	quired; check all th	nat apply)		F		
DROLOC and Hydro	GY Dlogy Indicators:	8	•	nat apply) ained Leaves	(B9)	ŀ	Secondary I	
DROLOC and Hydro Surface V	es):  Ology Indicators: icators (minimum of	8	Water-St	ained Leaves	(B9)	<u> </u>	Secondary I Surface S	ndicators (minimum of two requ
DROLOC land Hydro Surface V High Wat	BY  blogy Indicators: icators (minimum of Water (A1) er Table (A2)	8	Water-St Aquatic F	ained Leaves auna (B13)		<u> </u>	Secondary I Surface S Drainage	ndicators (minimum of two requioil Cracks (B6) Patterns (B10)
DROLOC and Hydro Surface V High Wat Saturatio	BY  blogy Indicators: icators (minimum of Water (A1) er Table (A2) n (A3)	8	Water-St Aquatic F True Aqu	ained Leaves Fauna (B13) natic Plants (B	14)	<u> </u>	Secondary I Surface S Drainage Dry-Seas	ndicators (minimum of two requi oil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLOC and Hydro Primary Indi Surface V High Wat Saturatio Water Ma	es):  Dlogy Indicators: icators (minimum of Water (A1) er Table (A2) n (A3) arks (B1)	8	Water-St Aquatic F True Aqu Hydroger	ained Leaves Fauna (B13) natic Plants (B n Sulfide Odor	14) (C1)		Secondary I Surface S Drainage Dry-Seas Crayfish B	ndicators (minimum of two required in the control of two requi
DROLOC land Hydro Surface V High Wat Saturatio Water Ma	BY  blogy Indicators: icators (minimum of Water (A1) er Table (A2) n (A3)	8	Water-St Aquatic F True Aqu Hydroger Oxidized	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres	14) (C1) s on Living		Secondary I Surface S Drainage Dry-Seas Crayfish E	ndicators (minimum of two requi oil Cracks (B6) Patterns (B10) on Water Table (C2)
DROLOC land Hydro Surface V High Wate Saturation Water Ma Sediment Drift Depo	Diogy Indicators: icators (minimum of Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	8	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I	14) (C1) s on Living fron (C4)	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation	ndicators (minimum of two requi loil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
DROLOC land Hydro Surface V High Wate Saturation Water Ma Sediment Drift Depo	Dlogy Indicators: icators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	8	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres	14) (C1) s on Living ron (C4) in Tilled S	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two requi oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
DROLOC and Hydro Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift Depo	Dlogy Indicators: icators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	8 fone is rec	Water-St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I on Reduction	14) (C1) s on Living ron (C4) in Tilled S	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two requol oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
DROLOC and Hydro rimary Indi Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	Dlogy Indicators: icators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) it or Crust (B4) is its (B5)	f one is rec	Water-St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) Hatic Plants (B In Sulfide Odor Rhizospheres In of Reduced I Iron Reduction Ick Surface (C7	14) (C1) s on Living fron (C4) in Tilled S ()	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two requion of two requions (B10) on Water Table (C2) on Water Table (C2) on Wisible on Aerial Imagery (C9) or Stressed Plants (D1) on Position (D2)
DROLOC and Hydro Primary Indi Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	Dlogy Indicators: icators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial (Vegetated Concave	f one is rec	Water-St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres In of Reduced I In on Reduction Ick Surface (C7 In Well Data (D	14) (C1) s on Living fron (C4) in Tilled S ()	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two required loil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) on Stressed Plants (D1) thic Position (D2)
DROLOC land Hydro Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	Dlogy Indicators: icators (minimum of Water (A1) ier Table (A2) in (A3) arks (B1) it Deposits (B2) iosits (B3) it or Crust (B4) iosits (B5) in Visible on Aerial Vegetated Concavi	f one is rec	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc 37) Gauge or B8) Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres In of Reduced I In on Reduction Ick Surface (C7 In Well Data (D	14) s on Living fron (C4) in Tilled S () 9) arks)	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two required loil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) on Stressed Plants (D1) thic Position (D2)
DROLOC land Hydro Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	blogy Indicators: icators (minimum of Water (A1) icer Table (A2) in (A3) in (A3) it Deposits (B2) it or Crust (B4) it or Crust (B4) it or Wisible on Aerial I ivegetated Concave tions: Present? Yes	f one is rec	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres Le of Reduced I Loon Reduction Lek Surface (C7 Ir Well Data (D Ixplain in Rema	14) (C1) s on Living fron (C4) in Tilled S () 9) arks)	Roots (C3)	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of	ndicators (minimum of two requiroil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2)
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Project/Site: Winnebago Tribe Broad	Iband Connectivity I	Project City/Co	ounty: <b>Thu</b> i	rston	Sampling Da	ate: <b>7/11/20</b> 2	23
Applicant/Owner: Winnebago Tr	ibe of Nebraska			State: NE	Sampling Po	oint: 10	
Investigator(s): C. Booth, K. She	rman (Olsson)			Section,	, Township, Range:	S35 T27N R	₹8E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	re, convex, none):	None		
Slope (%):0-1 Lat:	42.264580	Long:	-9	96.483843	Datum:	NAD83	
Soil Map Unit Name: 7053—Kennebe	ec silt loam, 0 to 3 pe	ercent slopes, occ	asionally flo	oded, overwash NV	VI classification:	None	
Are climatic / hydrologic conditions on	the site typical for the	his time of year?	Yes X	No (If	no, explain in Rem	arks)	
Are Vegetation X , Soil , or I	-lydrology si	gnificantly disturbe	ed? Ai	re "Normal Circumst	tances" present? Ye	es X No	
Are Vegetation , Soil , or h		aturally problemation	c? (I1	needed, explain an	y answers in Rema	arks.)	
SUMMARY OF FINDINGS - Att	ach site map sh	nowing samplir					
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes	No X	lo the Cor	mpled Area			
Wetland Hydrology Present?	Yes	No X	within a V	npled Area Vetland?	Yes	No X	
Remarks:							
SP 10 is an upland area in an agricult							
potential wetland; however, the area land however, if vegetation had not been d							
hydric soils and wetland hydrology. Pl							JON OI
<b>VEGETATION</b> - Use scientifi				_			
	Absolute	Dominant	Indicator	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina	•		
1				That Are OBL, FAC	CW, or FAC:	1	(A)
3.		<del> </del>		T			
J	<del></del>			Total Number of Do Species Across All		1	(B)
5.				opedies / toross / tir	Olidia.	<u>'</u>	(D)
·		= Total Cover		Percent of Domina	nt Species		
Sapling/Shrub Stratum (Plot size:	15' )	_		That Are OBL, FAC	•	100	(A/B)
1.							' '
2.				Prevalence Index	worksheet:		
3.				Total %	Cover of:	Multiply by:	
4.	<u> </u>			OBL species		x 1 =	_
5				FACW species		x 2 =	
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	_)	V	E4.014/	FACU species		x 4 =	_
1. Cyperus esculentus	2	X	FACW	UPL species		x 5 =	— <sub>(D)</sub>
2				Column Totals:		(A)	(B)
3				Preval	ence Index = B/A =	·	_
4		<del> </del>		Hydrophytic V	egetation Indicato	ors:	
5				1 - Rapid ٦	Test for Hydrophytic	Vegetation	
6				X 2 - Domina	ance Test is >50%		
7				3 - Prevale	ence Index is <3.01		
8					ological Adaptations	\	ting
9					marks or on a sepa	,	
10				Problemati	ic Hydrophytic Vege	etation (Explain)	
Woody Vine Stratum (Plot size:	30' 2	= Total Cover		1, ,, ,			
					dric soil and wetlar disturbed or proble		be
1				Hydrophytic	distarbed of proble	matic.	
	<del></del>	= Total Cover		Vegetation	Yes X	. No	
		- Total Gover		Present?	163		1
Remarks: (Include photo numbers he	re or on a separate	sheet.)		<del></del>			
PP 10							

Depth	Matrix			Redox Feat	ures			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 3/2	50					Clay Loam	
	10YR 3/3	50					Clay Loam	
12-30	10YR 3/2	50	7.5YR 4/6	2	С	М	Clay Loam	
	10YR 3/3	48					Clay Loam	
pe: C=Con	centration, D=Deple	tion, RM=I	Reduced Matrix, M	S=Masked \$	Sand Grain	ıs.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix	(S4)	Coast Pr	airie Redox (A16)
Histic Ep	ipedon (A2)			Sandy Red	ox (S5)		Dark Sur	face (S7)
Black His	stic (A3)			Stripped Ma	atrix (S6)		Iron-Man	ganese Masses (F12)
— Hydroge	n Sulfide (A4)			Loamy Muc	cky Mineral	(F1)	Very Sha	illow Dark Surface (TF12)
Stratified	Layers (A5)			Loamy Gle				xplain in Remarks)
2 cm Mu	ck (A10)			Depleted M	latrix (F3)		_	
Depleted	l Below Dark Surfac	e (A11)		Redox Darl	k Surface (	F6)		
Thick Da	rk Surface (A12)			Depleted D	ark Surfac	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)			Redox Dep	ressions (F	-8)		hydrology must be present,
5 cm Mu	cky Peat or Peat (S	3)					unless	disturbed or problematic.
Type: Depth (inch	<u> </u>						Hydric Soil Presen	
Type: Depth (inch	es):	il profile, it	is too low in the pr	ofile to mee	t hydric soi	il indicator	Hydric Soil Presen	
Type: Depth (inch	es):  (is present in the so	il profile, it	is too low in the pr	ofile to mee	t hydric soi	il indicator		
Type: Depth (inch marks: hough redox	es):  (is present in the so	il profile, it	is too low in the pr	ofile to mee	t hydric soi	il indicator		
Type: Depth (inch marks: hough redox  /DROLOG stland Hydro	es):  GY  ology Indicators: icators (minimum of		uired; check all tha	t apply)		il indicator	criteria; therefore, th	
Type: Depth (inch marks: hough redox  /DROLOG stland Hydro	es):  (is present in the so		uired; check all tha			il indicator	criteria; therefore, the	is soil is non-hydric.
Type: Depth (inch marks: hough redox  /DROLOG etland Hydre Primary Ind Surface \( \)	es):  GY  ology Indicators: icators (minimum of		uired; check all tha	t apply) ned Leaves		il indicator	criteria; therefore, the	is soil is non-hydric.
Type: Depth (inch marks: hough redox  /DROLOG etland Hydre Primary Ind Surface \( \)	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2)		uired; check all tha Water-Stai Aquatic Fa	t apply) ned Leaves	(B9)	il indicator	criteria; therefore, the	iis soil is non-hydric. iicators (minimum of two require
Type: Depth (inch marks: hough redox  /DROLOG ttland Hydro Primary Ind Surface \( \) High Wa Saturatio Water M:	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		uired; check all tha Water-Stai Aquatic Fa True Aqua	t apply) ned Leaves una (B13)	(B9)	il indicator	criteria; therefore, the	icators (minimum of two require I Cracks (B6) atterns (B10)
Type: Depth (inch marks: hough redox  /DROLOG ttland Hydro Primary Ind Surface \( \) High Wa Saturatio Water M:	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3)		uired; check all tha Water-Stai Aquatic Fa True Aqua Hydrogen	t apply) ned Leaves una (B13) tic Plants (B	(B9) 314) r (C1)		Secondary Ind Surface Soi Drainage Pa	icators (minimum of two require I Cracks (B6) atterns (B10)
Type: Depth (inch marks: hough redox  /DROLOG etland Hydre Primary Ind Surface V High Wa Saturatic Water Mark Sedimen	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)		uired; check all tha  Water-Stai  Aquatic Fa  True Aqua  Hydrogen : Oxidized R	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo	(B9) 314) r (C1) s on Living		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \	icators (minimum of two require I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8)
Type: Depth (inch marks: hough redox  TDROLOG  Stland Hydro Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2)		uired; check all tha  Water-Stai  Aquatic Fa  True Aquai  Hydrogen S	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere:	(B9) 314) r (C1) s on Living Iron (C4)	Roots (C	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Stunted or S	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inch marks: hough redox  TDROLOG  Stland Hydro Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3)		uired; check all tha  Water-Stai  Aquatic Fa  True Aqua  Hydrogen S  Oxidized R  Presence of	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere	(B9) s14) r (C1) s on Living lron (C4) in Tilled S	Roots (C	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Stunted or S	icators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inch marks: hough redox  /DROLOG  stland Hydre Primary Ind Surface N Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundation	es):  (x is present in the so  (x is present i	one is req	uired; check all tha  Water-Stai  Aquatic Fa  True Aqua  Hydrogen s  Oxidized R  Presence of Recent Iron  Thin Muck  Gauge or N	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere of Reduced in Reduction Surface (C) Vell Data (E	(B9) s14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required Cracks (B6) atterns (B10) atterns (C2) rrows (C8) /isible on Aerial Imagery (C9) Cressed Plants (D1) consistion (D2)
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Type: Depth (inch marks: hough redox  TDROLOG  tland Hydre Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Ild Observa	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) on Visible on Aerial ovegetated Concavitions: Present? Yes sent? Yes	magery (B	uired; check all tha  Water-Stai  Aquatic Fa  True Aquai  Hydrogen :  Oxidized R  Presence of  Recent Iron  Thin Muck  7) Gauge or N  38) Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere: of Reduced n Reduction Surface (C: Vell Data (C lain in Rem	(B9) s14) r (C1) s on Living lron (C4) n in Tilled S 7) 99) arks)	Roots (Cooils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)
Type: Depth (inch marks: hough redox  TDROLOG  Stland Hydre Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely  Id Observa rface Water turation Presiduration Presidues capill	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) oosits (B3) t or Crust (B4) oosits (B5) on Visible on Aerial ovegetated Concavitions: Present? Yes sent? Yes	magery (B	uired; check all that  Water-Stail  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of  Recent Iron  Thin Muck  Gauge or V  38)  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere: of Reduced n Reduction Surface (C Vell Data (C lain in Rem epth (inches	(B9) s14) r (C1) s on Living lron (C4) in Tilled S 7) b9) arks)	Roots (Cooils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)
Type: Depth (inch marks: hough redox  TDROLOG  Stland Hydre Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely  Id Observa rface Water turation Presiduration Presidues capill	es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concavitions: Present? Present? Yes ersent? Yes ary fringe)	magery (B	uired; check all that  Water-Stail  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of  Recent Iron  Thin Muck  Gauge or V  38)  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odo hizosphere: of Reduced n Reduction Surface (C Vell Data (C lain in Rem epth (inches	(B9) s14) r (C1) s on Living lron (C4) in Tilled S 7) b9) arks)	Roots (Cooils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)

<u> </u>	Long: percent slopes	Yes>	ve, convex, none): <u>C</u> -96.466750 NWI	Datum: classification: o, explain in Rema	S12 T26N R NAD83 None	₹8E
Landform (hillslope, terrace, etc.):         Field           Slope (%):         2-3         Lat:         42.235458           Soil Map Unit Name:         8071—Monona silt loam, 11 to 17           Are climatic / hydrologic conditions on the site typical for the site vegetation         , Soil         , or Hydrology         site           Are Vegetation         , Soil         , or Hydrology         name	Long:	Yes>	ve, convex, none):	Datum: classification: o, explain in Rema	NAD83 None	R8E
Slope (%): 2-3 Lat: 42.235458  Soil Map Unit Name: 8071—Monona silt loam, 11 to 17  Are climatic / hydrologic conditions on the site typical for the same vegetation Are Vegetation , Soil , or Hydrology name of the same vegetation	Long:	Yes>	-96.466750 NWI  K No (If no	Datum: classification: o, explain in Rema	None	
Soil Map Unit Name: 8071—Monona silt loam, 11 to 17  Are climatic / hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology signature vegetation , Soil , or Hydrology named to the site typical for the Are Vegetation , Soil , or Hydrology named to the site typical for the	percent slopes nis time of year? gnificantly disturbe	Yes>	NWI  No(If no	classification: o, explain in Rema	None	
Are climatic / hydrologic conditions on the site typical for the Are Vegetation , Soil , or Hydrology signature of the Soil , or Hydrology new Are Vegetation , Soil , or Hydrology new Are Vegetation , Soil , or Hydrology	nis time of year? gnificantly disturbe		K No (If no	o, explain in Rema		
Are Vegetation , Soil , or Hydrology signature signature , Soil , or Hydrology na	gnificantly disturbe		`	•	rks)	
Are Vegetation , Soil , or Hydrology na	-	ed? A	Are "Normal Circumstar			
	aturally problems+		iic Homai Onoumstai	nces" present? Yes	s X No	
SUMMARY OF FINDINGS - Attach site map sh	aturany problemati	ic? (	If needed, explain any	answers in Remar	ks.)	
	owing sampli	ng point	locations, transec	ts, important f	eatures, etc.	
Hydrophytic Vegetation Present? Yes	No X					
Hydric Soil Present? Yes	No X	le the Sa	mpled Area			
Wetland Hydrology Present? Yes	No X		Wetland?	Yes	No X	
Remarks: SP 11 is an upland area in an abandoned agricultural field calculations. This area was identified during the WETS Ta						
VEGETATION - Use scientific names of plan	nts					
Absolute	Dominant	Indicator	Dominance Test wo	rksheet:		
Tree Stratum (Plot size: 30' ) % Cover	Species?	Status	Number of Dominant	Species		
1			That Are OBL, FACV	V, or FAC:	1	(A)
2						
3			Total Number of Don		2	(D)
5.			Species Across All S	ıraıa: •	3	(B)
5	= Total Cover			o :		
Sapling/Shrub Stratum (Plot size: 15' )	-		Percent of Dominant That Are OBL, FACW		33	(A/B)
1.			That the OBE, They	•, 6, 17, 6.		. (700)
2.			Prevalence Index w	orksheet:		
3.			Total % Co	over of:	Multiply by:	
4.			OBL species		x 1 =	
5.			FACW species		x 2 =	
	= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5' )	-		FACU species		x 4 =	
1. Echinochloa crus-galli 25	X	FACW	UPL species		x 5 =	
2. Amaranthus albus 25	X	FACU	Column Totals:		(A)	(B)
3. Abutilon theophrasti 20	X	FACU	Prevalen	ice Index = B/A = _		
4. Setaria viridis 15		UPL	Hydrophytic Ved	etation Indicator	 s:	
5. Convolvulus arvensis 5		UPL		st for Hydrophytic		
6. Xanthium spinosum 5		FACU	I — '	ce Test is >50%	9	
7. Chenopodium album 5		FACU	<u> </u>	ce Index is <3.01		
8			4 - Morpholo	gical Adaptations¹	(Provide suppor	ting
9				arks or on a separa	,	
10.			Problematic	Hydrophytic Veget	ation <sup>1</sup> (Explain)	
	= Total Cover					
100	•					be
100			<sup>1</sup> Indicators of hydr present, unless dis			
Woody Vine Stratum (Plot size: 30' )	· ——— -					

Sampling Point: 11

Depth	Matrix			Redox	Featu	res		ne absence of inc	
· —	Color (moist)	%	Color (moi	ist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30	10YR 3/2	50						Silt Loam	
	10YR 3/3	50						Silt Loam	
									-
pe: C=Concen	tration, D=Deple	tion, RM=R	Reduced Matr	ix, MS=Mas	sked S	and Grain	s.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix
Hydric Soil Ind	dicators:							Indicators 1	for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	)			Sandy	/ Gleye	ed Matrix (	(S4)	Coast	Prairie Redox (A16)
Histic Epiped	don (A2)			Sandy	/ Redo	x (S5)		Dark S	Surface (S7)
Black Histic	(A3)			Stripp	ed Ma	trix (S6)		Iron-M	anganese Masses (F12)
Hydrogen Sı	ulfide (A4)			Loam	y Muck	ky Mineral	(F1)	Very S	Shallow Dark Surface (TF12)
Stratified Lay	yers (A5)			Loam	y Gley	ed Matrix	(F2)	Other	(Explain in Remarks)
2 cm Muck (	A10)			Deple	ted Ma	atrix (F3)			
	low Dark Surfac	e (A11)		Redox	k Dark	Surface (F	F6)		
Thick Dark S	Surface (A12)			Deple	ted Da	ırk Surface	e (F7)		rs of hydrophytic vegetation and
Sandy Muck	xy Mineral (S1)			Redox	k Depr	essions (F	8)		and hydrology must be present, ss disturbed or problematic.
5 cm Mucky	Peat or Peat (S	3)						unles	ss disturbed or problematic.
strictive Laver	(if observed):								
Туре:	(II observed).								
Depth (inches):	•								
								Hydric Soil Pres	ent? Yes No X
marks:								Hydric Soil Pres	ent? Yes NO A
								Hydric Soil Pres	ent? Yes No^
DROLOGY								Hydric Soil Pres	ent? Yes NoX
'DROLOGY tland Hydrolog		one is requ	uired; check a	ill that apply	<i>y</i> )				ndicators (minimum of two requi
'DROLOGY tland Hydrolog	gy Indicators: tors (minimum of	one is requ		ıll that apply -Stained Le	,	(B9)		Secondary	
DROLOGY tland Hydrolog Primary IndicatSurface Wat	gy Indicators: fors (minimum of ter (A1)	one is requ	Water	-Stained Le	eaves (	(B9)		Secondary I	ndicators (minimum of two requi
TDROLOGY tland Hydrolog Primary Indicat Surface Wat High Water	gy Indicators: fors (minimum of ter (A1) Table (A2)	one is requ	Water Aquat	-Stained Le	eaves ( 313)	`		Secondary I Surface S Drainage	ndicators (minimum of two requi Soil Cracks (B6) Patterns (B10)
'DROLOGY tland Hydrolog Primary Indicat Surface Wat	gy Indicators: cors (minimum of ter (A1) Table (A2)	one is requ	Water Aquat True A	-Stained Le ic Fauna (E Aquatic Pla	eaves ( 313) nts (B1	14)		Secondary I Surface S Drainage Dry-Seas	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2)
TDROLOGY tland Hydrolog Primary Indicat Surface Wate High Water Saturation (A	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1)	one is requ	Water Aquat True A	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide	eaves ( 313) nts (B1 e Odor	(C1)	Roots (C	Secondary I Surface S Drainage Dry-Seas Crayfish	ndicators (minimum of two requines oil Cracks (B6) Patterns (B10) Ion Water Table (C2) Burrows (C8)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2)	one is requ	Water Aquat True A Hydro Oxidiz	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide	eaves ( 313) nts (B1 e Odor oheres	(C1) on Living	Roots (C	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Fon Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)	one is requ	Water Aquat True A Hydro Oxidiz Prese	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide ted Rhizosp nce of Red	eaves ( 313) nts (B1 Odor oheres uced Ir	(C1) on Living	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted c	ndicators (minimum of two requirements of two requirements) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)	one is requ	Water Aquat True A Hydro Oxidiz Prese Recer	-Stained Letic Fauna (E Aquatic Plangen Sulfide gen Sulfide ged Rhizosp nce of Red	eaves (B13) Ints (B1 Codor Coheres Luction i	(C1) on Living ron (C4) in Tilled So	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
Primary Indicat Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5)		— Water — Aquat — True A — Hydro — Oxidiz — Prese — Recer — Thin M	-Stained Le ic Fauna (E Aquatic Plan gen Sulfide ted Rhizosp nce of Red the Iron Redu	eaves (B13) Ints (B13) Ints (B14) Ints (B16)	(C1) on Living ron (C4) in Tilled So	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1)
Primary Indicat Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //sible on Aerial I	magery (B7	— Water — Aquat — True A — Hydro — Oxidiz — Prese — Recer — Thin M	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide zed Rhizosp nce of Red nt Iron Redu Juck Surface	eaves (813) eaves (813) e Odor oheres uced In uction i ce (C7) eata (D9	(C1) on Living ron (C4) in Tilled So )	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave	magery (B7	— Water — Aquat — True A — Hydro — Oxidiz — Prese — Recer — Thin M	-Stained Le ic Fauna (E Aquatic Plan gen Sulfide ted Rhizosp nce of Red the Iron Redu	eaves (813) eaves (813) e Odor oheres uced In uction i ce (C7) eata (D9	(C1) on Living ron (C4) in Tilled So )	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Ve	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave	magery (B7	— Water — Aquat — True A — Hydro — Oxidiz — Prese — Recer — Thin M (7) — Gauge 8) — Other	-Stained Le ic Fauna (E Aquatic Plan gen Sulfide ted Rhizosp nce of Red nt Iron Redu Muck Surfac e or Well Da (Explain in	eaves (813) Ints (B1 Codor Coheres Codor C	(C1) on Living ron (C4) in Tilled So )	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
Primary Indicat Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Inundation V Sparsely Verentace Water Pre	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave esent? Yes	magery (B7	Water Aquat True A Hydro Oxidiz Prese Recer Thin N Gauge 8) Other	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide red Rhizosp nce of Red nt Iron Redu Muck Surfac e or Well Da (Explain in	eaves (813) Ints (B13) Ints (B144) Ints (B	(C1) on Living ron (C4) in Tilled So )	,	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
Primary Indicate Surface Water Marks Sediment De Drift Deposite Inundation V Sparsely Vereiter Table Presented	gy Indicators: tors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave ns: esent? Yes	magery (B7	— Water — Aquat — True A — Hydro — Oxidiz — Prese — Recer — Thin N O Gaugo 8) — Other	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide red Rhizosp nce of Red nt Iron Redu fluck Surfac e or Well Da (Explain in  Depth (ir	eaves (813) Ints (B13) Ints (B14)	(C1) on Living ron (C4) in Tilled So )	oils (C6)	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted c Geomorp FAC-Neu	ndicators (minimum of two requirements) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1) Shic Position (D2) Stral Test (D5)
Primary Indicate Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Sparsely Vereiter Table Present	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave ns: esent? Yes ent? Yes ent? Yes	magery (B7	Water Aquat True A Hydro Oxidiz Prese Recer Thin N Gauge 8) Other	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide red Rhizosp nce of Red nt Iron Redu Muck Surfac e or Well Da (Explain in	eaves (813) Ints (B13) Ints (B14)	(C1) on Living ron (C4) in Tilled So )	oils (C6)	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of	ndicators (minimum of two requirements) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1) Shic Position (D2) Stral Test (D5)
Primary Indicate Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Sparsely Vegeted Observation Frace Water Presenter Table Present	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave esent? Yes ent? Yes fringe)	magery ( B7 e Surface (B	- Water - Aquat - True A - Hydro - Oxidiz - Prese - Recer - Thin N - Gauge 8) Other  No X No X No X	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide red Rhizosp nce of Red nt Iron Redu Muck Surfac e or Well Da (Explain in  Depth (ir Depth (ir	eaves (813) Ints (B1) Ints	(C1) on Living ron (C4) in Tilled So ) rks)	wetlan	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	ndicators (minimum of two requirements) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1) Shic Position (D2) Stral Test (D5)
Primary Indicate Surface Wate High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Inundation V Sparsely Vegeted Observation Frace Water Presenter Table Present	gy Indicators: cors (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) //isible on Aerial I getated Concave ns: esent? Yes ent? Yes ent? Yes	magery ( B7 e Surface (B	- Water - Aquat - True A - Hydro - Oxidiz - Prese - Recer - Thin N - Gauge 8) Other  No X No X No X	-Stained Le ic Fauna (E Aquatic Plai gen Sulfide red Rhizosp nce of Red nt Iron Redu Muck Surfac e or Well Da (Explain in  Depth (ir Depth (ir	eaves (813) Ints (B1) Ints	(C1) on Living ron (C4) in Tilled So ) rks)	wetlan	Secondary I Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	ndicators (minimum of two requirements) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) For Stressed Plants (D1) Shic Position (D2) Stral Test (D5)

Project/Site: Winnebago Tribe Broadband Co	onnectivity Project	City/County: Th	urston	Sampling Da	ate: 7/11/20	23
Applicant/Owner: Winnebago Tribe of N	ebraska		State: Ne	Sampling Po	int: 12	
Investigator(s): C. Booth, K. Sherman (C	)Isson)		Section	, Township, Range:	S18 T26N F	₹9E
Landform (hillslope, terrace, etc.): Field		Local relief (conc	ave, convex, none):	Convex		
Slope (%): 2-3 Lat: 42.2	231246	Long:	-96.451215	Datum:	NAD83	
Soil Map Unit Name: 6603—Alcester silty c	lay loam, 2 to 6 perce	ent slopes	N	WI classification:	None	
Are climatic / hydrologic conditions on the site	typical for this time of	year? Yes	X No (If	no, explain in Rema	arks)	
Are Vegetation X , Soil , or Hydrolog	gy significantly	disturbed?	Are "Normal Circums	tances" present? Ye	es X No	
Are Vegetation , Soil , or Hydrolog	naturally pro	blematic?	(If needed, explain ar	nv answers in Rema	ırks.)	
SUMMARY OF FINDINGS - Attach si	,, <u> </u>					
Hydrophytic Vegetation Present? Yes	No X			, p		
Hydric Soil Present? Yes	X No	-				
•			ampled Area ı Wetland?	Vaa	No. V	
Wetland Hydrology Present? Yes	No X	- Within a	i vvetiand?	Yes	No X	
Remarks:		•				
SP 12 is an upland area located within an agr wetland. Although this area contains hydric so is present at this SP; however, it is not include	oil, it lacks dominant hy	drophytic vegetati				
<b>VEGETATION - Use scientific nam</b>	es of plants.					
	Absolute Domina	ant Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30' )	% Cover Specie	es? Status	Number of Domina	•	_	
1			That Are OBL, FA	CW, or FAC:	0	(A)
3.			T			
4		<del>-</del>	Total Number of D Species Across Al		2	(B)
5.			opeoics / toross / til	Tottata.		. (D)
··	= Total Co	over	Percent of Domina	ent Species		
Sapling/Shrub Stratum (Plot size: 1			That Are OBL, FA		0	(A/B)
1.			Í			. ( ' /
2.			Prevalence Index	worksheet:		
3.			Total %	Cover of:	Multiply by:	
4.			OBL species		x 1 =	
5.			FACW species		x 2 =	
	= Total Co	over	FAC species		x 3 =	
Herb Stratum (Plot size: 5' )			FACU species		x 4 =	
Cirsium altissimum	15 X	UPL	UPL species		x 5 =	
2. Polygonum sp.	15 X	OBL-UPL	Column Totals:	0	(A)	(B)
3. Helianthus annuus	5	UPL	Preva	lence Index = B/A =		
4. Abutilon theophrasti	5	FACU	Hydrophytic V	egetation Indicato	rs:	
5. Setaria viridis	5	UPL		Test for Hydrophytic		
6. Chamaecrista fasciculata	5	FACU	<u> </u>	ance Test is >50%	rogotation.	
7			_	ence Index is <3.01		
8			<u> </u>	ological Adaptations	1 (Provide suppor	rting
9.	. <u></u> .			marks or on a sepa		Ū
10			Problemat	ic Hydrophytic Vege	etation <sup>1</sup> (Explain)	
	50 = Total Co	over				
Woody Vine Stratum (Plot size: 30'	)			dric soil and wetlan disturbed or probler		t be
2.			Hydrophytic			
	= Total	l Cover	Vegetation Present?	Yes	NoX	-
Remarks: (Include photo numbers here or on	a separate sheet.)					
PP 12						

Depth	Matrix			Redox Featu	1163			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22	10YR 3/2	90	7.5YR 4/6	10	С	М	Silty Clay	
	-		•	_				
ne: C=Cond	centration, D=Deple	tion RM=	Reduced Matrix	MS=Masked S	Sand Grain		<sup>2</sup> Location: PL=Por	e Lining M=Matrix
	Indicators:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					Problematic Hydric Soils <sup>3</sup> :
Histosol (				Sandy Gley	ed Matrix	(S4)		irie Redox (A16)
	ipedon (A2)		-	Sandy Red		(04)	Dark Surfa	, ,
_			<del>-</del>	_				
Black His			-	Stripped Ma		· (= 4)		anese Masses (F12)
_ ′ ′	n Sulfide (A4)		_	Loamy Muc	•	. ,		ow Dark Surface (TF12)
	Layers (A5)		<del>-</del>	Loamy Gley		(Г2)	Other (Exp	olain in Remarks)
2 cm Mud		(8.4.4)	=	Depleted M	` '	F0\		
_	Below Dark Surfac	e (A11)		X Redox Dark	,	,	3.	
_	rk Surface (A12)		_	_ Depleted Da		` '		hydrophytic vegetation and hydrology must be present,
_	ucky Mineral (S1)		_	Redox Depi	ressions (F	<del>-</del> 8)		isturbed or problematic.
5 cm Mud	cky Peat or Peat (S	3)					4555 4	otarzea er prezioniane.
ype: Depth (inche	yer (if observed): es):						Hydric Soil Present	? Yes <u>X</u> No
Type: Depth (incho	es):						Hydric Soil Present	? Yes <u>X</u> No
Type: Depth (inchestarks:	es):						Hydric Soil Present	? Yes <u>X</u> No
ype: Depth (inchestarks:  DROLOG and Hydro	es):  GY  blogy Indicators:	one is rec	united: check all th	nat apply)				
DROLOC land Hydro	es):  Ology Indicators: icators (minimum of	one is rec		,	(B9)		Secondary India	cators (minimum of two requi
DROLOC land Hydro Surface V	GY  blogy Indicators: icators (minimum of Water (A1)	one is rec	Water-St	ained Leaves	(B9)		Secondary Indio	cators (minimum of two requi
DROLOC land Hydro Surface V High Wat	GY  blogy Indicators: icators (minimum of Water (A1) ter Table (A2)	one is rec	Water-St Aquatic F	ained Leaves auna (B13)			Secondary India Surface Soil Drainage Pa	cators (minimum of two requi Cracks (B6) cterns (B10)
DROLOC land Hydro Surface V High Wat Saturatio	GY  Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3)	one is rec	Water-St Aquatic F True Aqu	ained Leaves Fauna (B13) natic Plants (B	14)		Secondary India Surface Soil Drainage Pa	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2)
DROLOC land Hydro Primary Indi Surface V High Wat Saturation Water Ma	Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1)	one is rec	Water-St Aquatic F True Aqu Hydroger	ained Leaves Fauna (B13) uatic Plants (B n Sulfide Odor	14) (C1)		Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Buri	cators (minimum of two requi Cracks (B6) cterns (B10) Water Table (C2) cows (C8)
DROLOC land Hydro Surface V High Wat Saturatio Water Ma	es):  Diogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	one is rec	— Water-St — Aquatic F — True Aqu — Hydroger — Oxidized	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres	14) (C1) s on Living		Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9)
DROLOC land Hydro Surface V High Water Ma Sediment Drift Depo	es):  blogy Indicators: icators (minimum of Water (A1) iter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	one is rec	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence	ained Leaves Fauna (B13) uatic Plants (B n Sulfide Odor Rhizospheres e of Reduced I	14) (C1) s on Living lron (C4)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi	cators (minimum of two requi Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1)
DROLOC Iand Hydro Primary Indi Surface W High Wate Saturation Water Ma Sediment Drift Depo	blogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	one is rec	Water-St Aquatic F True Aqu Hydroger Oxidized Presence	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I	14) (C1) s on Living lron (C4) in Tilled S	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOC land Hydro Primary Indi Surface V High Water Ma Sediment Drift Depo	Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		— Water-St — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc	ained Leaves Fauna (B13) Hatic Plants (B In Sulfide Odor Rhizospheres For Reduced I Fron Reduction Rk Surface (C7	14) (C1) s on Living (ron (C4) in Tilled S	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOC and Hydro Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial	magery (E	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D	14) (C1) s on Living lron (C4) in Tilled S ()	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Interns (B10) Water Table (C2) Incows (C8) Isible on Aerial Imagery (C9) Interessed Plants (D1)
DROLOC and Hydro rimary Indi Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	magery (E	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) Hatic Plants (B In Sulfide Odor Rhizospheres For Reduced I Fron Reduction Rk Surface (C7	14) (C1) s on Living lron (C4) in Tilled S ()	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Interns (B10) Water Table (C2) Incows (C8) Isible on Aerial Imagery (C9) Interessed Plants (D1)
DROLOC land Hydro Primary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	blogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave	magery (E	Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D	14) (C1) s on Living lron (C4) in Tilled S ()	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOC Iand Hydro Primary Indi Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	es):  Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave	magery (E	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D	14) c (C1) s on Living lron (C4) in Tilled S c y ) 9) arks)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOC land Hydro Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	es):  Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes	magery (E	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In Thin Muc Gauge of Other (E: No X I	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema	14) (C1) s on Living lron (C4) in Tilled S () 9) arks)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOC land Hydro Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely d Observat ace Water I aration Pres	es):  plogy Indicators: icators (minimum of Water (A1) iter Table (A2) in (A3) arks (B1) it Deposits (B2) osits (B3) it or Crust (B4) osits (B5) in Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes sent? Yes	magery (E	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc (37) Gauge of B8) Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres e of Reduced I Fron Reduction ck Surface (C7 r Well Data (D explain in Rema	14) (C1) s on Living lron (C4) in Tilled S () 9) arks)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
DROLOC land Hydro Primary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely d Observat ace Water Table Pri Iration Pres	blogy Indicators: icators (minimum of Water (A1) iter Table (A2) in (A3) arks (B1) it Deposits (B2) osits (B3) it or Crust (B4) osits (B5) in Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes ary fringe)	magery (e e Surface (	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In Thin Muc (37) Gauge o (B8) Other (E)  No X I	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living lron (C4) in Tilled S () 9) arks)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
DROLOC land Hydro Primary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely d Observat ace Water Table Pri ration Pres	es):  plogy Indicators: icators (minimum of Water (A1) iter Table (A2) in (A3) arks (B1) it Deposits (B2) osits (B3) it or Crust (B4) osits (B5) in Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes sent? Yes	magery (e e Surface (	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In Thin Muc (37) Gauge o (B8) Other (E)  No X I	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living lron (C4) in Tilled S () 9) arks)	Roots (C3	Secondary India Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or Si Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)

Project/Site: Winnebago Tribe Broadband	I Connectivity P	roject City/C	County: Thu	rston	Sampling Dat	te: <b>7/11/202</b>	23
Applicant/Owner: Winnebago Tribe o	f Nebraska			State: <b>NE</b>	Sampling Poi	nt: 13	
Investigator(s): C. Booth, K. Sherman	(Olsson)			Section,	, Township, Range:	S18 T26N R	9E
Landform (hillslope, terrace, etc.): Field	t	Local r	relief (conca	ve, convex, none):	Concave		
Slope (%): 2-3 Lat: 4	2.230944	Long:	-	96.451312	Datum:	NAD83	
Soil Map Unit Name: 7716—McPaul silt I	oam, occasion	ally flooded		NV	VI classification:	None	
Are climatic / hydrologic conditions on the	site typical for th	is time of year?	Yes >	No (If	no, explain in Rema	irks)	
Are Vegetation X , Soil , or Hydro	ology sig	nificantly disturb	ed? A	re "Normal Circums	tances" present? Ye	s X No	
Are Vegetation , Soil , or Hydro	ology na	turally problemat	tic? (I	f needed, explain an	nv answers in Remar	rks.)	
SUMMARY OF FINDINGS - Attach	0,	, .	,				
		No X	Ť.	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
, , , ,		No .					
•		<del></del>		mpled Area Wetland?	Yes	No. Y	
Wetland Hydrology Present? Y	es N	No X	within a	rvetianu r	res	No X	
Remarks:							
SP 13 is an upland area located within an a wetland. Although this area contains hydric is present at this SP; however, it is not inclu  VEGETATION - Use scientific na	soil, it lacks do uded in the vege	minant hydrophy etation calculation	tic vegetatio				
	Absolute	Dominant	Indicator	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Domina	ant Species		
1				That Are OBL, FAC	CW, or FAC:	0	(A)
2							
3.				Total Number of Do			<b>(D)</b>
4.	- —			Species Across All	Strata:	2	(B)
5		= Total Cover					
Capling/Charle Ctuatum / Dlat size		= Total Cover		Percent of Domina		0	(A /D)
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FAC	SVV, or FAC:	0	(A/B)
1	- ——			Prevalence Index	workshoot:		
3.					Cover of:	Multiply by:	
4	- ——			OBL species		x 1 =	_
5.	- ——			FACW species		x 2 =	_
·		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5' )				FACU species		x 4 =	_
Helianthus annuus	20	Χ	FACU	UPL species		x 5 =	_
2. Cirsium altissimum	10	X	UPL	Column Totals:		(A)	(B)
3.				Preval	ence Index = B/A =		_
4.							
5.					egetation Indicator		
6.				<u> </u>	Test for Hydrophytic	Vegetation	
7.				<b>—</b>	ance Test is >50%		
8.				l —	ence Index is <3.01		
9.					ological Adaptations¹ marks or on a separ	\	ling
10.					ic Hydrophytic Vege	,	
	30	= Total Cover			io riyaropriyao vogo	(Explain)	
Woody Vine Stratum (Plot size: 38		rotal corol			dric soil and wetland		be
2.				Hydrophytic			
	<u> </u>	= Total Cover	r	Vegetation Present?	Yes	NoX	
Woody Vine Stratum (Plot size: 3	0')		· · · · · · · · · · · · · · · · · · ·	<sup>1</sup> Indicators of hy present, unless Hydrophytic Vegetation	dric soil and wetland	d hydrology must natic.	be

-	otion: (Describe to Matrix	the depth		ent the ind		confirm t	he absence of indi	cators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-4	10YR 3/2	98	5YR 5/8	2	С	M		Remarks
							Silty Clay	
4-30	10YR 3/2	90	5YR 5/8	10	<u>C</u>	M	Silty Clay	
<sup>1</sup> Type: C=Cond	centration, D=Deple	etion, RM=R	educed Matrix, MS	=Masked \$	Sand Grain	s.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (	'A1)		Ş	Sandy Glev	ed Matrix (	(S4)	Coast P	Prairie Redox (A16)
	ipedon (A2)			Sandy Red		,		ırface (S7)
Black His				Stripped Ma			_	nganese Masses (F12)
	, ,					(54)		• , ,
	n Sulfide (A4)				ky Mineral			nallow Dark Surface (TF12)
	Layers (A5)				yed Matrix	(F2)	Other (E	Explain in Remarks)
2 cm Mud				Depleted M	, ,			
	Below Dark Surface	ce (A11)			k Surface (I	,	•	
	rk Surface (A12)				ark Surface			of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		F	Redox Dep	ressions (F	8)		nd hydrology must be present, s disturbed or problematic.
5 cm Mud	cky Peat or Peat (S	3)					uniess	s disturbed of problematic.
Depth (inche	es): 						Hydric Soil Prese	nt? Yes X No
HYDROLOG	GY							
	ology Indicators:							
_	icators (minimum o	f one is requ	ired: check all that	annly)			Secondary In	dicators (minimum of two required)
	Vater (A1)	r one is requ	Water-Stain	,	(BQ)			pil Cracks (B6)
					(D3)		_	
_ ~	er Table (A2)		Aquatic Fau	, ,	4.4			Patterns (B10)
Saturatio			True Aquati					on Water Table (C2)
Water Ma	` '		Hydrogen S		, ,			urrows (C8)
	t Deposits (B2)		Oxidized Rh	•	J	Roots (C	′ <del>–</del>	Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Presence of	Reduced	Iron (C4)			Stressed Plants (D1)
Algal Mat	t or Crust (B4)		Recent Iron	Reduction	in Tilled S	oils (C6)		ic Position (D2)
Iron Depo	osits (B5)		Thin Muck S	Surface (C	7)		FAC-Neutr	ral Test (D5)
Inundatio	n Visible on Aerial	Imagery (B7	) Gauge or W	ell Data (D	9)			
Sparsely	Vegetated Concav	e Surface (B	Other (Expla	ain in Rem	arks)			
Field Observat	tions:							
Surface Water		<b>S</b>	No X Dep	oth (inches	)			
Water Table Pr			<del></del>	oth (inches	·			
Saturation Pres			<del></del> '	oth (inches		Wetlan	d Hydrology Prese	ent? Yes No X
(includes capilla				(01100	′ ——			
	ded Data (stream	gauge, moni	toring well, aerial p	hotos, prev	vious inspe	ctions), if	available:	
D 1								
Remarks:								

Project/Site: Winnebago Tribe Broa	adband Connectivity	Project City/C	ounty: Thu	urston	Sampling Da	ate: <b>7/11/20</b> 2	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: <b>NE</b>	Sampling Po	int: <b>14</b>	
Investigator(s): C. Booth, K. She	erman (Olsson)			Section	- n, Township, Range:	S18 T26N R	R9E
Landform (hillslope, terrace, etc.):	Field	Local r	elief (conca	ive, convex, none):	Concave		
Slope (%): <b>1-2</b> Lat:	42.230291	Long:		-96.451752	Datum:	NAD83	
Soil Map Unit Name: 7716—McPau	ıl silt loam, occasio	nally flooded		N	WI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for t	his time of year?	Yes 2	X No (li	f no, explain in Rem	arks)	
Are Vegetation X , Soil , or	Hydrology si	gnificantly disturb	ed? /	Are "Normal Circums	stances" present? Ye	es X No	
		aturally problemat		If needed, explain a			
SUMMARY OF FINDINGS - A	, ,,						
Hydrophytic Vegetation Present?	<del>_</del>	No X		1004110110, 114110	octo, important		
Hydric Soil Present?							
*		<del></del>		mpled Area		٧	
Wetland Hydrology Present?	Yes	No X	within a	Wetland?	Yes	_ NoX	
Remarks:							
SP 14 is an upland area located with wetland; however, the area lacks all calculations.	three wetland indicat	tors. Planted corn					tential
VEGETATION - Use scientif			1 12 4	Dominance Test	workshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Domina			
1.				That Are OBL, FA	•	0	(A)
2.							. ` ′
3.				Total Number of D	Oominant		
4.				Species Across A	Il Strata:	4	(B)
5.							•
Sapling/Shrub Stratum (Plot size	e: 15' )	= Total Cover		Percent of Domina That Are OBL, FA		0	(A/B)
1.	,)			Illat Ale Obl., I A	.CVV, OI 1 AC.		(A/b)
2.				Prevalence Index	worksheet:		
3.					Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	=		FACU species		x 4 =	_
Helianthus annuus		X	UPL	UPL species		x 5 =	
2. Abutilon theophrasti	5	X	FACU	Column Totals:		(A)	(B)
3. Bromus inermis	5	X	FACU	Preva	lence Index = B/A =	:	
4. Amaranthus albus	5	X	FACU				
5.					/egetation Indicato		
6.				I — '	Test for Hydrophytic	; Vegetation	
7.				<b>I</b> —	ance Test is >50%		
8.				l —	ence Index is ≤3.01		
9.					ological Adaptations emarks or on a sepa	\	ting
10.	<del></del>				tic Hydrophytic Veg	,	
10.	25	= Total Cover			uc riyuropriyuc vege	station (Explain)	
Woody Vine Stratum (Plot size: _ 1.	30' )	- Total Covel			ydric soil and wetlar disturbed or proble		be
2.		<del></del> -		Hydrophytic	<u> </u>		
		= Total Cover		Vegetation Present?	Yes	No X	•
Remarks: (Include photo numbers h PP 14	ere or on a separate	sheet.)		•			

Sampling Point: 14

Profile Descri Depth	ption: (Describe to Matrix	the depth ne		nent the ind		confirm t	he absence of indic	cators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-30	10YR 3/2	70					Silty Clay	
	10YR 3/3	30					Silty Clay	
Type: C=Con	centration, D=Deple	etion, RM=Red	duced Matrix, M	S=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast P	rairie Redox (A16)
Histic Ep	pipedon (A2)			Sandy Redo	ox (S5)		Dark Su	rface (S7)
Black His	stic (A3)		_	Stripped Ma	atrix (S6)		Iron-Mai	nganese Masses (F12)
	n Sulfide (A4)		_	Loamy Muc	` ,	(F1)		allow Dark Surface (TF12)
<u> </u>	I Layers (A5)		_	Loamy Gley				ixplain in Remarks)
2 cm Mu			_	Depleted M		` '		,
	d Below Dark Surfac	e (A11)	_	Redox Dark	` '	<del>-</del> 6)		
	ark Surface (A12)	- ( )	_	Depleted Da	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
	lucky Mineral (S1)		_	Redox Depi				d hydrology must be present,
	cky Peat or Peat (S	3)	_	Tredox Depi	1) 611016601	0)	unless	disturbed or problematic.
							1	
	yer (if observed):							
Type:								.,
Depth (inch	nes):						Hydric Soil Presei	nt? Yes No X
HYDROLO(	GY							
Vetland Hydr	ology Indicators:							
Primary Ind	licators (minimum o	fone is require	ed; check all tha	at apply)			Secondary Inc	dicators (minimum of two required
Surface	Water (A1)		Water-Sta	ined Leaves	(B9)		Surface So	il Cracks (B6)
High Wa	ter Table (A2)		Aquatic Fa	una (B13)			Drainage F	atterns (B10)
Saturation	, ,			tic Plants (B	14)			n Water Table (C2)
	arks (B1)		Hydrogen	Sulfide Odor	· (C1)		Crayfish Bu	
Sedimen	nt Deposits (B2)		_	Rhizospheres		Roots (C	3) Saturation	Visible on Aerial Imagery (C9)
	oosits (B3)		_	of Reduced I	•	,	<i>'</i> —	Stressed Plants (D1)
	it or Crust (B4)		_	n Reduction	, ,	oils (C6)		c Position (D2)
	osits (B5)		_	Surface (C7		0.10 (00)		al Test (D5)
	on Visible on Aerial	Imagery (B7)		Well Data (D				
_	Vegetated Concav	. , ,	<u> </u>	olain in Rema	,			
<u> </u>						1		
ield Observa			٧ -					
Surface Water				epth (inches)				
Vater Table P			<del></del>	epth (inches)		Mette:	al I brahva la Direcció	m40 Van Na V
	sent? Yes	N	0 X D	epth (inches)		wetian	d Hydrology Prese	nt? Yes No X
						1		
ncludes capill	ary fringe)		min m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mbatas	daua I	otion - \ 'C	available:	
ncludes capill		gauge, monito	ring well, aerial	photos, prev	vious inspe	ctions), if	available:	
ncludes capill	ary fringe)	gauge, monito	ring well, aerial	photos, prev	vious inspe	ctions), if	available:	
ncludes capill escribe Reco	ary fringe)	gauge, monito	ring well, aerial	photos, prev	rious inspe	ctions), if	available:	

Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS - Attach site map s	Long: _ 2 to 6 percent slop	pes Yes	ave, convex, none): -96.451524  NV  No(If	Datum: VI classification: no, explain in Rem	NAD83	₹9E
Landform (hillslope, terrace, etc.):  Slope (%):  2-3  Lat:  42.231151  Soil Map Unit Name:  6603—Alcester silty clay loam, Are climatic / hydrologic conditions on the site typical for Are Vegetation  Are Vegetation  Soil  Or Hydrology  SUMMARY OF FINDINGS - Attach site map site states and site site site site site site site site	Long: 2 to 6 percent slop this time of year? significantly disturb	pes Yes	ave, convex, none): -96.451524  NV  No(If	Concave  Datum: VI classification: no, explain in Rem	NAD83 None	R9E
Slope (%):  2-3 Lat:  42.231151  Soil Map Unit Name:  6603—Alcester silty clay loam, Are climatic / hydrologic conditions on the site typical for Are Vegetation  Are Vegetation  Soil  Or Hydrology  SUMMARY OF FINDINGS - Attach site map site  **Total Control of the Control of	Long: 2 to 6 percent slop this time of year? significantly disturb	pes Yes		Datum: VI classification: no, explain in Rem	None	
Soil Map Unit Name: 6603—Alcester silty clay loam, Are climatic / hydrologic conditions on the site typical for Are Vegetation , Soil , or Hydrology Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS - Attach site map s	2 to 6 percent slop this time of year? significantly disturb	yes	NV No(If	VI classification: no, explain in Rem	None	
Are climatic / hydrologic conditions on the site typical for Are Vegetation , Soil , or Hydrology Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS - Attach site map s	this time of year?	Yes	X No(If	no, explain in Rem		
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS - Attach site map s	significantly disturb			•	arks)	
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS - Attach site map s		ed?	Are "Normal Circumst			
SUMMARY OF FINDINGS - Attach site map s	naturally problemat			ances" present? Ye	es X No	
		ic? (	(If needed, explain an	y answers in Rema	arks.)	
Underenhytic Venetation Dresent?	showing sampli	ing point	locations, transe	cts, important	features, etc.	
Hydrophytic Vegetation Present? Yes	No X					
Hydric Soil Present? Yes X	No	le the Sa	ampled Area			
Wetland Hydrology Present? Yes	No X		Wetland?	Yes	No X	
Remarks:						
SP 15 is an upland area located at the toe of a slope alo lacks dominant hydrophytic vegetation and sufficient wet  VEGETATION - Use scientific names of pla	tland hydrology and	-		D. Although this are	∍a contains hydric	soil, it
Absolute		Indicator	Dominance Test v	vorksheet		
Tree Stratum (Plot size: 30' ) % Cover		Status	Number of Domina			
1.			That Are OBL, FAC	•	2	(A)
2.						
3			Total Number of Do			
4			Species Across All	Strata:	4	(B)
5	= Total Cover					
Sapling/Shrub Stratum (Plot size: 15' )	Total Cover		Percent of Domina That Are OBL, FAC		50	(A/D)
Sapling/Shrub Stratum (Plot size: 15' )  1.			That Are Obc, FAC	OVV, OI FAC.	50	(A/B)
2.			Prevalence Index	worksheet:		
3.			Total % (		Multiply by:	
4.			OBL species	30	x 1 = 30	_
5.			FACW species	5	x 2 = 10	_
	= Total Cover		FAC species	15	x 3 = 45	_
Herb Stratum (Plot size: 5' )	_		FACU species	45	x 4 = 180	_
1. Persicaria coccinea 30	X	OBL	UPL species	15	x 5 = 75	_
2. Bromus inermis 15	X	FACU	Column Totals:	110	(A) 340	(B)
3. Rumex crispus 15	X	FAC	Prevale	ence Index = B/A =	3.09	_
4. Convolvulus arvensis 15	X	UPL	Hydrophytic V	egetation Indicato	ors:	
5. Chamaecrista fasciculata 10		FACU		est for Hydrophytic		
6. Sonchus arvensis 10		FACU	<u> </u>	ince Test is >50%	, vogotation	
7. Rumex altissimus 5		FACW		ence Index is <3.01		
8			<u> </u>	logical Adaptations	s1 (Provide suppor	ting
9				marks or on a sepa	,	
10			Problemati	c Hydrophytic Vege	etation <sup>1</sup> (Explain)	
100	= Total Cover		<sup>1</sup> Indicators of by	dric soil and wetlar	nd hydrology must	be
Woody Vine Stratum (Plot size: 30' )  1.				disturbed or proble		

Sampling Point: 15

ofile Description: (Describe to the depth Depth Matrix		Redox Featu	res			
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22 10YR 3/1 95	7.5YR 4/6	5	С	М	Clay Loam	
pe: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS	S=Masked S	and Grain	s.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil Indicators:					Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gleye	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)	_	Sandy Redo	x (S5)		Dark Sur	face (S7)
Black Histic (A3)	_	Stripped Mat	trix (S6)		Iron-Mar	ganese Masses (F12)
Hydrogen Sulfide (A4)	_	Loamy Muck	ky Mineral	(F1)		allow Dark Surface (TF12)
Stratified Layers (A5)		Loamy Gleye				xplain in Remarks)
2 cm Muck (A10)	_	Depleted Ma	atrix (F3)			
Depleted Below Dark Surface (A11)	$\overline{x}$	Redox Dark	Surface (F	F6)		
Thick Dark Surface (A12)	_	Depleted Da	ark Surface	e (F7)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	_	Redox Depre	essions (F	8)		hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_				unless	disturbed or problematic.
Type: Depth (inches): marks:					Hydric Soil Preser	t? Yes <u>X</u> No
Type: Depth (inches): marks:					Hydric Soil Preser	t? Yes <u>X</u> No
Type: Depth (inches): marks:  /DROLOGY					Hydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:	united: check all tha	t apply)				
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is recommend)			(BQ)		Secondary Inc	licators (minimum of two requi
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed and surface Water (A1)	Water-Stair	ned Leaves (	(B9)		Secondary Inc. Surface So	licators (minimum of two requi I Cracks (B6)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is recompleted by the complete of the com	Water-Stair Aquatic Fa	ned Leaves ( una (B13)			Secondary Inc Surface So Drainage P	licators (minimum of two requi I Cracks (B6) atterns (B10)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stair Aquatic Far True Aquat	ned Leaves ( una (B13) tic Plants (B1	14)		Secondary Inc Surface So Drainage P Dry-Seasor	licators (minimum of two requi I Cracks (B6) atterns (B10) I Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	— Water-Stair — Aquatic Fai — True Aquat — Hydrogen S	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor	14) (C1)		Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu	licators (minimum of two requi I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the s	— Water-Stair — Aquatic Fai — True Aquat — Hydrogen S — Oxidized R	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres	14) (C1) on Living		Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	licators (minimum of two requi I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the se	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres if Reduced Ir	14) (C1) on Living ron (C4)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i	(C1) on Living ron (C4) in Tilled So	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7)	(C1) on Living ron (C4) in Tilled So	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	Water-Stair Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V	ned Leaves ( una (B13) iic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (E) Sparsely Vegetated Concave Surface (E)	Water-Stair Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7)	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Id Observations:	Water-Stair Aquatic Fat Aquatic Fat True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	ned Leaves ( una (B13) iic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 lain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Indicator Crust (B4) In	Water-Stair Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	ned Leaves ( una (B13) iic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (DS lain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Based of the Sparsely Vegetated Concave Surface (Based Of the Sparsely Vegetated Concave Sparsely Vegetate	Water-Stair Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	ned Leaves ( una (B13) iic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 Iain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc. Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or S Geomorphi FAC-Neutra	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //sible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the se	Water-Stair Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	ned Leaves ( una (B13) iic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (DS lain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //sible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the s	Water-Stair	ned Leaves ( una (B13) cic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 lain in Rema epth (inches) epth (inches)	(C1) on Living ron (C4) in Tilled So ) 9) irks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or S Geomorphi FAC-Neutra	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //sible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the se	Water-Stair	ned Leaves ( una (B13) cic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 lain in Rema epth (inches) epth (inches)	(C1) on Living ron (C4) in Tilled So ) 9) irks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or S Geomorphi FAC-Neutra	licators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) //sible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) at Test (D5)

Project/Site: Winnebago Tribe Broadban	d Connectivity Project	City/County:	Thurston	Sampling Date	7/19/2023
Applicant/Owner: Winnebago Tribe	of Nebraska	_	State: NE	<ul> <li>Sampling Point</li> </ul>	:: 16
Investigator(s): K. Sherman, C. Boot	h, W. Jewell (Olsson)		Section	n, Township, Range:	S1 T26N R9E
Landform (hillslope, terrace, etc.): Fie	ld	Local relief (co	oncave, convex, none):	Concave	
Slope (%): <b>3-4</b> Lat:	42.250773	Long:	-96.351748	Datum:	NAD83
Soil Map Unit Name: <b>7880—Onawa silty</b>	/ clay, occasionally flo	ooded	N'	IWI classification:	None
Are climatic / hydrologic conditions on the	site typical for this time	e of year? Yes	No X (II	f no, explain in Remark	(s)
Are Vegetation X , Soil , or Hydr	ology significar	ntly disturbed?	Are "Normal Circums	stances" present? Yes	X No
Are Vegetation , Soil , or Hydr	ology naturally	problematic?	(If needed, explain a	ny answers in Remark	s.)
SUMMARY OF FINDINGS - Attack	n site map showin	g sampling po	int locations, trans	ects, important fe	atures, etc.
Hydrophytic Vegetation Present?	Yes X No				
Hydric Soil Present?	Yes X No	le th	e Sampled Area		
Wetland Hydrology Present?	Yes X No		n a Wetland?	Yes X	No
Remarks: Wetland 16 is a PEMA/C wetland within a potential wetland. Planted soybeans are p typical at this site due to recent heavy rain	oresent at this SP; howenfall events.				
VEGETATION - Use scientific n	•		D T	·····	
<u>Tree Stratum</u> (Plot size: 30'		minant Indicator ecies? Status			
1.	, <u>notate.</u> <u>sp</u>		That Are OBL, FA	•	2 (A)
2.			_	_	
3.			Total Number of D	Dominant	
4			Species Across Al	Il Strata:	2 (B)
5	- <del></del>		_		
Sapling/Shrub Stratum (Plot size:	15' )	al Cover	Percent of Domina That Are OBL, FA	•	100 (A/B)
1.				_	
2.			Prevalence Index	worksheet:	
3.			Total %	Cover of:	Multiply by:
4.			OBL species	x	1 =
5.			FACW species	x	2 =
	= Tota	al Cover	FAC species	x	3 =
Herb Stratum (Plot size: 5' )	!		FACU species		4 =
Amaranthus tuberculatus	4	X OBL	'		5 =
2. Echinochloa crus-galli		X FACV	<u> </u>	(A	A)(B)
3			— Preva	alence Index = B/A =	
4			- Hydrophytic \	Vegetation Indicators	:
5			X 1 - Rapid	Test for Hydrophytic V	egetation
6			— X 2 - Domin	ance Test is >50%	
7			3 - Preval	ence Index is ≤3.01	
8				ological Adaptations¹ (	
9				emarks or on a separat	•
10	- <del></del>	<del></del>	Problema	tic Hydrophytic Vegeta	tion ' (Explain)
Woody Vine Stratum (Plot size:	6 = Tota 30' )	al Cover		ydric soil and wetland l disturbed or problema	
2.			Hydrophytic	· · · · · · · · · · · · · · · · · · ·	
	= T	otal Cover	Vegetation Present?	Yes X	No
Remarks: (Include photo numbers here o			Vegetation	Yes X	No

Sampling Point: 16

Depth	Matrix			Redox Feat	ui es			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30	Gley4/10Y	97	7.5YR4/6	3	C	M	Clay	Organic matter throughout
e: C=Con	centration, D=Deple	tion, RM=f	Reduced Matrix, MS	S=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix
lydric Soil	Indicators:						Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast	Prairie Redox (A16)
Histic Ep	ipedon (A2)		_	Sandy Red	ox (S5)		Dark S	Surface (S7)
_Black His	stic (A3)			Stripped Ma	atrix (S6)		Iron-M	anganese Masses (F12)
Hydroger	n Sulfide (A4)			Loamy Muc			Very S	hallow Dark Surface (TF12)
_	Layers (A5)			Loamy Gle		(F2)	Other	(Explain in Remarks)
_ 2 cm Mu			_	Depleted M				
_ '	Below Dark Surface	e (A11)	_	Redox Dark	,	,	3.	
_	rk Surface (A12)		_	Depleted D				rs of hydrophytic vegetation and and hydrology must be present,
	ucky Mineral (S1)		_	Redox Dep	ressions (F	-8)		ss disturbed or problematic.
5 cm Mud	cky Peat or Peat (S	3)						
ype: Depth (inch	yer (if observed): es):						Hydric Soil Pres	ent? Yes X No
Type: Depth (inchenarks:	es):						Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inchinarks:	es):						Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inchinarks:  DROLOGIAND HIGH	es):	one is req	uired; check all that	t apply)				ent? Yes X No no ndicators (minimum of two requi
Type: Depth (inchinarks:  DROLOGIAND Hydro	es):  GY  blogy Indicators: icators (minimum of	one is req	uired; check all that Water-Stair	,	(B9)		Secondary I	
DROLOGIand Hydro	es):  GY  blogy Indicators: icators (minimum of	one is req		ned Leaves	(B9)		Secondary I	ndicators (minimum of two requi
DROLOGIand Hydro	es):  Dlogy Indicators: icators (minimum of Water (A1) ter Table (A2)	one is req	Water-Stair	ned Leaves una (B13)	` '		Secondary I  X Surface S  Drainage	ndicators (minimum of two requin
DROLOGIAND SATURATION Water Ma	es):  blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1)	one is req	— Water-Stair — Aquatic Fau — True Aquat — Hydrogen S	ned Leaves una (B13) ic Plants (B Sulfide Odo	14) r (C1)		Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I	ndicators (minimum of two requinosoil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
DROLOGIAND SUPPLY STATE OF THE PROLOGIAND SUPPLY SU	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)	one is req	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R	ned Leaves una (B13) ic Plants (B Sulfide Odor hizosphere	14) r (C1) s on Living		Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturation	ndicators (minimum of two requires of the control of two requires of the control of two requires (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
DROLOC land Hydro High Wat Saturatio Water Ma Sedimen Drift Dep	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	one is req	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized Ri	ned Leaves una (B13) ic Plants (B Sulfide Odo hizospheres f Reduced	14) r (C1) s on Living Iron (C4)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturation  X Stunted c	ndicators (minimum of two requirements of two requirements) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOGIAND SECTION OF THE PROLOGIAND SECTION	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	one is req	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction	14) r (C1) s on Living Iron (C4) in Tilled S	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements (B6)  Patterns (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)
DROLOGIAND WATER MANAGE INTO DEPORT D	es):  plogy Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7	14) r (C1) s on Living lron (C4) in Tilled S	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
DROLOC Iand Hydro Saturatio Water Ma Sedimen Drift Dep Algal Mai Iron Depc Inundatio	es):  plogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I	magery (B	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospherer of Reduced in Reduction Surface (C7 Vell Data (D	14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements (B6)  Patterns (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)
DROLOGIAND SALURATION DEPORED TO PROLOGIAND SALURATION Water Management of the process of the pr	es):  plogy Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave	magery (B	Water-Stair Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospherer of Reduced in Reduction Surface (C7 Vell Data (D	14) r (C1) s on Living lron (C4) in Tilled S 7)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements (B6)  Patterns (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)
DROLOGIANDE Primary Ind X Surface V High Water Ma Sedimen Drift Dep Algal Ma Iron Depo Inundatio Sparsely d Observa	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions:	magery (B e Surface (t	— Water-Stair — Aquatic Fat — True Aquat — Hydrogen S — Oxidized RI — Presence o — Recent Iror — Thin Muck S — Gauge or W — Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced in Reduction Surface (C7 Vell Data (D lain in Rema	14) r (C1) s on Living lron (C4) in Tilled S 7) 19) arks)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements (B6)  Patterns (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)
DROLOC Cland Hydro Primary Ind X Surface V High Water Ma Sedimen Drift Dep Algal Ma' Iron Depu Inundation Sparsely d Observa	es):  Cology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes	magery (B	— Water-Stair — Aquatic Fat — True Aquat — Hydrogen S — Oxidized RI — Presence o — Recent Iror — Thin Muck S 7) — Gauge or W 088) — Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odo hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Remand	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of two requirements (B6)  Patterns (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)
DROLOC Cland Hydro Primary Ind X Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mai Iron Depi Inundatio Sparsely d Observa	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes resent? Yes	magery (B e Surface (t	Water-Stair Aquatic Fat Aquatic Fat True Aquat Hydrogen S Oxidized Ri Presence o Recent Iror Thin Muck State Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odo hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Remands)	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturation  X Stunted of  X Geomorp  FAC-Neu	ndicators (minimum of two requirements of the content of two requirements (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)  tral Test (D5)
DROLOC Primary Ind X Surface N High Water Ma Sedimen Drift Dep Algal Mai Iron Depo Inundatic Sparsely d Observa arace Water er Table Pr	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes sent? Yes	magery (B e Surface (t	Water-Stair Aquatic Fat Aquatic Fat True Aquat Hydrogen S Oxidized Ri Presence o Recent Iror Thin Muck State Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odo hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Remand	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturatio  X Stunted of  X Geomorp	ndicators (minimum of two requirements of the content of two requirements (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)  tral Test (D5)
DROLOGIANT SET TOPE TO THE PROLOGIANT SET TO	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes sent? Yes	magery (Besure Surface (B	Water-Stair Aquatic Fat Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Gauge or V Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Remains pth (inches pth (inches	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)  2	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturation  X Stunted of  X Geomorp  FAC-Neu	ndicators (minimum of two requirements of the content of two requirements (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)  tral Test (D5)
DROLOGIANT SET TOPE TO THE PROLOGIANT SET TO	es):  cology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave tions: Present? Yes resent? Yes ary fringe)	magery (Besure Surface (B	Water-Stair Aquatic Fat Aquatic Fat True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck S Gauge or V Other (Expl	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced n Reduction Surface (C7 Vell Data (D lain in Remains pth (inches pth (inches	14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)  2	Roots (C3	Secondary I  X Surface S  Drainage  Dry-Seas  Crayfish I  Saturation  X Stunted of  X Geomorp  FAC-Neu	ndicators (minimum of two requirements of the content of two requirements (B10)  on Water Table (C2)  Burrows (C8)  n Visible on Aerial Imagery (C9)  or Stressed Plants (D1)  hic Position (D2)  tral Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity P	Project City/Co	unty: Thu	rston	Sampling Da	ate: 7/19/20	23
Applicant/Owner: Winnebago Tribe of Nebraska			State: NE	Sampling Po	int: 17	
Investigator(s): K. Sherman, C. Booth, W. Jewell (OI	sson)		Section	n, Township, Range:	S1 T26N R	(9E
Landform (hillslope, terrace, etc.): Field	Local re	lief (conca	ve, convex, none):	Concave		
Slope (%): 2-3 Lat: 42.250882	Long:	-	96.351508	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa silty clay, occasion	ally flooded		N	IWI classification:	None	
Are climatic / hydrologic conditions on the site typical for the	is time of year?	Yes	No X (I	f no, explain in Rema	arks)	
Are Vegetation X , Soil , or Hydrology sig	nificantly disturbed	d? A	re "Normal Circums	stances" present? Ye	es X No	
Are Vegetation , Soil , or Hydrology na	turally problematic	:? (I	f needed, explain a	ny answers in Rema	ırks.)	
SUMMARY OF FINDINGS - Attach site map sh	owing samplin					
	No -					
Hydric Soil Present? Yes X		le the Se	maled Area			
Wetland Hydrology Present? Yes X	No		mpled Area Wetland?	Yes	No X	
Remarks:				<u>-</u>		
Wetland 17 is a PEMA/C wetland within an agricultural fiel potential wetland. Vegetation is not present at this SP due						ıv
indicators, it is likely hydrophytic vegetation would be prese	ent in the absence	of farming	practices. Planted	soybeans are presen	nt at this SP; how	
they are not included in the vegetation calculations. Climat		ot typical a	t this site due to re	cent heavy rainfall ev	/ents.	
VEGETATION - Use scientific names of plan			In			
Absolute Tree Stratum (Plot size: 30' ) % Cover	Dominant I Species?	Indicator Status	Dominance Test Number of Domin			
1. (1 lot 0/20)			That Are OBL, FA	•	0	(A)
2.						•
3			Total Number of D			
4			Species Across A	II Strata:	0	(B)
5	= Total Cover					
Sapling/Shrub Stratum (Plot size: 15' )	- Total Covel		Percent of Domina That Are OBL, FA	•	0	(A/B)
1.			That AIC OBE, I A	10VV, 01 1 AO.		- (A/D)
2.			Prevalence Index	k worksheet:		
3.			Total %	Cover of:	Multiply by:	
4.			OBL species		x 1 =	
5.			FACW species		x 2 =	
	= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5' )			FACU species		x 4 =	_
1			UPL species		x 5 =	<b>—</b>
2			Column Totals:	0	(A)	(B)
3			Preva	alence Index = B/A =		
4			Hydrophytic \	Vegetation Indicato	rs:	
5			1 - Rapid	Test for Hydrophytic	: Vegetation	
6.			2 - Domin	ance Test is >50%		
7. 8.			3 - Preval	ence Index is ≤3.01		
				ological Adaptations		rting
9				emarks or on a sepa tic Hydrophytic Vege	,	
10	= Total Cover		— Problema	luc Hydrophylic vege	tation (Explain)	
Woody Vine Stratum (Plot size: 30' )	- Total Covel			ydric soil and wetlan disturbed or probler		t be
2.			Hydrophytic			
	= Total Cover		Vegetation Present?	Yes	NoX	-
Remarks: (Include photo numbers here or on a separate s	sheet.)					
PP 17	,					

Sampling Point: 17

file Description: (Describe to the depth ne Depth Matrix	R	edox Featu	res			
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30 Gley1 4/10Y 97	7.5YR4/6	3	С	М	Clay	
pe: C=Concentration, D=Depletion, RM=Red	duced Matrix, MS	=Masked S	and Grain	s.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:					Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	8	Sandy Gleye	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)		Sandy Redo	x (S5)		Dark Su	face (S7)
Black Histic (A3)		Stripped Ma	trix (S6)		— Iron-Mar	iganese Masses (F12)
Hydrogen Sulfide (A4)		.oamy Muck	ky Mineral	(F1)		allow Dark Surface (TF12)
Stratified Layers (A5)	_	oamy Gley	•	` '		xplain in Remarks)
2 cm Muck (A10)	_	Depleted Ma			_ `	•
Depleted Below Dark Surface (A11)		Redox Dark	. ,	F6)		
Thick Dark Surface (A12)		Depleted Da	rk Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	— <sub>F</sub>	Redox Depr	essions (F	-8)		d hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_				unless	disturbed or problematic.
Strictive Layer (if observed): Type: Depth (inches): narks:				F	lydric Soil Preser	nt? Yes <u>X</u> No
Type: Depth (inches):				F	lydric Soil Preser	nt? Yes <u>X</u> No
Type: Depth (inches):				ŀ	lydric Soil Preser	nt? Yes <u>X</u> No
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators:				ŀ		
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is require		,		ŀ	Secondary Inc	dicators (minimum of two requin
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators:	ed; check all that Water-Stain	,	(B9)	<u> </u>		dicators (minimum of two requi
Type: Depth (inches):  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one is required X Surface Water (A1)  High Water Table (A2)	Water-Stain Aquatic Fau	ed Leaves ( na (B13)		 	Secondary Inc X Surface So Drainage P	dicators (minimum of two requi il Cracks (B6) atterns (B10)
Type: Depth (inches):  narks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is require  X Surface Water (A1)	Water-Stain Aquatic Fau True Aquatic	ed Leaves ( na (B13) c Plants (B1	14)	ŀ	Secondary Inc  X Surface So  Drainage P  Dry-Seasor	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches):  DROLOGY  Iland Hydrology Indicators: Primary Indicators (minimum of one is required X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stain Aquatic Fau True Aquatic Hydrogen S	ed Leaves ( na (B13) c Plants (B1 ulfide Odor	14) (C1)		Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu	dicators (minimum of two requinil Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inches):  Depth (inches):  DROLOGY  Itland Hydrology Indicators:  Primary Indicators (minimum of one is required to the content of the content	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres	14) (C1) on Living		Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation	dicators (minimum of two requinum of two requirements of two requireme
Type: Depth (inches):  DROLOGY  Iland Hydrology Indicators: Primary Indicators (minimum of one is required X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stain Aquatic Fau True Aquatic Hydrogen S	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres	14) (C1) on Living		Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or	dicators (minimum of two required if Cracks (B6) atterns (B10) atterns (B10) atterns (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one is required X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leaves ( na (B13) c Plants (B1 ulfide Odor izospheres Reduced II Reduction i	(C1) on Living ron (C4) in Tilled So	Roots (C3)	Secondary Inc  X Surface So Drainage P Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inches):  Darks:  DROLOGY  Iland Hydrology Indicators: Primary Indicators (minimum of one is required to the content of the cont	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres Reduced In Reduction i Surface (C7)	(C1) on Living ron (C4) in Tilled So	Roots (C3)	Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
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Type: Depth (inches):  Darks:  DROLOGY  Iland Hydrology Indicators: Primary Indicators (minimum of one is required to the content of the cont	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres Reduced In Reduction i Surface (C7) fell Data (D8)	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Inc  X Surface So Drainage P Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inches): Depth (i	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres Reduced In Reduction i Surface (C7) fell Data (D8)	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation  X Stunted or  X Geomorphi	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
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Type: Depth (inches): Depth (i	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres FReduced In Reduction i Surface (C7) fell Data (D9 ain in Rema	(C1) on Living ron (C4) in Tilled So ) 9)	Roots (C3)	Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation  X Stunted or  X Geomorphi	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inches):  Depth (inches):  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one is required X Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  d Observations: face Water Present?  Yes  N	Water-Stain Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres FReduced In Reduction i Surface (C7) fell Data (D8) ain in Rema	(C1) on Living ron (C4) in Tilled So ) 9)	Roots (C3)	Secondary Inc  X Surface So  Drainage P  Dry-Seasor  Crayfish Bu  Saturation  X Stunted or  X Geomorphi	dicators (minimum of two required il Cracks (B6) atterns (B10) a Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) at Position (D2) at Test (D5)
Type: Depth (inches): Depth (i	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres F Reduced Ir Reduction i Surface (C7) fell Data (D8 ain in Rema oth (inches) oth (inches)	(C1) on Living ron (C4) in Tilled So ) 9) irks)	Roots (C3) oils (C6)	Secondary Inc  X Surface So Drainage P Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi FAC-Neutra	dicators (minimum of two required il Cracks (B6) atterns (B10) a Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) at Test (D5)
Type: Depth (inches): Depth (i	Water-Stain Aquatic Fau Aquatic Fau True Aquatic Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Gauge or W Other (Explain	ed Leaves ( na (B13) c Plants (B1 ulfide Odor nizospheres F Reduced Ir Reduction i Surface (C7) fell Data (D8 ain in Rema oth (inches) oth (inches)	(C1) on Living ron (C4) in Tilled So ) 9) irks)	Roots (C3) oils (C6)	Secondary Inc  X Surface So Drainage P Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi FAC-Neutra	dicators (minimum of two required il Cracks (B6) atterns (B10) a Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) at Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity	Project City/Co	unty: Thur	ston	Sampling	Date: 7/19/2	2023
Applicant/Owner: Winnebago Tribe of Nebraska			State: NE	Sampling	Point: 18	3
Investigator(s): K. Sherman, C. Booth, W. Jewell (O	Isson)		Sectio	n, Township, Rang	ge: <b>S1 T26N</b>	R9E
Landform (hillslope, terrace, etc.): Field	Local rel	lief (concav	e, convex, none):	Concave		
Slope (%): 2-3 Lat: 42.250957	Long:	-9	6.350933	Datum:	NAD83	
Soil Map Unit Name: 7876—Onawa and Haynie soils, o	occasionally flood	led	1	NWI classification:	None	)
Are climatic / hydrologic conditions on the site typical for t	his time of year?	Yes	No X (	If no, explain in Re	emarks)	
Are Vegetation X , Soil , or Hydrology si	ignificantly disturbed	d? Ar	e "Normal Circum	stances" present?	Yes X N	О
Are Vegetation , Soil , or Hydrology na	aturally problematic	:? (If	needed, explain a	any answers in Re	marks.)	
SUMMARY OF FINDINGS - Attach site map sh	nowing samplin					; <b>.</b>
Hydrophytic Vegetation Present? Yes -	No -					
Hydric Soil Present? Yes X	No	lo the Con	anled Area			
<u> </u>	No	within a V	npled Area Vetland?	Yes	No X	
Remarks:						
Wetland 18 is a PEMA/C wetland within an agricultural fie						a.
potential wetland. Vegetation is not present at this SP due indicators, it is likely hydrophytic vegetation would be present.						
they are not included in the vegetation calculations. Clima		•				,
<b>VEGETATION</b> - Use scientific names of pla	nts.					
Absolute	Dominant I	Indicator	Dominance Test	t worksheet:		
Tree Stratum (Plot size: 30' ) % Cover	Species?	Status	Number of Domir	•		(4)
1	- —— –		That Are OBL, FA	ACVV, or FAC:	0	(A)
3.	- —— –		T-4-1 Nob	D i t		
4.	- —— —		Total Number of Species Across A		0	(B)
5.	- — —		- CP - C - C - C - C - C - C - C - C - C	•		_ (5)
	= Total Cover		Percent of Domin	ant Species		
Sapling/Shrub Stratum (Plot size: 15' )	-		That Are OBL, FA	•	0	(A/B)
1.					-	_ ` ′
2.			Prevalence Inde	x worksheet:		
3.			Total %	6 Cover of:	Multiply by	:
4.			OBL species		x 1 =	
5			FACW species		x 2 =	
	= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5' )			FACU species		x 4 =	
1	- —— –		UPL species		x 5 =	
2	- —— –		Column Totals:	0	(A)	(B)
3	- —— –		Prev	alence Index = B/A	<i>\</i> =	
4	- —— –		Hydrophytic	Vegetation Indica	ators:	
5	- —— –		1 - Rapid	Test for Hydrophy	ytic Vegetation	
6			2 - Domii	nance Test is >50%	%	
7			3 - Preva	lence Index is <3.	O¹	
8				nological Adaptatio	, , , , , ,	orting
9	- —— –			emarks or on a se	. ,	
10	- <u></u> -		Problema	atic Hydrophytic Ve	egetation  ' (Explair	1)
Woods Vine Stratum (Plataine)	= Total Cover		1			
Woody Vine Stratum (Plot size: 30')				nydric soil and wet s disturbed or prob		st be
1			Hydrophytic	s disturbed or prot	летанс.	
Z	= Total Cover		Vegetation	Yes	X No	
	- Total Cover		Present?	Tes	X No	_
Remarks: (Include photo numbers here or on a separate	sheet.)					
PP 18						

Depth	Matrix		ŀ	Redox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 3/1	90	7.5YR 4/6	10	С	М	Clay	
10-30	10YR 3/1	85	7.5YR 4/6	15	С	М	Clay	
/pe: C=Conc	centration, D=Deple	tion, RM=F	Reduced Matrix, MS	S=Masked S	and Grain	ıs.	<sup>2</sup> Location: PL=Pe	ore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol (	A1)			Sandy Gley	ed Matrix (	(S4)	Coast P	rairie Redox (A16)
Histic Epi	pedon (A2)			Sandy Redo	ox (S5)		Dark Su	rface (S7)
Black Hist	tic (A3)			Stripped Ma	trix (S6)		Iron-Maı	nganese Masses (F12)
	n Sulfide (A4)		_	Loamy Mucl	ky Mineral	(F1)	Very Sh	allow Dark Surface (TF12)
Stratified	Layers (A5)		_	Loamy Gley	ed Matrix	(F2)		xplain in Remarks)
2 cm Muc	ck (A10)			Depleted Ma	atrix (F3)		_	
Depleted	Below Dark Surfac	e (A11)	$\overline{X}$	Redox Dark	Surface (	F6)		
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)			_	Depleted Da	ark Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
			_	Redox Depr	essions (F	-8)	wetland hydrology must be present,	
5 cm Mucky Peat or Peat (S3)						unless	disturbed or problematic.	
etrictivo I av	/er (if observed):							
	yer (ii observed).							
Type: Depth (inche	ae).						Hydric Soil Presei	nt? Yes X No
Depti (mone							riyana com ricoci	1. 103 <u>X</u> 10
<u> </u>	av.							
tland Hydro	ology Indicators:	ono is rogu	uired: check all the	t apply)			Socondary In	dicators (minimum of two require
tland Hydro Primary Indic	ology Indicators: cators (minimum of	one is requ			/PO)			· · · · · · · · · · · · · · · · · · ·
etland Hydro Primary Indio	ology Indicators: cators (minimum of Vater (A1)	one is requ	Water-Stair	ned Leaves	(B9)		X Surface So	il Cracks (B6)
etland Hydro Primary India Surface W High Wate	cators (minimum of Vater (A1) er Table (A2)	one is requ	Water-Stair Aquatic Fa	ned Leaves una (B13)	, ,		X Surface So	oil Cracks (B6) Patterns (B10)
Primary India Surface W High Wate Saturation	cators (minimum of Vater (A1) er Table (A2) n (A3)	one is requ	Water-Stain Aquatic Far True Aquat	ned Leaves una (B13) tic Plants (B	14)		X Surface So  Drainage F  Dry-Season	il Cracks (B6) Patterns (B10) n Water Table (C2)
Primary India Surface W High Wate Saturation Water Ma	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1)	one is requ	— Water-Staii — Aquatic Fai — True Aquat — Hydrogen S	ned Leaves una (B13) ic Plants (B <sup>2</sup> Sulfide Odor	14) (C1)	D. 1. (00	X Surface So  Drainage F  Dry-Seasor  Crayfish Bu	oil Cracks (B6) Patterns (B10) In Water Table (C2) Income (C8)
Primary India Surface W High Wate Saturation Water Ma Sediment	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	one is requ	Water-Stain Aquatic Fai True Aquat Hydrogen S	ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres	14) (C1) on Living	Roots (C3	X Surface So Drainage F Dry-Seaso Crayfish Bu Saturation	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9)
Primary India Surface W High Wate Saturation Water Ma Sediment Drift Depo	cators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	one is requ	Water-Stail Aquatic Far True Aquat Hydrogen S Oxidized R Presence c	ned Leaves una (B13) tic Plants (B <sup>2</sup> Sulfide Odor hizospheres of Reduced I	14) (C1) on Living ron (C4)		X Surface So Drainage F Dry-Seaso Crayfish Bu Saturation X Stunted or	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Primary India Surface W High Wate Saturation Water Ma Sediment Drift Depo	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) c or Crust (B4)	one is requ	Water-Stail Aquatic Fal True Aquat Hydrogen S Oxidized R Presence of	ned Leaves una (B13) cic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction	(C1) on Living ron (C4) in Tilled S		X Surface So Drainage F Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi	il Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)
Primary India Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5)		Water-Stain Aquatic Far Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7	14) (C1) con Living ron (C4) in Tilled S		X Surface So Drainage F Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
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Primary Indice Primary Indice Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5)	magery (B	Water-Stain Aquatic Fan True Aquat Hydrogen S Oxidized R Presence co Recent Iror Thin Muck Gauge or V	ned Leaves una (B13) ic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7	(C1) con Living ron (C4) in Tilled S )		X Surface So Drainage F Dry-Seasor Crayfish Bu Saturation X Stunted or X Geomorphi	il Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)
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Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Pld Observat rface Water Fater Table Prescudes capilla	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) er Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave tions: Present? Yes event? Yes ary fringe)	magery (Bi	Water-Stain	ned Leaves una (B13) cic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema epth (inches) epth (inches)	14) (C1) con Living ron (C4) in Tilled S ) 9) arks)	oils (C6)	X Surface So Drainage F Dry-Seaso Crayfish Bu Saturation X Stunted or X Geomorphi FAC-Neutr	ill Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) In Test (D5)
Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Pld Observat rface Water Fater Table Prescudes capilla	cators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) cor Crust (B4) posits (B5) in Visible on Aerial I Vegetated Concave tions: Present? Yes esent? Yes ent? Yes	magery (Bi	Water-Stain	ned Leaves una (B13) cic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema epth (inches) epth (inches)	14) (C1) con Living ron (C4) in Tilled S ) 9) arks)	oils (C6)	X Surface So Drainage F Dry-Seaso Crayfish Bu Saturation X Stunted or X Geomorphi FAC-Neutr	ill Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) In Test (D5)
Primary India Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely W Flace Water Fater Table Prescuides capilla	cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) er Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave tions: Present? Yes event? Yes ary fringe)	magery (Bi	Water-Stain	ned Leaves una (B13) cic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema epth (inches) epth (inches)	14) (C1) con Living ron (C4) in Tilled S ) 9) arks)	oils (C6)	X Surface So Drainage F Dry-Seaso Crayfish Bu Saturation X Stunted or X Geomorphi FAC-Neutr	il Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) In Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity Pro	ject City/Cou	ınty: <b>Thur</b>	ston	Sampling Dat	te: <b>7/19/202</b>	23
Applicant/Owner: Winnebago Tribe of Nebraska			State: NE	Sampling Poir	nt: 19	
Investigator(s): K. Sherman, C. Booth, W. Jewell (Olss	on)		Section	, Township, Range:	S1 T26N R9	9E
Landform (hillslope, terrace, etc.): Field	Local relie	ef (concav	e, convex, none):	Concave		
Slope (%): 2-3 Lat: 42.250607	Long:	-9	6.351478	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa silty clay, occasional	ly flooded		N	VI classification:	None	
Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes	No X (If	no, explain in Rema	rks)	
Are Vegetation X , Soil , or Hydrology signi	ficantly disturbed	? Ar	e "Normal Circums	tances" present? Ye	s X No	
Are Vegetation , Soil , or Hydrology nature	rally problematic?	) (If	needed, explain ar	ny answers in Remar	ks.)	
SUMMARY OF FINDINGS - Attach site map show	, .	,				
Hydrophytic Vegetation Present? Yes - No			•	· ·	<u> </u>	
Hydric Soil Present? Yes No						
Wetland Hydrology Present? Yes X No		is the San within a V	npled Area Vetland?	Yes	No X	
Westalia Hydrology Frederic: 165 No	<u> </u>		· ottaria i		<u> </u>	
Remarks:						
SP 19 is an upland outpoint for to Wetlands 16, 17, and 18 ld						
Tables analysis as a potential wetland. Vegetation is not pre- hydrophytic vegetation would be present in the absence of fa						
in the vegetation calculations. Climatic conditions are not typ					, they are not me	luucu
<b>VEGETATION</b> - Use scientific names of plants	S.					
Absolute	Dominant Inc	dicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30' ) % Cover	Species? S	Status	Number of Domina	•	_	
1			That Are OBL, FA	CW, or FAC:	0	(A)
2			T / IN			
4			Total Number of D Species Across Al		0	(B)
5				· Oliata.		(D)
=	Total Cover		Percent of Domina	ent Species		
Sapling/Shrub Stratum (Plot size: 15' )			That Are OBL, FA	•	0	(A/B)
1.				•		` ,
2.			Prevalence Index	worksheet:		
3.			Total %	Cover of:	Multiply by:	
4.			OBL species		x 1 =	_
5.			FACW species		x 2 =	_
	Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5' )			FACU species		x 4 =	_
1			UPL species		x 5 =	— (B)
2			Column Totals:		(A)	— <sup>(B)</sup>
3			Preva	lence Index = B/A =		_
4			Hydrophytic V	egetation Indicator	s:	
5			1 - Rapid <sup>-</sup>	Test for Hydrophytic	Vegetation	
6			2 - Domina	ance Test is >50%		
7			3 - Prevale	ence Index is ≤3.01		
8				ological Adaptations¹		ting
9				marks or on a separa	,	
10	T-4-1 0		Problemat	ic Hydrophytic Vege	(Explain)	
Woody Vine Stratum (Plot size: 30' )	Total Cover		1, ,, ,	12 9 1 0		
1.				dric soil and wetland disturbed or problem		be
2.			Hydrophytic	distalbed of problem	1010.	
	= Total Cover		Vegetation	Yes -	No -	
	Total Gover		Present?			
Remarks: (Include photo numbers here or on a separate she	eet.)					
PP 19						

Sampling Point: 19

Depth Matrix (Inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Rei  0-30 10YR 3/1 100 Color (moist) % Type¹ Loc² Texture Rei  1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  1 Hydric Soil Indicators:  Histosol (A1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Indicators for Problematic I Coast Prairie Redox (A² Dark Surface (S7) Iron-Manganese Masse Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surf. Very Shallow Dark Surf. Other (Explain in Rema Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Sandy Mucky Mineral (F1) Redox Depressions (F8) Water-Stained Hydrology Indicators:    Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Secondary Indicators (minimum of Surface (A61) Water-Stained Leaves (B9) X Surface Soil Cracks (B6)	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Redox Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Redox Dark Surface (F7)  Thick Dark Surface (A12)  Sandy Redox Dark Surface (F8)  Thick Dark Surface (A12)  Sandy Redox Dark Surface (F8)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Depleted Matrix (F2)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Redox Dark Surface (F7)  Sandy Mucky Mineral (F1)  Wetland Hydrology mu unless disturbed or proceed to the following mu unless disturbed or proceed to the	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Stratified Layer or Peat (S3)  Redox Depressions (F8)  Redox Depressions (F8)  Restrictive Layer (if observed):  Type: Depth (inches):  Hydric Soil Present? Yes  Hydric Soil Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sem Mucky Mineral (S1)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sem Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  Hydric Soil Present? Yes  Indicators for Problematic I  Coast Prairie Redox (A'  Coast Prairie Redox (A'  Dark Surface (S7)  Dark Surface (S7)  Loamy Mucky Mineral (F1)  Very Shallow Dark Surface  Other (Explain in Rema  3 Indicators of hydrophytic wetland hydrology mu unless disturbed or proceed to the procession of the proce	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Strib Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Strib Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Coast Prairie Redox (A2)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Coast Prairie Redox (A2)  Black Histic (A3)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Coamy Mucky Mineral (F1)  Depleted Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Hydric Soil Present? Yes  Hydrocodary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of minimum o	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Coast Prairie Redox (A2)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Coast Prairie Redox (A2)  Black Histic (A3)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Coamy Mucky Mineral (F1)  Depleted Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Hydric Soil Present? Yes  Hydrocodary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of minimum o	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Strib Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present? Yes  Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	Hydric Soils <sup>3</sup> : 16) es (F12) face (TF12) arks)  vegetation and ust be present,
Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Sandy Mucky Mineral (F1)  Depleted Dark Surface (F7)  Redox Depressions (F8)  Restrictive Layer (if observed):  Type:  Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Sandy Matrix (S4)  Loamy Medox (S5)  Loamy Redox (S5)  Loamy Mucky Mineral (F1)  Very Shallow Dark Surface  Very Shallow Dark Surface  Pepleted Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Redox Depressions (F8)  Hydric Soil Present? Yes  Secondary Indicators (minimum	es (F12) face (TF12) fack (TF12) fack (TF12) fack (TF12) fack (TF12) fack (TF12)
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F7)  Sandy Mucky Mineral (S1)  Form Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Stratified Matrix (S6)  Loamy Mucky Mineral (F1)  Very Shallow Dark Surface  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pero Other (Explain in Remainstance)  Netland Matrix (F3)  Redox Dark Surface (F6)  Pepted Matrix (F2)  Other (Explain in Remainstance)  Other (Explain in Remainstance)  Hydric Soil Present? Yes	es (F12) face (TF12) arks)  vegetation and ust be present,
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stripped Matrix (S6)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F7)  Sandy Mucky Mineral (S1)  Form Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Stratified Matrix (S6)  Loamy Mucky Mineral (F1)  Very Shallow Dark Surface  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pepted Matrix (F2)  Other (Explain in Remainstance)  Very Shallow Dark Surface  Pero Other (Explain in Remainstance)  Netland Matrix (F3)  Redox Dark Surface (F6)  Pepted Matrix (F2)  Other (Explain in Remainstance)  Other (Explain in Remainstance)  Hydric Soil Present? Yes	es (F12) face (TF12) arks)  vegetation and ust be present,
Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of one is required; check all that apply)  Stratified Matrix (S6)  Loamy Mucky Mineral (F1)  Very Shallow Dark Surface  Very Shallow Dark Surface  Pother (Explain in Remainster)  Net (Explain in Rema	race (TF12) urks) vegetation and ust be present,
Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Matrix (F2)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Hydric Soil Present? Yes  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of sone is required; check all that apply)  Summark Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Pepleted Matrix (F2)  Other (Explain in Remained)  Net (Explain in Remained)  Hydric (Explain in Remained)  Net (Explain in Remained)  Net (Explain in Remained)  Net (Explain in Remained)  Hydric (F6)  Depleted Matrix (F2)  Net (Explain in Remained)  Net (Explain in Remained)  Hydric (F6)  Net (Explain in Remained)  Ne	race (TF12) urks) vegetation and ust be present,
Stratified Layers (A5)  2 cm Muck (A10)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Depth (inches):  Hydric Soil Present? Yes  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	vegetation and ust be present,
2 cm Muck (A10) Depleted Matrix (F3) Redox Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	vegetation and ust be present,
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)  Wetland Surface (F7) Redox Depressions (F8)  Wetland Surface (F6) Depleted Dark Surface (F6)  Wetland Surface (F6)  Pepleted Dark Surface (F6)  Wetland Pople Surface (F6)  Wetland Surface (F6)  Pepleted Dark Surface (F6)  Wetland Pople Surface (F6)  Pepleted Dark Surface (F6)  Wetland Pople Surface (F6)  Pepleted Dark Surface (F6)  Wetland Pople Surface (F6)  Secondary Indicators (minimum of the information	ıst be present,
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Hydric Soil Present? Yes  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of soil present):	ıst be present,
Sandy Mucky Mineral (S1) Redox Depressions (F8) wetland hydrology mu unless disturbed or proceeding the processions (F8) Restrictive Layer (if observed):  Type: Depth (inches): Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	ıst be present,
Type: Depth (inches):  Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of one is required; check all that apply)	•
Restrictive Layer (if observed):  Type: Depth (inches):  Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	
Type: Depth (inches): Hydric Soil Present? Yes  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	
Depth (inches):    Hydric Soil Present? Yes	
Remarks:  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	No X
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum	
Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum)	
Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of one is required; check all that apply)	
	um of two require
	<del></del>
High Water Table (A2)  Aquatic Fauna (B13)  Drainage Patterns (B10)	
Saturation (A3)  True Aquatic Plants (B14)  Dry-Season Water Table (	(C2)
Water Marks (B1)  Hydrogen Sulfide Odor (C1)  Crayfish Burrows (C8)	,02)
Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Saturation Visible on Aeria	al Imagery (C0)
Drift Deposits (B3)  Presence of Reduced Iron (C4)  Stunted or Stressed Plants	
<del>_</del>	
Algal Mat or Crust (B4)  Recent Iron Reduction in Tilled Soils (C6)  X Geomorphic Position (D2)  This Music Surface (C7)	
Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
Field Observations:	
Surface Water Present? Yes NoX Depth (inches)	
Water Table Present? Yes No X Depth (inches)	
<del></del>	X No
Saturation Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes	X No
Saturation Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes includes capillary fringe)	X No
Saturation Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	X No
Saturation Present? Yes No X Depth (inches) Wetland Hydrology Present? Yes includes capillary fringe)	X No

Project/Site: Winnebago Tribe Broad	band Connectivity P	roject City/Co	ounty: Thu	ırston	Sampling Dat	te: <b>7/19/202</b>	23
Applicant/Owner: Winnebago Tril	be of Nebraska			State: <b>NE</b>	Sampling Poir	nt: <b>20</b>	
Investigator(s): K. Sherman, C. Bo	ooth, W. Jewell (Ols	sson)		Section	n, Township, Range:	S1 T26N R9	θE
Landform (hillslope, terrace, etc.):	Field	Local re	lief (conca	ve, convex, none):	Concave		
Slope (%): <b>2-3</b> Lat:	42.249527	Long:		-96.350685	Datum:	NAD83	
Soil Map Unit Name: 7856—Sarpy so	oils, occasionally fl	ooded		N	IWI classification:	None	
Are climatic / hydrologic conditions on	the site typical for th	is time of year?	Yes	No X (II	f no, explain in Rema	irks)	
Are Vegetation X , Soil , or H	lydrology sig	nificantly disturbe	d? A	Are "Normal Circums	stances" present? Ye	s X No	
Are Vegetation , Soil , or H	lvdrology na	turally problemation	? (	If needed, explain a	iny answers in Remar	rks.)	
SUMMARY OF FINDINGS - Atta			,	•	•	,	
Hydrophytic Vegetation Present?		√о X	Ĭ.	•			
Hydric Soil Present?	<del></del>	10 10	l				
Wetland Hydrology Present?		10 X		mpled Area Wetland?	Yes	No X	
Wetland Hydrology Present?	res r	NO	Within a	vvetianu :	res	NO A	
Remarks:							
SP 20 is an upland area located within							
wetland. Although this area contains hy							
soybeans are present at this SP; howe recent heavy rainfall events.	ver, they are not inc	luded in the veget	tation calcu	ilations. Climatic coi	nditions are not typica	al at this site due t	to
VEGETATION - Use scientific	names of plan	ıts					
	Absolute		Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina			
1.	<u> </u>			That Are OBL, FA	•	0	(A)
2.					•		
3.				Total Number of D	Dominant		
4				Species Across Al	Il Strata:	1	(B)
5.							
		= Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FA	CW, or FAC:	0	(A/B)
1							
2				Prevalence Index			
3				Total %	Cover of:	Multiply by:	_
4				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)			FACU species		x 4 =	_
Amaranthus retroflexus	3	X	FACU	UPL species		x 5 =	_
2				Column Totals:		(A)	(B)
3.				Preva	alence Index = B/A =		_
4				Hydrophytic \	Vegetation Indicator		
5.					Test for Hydrophytic		
6.				<b>—</b>	nance Test is >50%	vegetation	
7.				<u> </u>	lence Index is <3.01		
8.				_	_	l (Dravida aumant	ilm m
9.					iological Adaptations¹ emarks or on a separ		ing
10.					itic Hydrophytic Veget	,	
· ·	3	= Total Cover		<b>—</b>		(2/17/14/17)	
Woody Vine Stratum (Plot size:	30'	Total Gover		<sup>1</sup> Indicators of h	ydric soil and wetland	d hydrology must	he
1.					s disturbed or problem		DE
2.				Hydrophytic	alotal problem		
		= Total Cover		Vegetation	Yes	No X	
		- Total Cover		Present?	165		
Remarks: (Include photo numbers her	e or on a separate s	heet.)					
PP 20	•	,					

_	otion: (Describe			ent the ind		onfirm t	he absence of indic	cators.)		
Depth (inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	_ Texture	Remarks		
<u> </u>								Remarks		
0-5	10YR 3/1	90	10YR 5/3	10	<u> </u>	M	Clay Loam			
5-30	10YR 3/1	100					Sand			
							<u> </u>			
							<u> </u>			
		. <u></u>								
<sup>1</sup> Type: C=Cond	centration, D=Dep	oletion, RM=R	educed Matrix, MS	S=Masked S	Sand Grains	S.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix		
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :		
Histosol (	(A1)		;	Sandy Gley	ed Matrix (	S4)	Coast P	rairie Redox (A16)		
Histic Epi	ipedon (A2)			Sandy Redo			— Dark Su	rface (S7)		
Black His				Stripped Ma				nganese Masses (F12)		
	n Sulfide (A4)			• •	` '	(E1)		allow Dark Surface (TF12)		
	Layers (A5)	<u> </u>			` '		explain in Remarks)			
2 cm Muc				Depleted M		(1 2)		Apiani in Remarks)		
		(Δ11)				-6)				
	Below Dark Surfa	ace (ATT)		Redox Dark	,	•	3, ,, ,			
	Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Redox Depressions (F8)					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,				
					8)	unless disturbed or problematic.				
5 cm Mud	cky Peat or Peat (	S3)						·		
Type: Depth (inch	yer (if observed) es):						Hydric Soil Presei	nt? Yes <u>X</u> No		
HYDROLO(	<del>S</del> Y									
_	ology Indicators:		irad: abaak all that	annlu)			Socondary In	diagtors (minimum of two required)		
	,	or one is requ	ired; check all that	,	(DO)			dicators (minimum of two required)		
_	Vater (A1)		Water-Stair		(69)		_	il Cracks (B6)		
	er Table (A2)		Aquatic Fau	, ,				atterns (B10)		
Saturatio			True Aquati					n Water Table (C2)		
Water Ma	` ,		Hydrogen S		` '		Crayfish Burrows (C8)			
	t Deposits (B2)		Oxidized RI		_	Roots (C	· —	Visible on Aerial Imagery (C9)		
Drift Dep	osits (B3)		Presence of	f Reduced I	Iron (C4)		Stunted or	Stressed Plants (D1)		
Algal Mat	t or Crust (B4)		Recent Iron	Reduction	in Tilled So	oils (C6)	X Geomorphi	c Position (D2)		
Iron Depo	osits (B5)		Thin Muck \$	Surface (C7	<b>'</b> )		FAC-Neutr	al Test (D5)		
l <u>—</u>	n Visible on Aeria		, <u> </u>	/ell Data (D	9)					
Sparsely	Vegetated Conca	ive Surface (B	Other (Expl	ain in Rema	arks)					
Field Observa	tions:									
Surface Water	Present? Ye	es	No X De	pth (inches)	)					
Water Table Pr	esent? Ye	es		pth (inches)	)					
Saturation Pres	ent? Ye	es	No X De	pth (inches)	)	Wetlan	d Hydrology Prese	nt? Yes No X		
(includes capilla										
Describe Recor	ded Data (stream	n gauge, moni	toring well, aerial p	hotos, prev	vious inspec	ctions), if	available:			
Remarks:										

Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Thu	rston	Sampling D	oate: 7/19/20	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: NE	Sampling P	oint: 21	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (C	Olsson)		Section	<del>-</del> n, Township, Range	: S1 T26N R	9E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	ve, convex, none):	None		
Slope (%): <b>0-2</b> Lat:	42.248573	Long:	-	96.350907	Datum:	NAD83	
Soil Map Unit Name: <b>7856—Sarpy</b>	soils, occasionally	flooded		N	IWI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for f	this time of year?	Yes	No X (I	lf no, explain in Ren	narks)	
Are Vegetation X, Soil, or	Hydrology s	ignificantly disturbe	ed? A	re "Normal Circum	stances" present? Y	res X No	
		aturally problemati			nny answers in Rem		
SUMMARY OF FINDINGS - A	, ,,		•				
Hydrophytic Vegetation Present?	Yes	No X				,	
Hydric Soil Present?	Yes	No X					
				mpled Area	V	No. V	
Wetland Hydrology Present?	Yes	No X	within a v	Wetland?	Yes	NoX	
Remarks:			1				
wetland; however, the area lacks all in the vegetation calculations. Climat VEGETATION - Use scientif	tic conditions are not	typical at this site of				r, they are not inclu	uded
	Absolute	Dominant	Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domin	•		
1.				That Are OBL, FA	ACW, or FAC:	0	_ (A)
3.	<del></del>			T	<b>.</b>		
4	<del></del> -			Total Number of D Species Across A		1	(B)
5.	<del></del> -			opeoles / toloss / t	in Otrata.	<u> </u>	. (D)
o		= Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size	e: 15' )	_		That Are OBL, FA	•	0	(A/B)
1.				,	,		. ( /
2.	<del></del>			Prevalence Index	x worksheet:		
3.				Total %	Cover of:	Multiply by:	
4.				OBL species		x 1 =	
5.				FACW species		x 2 =	
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
Amaranthus retroflexus	1	X	FACU	UPL species		x 5 =	
2				Column Totals:	0	(A)	(B)
3.				Preva	alence Index = B/A	=	
4.				Hydrophytic '	Vegetation Indicat	ors:	
5					Test for Hydrophyti		
6.				I —	nance Test is >50%	ŭ	
7				I —	lence Index is <3.0		
8.				_	nological Adaptation		rtina
9	<u> </u>			data in Re	emarks or on a sepa	arate sheet)	Ü
10.				Problema	atic Hydrophytic Veg	jetation <sup>1</sup> (Explain)	
	1	= Total Cover		_			
Woody Vine Stratum (Plot size:	30' )	_			nydric soil and wetla s disturbed or proble		be
2.				Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	No X	-
Remarks: (Include photo numbers h PP 21	ere or on a separate	sheet.)		_			

Sampling Point: 21

Depth Matrix	Redo	ox Features			
(inches) Color (moist) %	Color (moist)	% Typ	e <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-30 10YR 4/2 100				Clay Loam	
pe: C=Concentration, D=Depletion, RM=Re	educed Matrix, MS=M	lasked Sand G	Grains.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil Indicators:				Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	San	idy Gleyed Ma	trix (S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)	San	dy Redox (S5	)	Dark Sur	face (S7)
Black Histic (A3)	Strip	pped Matrix (S	6)	Iron-Man	ganese Masses (F12)
Hydrogen Sulfide (A4)	Loa	my Mucky Min	eral (F1)	Very Sha	llow Dark Surface (TF12)
Stratified Layers (A5)	Loa	my Gleyed Ma	atrix (F2)	Other (Ex	kplain in Remarks)
2 cm Muck (A10)		oleted Matrix (F		_ `	
Depleted Below Dark Surface (A11)		lox Dark Surfa			
Thick Dark Surface (A12)	— Dep	leted Dark Su	rface (F7)	<sup>3</sup> Indicators of	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	<u> </u>				I hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_	unless disturbed or proble			
Strictive Layer (if observed): Type: Depth (inches):				Hydric Soil Presen	t? Yes No X
Туре:				Hydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches):				Hydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches): narks:				Hydric Soil Presen	t? Yes No X
Type: Depth (inches): marks:  TDROLOGY	red; check all that ap	ply)			t? Yes No X
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators:	red; check all that ap Water-Stained			Secondary Ind	
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is required)		Leaves (B9)		Secondary Ind	icators (minimum of two requi
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requing Surface Water (A1)	Water-Stained	Leaves (B9) (B13)		Secondary Ind Surface Soi	icators (minimum of two requin
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2)	Water-Stained Aquatic Fauna	Leaves (B9) (B13) lants (B14)		Secondary Ind Surface Soi	icators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-StainedAquatic FaunaTrue Aquatic P	Leaves (B9) (B13) lants (B14) de Odor (C1)		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu	icators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Live	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \	icators (minimum of two requin I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requined Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (C	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V	icators (minimum of two requin I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tille	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V	icators (minimum of two required licentes (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) coposition (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (C) eduction in Tille face (C7)	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) coposition (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surl	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9)	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required licentes (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) coposition (D2)
Type: Depth (inches): marks:  TDROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9)	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) coposition (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9)	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: face Water Present?  Yes	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surl Gauge or Well Other (Explain	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9) in Remarks)	ving Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surl Gauge or Well Other (Explain No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9) in Remarks)	ving Roots (C3 4) ed Soils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2) Il Test (D5)
Type: Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required by the second of the secon	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surl Gauge or Well Other (Explain No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Liveduced Iron (Ceduction in Tilleface (C7) Data (D9) in Remarks) (inches)	ving Roots (C3 4) ed Soils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2) Il Test (D5)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)  Id Observations: face Water Present? Ves Inter Table Present? Inter Tab	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) expheres on Liveduced Iron (C) eduction in Tille face (C7) Data (D9) in Remarks)  (inches) (inches) (inches)	ving Roots (C3 :4) ed Soils (C6)	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) Il Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity Pro	oject City/Co	unty: Thur	rston	Samplin	ng Date: <b>7/</b>	19/2023
Applicant/Owner: Winnebago Tribe of Nebraska			State:	<b>NE</b> Samplin	g Point:	22
Investigator(s): K. Sherman, C. Booth, W. Jewell (Olss	son)		Sec	ction, Township, Ra	inge: S1 T2	26N R9E
Landform (hillslope, terrace, etc.): Field	Local rel	ief (concav	e, convex, non	e): Concave		
Slope (%): 2-3 Lat: 42.248561	Long:		96.353254	Datum:	NAD8	3
Soil Map Unit Name: 7880—Onawa silty clay, occasional	lly flooded			NWI classification	n: N	lone
Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes	No X	(If no, explain in I	Remarks)	
Are Vegetation $X$ , Soil , or Hydrology sign	nificantly disturbed	d? Ar	e "Normal Circ	<del>–</del> umstances" presen	it? Yes X	No
Are Vegetation , Soil , or Hydrology natu	urally problematic	? (If	needed, expla	in any answers in F	Remarks.)	<u> </u>
SUMMARY OF FINDINGS - Attach site map sho	wing samplin					etc.
Hydrophytic Vegetation Present? Yes - No	o <b>-</b>					
Hydric Soil Present? Yes No	o X	le the Sar	npled Area			
Wetland Hydrology Present? Yes No	<del></del>	within a V	-	Yes	No X	
						·
Remarks:	O	<b>T</b>		· · · · · · · · · · · · · · · · · · ·		(4i - 1
SP 22 is an upland area located within an agricultural field in wetland. Vegetation is not present at this SP due to farming						
unlikely hydrophytic vegetation would be present in the abse						
included in the vegetation calculations. Climatic conditions a	are not typical at th				<u> </u>	·
VEGETATION - Use scientific names of plant	s.		_			
Absolute		ndicator		est worksheet:		
Tree Stratum (Plot size: 30' ) % Cover	Species?	Status		minant Species , FACW, or FAC:	0	(Δ)
2.			Illat Ale Obe	, FACVV, OI I AC.		(A)
3.			Total Number	of Dominant		
4.			Species Acros		0	(B)
5.			'		<u> </u>	``'
	Total Cover		Percent of Do	minant Species		
Sapling/Shrub Stratum (Plot size: 15' )				, FACW, or FAC:	0	(A/B)
1						
2.				idex worksheet:		
3.				al % Cover of:	Multiply	y by:
4			OBL species		x 1 =	
5			FACW species		x 2 =	
	Total Cover		FAC species		_ x 3 = _	
Herb Stratum (Plot size: 5' )			FACU species		_ x 4 = x 5 =	
1			UPL species Column Totals	s: <u>0</u>	_ x5= _	(B)
2				revalence Index = E	<b>–</b> `′ –	(0)
3. 4.			1 1	evalence much - L	»/A –	
5.			Hydrophy	tic Vegetation Indi	cators:	
6.			1 - Ra	pid Test for Hydrop	hytic Vegetation	1
7.				minance Test is >5		
8.				evalence Index is <	•	
<del></del>				orphological Adapta		upporting
9				n Remarks or on a s ematic Hydrophytic	. ,	-lain\
<sup>10.</sup>	Total Cover			mane myuropriyne	vegetation (EA)	ріанті
Woody Vine Stratum (Plot size: 30' )	Total Cover		1 Indicators	of hydric soil and w	etland hydrology	· must be
1.				or nydric soll and w less disturbed or pr		/ Musi De
2.			Hydrophyt			
	= Total Cover		Vegetation Present?		- No_	
Remarks: (Include photo numbers here or on a separate sh	ieet.)					
PP 22	•					

Depth (inches) 0-2				Redox Featu	res			
0-2	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	10YR 3/1	90					Clay	
	10YR 4/3	9	7.5YR4/6	1	С	М	Sand	
2-30	10YR 3/1	100					Clay	
oe: C=Conce	entration, D=Deple	etion, RM=Re	educed Matrix, M	S=Masked S	and Grain	ıs.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix
lydric Soil I	ndicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A	<b>A1</b> )			Sandy Gley	ed Matrix (	(S4)	Coast Pra	nirie Redox (A16)
− Histic Epip	,			Sandy Redo		` ,	— Dark Surf	, ,
■ Black Histi				Stripped Ma				ganese Masses (F12)
_	Sulfide (A4)			Loamy Muc		(F1)		low Dark Surface (TF12)
_ ′ ′	_ayers (A5)			Loamy Gley	-	. ,		plain in Remarks)
2 cm Muck				Depleted Ma		/		,
	Selow Dark Surfac	e (A11)		Redox Dark		F6)		
_		· (/ (/ 1 / )	_		,	,	<sup>3</sup> Indicators o	f hydrophytic vegetation and
_	ick Dark Surface (A12)  Indy Mucky Mineral (S1)  Im Mucky Peat or Peat (S3)  Depleted Dark Surface (F7)  Redox Depressions (F8)					hydrology must be present,		
_					unless disturbed or problematic.			
_							I	
trictive Laye	er (if observed):							
Туре: 								
Depth (inche	s):						Hydric Soil Present	? Yes No X
				5	inccinyu	ric soil ind	dicator criteria; thereto	ore, this soil is non-hydric.
	.,			<u> </u>	meernyd	ric soil ind	dicator criteria; thereto	re, this soil is non-hydric.
					, meet nyd	ric soil ind	dicator criteria; thereto	re, this soil is non-hydric.
land Hydrol	ogy Indicators:				, meet nyu	ric soil ind		
land Hydrol Primary Indic	ogy Indicators: ators (minimum of	f one is requi		t apply)		ric soli ind	Secondary Indi	cators (minimum of two requi
land Hydrol	ogy Indicators: ators (minimum of	f one is requi				ric soli ind		cators (minimum of two requi
land Hydrol Primary Indic Surface W	ogy Indicators: ators (minimum of	f one is requi		t apply) ned Leaves		ric soli ind	Secondary Indi	cators (minimum of two requ Cracks (B6)
land Hydrol Primary Indic Surface W	ogy Indicators: eators (minimum of ater (A1) er Table (A2)	f one is requi	Water-Stail Aquatic Fa	t apply) ned Leaves	(B9)	ric soli ind	Secondary Indi Surface Soil Drainage Pa	cators (minimum of two requ Cracks (B6)
land Hydrol Primary Indic Surface W High Wate	logy Indicators: eators (minimum of later (A1) or Table (A2) (A3)	f one is requi	Water-Stail Aquatic Fa True Aquat	t apply) ned Leaves una (B13)	(B9) 14)	ric soli ind	Secondary Indi Surface Soil Drainage Pa	cators (minimum of two requ Cracks (B6) tterns (B10) Water Table (C2)
Primary Indic Surface W High Wate Saturation Water Mar	logy Indicators: eators (minimum of later (A1) or Table (A2) (A3)	f one is requi	Water-Stai Aquatic Fa True Aquat Hydrogen S	t apply) ned Leaves una (B13) tic Plants (B	(B9) 14) (C1)		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur	cators (minimum of two requ Cracks (B6) tterns (B10) Water Table (C2) rows (C8)
Primary Indic Surface W High Wate Saturation Water Mar	logy Indicators: cators (minimum of later (A1) cr Table (A2) (A3) cks (B1) Deposits (B2)	f one is requi	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor	(B9)  14) (C1) s on Living		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	cators (minimum of two requi Cracks (B6) tterns (B10) Water Table (C2) rows (C8)
Primary Indic Surface W High Wate Saturation Water Mar Sediment	logy Indicators: cators (minimum of later (A1) cr Table (A2) (A3) cks (B1) Deposits (B2)	f one is requi	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres	(B9)  14) (C1) If on Living ron (C4)	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	cators (minimum of two requi Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1)
cland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment	logy Indicators: cators (minimum of later (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	f one is requi	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres of Reduced I	(B9)  14) (C1) s on Living ron (C4) in Tilled S	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	cators (minimum of two requi Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
land Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos	logy Indicators: cators (minimum of later (A1) or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	t apply) ned Leaves una (B13) tic Plants (B: Sulfide Odor hizospheres of Reduced I	(B9)  14) (C1) con Living ron (C4) in Tilled S )	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two required Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Iron Depos	logy Indicators: cators (minimum of later (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	lmagery (B7)	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Irot Thin Muck Gauge or V	t apply) ned Leaves una (B13) tic Plants (B: Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7	(B9)  14) (C1) If on Living ron (C4) In Tilled S (C4) (C5) (C5)	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two requ Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
land Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely V	logy Indicators: cators (minimum of later (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial I	lmagery (B7)	Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Irot Thin Muck Gauge or V	t apply) ned Leaves una (B13) tic Plants (B' Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D	(B9)  14) (C1) If on Living ron (C4) In Tilled S (C4) (C5) (C5)	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two required Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
tland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Iron Depos Inundation Sparsely W	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) eks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) I Visible on Aerial legetated Concave	Imagery (B7) e Surface (B8	Water-Stai  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of Recent Iron  Thin Muck  Gauge or V  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B' Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D	(B9)  14) (C1) If on Living ron (C4) In Tilled S (C4) (C5) (C6) (C6) (C7) (C7) (C7) (C7) (C7) (C7) (C7) (C7	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two requi Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) erks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial later (A1) later (A2) later (A2) later (A2) later (A3) later (A4)	Imagery (B7) e Surface (B8	Water-Stai  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of  Recent Iron  Thin Muck  Gauge or V  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor chizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema	(B9)  14) (C1) I on Living I on (C4) In Tilled S I on Till	Roots (C	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two requi Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
tland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely W d Observation face Water Preservation	logy Indicators: sators (minimum of later (A1) er Table (A2) (A3) erks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) a Visible on Aerial I legetated Concave ons: legetated? Yes sent? Yes	Imagery (B7) e Surface (B8	Water-Stai  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of Recent Iron  Thin Muck  Gauge or W  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema	(B9)  14) (C1) s on Living ron (C4) in Tilled S ) 9) arks)	Roots (Coils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic	cators (minimum of two requi Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
tland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mat of Iron Depos Inundation Sparsely W	logy Indicators: leators (minimum of later (A1) leator (A2) leator (A3) leator	Imagery (B7) e Surface (B8	Water-Stai  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of Recent Iron  Thin Muck  Gauge or W  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema	(B9)  14) (C1) If on Living ron (C4) In Tilled S (C4) (C5) (C6) (C6) (C7) (C7) (C7) (C7) (C7) (C7) (C7) (C7	Roots (Coils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
tland Hydrol Primary Indic Surface W High Wate Saturation Water Mar Sediment Drift Depos Algal Mate Iron Depos Inundation Sparsely W d Observation face Water Peter Table Preservation Preservations	logy Indicators: leators (minimum of later (A1) leator (A2) leator (A3) leator	Imagery (B7) e Surface (B8	Water-Stai  Aquatic Fa  True Aquat  Hydrogen S  Oxidized R  Presence of  Recent Iron  Thin Muck  Gauge or V  Other (Exp	t apply) ned Leaves una (B13) tic Plants (B: Sulfide Odor hizospheres of Reduced I n Reduction Surface (C7 Vell Data (D lain in Rema	(B9)  14) (C1) s on Living ron (C4) in Tilled S ) 9) arks)	Roots (Coils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S X Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) Itterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)

Landform (hillslope, terrace, etc.): Field Local relief (concave, convex, none): Concave Slope (%): 2-3 Lat: 42.247848 Long: -96.351368 Datum: NAD83	Noetc.
Landform (hillslope, terrace, etc.):    Field	Noetc.
Slope (%):  2-3 Lat:  42.247848  Long:  -96.351368  Datum:  NAD83  Soil Map Unit Name:  7889—Onawet silty clay loam, frequently flooded  Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  X  (If no, explain in Remarks)  Are Vegetation  X, Soil  , or Hydrology  significantly disturbed?  Are "Normal Circumstances" present? Yes  X  Are Vegetation  , Soil  , or Hydrology  naturally problematic?  (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, or hydrology Present?  Hydrophytic Vegetation Present?  Yes  X  No  Hydric Soil Present?  Yes  X  No  Is the Sampled Area within a Wetland?  Wetland Hydrology Present?  Yes  X  No  Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	Noetc.
Soil Map Unit Name: 7889—Onawet silty clay loam, frequently flooded  Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks)  Are Vegetation X, Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, which is the Sampled Area within a Wetland Pydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	Noetc.
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks)  Are Vegetation X , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, and the soil Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Remarks:  Wetland Hydrology Present? Yes X No Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables and potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	etc.
Are Vegetation X , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, or Hydrophytic Vegetation Present? Yes X No	etc.
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, and the Hydrophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland Hydrology Present? Yes X No Wetland Hydrology Present? Yes X No Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables and potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	etc.
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, and the strength of the	_
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, of Hydrophytic Vegetation Present?  Yes X No Is the Sampled Area within a Wetland?  Wetland Hydrology Present?  Yes X No Wetland?  Yes X No Within a Wetland?  Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	_
Hydrophytic Vegetation Present?  Yes X No Is the Sampled Area Wetland Hydrology Present?  Yes X No Within a Wetland?  Yes X No Within a Wetland?  Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	_
Hydric Soil Present?  Yes X No Is the Sampled Area within a Wetland?  Wetland Hydrology Present?  Yes X No Is the Sampled Area within a Wetland?  Yes X No Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	
Wetland Hydrology Present?  Yes X No within a Wetland?  Yes X No Remarks:  Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	
Remarks: Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	
Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables an potential wetland. Planted soybeans are present at this SP; however, they are not included in the vegetation calculations. Climatic condition typical at this site due to recent heavy rainfall events.	valveis as a
Absolute Dominant Indicator Dominance Lest worksheet:  Tree Stratum (Plot size: 30' ) % Cover Species? Status Number of Dominant Species	
1. That Are OBL, FACW, or FAC:	(A)
2.	
3 Total Number of Dominant	
4 Species Across All Strata: 1	(B)
5	
= Total Cover Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 15' ) That Are OBL, FACW, or FAC: 100	(A/B)
1	
2. Prevalence Index worksheet:  3. Total % Cover of: Multiply	, by
3 Total % Cover of: Multiply 4. OBL species x 1 =	/ by.
5. FACW species x 2 =	
= Total Cover FACV species x 2 =	
Herb Stratum (Plot size: 5' ) FACU species x 4 =	
1. Amaranthus tuberculatus 3 X OBL UPL species x 5 =	
2. Column Totals: 0 (A)	(B)
3. Prevalence Index = B/A =	` ′
4.	
5. Hydrophytic Vegetation Indicators:	
6. 1 - Rapid Test for Hydrophytic Vegetation	
7. <u>X</u> 2 - Dominance Test is >50%	
3 - Prevalence Index is ≤3.0¹  8.	
9. 4 - Morphological Adaptations¹ (Provide su data in Remarks or on a separate sheet)	upporting
10. Problematic Hydrophytic Vegetation <sup>1</sup> (Exp	olain)
3 = Total Cover	,
Woody Vine Stratum (Plot size: 30' )   1 Indicators of hydric soil and wetland hydrology present, unless disturbed or problematic.	must be
2. Hydrophytic  = Total Cover Vegetation Yes X No	

Sampling Point: 23

ofile Description: (Describe to the dep Depth Matrix		Redox Featu	res				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-30 10YR4/1 95	7.5YR4/6	5	С	M	Clay		
<u> </u>	<u> </u>						
	_						
pe: C=Concentration, D=Depletion, RN	//⊒Reduced Matrix, M	S=Masked S	and Grain	S.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix	
Hydric Soil Indicators:					Indicators for	Problematic Hydric Soils <sup>3</sup> :	
Histosol (A1)		Sandy Gleye	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)	
Histic Epipedon (A2)	_	Sandy Redo	x (S5)	,	— Dark Sur	face (S7)	
Black Histic (A3)		Stripped Mat				ganese Masses (F12)	
Hydrogen Sulfide (A4)		Loamy Muck	` '	(F1)		allow Dark Surface (TF12)	
Stratified Layers (A5)	_	Loamy Gleye	•	, ,		xplain in Remarks)	
2 cm Muck (A10)	_	Depleted Ma		. ,	_ (	. ,	
Depleted Below Dark Surface (A11)	_	Redox Dark		F6)			
Thick Dark Surface (A12)	_		,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)					wetland	hydrology must be present,	
5 cm Mucky Peat or Peat (S3)	_	·	,	,	unless disturbed or problematic.		
Strictive Layer (if observed): Type: Depth (inches):				Н	lydric Soil Presen	t? Yes <u>X</u> No	
Туре:				H	lydric Soil Presen	t? Yes <u>X</u> No	
Type: Depth (inches):				H	lydric Soil Presen	t? Yes <u>X</u> No	
Type: Depth (inches): marks:				H	lydric Soil Presen	t? Yes <u>X</u> No	
Type: Depth (inches): marks:  /DROLOGY	required; check all tha	t apply)		H			
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:		t apply) ned Leaves (	(B9)	H		licators (minimum of two requii	
Type: Depth (inches): narks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is recognitions)		ned Leaves (	(B9)	H	Secondary Ind  X Surface Soi	licators (minimum of two requi	
Type: Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is in Surface Water (A1)	Water-Stair Aquatic Fa	ned Leaves (		H	Secondary Ind  X Surface Soi  Drainage Pa	licators (minimum of two requin	
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstruction) Surface Water (A1) High Water Table (A2)	Water-Stain Aquatic Fa True Aquat	ned Leaves ( una (B13)	14)	H	Secondary Ind  X Surface Soi  Drainage Pa	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)	
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) Saturation (A3)	— Water-Staii — Aquatic Fa — True Aquat — Hydrogen S	ned Leaves ( una (B13) tic Plants (B1	14) (C1)		Secondary Ind  X Surface Soi  Drainage Portainage Porta	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)	
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is research to the surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	— Water-Stain — Aquatic Fa — True Aquat — Hydrogen S — Oxidized R	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor	14) (C1) on Living		Secondary Ind  X Surface Soi  Drainage Portainage Porta	licators (minimum of two requin I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8)	
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is in Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stair Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres	14) (C1) on Living ron (C4)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Portion  Dry-Seasor  Crayfish But  Saturation V	licators (minimum of two requin I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)	
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced Ir	(C1) on Living ron (C4) in Tilled So	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Portion  Dry-Seasor  Crayfish But  Saturation V	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)	
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i	(C1) on Living ron (C4) in Tilled So	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two required I Cracks (B6) atterns (B10) atterns (C2) rrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)	
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is researched) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck (B7) Gauge or V	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7)	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two required I Cracks (B6) atterns (B10) atterns (C2) rrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) co Position (D2)	
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is really sufface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck (B7) Gauge or V	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7) Vell Data (D9	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)	
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is not sufface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	Water-Stair Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iror Thin Muck (B7) Gauge or V De (B8) Other (Exp	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7) Vell Data (D9	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)	
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is a Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Id Observations:	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck (B7) Gauge or V (B8) Other (Exp	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced In n Reduction i Surface (C7) Vell Data (D9 lain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)	
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Itd Observations: face Water Present?  Yes	Water-Stain	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (DS lain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2) al Test (D5)	
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Id Observations: face Water Present? Yes	Water-Stain	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 Iain in Rema	(C1) on Living ron (C4) in Tilled So )	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Portago Season  Crayfish But  Saturation Notes Stunted or State Season  X Stunted or State Season  FAC-Neutra	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2) al Test (D5)	
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is researched) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Id Observations: face Water Present? Yes ter Table Present? Yes uration Present? Yes	Water-Stair Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck (B7) Gauge or V (B8) Other (Exp	ned Leaves ( una (B13) tic Plants (B1 Sulfide Odor hizospheres of Reduced Ir n Reduction i Surface (C7) Vell Data (D9 lain in Rema epth (inches) epth (inches)	(C1) on Living ron (C4) in Tilled So ) 9) irks)	Roots (C3) oils (C6)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Seasor  Crayfish Bu  Saturation V  X Stunted or S  X Geomorphic  FAC-Neutra	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) to Position (D2) al Test (D5)	

Project/Site: Winnebago Tribe Bro	oadband Connectivity F	Project City/Co	unty: Thurston	Sampling Dat	te: 7/19/2023
Applicant/Owner: Winnebago	Tribe of Nebraska		State:	NE Sampling Poir	nt: <b>24</b>
Investigator(s): K. Sherman, C	. Booth, W. Jewell (O	lsson)	Se	ection, Township, Range:	S12 T26N R9E
Landform (hillslope, terrace, etc.):	Field	Local re	lief (concave, convex, no	ne): Concave	
Slope (%): <b>2-3</b> Lat:	42.247671	Long:	-96.351678	Datum:	NAD83
Soil Map Unit Name: 7889—Onav	wet silty clay loam, fre	quently flooded		NWI classification:	None
Are climatic / hydrologic conditions	on the site typical for the	nis time of year?	Yes No X	(If no, explain in Rema	ırks)
Are Vegetation $X$ , Soil , $\alpha$	or Hydrology się	gnificantly disturbed	d? Are "Normal Cir	rcumstances" present? Ye	s X No
Are Vegetation , Soil , o	or Hydrology na	aturally problematic	? (If needed, expl	lain any answers in Remar	rks.)
SUMMARY OF FINDINGS -		• •	, ,		
Hydrophytic Vegetation Present?		No -		· · ·	·
Hydric Soil Present?	Yes	No X	le the Compled Area		
Wetland Hydrology Present?		No X	Is the Sampled Area within a Wetland?	Yes	No X
Remarks:					
SP 24 is the upland outpoint for Weidentified during the WETS Tables lack of hydric soil and sufficient we soybeans are present at this SP; herecent heavy rainfall events.	analysis as a potential tland hydrology, it is un owever, they are not ind	wetland. Vegetatio likely hydrophytic v cluded in the veget	n is not present at this SF regetation would be prese	P due to farming practices; ent in the absence of farmi	; however, with the ing practices. Planted
VEGETATION - Use scient			<u> </u>		
<u>Tree Stratum</u> (Plot size: 30	Absolute )' ) % Cover	Dominant I Species?		Test worksheet: ominant Species	
1.	) <u>70 GOVER</u>	орсоюз:		L, FACW, or FAC:	0 (A)
2.					- ( )
3.			Total Numbe	er of Dominant	
4.			Species Acro	oss All Strata:	0 (B)
5.					
Sapling/Shrub Stratum (Plot siz	ze: 15' )	= Total Cover	That Are OB	ominant Species L, FACW, or FAC:	0 (A/B)
2.			Prevalence	Index worksheet:	
3.			To	tal % Cover of:	Multiply by:
4			OBL species		x 1 =
5			FACW speci		x 2 =
Harb Stratum (Diet sine)		= Total Cover	FAC species		x 3 =
Herb Stratum (Plot size: 5	)		FACU species		x 4 =
1. 2.			Column Tota	<del></del>	(A) (B)
3.				Prevalence Index = B/A =	(A)(B)
4.			Hydroph	ytic Vegetation Indicator	
5				Rapid Test for Hydrophytic	
6		. <u> </u>	<del></del>	Oominance Test is >50%	9
7		. <u> </u>	_	Prevalence Index is <3.01	
8		. <u>——</u> —	4 - N	 Norphological Adaptations¹	(Provide supporting
9		. <u> </u>	data	in Remarks or on a separa	ate sheet)
10		<u> </u>	Prob	elematic Hydrophytic Vege	tation <sup>1</sup> (Explain)
		= Total Cover			
Woody Vine Stratum (Plot size: 1.	30' )			s of hydric soil and wetland Inless disturbed or problem	
2.			Hydrophy		
		= Total Cover	Vegetatio Present?	n Yes -	No
Remarks: (Include photo numbers PP 24	here or on a separate	sheet.)	•		

	Matrix			Redox Featu				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30	10YR3/1	100					Clay	
pe: C=Cor	ncentration, D=Depl	etion, RM=R	educed Matrix, N	/IS=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soi	l Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
– Histic Ep	oipedon (A2)		_	Sandy Redo		, ,	— Dark Su	face (S7)
_ `	stic (A3)		_	<ul><li>Stripped Ma</li></ul>	, ,			iganese Masses (F12)
_	en Sulfide (A4)		_	Loamy Muc	` '	(F1)		allow Dark Surface (TF12)
_ ′ ′	d Layers (A5)		_	Loamy Gley				xplain in Remarks)
_	ıck (A10)		_	Depleted Ma		. –,		,,
_	d Below Dark Surfac	ce (A11)	_	Redox Dark		<del>-</del> 6)		
_ `	ark Surface (A12)	50 (7111)	_	Depleted Da	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
_	Mucky Mineral (S1)		_	Redox Depr				d hydrology must be present,
	icky Peat or Peat (S	(3)	_		250,0110 (1	-,		disturbed or problematic.
strictive La	yer (if observed):							
Туре:								
Depth (inch	ooc).							
marks:							Hydric Soil Preser	it? Yes No_X
marks:	, <u> </u>						Hydric Soil Preser	nt? Yes No X
marks:	GY						Hydric Soil Preser	t? Yes No X
marks:  /DROLO	GY rology Indicators:							
marks:  /DROLO tland Hydr Primary Inc	GY rology Indicators: dicators (minimum o	f one is requ	•	,			Secondary Inc	dicators (minimum of two requi
marks:  /DROLO tland Hydr Primary Inc. Surface	GY rology Indicators: dicators (minimum o Water (A1)	f one is requ	Water-Sta	ained Leaves	(B9)		Secondary Inc.	dicators (minimum of two requi
Marks:  /DROLO tland Hydr Primary Inc Surface High Wa	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2)	f one is requ	Water-Sta Aquatic F	ained Leaves auna (B13)	` /		Secondary Inc. Surface So Drainage P	dicators (minimum of two requi il Cracks (B6) atterns (B10)
Marks:  /DROLO ctland Hydr Primary Inc Surface High Wa Saturatio	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2) on (A3)	f one is requ	Water-Sta Aquatic F True Aqua	ained Leaves auna (B13) atic Plants (B	14)		Secondary Inc Surface So Drainage P Dry-Seasor	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2)
/DROLO tland Hydr Primary Inc Surface High Wa	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2)	f one is requ	Water-Sta Aquatic F True Aqua	ained Leaves auna (B13)	14)		Secondary Inc. Surface So Drainage P	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2)
Marks:  /DROLO  tland Hydr  Primary Inc  Surface  High Wa  Saturatic  Water M	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2) on (A3)	f one is requ	Water-Sta Aquatic F True Aqua Hydrogen	ained Leaves auna (B13) atic Plants (B	14) · (C1)	Roots (C	Secondary Inc Surface So Drainage P Dry-Season Crayfish Bu	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2)
marks:  /DROLO etland Hydr Primary Inc Surface High Wa Saturatic Water M Sedimer	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1)	f one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leaves auna (B13) atic Plants (B Sulfide Odor	14) (C1) s on Living	Roots (C	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2) irrows (C8)
marks:  /DROLO  tland Hydr  Primary Inc  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep	GY rology Indicators: dicators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)	f one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres	14) (C1) s on Living fron (C4)	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Marks:  /DROLO  tland Hydr  Primary Inc  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma	GY rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)	f one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I	14) s on Living ron (C4) in Tilled So	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requiral cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Marks:  /DROLO etland Hydr Primary Inc Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction	14) (C1) s on Living ron (C4) in Tilled So	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two requiral cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Marks:  //DROLO etland Hydr Primary Inc Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	Imagery (B7	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru Thin Muci	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7	14) c (C1) c on Living ron (C4) in Tilled So c)	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Marks:  /DROLO etland Hydr Primary Inc Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concaverage	Imagery (B7	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru Thin Muci	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (D	14) c (C1) c on Living ron (C4) in Tilled So c)	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two requiral cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Marks:  /DROLO etland Hydr Primary Inc Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concaverations:	Imagery (B7 re Surface (Bi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru Thin Muci Gauge or Other (Ex	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (D) plain in Rema	14) f (C1) s on Living fron (C4) in Tilled Sc f) 9)	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two required in Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Marks:  Primary Inc. Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concaverations: Present?	Imagery (B7	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muc ) Gauge or Other (Ex	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction of Surface (C7 Well Data (D plain in Rema	14) f (C1) f on Living fron (C4) in Tilled Sc f) 9) arks)	,	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two requiral cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks:  /DROLO  tland Hydr  Primary Inc  Surface  High Wa  Saturatic  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatic  Sparsely  Id Observaticae Water Table P	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concaverations: Present? Yes present? Yes	Imagery (B7		ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction of Surface (C7 Well Data (D plain in Rema	14) (C1) s on Living lron (C4) in Tilled Sc () 9) arks)	oils (C6)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi FAC-Neutra	dicators (minimum of two requi il Cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
marks:  /DROLO  stland Hydr  Primary Inc  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatio  Sparsely  std Observa  rface Water  ater Table P	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concave ations: Present? Yes esent? Yes esent?	Imagery (B7		ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction of Surface (C7 Well Data (D plain in Rema	14) (C1) s on Living lron (C4) in Tilled Sc () 9) arks)	oils (C6)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi	dicators (minimum of two required il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
marks:  /DROLO  stland Hydr  Primary Inc  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatio  Sparsely  std Observa  rface Water  tter Table P  turation Pre  cludes capil	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concaverations: Feresent? Fresent?	Imagery (B7 e Surface (B6	Water-Sta	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction of Surface (C7 Well Data (D plain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living ron (C4) in Tilled So (7) 9) arks)	wetlan	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi FAC-Neutra	dicators (minimum of two required il Cracks (B6) atterns (B10) n Water Table (C2) nrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
marks:  /DROLO  stland Hydr  Primary Inc  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatio  Sparsely  std Observa  rface Water  tter Table P  turation Pre  cludes capil	GY  rology Indicators: dicators (minimum of Water (A1)) ater Table (A2) on (A3) darks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial of Vegetated Concave ations: Present? Yes esent? Yes esent?	Imagery (B7 e Surface (B6	Water-Sta	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction of Surface (C7 Well Data (D plain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living ron (C4) in Tilled So (7) 9) arks)	wetlan	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or X Geomorphi FAC-Neutra	dicators (minimum of two requisit Cracks (B6) atterns (B10) n Water Table (C2) arrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)

Sampling Point: 24

Project/Site: Winnebago Tribe Broad	band Connectivity Proje	ect City/Cou	nty: Thurston	Sampling Da	ate: <b>7/19/2023</b>
Applicant/Owner: Winnebago Tr	ibe of Nebraska		Stat	e: <b>NE</b> Sampling Po	oint: 25
Investigator(s): K. Sherman, C. B	ooth, W. Jewell (Olsso	on)		Section, Township, Range:	S12 T26N R9E
Landform (hillslope, terrace, etc.):	Field	Local relie	ef (concave, convex, r	none): Concave	
Slope (%): <b>3-4</b> Lat:	42.246460	Long:	-96.352934	Datum:	NAD83
Soil Map Unit Name: 7889—Onawet	silty clay loam, freque	ently flooded		NWI classification:	None
Are climatic / hydrologic conditions on	the site typical for this ti	me of year?	Yes No	X (If no, explain in Rema	arks)
Are Vegetation X , Soil , or H	Hydrology signific	cantly disturbed?	? Are "Normal (	Circumstances" present? Ye	es X No
Are Vegetation , Soil , or h		ally problematic?	(If needed, ex	cplain any answers in Rema	arks.)
SUMMARY OF FINDINGS - Att		, .	,		
Hydrophytic Vegetation Present?	Yes X No		·	<u> </u>	·
Hydric Soil Present?	Yes X No				
Wetland Hydrology Present?	Yes X No		Is the Sampled Area within a Wetland?	Yes X	No
Wettand Hydrology Frederics	<u> </u>		Within a Wotland	163 <u>X</u>	- "
Remarks: Wetland 25 is a PEMA/C wetland loca potential wetland. Planted soybeans a typical at this site due to recent heavy	re present at this SP; ho rainfall events.	owever, they are			
VEGETATION - Use scientifi	•		In	- <del> </del>	
Tree Stratum (Plot size: 30'			diodioi	e Test worksheet: Dominant Species	
1.		Орескоз:		BL, FACW, or FAC:	1 (A)
2.					
3.			Total Numb	ber of Dominant	
4.			Species Ad	cross All Strata:	1 (B)
5.					
Sapling/Shrub Stratum (Plot size:	= To	otal Cover		Dominant Species BL, FACW, or FAC:	100 (A/B)
1.					
2.			Prevalence	e Index worksheet:	
3.	:			Total % Cover of:	Multiply by:
4	<u>-</u>		OBL specie	es	x 1 =
5	<u>-</u>		FACW spe		x 2 =
	= To	otal Cover	FAC specie		x 3 =
Herb Stratum (Plot size: 5'	_)	~	FACU spec		x 4 =
1. Amaranthus tuberculatus		X	OBL UPL specie		x 5 =(B)
2			Column To		(7.)
3				Prevalence Index = B/A =	
4			Hydrop	hytic Vegetation Indicato	ors:
5			<del></del> 1 -	Rapid Test for Hydrophytic	Vegetation
6			X 2-	Dominance Test is >50%	
7			3 -	Prevalence Index is ≤3.0¹	
8				Morphological Adaptations	
9				ta in Remarks or on a sepa	•
10	— <u> </u>		Pro	oblematic Hydrophytic Vege	etation (Explain)
Woody Vine Stratum (Plot size:	30' = To	otal Cover		ors of hydric soil and wetlan	
				· · · · · · · · · · · · · · · · · · ·	
		= Total Cover	Vegetat Present	ion Yes X	No
1. 2. Remarks: (Include photo numbers he			Hydrop Vegetat	ion Yes X	

Sampling Point: 25

ofile Description: (Describe to the depth Depth Matrix		Features			,
(inches) Color (moist) %	Color (moist) %	6 Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30 Gley1 4/10Y 100				Clay	
pe: C=Concentration, D=Depletion, RM=F	Reduced Matrix, MS=Mas	ked Sand Grair	ns.		re Lining, M=Matrix
Hydric Soil Indicators:					Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Gleyed Matrix	(S4)		airie Redox (A16)
Histic Epipedon (A2)	Sandy	Redox (S5)		Dark Sur	
Black Histic (A3)	Strippe	ed Matrix (S6)		Iron-Man	ganese Masses (F12)
Hydrogen Sulfide (A4)	<u> </u>	Mucky Minera	` '		llow Dark Surface (TF12)
Stratified Layers (A5)		Gleyed Matrix	(F2)	Other (Ex	rplain in Remarks)
2 cm Muck (A10)	Deplet	ed Matrix (F3)			
Depleted Below Dark Surface (A11)		Dark Surface (	,		
Thick Dark Surface (A12)	Deplet	ed Dark Surfac	e (F7)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Redox	Depressions (F	F8)		I hydrology must be present,
5 cm Mucky Peat or Peat (S3)				uniess	disturbed or problematic.
Strictive Layer (if observed):  Type: Depth (inches): marks:			н	ydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (inches): marks:			н	ydric Soil Presen	t? Yes X No
Type: Depth (inches): marks:  /DROLOGY			н	ydric Soil Presen	t? Yes X No
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:	uired: check all that apply	)	н		
Type:  Depth (inches):  marks:  /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is req		,	н	Secondary Ind	icators (minimum of two require
Type:  Depth (inches):  marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of one is req  X Surface Water (A1)	Water-Stained Le	aves (B9)	н	Secondary Ind  X Surface Soi	icators (minimum of two require
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is req  X Surface Water (A1)  High Water Table (A2)	Water-Stained Le	aves (B9) 13)	Н	Secondary Ind  X Surface Soi  Drainage Pa	icators (minimum of two require I Cracks (B6) atterns (B10)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar	aves (B9) 13) its (B14)	Н	Secondary Ind  X Surface Soi  Drainage Pa	icators (minimum of two require I Cracks (B6) atterns (B10) Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide	aves (B9) 13) ts (B14) Odor (C1)		Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu	icators (minimum of two require I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp	, aves (B9) 13) ts (B14) Odor (C1) heres on Living		Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation N	icators (minimum of two require I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu	aves (B9)  13)  Its (B14)  Odor (C1)  heres on Living aced Iron (C4)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation N	icators (minimum of two require I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req  X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)  X Algal Mat or Crust (B4)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu	aves (B9)  13)  Its (B14)  Odor (C1)  heres on Living  iced Iron (C4)  ction in Tilled S	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) & Position (D2)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living  iced Iron (C4)  ction in Tilled S e (C7)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation N	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req  X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)  X Algal Mat or Crust (B4)	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living  iced Iron (C4)  ction in Tilled S  e (C7)  tta (D9)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac 7) Gauge or Well Da	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living  iced Iron (C4)  ction in Tilled S  e (C7)  tta (D9)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  //DROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req  X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)  X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B) Ild Observations:	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da Other (Explain in	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living iced Iron (C4)  ction in Tilled S e (C7) tta (D9)  Remarks)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) & Position (D2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B Id Observations: face Water Present?  Yes X	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac Gauge or Well Da 38) Other (Explain in	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living toed Iron (C4)  ction in Tilled Se (C7)  tta (D9)  Remarks)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) & Position (D2)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B Id Observations: face Water Present? Yes X ter Table Present? Yes	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac 7) Gauge or Well Da 38) Other (Explain in	aves (B9)  13)  Its (B14)  Odor (C1)  heres on Living iced Iron (C4)  ction in Tilled Se (C7)  Ita (D9)  Remarks)  ches)  3  ches)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic  FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B) Ind Observations: face Water Present?	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac 7) Gauge or Well Da 38) Other (Explain in	aves (B9)  13)  Its (B14)  Odor (C1)  heres on Living iced Iron (C4)  ction in Tilled Se (C7)  Ita (D9)  Remarks)  ches)  3  ches)	Roots (C3)	Secondary Ind  X Surface Soi  Drainage Pa  Dry-Season  Crayfish Bu  Saturation \ X Stunted or S  X Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B Id Observations: face Water Present? Yes X ter Table Present? Yes	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac 7) Gauge or Well Da 38) Other (Explain in  No Depth (in No X Depth (in	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living aced Iron (C4)  ction in Tilled See (C7)  ta (D9)  Remarks)  ches)  ches)  ches)	Roots (C3) Soils (C6)  Wetland	Secondary Ind  X Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ X Stunted or S X Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is req X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B) Ind Observations: face Water Present?	Water-Stained Le Aquatic Fauna (B True Aquatic Plar Hydrogen Sulfide Oxidized Rhizosp Presence of Redu Recent Iron Redu Thin Muck Surfac 7) Gauge or Well Da 38) Other (Explain in  No Depth (in No X Depth (in	aves (B9)  13)  ts (B14)  Odor (C1)  heres on Living aced Iron (C4)  ction in Tilled See (C7)  ta (D9)  Remarks)  ches)  ches)  ches)	Roots (C3) Soils (C6)  Wetland	Secondary Ind  X Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ X Stunted or S X Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) crows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)

Project/Site: Winnebago Tribe Broa	dband Connectivity Pro	oject City/Co	unty: Thur	ston	Sampling D	ate: 7/19/202	23
Applicant/Owner: Winnebago To	ribe of Nebraska			State: N	E Sampling Po	oint: 26	
Investigator(s): K. Sherman, C. I	Booth, W. Jewell (Olss	on)		Secti	on, Township, Range	S12 T26N R	9E
Landform (hillslope, terrace, etc.):	Field	Local rel	lief (concav	e, convex, none)	: Convex	'	
Slope (%): <b>2-3</b> Lat:	42.244891	Long:	-9	6.354494	Datum:	NAD83	
Soil Map Unit Name: 7889—Onawe	t silty clay loam, frequ	uently flooded			NWI classification:	None	
Are climatic / hydrologic conditions or	n the site typical for this	time of year?	Yes	No X	(If no, explain in Rem	ıarks)	
Are Vegetation X , Soil , or	Hydrology signi	ificantly disturbed	d? Ar	e "Normal Circur	mstances" present? Y	es X No	
Are Vegetation , Soil , or	Hydrology natu	rally problematic	? (If	needed, explain	any answers in Rem	arks.)	
SUMMARY OF FINDINGS - At	· · · ·	, .	,				
Hydrophytic Vegetation Present?	Yes - No		Ĭ	·	· · ·		
Hydric Soil Present?	Yes No	<del></del>					
Wetland Hydrology Present?	Yes No	<del></del>	within a W	npled Area	Yes	No X	
Wetland Hydrology Fresent:	163	<u> </u>	within a vi	retiana :	165		
Remarks:							
SP 26 is an upland area located in a							al
wetland. Vegetation is not present at							
unlikely hydrophytic vegetation would the vegetation calculations. Climatic	•	٠.		•		ver, it is not include	ed in
VEGETATION - Use scientif			to recent in	eavy failliaii eve	1115.		
VEGETATION - OSE SCIENTIN	•		ndinata.	Dominance Tes	st workshoot:		
<u>Tree Stratum</u> (Plot size: 30'	Absolute ) % Cover		ndicator Status	Number of Dom			
1.	_ /			That Are OBL, F	•	0	(A)
2.				,	,		( ' ')
3.				Total Number of	f Dominant		
4.				Species Across		0	(B)
5.				•			` ,
	=	Total Cover		Percent of Domi	inant Species		
Sapling/Shrub Stratum (Plot size	: 15' )			That Are OBL, F	•	0	(A/B)
1.							` ,
2.				Prevalence Ind	ex worksheet:		
3.				Total	% Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
		Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)			FACU species		x 4 =	_
1.				UPL species		x 5 =	
2.				Column Totals:	0	(A)	(B)
3.				Pre	valence Index = B/A =	=	_
4.							
5.				-	c Vegetation Indicate		
6.					id Test for Hydrophyti	c Vegetation	
7.					ninance Test is >50%		
8.					ralence Index is <3.01		
9.					ohological Adaptation	\	ing
-					Remarks or on a sepa natic Hydrophytic Veg	,	
10		T-4-1 0		_ Problem	nauc nyuropnyuc veg	etation (Explain)	
Woody Vine Stratum (Plot size:	30'	Total Cover		1			
					hydric soil and wetlan ss disturbed or proble		be
1				•		mauc.	
<sup>2.</sup>				Hydrophytic Vegetation		N .	
		= Total Cover		Present?	Yes	· No	
Remarks: (Include photo numbers he	ere or on a separate she	eet.)		-			
PP 26	or or a coparate on	331.7					
<u> </u>							
1							

Sampling Point: 26

Depth Matrix		needed to docum F	Redox Feat				
(inches) Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6 10YR 3/1	100					Loam	
6-30 10YR 3/1	85					Clay	
10YR 4/2	10	7.5YR 4/6	5	С	М	Clay	
pe: C=Concentration, D=Depletic	 on, RM=R	educed Matrix, MS	S=Masked S	Sand Grain	is.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:	,	· · · · · · · · · · · · · · · · · · ·					r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gley	ed Matrix (	(S4)		rairie Redox (A16)
Histic Epipedon (A2)			Sandy Red		(01)		face (S7)
Black Histic (A3)			Stripped Ma				nganese Masses (F12)
					(54)		• , ,
Hydrogen Sulfide (A4)			Loamy Muc	-	. ,		allow Dark Surface (TF12)
Stratified Layers (A5)			Loamy Gley		(۲2)	Other (E	xplain in Remarks)
2 cm Muck (A10)	/A.4.4.5		Depleted M		E0)		
Depleted Below Dark Surface (	(A11)		Redox Darl	,	,	3.	
Thick Dark Surface (A12)		_	Depleted D				of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		!	Redox Dep	ressions (F	-8)		d hydrology must be present, disturbed or problematic.
5 cm Mucky Peat or Peat (S3)						unicoo	distance of problematic.
Type: Depth (inches):							
marks: nough redox is present in the soil prefere, this soil is non-hydric.	profile, the	e matrix color conta	aining the r	edox is at t		Hydric Soil Preser	
marks: nough redox is present in the soil prefore, this soil is non-hydric.	profile, the	e matrix color cont	aining the r	edox is at t			
marks: nough redox is present in the soil prefore, this soil is non-hydric.  **TDROLOGY** tland Hydrology Indicators:				edox is at t		percentage to med	et hydric soil indicator criteria;
marks: nough redox is present in the soil prefore, this soil is non-hydric.  'DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or		ired; check all that	apply)			percentage to med	et hydric soil indicator criteria;
marks: nough redox is present in the soil prefore, this soil is non-hydric.  **TDROLOGY** tland Hydrology Indicators:		ired; check all that	apply)			percentage to med	et hydric soil indicator criteria;
marks: nough redox is present in the soil prefore, this soil is non-hydric.  'DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or		ired; check all that	apply)			percentage to med Secondary Inc. Surface So	et hydric soil indicator criteria;
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1)		ired; check all that	apply) ned Leaves una (B13)	(B9)		Secondary Inc. Surface So Drainage P	et hydric soil indicator criteria; dicators (minimum of two require
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2)		ired; check all that Water-Stair Aquatic Fau	apply) ned Leaves una (B13) ic Plants (B	(B9)		Secondary Inc. Surface So Drainage P	dicators (minimum of two require il Cracks (B6) atterns (B10)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)		ired; check all thatWater-StairAquatic FauTrue Aquati	apply) ned Leaves una (B13) ic Plants (B Sulfide Odol	(B9) 314) r (C1)	doo low of a	Secondary Inc. Surface So Drainage P Dry-Season Crayfish Bu	dicators (minimum of two require il Cracks (B6) atterns (B10)
marks: nough redox is present in the soil prefore, this soil is non-hydric.   /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		ired; check all thatWater-StairAquatic FauTrue AquatiHydrogen S	apply) ned Leaves una (B13) ic Plants (B Sulfide Odor	(B9) (14) r (C1) s on Living	doo low of a	Secondary Inc. Surface So Drainage P Dry-Seasol Crayfish Bu	dicators (minimum of two required il Cracks (B6) atterns (B10) in Water Table (C2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		ired; check all that  Water-Stair  Aquatic Fau  True Aquati  Hydrogen S  Oxidized R	apply) ned Leaves una (B13) ic Plants (B Sulfide Odo nizospheres	(B9) (14) r (C1) s on Living Iron (C4)	too low of a	Secondary Inc. Surface So. Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	dicators (minimum of two require il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized Rl  Presence o  Recent Iron	apply) ned Leaves una (B13) ic Plants (B Sulfide Odor nizospheres f Reduced Reduction	(B9) i14) r (C1) s on Living lron (C4) in Tilled S	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ne is requ	ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S	apply) ned Leaves una (B13) ic Plants (B Gulfide Odor nizospheres f Reduced i Reduction Surface (C7	(B9) s14) r (C1) s on Living lron (C4) in Tilled S	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ne is requ	ired; check all that  Water-Stair  Aquatic Fau  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S	apply) ined Leaves una (B13) ic Plants (B Gulfide Odor inizospheres f Reduced in Reduction Surface (C7 Vell Data (D	(B9) r (C1) s on Living lron (C4) in Tilled S 7)	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Images	ne is requ	ired; check all that  Water-Stair  Aquatic Fau  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S	apply) ined Leaves una (B13) ic Plants (B Gulfide Odor inizospheres f Reduced in Reduction Surface (C7 Vell Data (D	(B9) r (C1) s on Living lron (C4) in Tilled S 7)	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.   //DROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave States (A1) Id Observations:	ne is requ agery (B7 Surface (B8	ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S  Gauge or W  Other (Expl	apply) ned Leaves una (B13) ic Plants (B Gulfide Odor nizospheres f Reduced Reduction Surface (C7 Jell Data (D ain in Rema	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.   //DROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave State (Marks (Marks)) Ind Observations:  face Water Present?  Yes	ne is requ agery ( B7 Surface (B8	ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S  Other (Expl	apply) ned Leaves una (B13) ic Plants (B Sulfide Odor nizospherer f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	too low of a	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) atterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave State Water Present?  Id Observations: face Water Present?  Yes ter Table Present?  Yes	ne is requ agery (B7 Surface (B8	water-Stair Aquatic Fat True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Other (Expl	apply) ned Leaves una (B13) ic Plants (B Sulfide Odo nizospheres f Reduced n Reduction Surface (C7 Vell Data (D ain in Remain	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3	Secondary Inc. Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutri	dicators (minimum of two required il Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave State Water Present?  Id Observations: face Water Present?  Yes curation Present?  Yes curation Present?  Yes	ne is requ agery (B7 Surface (B8	water-Stair Aquatic Fat True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Other (Expl	apply) ned Leaves una (B13) ic Plants (B Sulfide Odor nizospherer f Reduced Reduction Surface (C7 Vell Data (D ain in Rema	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)	Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two required il Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave State Water Present?  Id Observations: face Water Present?  Yes ter Table Present?  Yes	ne is requi	ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S  Other (Expl	apply) med Leaves una (B13) ic Plants (B Sulfide Odoi nizospheres f Reduced i Reduction Surface (C7 Vell Data (D ain in Remains pth (inches pth (inches	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 09) arks)	Roots (C3	Secondary Inc. Surface So. Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutr	dicators (minimum of two required il Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)
marks: nough redox is present in the soil prefore, this soil is non-hydric.  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Seld Observations: face Water Present?  Ves Sturation Present?  Ves Scludes capillary fringe)	ne is requi	ired; check all that  Water-Stair  Aquatic Fat  True Aquati  Hydrogen S  Oxidized RI  Presence o  Recent Iron  Thin Muck S  Other (Expl	apply) med Leaves una (B13) ic Plants (B Sulfide Odoi nizospheres f Reduced i Reduction Surface (C7 Vell Data (D ain in Remains pth (inches pth (inches	(B9) r (C1) s on Living lron (C4) in Tilled S 7) 09) arks)	Roots (C3	Secondary Inc. Surface So. Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutr	dicators (minimum of two required il Cracks (B6) atterns (B10) in Water Table (C2) irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2) al Test (D5)

Applicant/Ourset   Winnebago Tribe of Nebraska   Sales   RE   Sampling Point   27   Investigator(s)   K. Sherman, C. Booth, W. Jewill (Otson)   Society	Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Thur	ston	Sampling D	oate: 7/19/20	23
Landform (fillslope: terroce, etc.): Field Local relief (concave, convex, none): Concave Silvey (%): 2-3 Let: 42.242665 Long: 96.3573 Distum: NADB3 Solf Map Unit Name: 7889—Cnawet sility clay foam, frequently flooded Wild insafficiation: None Are climatic / hydrologic conditions on the site byical for this time of year? Yes No X (if no, explain in Remarks). Are Vegetation Solf (if no explain in Remarks).  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophysis (vegetation Present? Yes No X (if needed, explain any answers in Remarks).  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophysis (vegetation Present? Yes No X (if needed, explain any answers in Remarks).  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophysis (vegetation Present? Yes No X (if needed, explain any answers in Remarks).  SUBMINARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophysis (vegetation research Yes No X (if needed, explain any answers in Remarks).  SUBMINARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophysis (vegetation research Yes Within any agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential events.  SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential events.  SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential events.  SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential events.  SP 27 is an upland area located within an agricultural field in Staging Area E. This area w	Applicant/Owner: Winnebago T	ribe of Nebraska			State: <b>NE</b>	Sampling P	oint: 27	
Slope (S)   2.3   Lat	Investigator(s): K. Sherman, C.	Booth, W. Jewell (O	lsson)		Section	– n, Township, Range	: S12 T26N F	₹9E
Soil Map Unit Name: 7889—Onawet sifty clay loam, frequently flooded Are climatic / hydrologic conditions on the site typical for this time of year? Yes	Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	e, convex, none):	Concave		
Are Vegetation X , Soil , or Hydrology significantly disturbed? Are Nomal Circumstances' present? Yes X No Are Vegetation S, Soil , or Hydrology and a significantly disturbed? Are "Normal Circumstances' present? Yes X No Are Vegetation S, Soil , or Hydrology and a naturally problematic? (If it deeded, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Within a Wetland? Yes No X within a Wetland? Yes N	Slope (%): <b>2-3</b> Lat:	42.242666	Long:	-	96.35738	Datum:	NAD83	
Are Vegetation X , Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation	Soil Map Unit Name: 7889—Onawe	et silty clay loam, fre	equently flooded		١	IWI classification:	None	
Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINIDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydric Soil Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a well and thydrology Present? Yes No X Is the Sampled Area within a well and Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted corn is present at this SP, however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30') Absolute No Cover Septiment of Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  1. Total Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  2. Total Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  4. Total Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  4. Prevalence Index worksheet: Total % Cover of Multiply by:  2. Dominant Species X 1 = FACU species X 2 = FACU species X 3 = FACU species X 4 = UPL+ species X 3 = FACU species X 4 = UPL+ species X 5 = Column Totals: 0 (A) (B)  7. Septiment Species X 4 = UPL+ species X 5 = Column Totals: 0 (A) (B)  7. Septiment Species X 5 = Column Totals: 0 (A) (B)  8. Hydrophytic Vegetation Indicators:  1. Rapid Test for Hydrophytic Vegetation  1. Hydrophytic Vegetation (Pict size: 30')  1. Hydrophytic Species X 5 = Total Cover Prevalence Index is \$3.0'  2. Dominance Test worksheet:  1. Rapid Test for Hydrophytic Vegetation  2. Dominant Species X 2 = FACU species X 4 = UPL+ species X 5 = Column Totals: 0 (A) (B)  1. Hydrophytic Vegetation Indicators:  1. Rapid Test for Hydroph	Are climatic / hydrologic conditions o	n the site typical for t	his time of year?	Yes	No X (	lf no, explain in Ren	narks)	
Summary   Summ	Are Vegetation X , Soil , or	Hydrology si	gnificantly disturbe	ed? Ar	e "Normal Circum	stances" present? Y	es X No	
Summary   Summ	Are Vegetation . Soil . or	Hvdrology na	aturally problemation	c? (If	needed, explain a	nv answers in Rem	arks.)	
Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Within a Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X Wetland Hydrology it is in an individual of the North Status o		· · · ·		•	•	•	,	
Hydric Soil Present?  Wetland Hydrology Present?  Yes No X  Wetland Hydrology Present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unable to the vegetation is not present at this SP due to farming practices. Planted corn is present at this SP, however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')		<del>-</del>		T .	•	•	<u> </u>	
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks:  SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted corn is present at this SP, however, it is not included in the vegetation calculations. Climate nor hot typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Iree Stratum (Plot size: 30') Assoute Species?  In a Stratum (Plot size: 15') Assoute Species?  In a Stratum (Plot size: 15') Assoute Species Across All Strata: 0 (B)  Prevalence Index worksheet:  In a Stratum (Plot size: 5') Assoute Species Size Species S								
Remarks:  SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is untilitied in the absence of farming practices. Planted dorn is present at this SP, however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  **VECETATION** Uses cientific names of plants.**  **Tere Stratum** (Plot size: 30' ) **& Cover Species?**  **Tree Stratum** (Plot size: 30' ) **& Cover Species?**  **Total Number of Dominant Species**  **Total N	1		<del></del>		-	Vos	No. X	
SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is not included in unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')	Wettarid Trydrology i Tesent:		NO	within a v	vetiana :	165	_ NO	
wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted com is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.	Remarks:							
unlikely hydrophylic vegetation would be present in the absence of farming practices. Planted corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not hybrical at this site due to recent heavy rainfall events.    VEGETATION - Use scientific names of plants.								tential
the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.    Tree Stratum (Plot size: 30' )								
Tree Stratum (Plot size: 30' )	, , , ,	•	0.		•		ver, it is not include	ed in
Tree Stratum (Plot size: 30' )				e to recent n	eavy raiman evem	.5.		
Number of Dominant Species   That Are OBL, FACW, or FAC:   0   (A)	VESCIATION - Ose scientil	•		Indicator	Dominance Test	worksheet:		
That Are OBL, FACW, or FAC: 0 (A)  2	Tree Stratum (Plot size: 30'							
2		′	<u> </u>			•	0	(A)
Species Across All Strata: 0 (B)	2.							. ` ′
Species Across All Strata:	3.				Total Number of I	Dominant		
Sapling/Shrub Stratum	4.				Species Across A	III Strata:	0	(B)
Sapling/Shrub Stratum   (Plot size: 15' )   That Are OBL, FACW, or FAC: 0 (A/B)	5.							•
That Are OBL, FACW, or FAC:			= Total Cover		Percent of Domin	ant Species		
2.       3.       Total % Cover of:       Multiply by:         6.       Species       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 =       X 1 = <td>Sapling/Shrub Stratum (Plot size</td> <td>: 15' )</td> <td>_</td> <td></td> <td>That Are OBL, FA</td> <td>ACW, or FAC:</td> <td>0</td> <td>(A/B)</td>	Sapling/Shrub Stratum (Plot size	: 15' )	_		That Are OBL, FA	ACW, or FAC:	0	(A/B)
Total % Cover of: Multiply by:	1.							
A	2.				Prevalence Inde	x worksheet:		
5.       = Total Cover       FACW species       x 2 = FAC species       x 3 = FACU species       x 4 = FACU species       x 5 = FACU species       x 6 = FACU species       x 7 = FACU species       x 7 = FACU species       x 7 = FACU species       x 6 = FACU species       x 7 = FACU species       x 6 = FACU species       x 7 = FACU species       x 6 = FACU species       x 7 = FACUs species       x	3.				Total %	Cover of:	Multiply by:	
Herb Stratum (Plot size: 5' )	4.				OBL species		x 1 =	
Herb Stratum (Plot size: 5' )	5.				FACW species		x 2 =	
1.       UPL species       x 5 =         2.       Column Totals:       0 (A) (B)         3.       Prevalence Index = B/A =         4.       Hydrophytic Vegetation Indicators:         5.       1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%       3 - Prevalence Index is ≤3.0¹         4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)       Problematic Hydrophytic Vegetation¹ (Explain)         1.       Problematic Hydrophytic vegetation¹ (Explain)         4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)       Problematic Hydrophytic vegetation¹ (Explain)         4 - Morphytic vegetation numbers be disturbed or problematic.       Problematic Hydrophytic vegetation numbers disturbed or problematic.         4 - Morphytic vegetation numbers here or on a separate sheet.)       Problematic Hydrophytic vegetation numbers here or on a separate sheet.)			= Total Cover		FAC species		x 3 =	
2.	Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
3.	1				UPL species		x 5 =	
4. 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size:	2				Column Totals:	0	(A)	(B)
Hydrophytic Vegetation Indicators:   1 - Rapid Test for Hydrophytic Vegetation     2 - Dominance Test is >50%     3 - Prevalence Index is ≤3.0¹     4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)     Problematic Hydrophytic Vegetation ¹ (Explain)     Moody Vine Stratum (Plot size: 30' )     1.	3.				Preva	alence Index = B/A	=	
5.	4.				Hydrophytic	Vogotation Indicat	ore:	
6. 7. 8. 9. 10. Woody Vine Stratum (Plot size: 30' ) 1. 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)  1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  2 Hydrophytic Vegetation Yes - No - Present?  Remarks: (Include photo numbers here or on a separate sheet.)	5					_		
7	6.					, , ,	ŭ	
8	7.							
9.	8.					_		tina
Problematic Hydrophytic Vegetation (Explain)  Total Cover  Woody Vine Stratum (Plot size: 30' )  1.	9.					0 1	\	ung
Total Cover   Stratum (Plot size: 30' )	10					•	•	
Woody Vine Stratum   (Plot size: 30'   )			= Total Cover		_		(=)	
1	Woody Vine Stratum (Plot size:	30' )	-		<sup>1</sup> Indicators of h	ydric soil and wetla	nd hydrology must	he.
2 = Total Cover								БС
= Total Cover	2.				· ·	•		
Remarks: (Include photo numbers here or on a separate sheet.)			= Total Cover			Yes	- No -	
		<del></del>	. 5.01 55701		_			
PP 27	Remarks: (Include photo numbers h	ere or on a separate	sheet.)					
	PP 27							

Sampling Point: 27

<b>file Descrip</b> Depth	Matrix			Redox Feat	uies			
(inches)	Color (moist)	%	Color (mois	t) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 3/1	100					Clay Loam	
6-30	10YR 3/1	100					Clay	
							. <u> </u>	
oe: C=Cond	entration, D=Deple	etion, RM=F	Reduced Matrix	, MS=Masked S	Sand Grain	ıs.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix
lydric Soil	Indicators:						Indicators for I	Problematic Hydric Soils <sup>3</sup> :
Histosol (	A1)			Sandy Gley	ed Matrix	(S4)	Coast Pra	irie Redox (A16)
	pedon (A2)			Sandy Red		()	Dark Surfa	, ,
Black His				Stripped Ma				anese Masses (F12)
	Sulfide (A4)			Loamy Muc		I (E1)	_	ow Dark Surface (TF12)
_ ′ ′	Layers (A5)			Loamy Gle				ow Dark Surface (1712) blain in Remarks)
2 cm Muc				Depleted M		(· <i>L)</i>	_ Onlei (EX	Jan III Kelliaiks)
		o (A11)		Redox Dark		E6)		
	Below Dark Surfac k Surface (A12)	~ (AII)		Depleted D	,	,	3Indicators of	hydrophytic vegetation and
_	ucky Mineral (S1)			Redox Dep				hydrology must be present,
_		0)		Redox Dep	ressions (r	-0)		isturbed or problematic.
5 cm Muc	ky Peat or Peat (S	3)						
Type: Depth (inche	ver (if observed):						Hydric Soil Present	? Yes No _X
Type: Depth (inche							Hydric Soil Present	? Yes No <u>X</u>
Type: Depth (inchenarks:	es):						Hydric Soil Present	? Yes No _X
Type: Depth (inchenarks:	es):							
Type: Depth (inchenarks:  DROLOGILAND Hydro Primary India	SY logy Indicators: cators (minimum of	one is req		,			Secondary Indic	cators (minimum of two requi
Type: Depth (inchenarks:  DROLOG	SY logy Indicators: cators (minimum of	one is req	Water-S	Stained Leaves	(B9)			cators (minimum of two requi
DROLOG Cland Hydro Surface V High Wate	SY  logy Indicators: cators (minimum of Vater (A1) er Table (A2)	one is req	Water-S	,	(B9)		Secondary Indic	cators (minimum of two requi Cracks (B6)
Type: Depth (inchestants: DROLOGitland Hydro Surface V	SY  logy Indicators: cators (minimum of Vater (A1) er Table (A2)	one is req	Water-S Aquatio True Ad	Stained Leaves Fauna (B13) quatic Plants (B	314)		Secondary India Surface Soil Drainage Pat	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2)
Type: Depth (inche narks:  DROLOG Iland Hydro Primary India Surface V High Water Saturation Water Ma	es):  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) erks (B1)	one is req	Water-S Aquatio True Ad	Stained Leaves Fauna (B13)	314)		Secondary Indic Surface Soil Drainage Pat	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2)
Type: Depth (inche narks:  DROLOG Iland Hydro Primary India Surface V High Water Saturation Water Ma	SY  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3)	one is req	Water-S Aquatic True Ac Hydrog	Stained Leaves Fauna (B13) quatic Plants (B	314) r (C1)	Roots (C	Secondary Indio Surface Soil Drainage Pat Dry-Season Crayfish Burn	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2)
Type: Depth (inche narks:  DROLOG Iland Hydro Primary India Surface V High Water Saturation Water Ma	es):  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2)	one is req	Water-S Aquatic True Ac Hydrog Oxidize	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo	s14) r (C1) s on Living	Roots (C3	Secondary Indic Surface Soil Drainage Pat Dry-Season \ Crayfish Burn Staturation Vi	cators (minimum of two requi Cracks (B6) cterns (B10) Water Table (C2) cows (C8)
Type: Depth (inche narks:  DROLOG tland Hydro Primary India Surface W High Wate Saturatior Water Ma Sediment Drift Depc Algal Mat	BY  Ilogy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) osits (B3) or Crust (B4)	one is req	Water-S Aquatic True Ac Hydrog Oxidize Presen	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere	314) r (C1) s on Living Iron (C4)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burr Saturation Vi	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9)
Type: Depth (inche narks:  TDROLOG tland Hydro Primary Indie Surface V High Water Saturatior Water Ma Sediment Drift Depo	cators (minimum of Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)		Water-S Aquatic True Ac Hydrog Oxidize Present Recent	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced	s14) r (C1) s on Living Iron (C4) i in Tilled S		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burr Saturation Vi	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
Type: Depth (inche narks:  DROLOG tland Hydro Primary India Surface V High Water Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	cators (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) n Visible on Aerial	lmagery (B	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mo	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C) or Well Data (D	r (C1) s on Living lron (C4) in Tilled S 7)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
DROLOG  Cland Hydro  Primary India  Surface V  High Water  Saturatior  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Inundation	cators (minimum of Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)	lmagery (B	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mo	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (Ci	r (C1) s on Living lron (C4) in Tilled S 7)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
Type: Depth (inche narks:  DROLOG tland Hydro Primary India Surface V High Water Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	BY  Ilogy Indicators: cators (minimum of Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial (Vegetated Concave	lmagery (B	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mo	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C) or Well Data (D	r (C1) s on Living lron (C4) in Tilled S 7)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Isible on Aerial Imagery (C9) Irressed Plants (D1)
Type: Depth (inchest land Hydro Primary India Surface W High Water Ma Sediment Drift Depote Inundation Sparsely)	es):  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) links (B1) Deposits (B2) losits (B3) or Crust (B4) losits (B5) n Visible on Aerial (Vegetated Concave	lmagery ( B e Surface (B	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mo	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C) or Well Data (D	s14) r (C1) s on Living lron (C4) in Tilled S 7) 199) arks)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Sible on Aerial Imagery (C9) Irressed Plants (D1)
Type: Depth (inchest land Hydro Primary India Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely V Id Observat	es):  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) links (B1) Deposits (B2) losits (B3) or Crust (B4) losits (B5) n Visible on Aerial I Vegetated Concave lions: Present? Yes	Imagery (B e Surface (E	Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin Mc Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere: ce of Reduced Iron Reduction uck Surface (C) or Well Data (E	s14) r (C1) s on Living lron (C4) in Tilled S 7) 99) arks)		Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) Iterns (B10) Water Table (C2) Iterows (C8) Sible on Aerial Imagery (C9) Irressed Plants (D1)
Type: Depth (inchest land lydro) Primary India Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely ' d Observat face Water F	es):  Sy  logy Indicators: cators (minimum of Vater (A1) er Table (A2) n (A3) links (B1) Deposits (B2) losits (B3) or Crust (B4) losits (B5) n Visible on Aerial (Vegetated Concave lions: Present? Yes esent? Yes	lmagery (B e Surface (E	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mo Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (Ci or Well Data (D Explain in Rem	s14) r (C1) s on Living Iron (C4) in Tilled S 7) 09) arks)	oils (C6)	Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
Type: Depth (inchest land Hydro Primary India Surface W High Water Ma Sediment Drift Depote Inundation Sparsely)  d Observat face Water Fater Table Present Inchest land Present	BY  Ilogy Indicators: cators (minimum of Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) irks (B3) or Crust (B4) isits (B5) in Visible on Aerial Vegetated Concave ions: Present? Yes ent? Yes ent? Yes	lmagery (B e Surface (E	Water-S Aquatic True Ac Hydrog Oxidize Present Recent Thin Mu 7) Gauge Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (Ci or Well Data (D Explain in Rem  Depth (inches	s14) r (C1) s on Living Iron (C4) in Tilled S 7) 09) arks)	oils (C6)	Secondary India Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
Type: Depth (inchest land Hydro Primary India Surface W High Water Ma Sediment Drift Depo Inundation Sparsely depth of the Table Presuration Presuludes capilla	BY  Ilogy Indicators: cators (minimum of Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) irks (B3) or Crust (B4) isits (B5) in Visible on Aerial Vegetated Concave ions: Present? Yes ent? Yes ent? Yes	lmagery ( B e Surface (E	— Water-S — Aquatic — True Ac — Hydrog — Oxidize — Present — Recent — Thin Mc — Gauge — Other (I	Stained Leaves Fauna (B13) quatic Plants (B en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (Ci or Well Data (D Explain in Rem  Depth (inches Depth (inches	s14) r (C1) s on Living Iron (C4) in Tilled S 7) 99) arks)	Wetlan	Secondary Indic Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi Stunted or St Geomorphic FAC-Neutral	cators (minimum of two requi Cracks (B6) terns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity Pr	oject City/Co	unty: Thu	rston	Sampling Da	te: <b>7/19/20</b> 2	23
Applicant/Owner: Winnebago Tribe of Nebraska			State: N	E Sampling Poi	nt: <b>28</b>	
Investigator(s): K. Sherman, C. Booth, W. Jewell (Ols	son)		Section	on, Township, Range:	S12 T26N R	:9E
Landform (hillslope, terrace, etc.): Field	Local re	lief (conca	/e, convex, none)	None		
Slope (%): 2-3 Lat: 42.242839	Long:	-	96.357342	Datum:	NAD83	
Soil Map Unit Name: 7889—Onawet silty clay loam, freq	uently flooded			NWI classification:	None	
Are climatic / hydrologic conditions on the site typical for this	s time of year?	Yes	No X	(If no, explain in Rema	arks)	
Are Vegetation X , Soil , or Hydrology sign	nificantly disturbe	d? A	re "Normal Circur	nstances" present? Ye	s X No	
Are Vegetation , Soil , or Hydrology natu	urally problematio	:? (I	f needed, explain	any answers in Rema	rks.)	
SUMMARY OF FINDINGS - Attach site map sho		,				
Hydrophytic Vegetation Present? Yes - N		Ĭ.	•	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
Hydric Soil Present? Yes N						
Wetland Hydrology Present? Yes N		within a	mpled Area Netland?	Yes	No X	
Wettand Trydrology Fresent: FesN	<u> </u>	within a	vetiana:	163	<u> </u>	
Remarks:						
SP 28 is an upland area located within an agricultural field						tential
wetland. Vegetation is not present at this SP due to farming						
unlikely hydrophytic vegetation would be present in the absorber the vegetation calculations. Climatic conditions are not typic	0.		•		er, it is not include	ea in
VEGETATION - Use scientific names of plant		to recent i	leavy fairliail evel	113.		
Absolute		Indicator	Dominance Tes	t worksheet:		
Tree Stratum (Plot size: 30' ) % Cover	Species?	Status	Number of Domi			
1.	<u> </u>		That Are OBL, F	•	0	(A)
2.						
3			Total Number of	Dominant		
4			Species Across	All Strata:	0	(B)
5						
	Total Cover		Percent of Domi	•	_	
Sapling/Shrub Stratum (Plot size: 15' )			That Are OBL, F	ACW, or FAC:	0	(A/B)
1			Drevelence Ind			
2			Prevalence Ind	% Cover of:	Multiply by:	
J			OBL species	70 COVEL OI.	x 1 =	_
5.			FACW species		x 2 =	_
	Total Cover		FAC species		x3=	_
Herb Stratum (Plot size: 5')	10141 00101		FACU species		x 4 =	_
1.			UPL species		x 5 =	_
2.			Column Totals:	0	(A)	(B)
3.			Pre	valence Index = B/A =		_ ` `
4.						
5.				Vegetation Indicator		
6.			I — :	d Test for Hydrophytic	Vegetation	
7.			<u> </u>	inance Test is >50%		
8.			l —	alence Index is ≤3.0¹	1 /B : 1	
9.				hological Adaptations´ Remarks or on a separ		ung
10.				atic Hydrophytic Vege	,	
	Total Cover		_		(=:4:)	
Woody Vine Stratum (Plot size: 30' )			<sup>1</sup> Indicators of	hydric soil and wetland	d hydrology must	be
1.				ss disturbed or probler		
2.			Hydrophytic			
	= Total Cover		Vegetation	Yes -	No -	
			Present?			
Remarks: (Include photo numbers here or on a separate sh	neet.)					
PP 28						

Sampling Point: 28

file Description: (Describe Depth Matrix	•		Redox Feat	ures			
(inches) Color (moist)	%	Color (moi	st) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30 10YR 3/2	100					Clay	
pe: C=Concentration, D=Dep	letion, RM=I	Reduced Matri	x, MS=Masked S	Sand Grains	S.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:						Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gley	ed Matrix (	S4)	Coast Pr	rairie Redox (A16)
Histic Epipedon (A2)			Sandy Red	ox (S5)		Dark Su	rface (S7)
Black Histic (A3)			Stripped Ma	atrix (S6)		Iron-Mar	nganese Masses (F12)
Hydrogen Sulfide (A4)			Loamy Muc	ky Mineral	(F1)	Very Sha	allow Dark Surface (TF12)
Stratified Layers (A5)			Loamy Gle				xplain in Remarks)
2 cm Muck (A10)			Depleted M	latrix (F3)		_	
Depleted Below Dark Surfa	ace (A11)		Redox Dark	k Surface (F	<del>-</del> 6)		
Thick Dark Surface (A12)	•		Depleted D	ark Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Redox Dep				d hydrology must be present,
5 cm Mucky Peat or Peat (	S3)					unless	disturbed or problematic.
strictive Layer (if observed) Type: Depth (inches):					Н	lydric Soil Preser	nt? Yes No X
Туре:					Н	lydric Soil Preser	nt? Yes No X
Type: Depth (inches):					H	lydric Soil Preser	nt? Yes No X
Type: Depth (inches): narks:					H	lydric Soil Preser	nt? Yes No X
Type: Depth (inches): narks:  DROLOGY		uired; check a	ll that apply)		H		nt? Yes No X
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators:			ll that apply) -Stained Leaves	(B9)	H	Secondary Inc	
Type:  Depth (inches):  narks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum		Water		(B9)	H	Secondary Inc	dicators (minimum of two requi
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1)		Water- Aquati	-Stained Leaves		H	Secondary Inc Surface So Drainage P	dicators (minimum of two requinul Cracks (B6)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water- Aquati True A	-Stained Leaves c Fauna (B13)	14)	H	Secondary Inc Surface So Drainage P	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water- Aquati True A Hydro	-Stained Leaves c Fauna (B13) Aquatic Plants (B	114) r (C1)		Secondary Inc Surface So Drainage P Dry-Season Crayfish Bu	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		— Water- Aquati — True A — Hydrog — Oxidiz	Stained Leaves c Fauna (B13) equatic Plants (B gen Sulfide Odo	14) r (C1) s on Living		Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requinil Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water- Aquati True A Hydro Oxidiz Preser	-Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odo ed Rhizosphere	i14) r (C1) s on Living lron (C4)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches): narks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water- Aquati True A Hydroi Oxidiz Presei Recen	Stained Leaves c Fauna (B13) quatic Plants (B gen Sulfide Odo ed Rhizosphere nce of Reduced	i14) r (C1) s on Living Iron (C4) in Tilled Sc	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one is req	Water- Aquati True A Hydrog Oxidiz Preseg Recen Thin M	Stained Leaves c Fauna (B13) equatic Plants (Bgen Sulfide Odor ed Rhizospheres oce of Reduced t Iron Reduction	r (C1) s on Living Iron (C4) in Tilled Sc	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two required il Cracks (B6) satterns (B10) an Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	of one is req	— Water- Aquati — True A Hydrog Oxidiz — Presei — Recen — Thin M Gauge	Stained Leaves c Fauna (B13) equatic Plants (Bgen Sulfide Odored Rhizospheres are of Reduced t Iron Reduction fuck Surface (C7	r (C1) s on Living Iron (C4) in Tilled Sc 7)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two required il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is req	— Water- Aquati — True A Hydrog Oxidiz — Presei — Recen — Thin M Gauge	Stained Leaves c Fauna (B13) Aquatic Plants (Bgen Sulfide Odored Rhizospherence of Reduced It Iron Reduction fluck Surface (C7) ar Well Data (D	r (C1) s on Living Iron (C4) in Tilled Sc 7)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is req I Imagery (B ve Surface (I	— Water- — Aquati — True A — Hydrog — Oxidiz — Presei — Recen — Thin M — Gauge — B8) — Other	Stained Leaves c Fauna (B13) Aquatic Plants (Bgen Sulfide Odored Rhizospheres of Reduced to Iron Reduction fluck Surface (C7) e or Well Data (Explain in Remarks)	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) latterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca d Observations: face Water Present?	of one is req	Water- Aquati True A Hydrog Oxidiz Preset Recen Thin M Gay Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced t Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains)	r (C1) s on Living Iron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) latterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca d Observations: face Water Present?  Yer Table Present?	of one is req	Water- Aquati True A Hydrog Oxidiz Preser Recen Thin N Gauge B8) Other  No X No X	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc. Surface So Drainage P Dry-Season Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water- Aquati True A Hydrog Oxidiz Preset Recen Thin M Gay Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced t Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains)	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water-   Aquati   True A   Hydroi   Oxidiz   Preser   Recen   Thin M   Gauge   B8)   Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction Muck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches Depth (inches	r (C1) s on Living lron (C4) in Tilled So 7) 99) arks)	Roots (C3) pils (C6)  Wetland	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two required il Cracks (B6) latterns (B10) latterns (B10) latterns (C2) lurrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) loc Position (D2) lat Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water-   Aquati   True A   Hydroi   Oxidiz   Preser   Recen   Thin M   Gauge   B8)   Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction Muck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches Depth (inches	r (C1) s on Living lron (C4) in Tilled So 7) 99) arks)	Roots (C3) pils (C6)  Wetland	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)

Project/Site: Winnebago Tribe Broa	dband Connectivity I	Project City/Co	ounty: Thur	ston	Sampling D	Date: 7/19/20	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: <b>NE</b>	Sampling P	Point: 29	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (O	lsson)		Sectio	n, Township, Range	e: <b>S12 T26N F</b>	₹9E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	e, convex, none):	Concave		
Slope (%): <b>0-1</b> Lat:	42.236335	Long:	-6	96.356819	Datum:	NAD83	
Soil Map Unit Name: 7889—Onawe	et silty clay loam, fre	equently flooded		11	NWI classification:	None	
Are climatic / hydrologic conditions of	n the site typical for t	his time of year?	Yes	No X (	(If no, explain in Rer	narks)	
Are Vegetation X , Soil , or	Hydrology si	gnificantly disturbe	d? Ar	e "Normal Circum	nstances" present?	Yes X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemation	c? (If	needed, explain a	any answers in Rem	narks.)	
SUMMARY OF FINDINGS - A	, ,,		•				
Hydrophytic Vegetation Present?		No -	Ĭ.	•			
Hydric Soil Present?		No X	l				
Wetland Hydrology Present?		No X	within a V	npled Area	Yes	No X	
Wetland Hydrology Fresent:		NO	Within a v	vetiana:	163	_ 10	
Remarks:							
SP 29 is an upland area located with							
wetland. Vegetation is not present at							
unlikely hydrophytic vegetation would	•	0.		•		ever, it is not includ	ed in
the vegetation calculations. Climatic <b>VEGETATION - Use scientif</b>			e to recent n	eavy rainiali even	ils.		
VEGETATION - OSE SCIENTIL	•		l., .l 4	Dominance Test	t workshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Domir			
1.				That Are OBL, FA	•	0	(A)
2.	<u> </u>			,	, -		. ( )
3.	· ·			Total Number of	Dominant		
4.				Species Across A		0	(B)
5.							. ` ′
		= Total Cover		Percent of Domir	ant Species		
Sapling/Shrub Stratum (Plot size	: 15' )	-		That Are OBL, F	•	0	(A/B)
1.						-	• ` ′
2.				Prevalence Inde	x worksheet:		-
3.				Total %	6 Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.	,			FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
1.				UPL species		x 5 =	
2.				Column Totals:	0	(A)	(B)
3.				Prev	ralence Index = B/A	=	
4.				II. dan da da	Maria de Caralla de La desa		
5.					Vegetation Indicat		
6.				· — ·	d Test for Hydrophyt	ŭ	
7.	· ·				nance Test is >50%		
8.	· ·				alence Index is <3.0		
9.					hological Adaptatior Remarks or on a sep	\	ting
-		<del></del>			atic Hydrophytic Ve	,	
10	<del></del>	- Total Cover		FIODIEIII	alic Hydrophylic ve	Jetation (Explain)	
Woody Vine Stratum (Plot size:	30' )	= Total Cover		1, , , ,			
1.					hydric soil and wetla s disturbed or probl		be
1				Hydrophytic	3 distarbed or proble	cinatio.	
Z	<del></del>	- Total Caver		Vegetation	Vaa	Na	
		= Total Cover		Present?	Yes	No	-
Remarks: (Include photo numbers he	ere or on a separate	sheet.)					
PP 29	c. c a coparato	,					
1							

Sampling Point: 29

file Description: (Describe Depth Matrix	•		Redox Feat	ures			
(inches) Color (moist)	%	Color (moi	st) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30 10YR 3/2	100					Clay	
pe: C=Concentration, D=Dep	letion, RM=I	Reduced Matri	x, MS=Masked S	Sand Grains	S.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix
Hydric Soil Indicators:						Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gley	ed Matrix (	S4)	Coast Pr	rairie Redox (A16)
Histic Epipedon (A2)			Sandy Red	ox (S5)		Dark Su	rface (S7)
Black Histic (A3)			Stripped Ma	atrix (S6)		Iron-Mar	nganese Masses (F12)
Hydrogen Sulfide (A4)			Loamy Muc	ky Mineral	(F1)	Very Sha	allow Dark Surface (TF12)
Stratified Layers (A5)			Loamy Gle				xplain in Remarks)
2 cm Muck (A10)			Depleted M	latrix (F3)		_	
Depleted Below Dark Surfa	ace (A11)		Redox Dark	k Surface (F	<del>-</del> 6)		
Thick Dark Surface (A12)	•		Depleted D	ark Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Redox Dep				d hydrology must be present,
5 cm Mucky Peat or Peat (	S3)					unless	disturbed or problematic.
strictive Layer (if observed) Type: Depth (inches):					Н	lydric Soil Preser	nt? Yes No X
Туре:					Н	lydric Soil Preser	nt? Yes No X
Type: Depth (inches):					H	lydric Soil Preser	nt? Yes No X
Type: Depth (inches): narks:					H	lydric Soil Preser	nt? Yes No X
Type: Depth (inches): narks:  DROLOGY		uired; check a	ll that apply)		H		nt? Yes No X
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators:			ll that apply) -Stained Leaves	(B9)	H	Secondary Inc	
Type:  Depth (inches):  narks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum		Water		(B9)	H	Secondary Inc	dicators (minimum of two requi
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1)		Water- Aquati	-Stained Leaves		H	Secondary Inc Surface So Drainage P	dicators (minimum of two requinul Cracks (B6)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water- Aquati True A	-Stained Leaves c Fauna (B13)	14)	H	Secondary Inc Surface So Drainage P	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water- Aquati True A Hydro	-Stained Leaves c Fauna (B13) Aquatic Plants (B	114) r (C1)		Secondary Inc Surface So Drainage P Dry-Season Crayfish Bu	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		— Water- Aquati — True A — Hydrog — Oxidiz	Stained Leaves c Fauna (B13) equatic Plants (B gen Sulfide Odo	14) r (C1) s on Living		Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requinil Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water- Aquati True A Hydro Oxidiz Preser	-Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odo ed Rhizosphere	i14) r (C1) s on Living lron (C4)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches): narks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water- Aquati True A Hydroi Oxidiz Presei Recen	Stained Leaves c Fauna (B13) quatic Plants (B gen Sulfide Odo ed Rhizosphere nce of Reduced	i14) r (C1) s on Living Iron (C4) in Tilled Sc	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one is req	Water- Aquati True A Hydrog Oxidiz Preseg Recen Thin M	Stained Leaves c Fauna (B13) quatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced t Iron Reduction	r (C1) s on Living Iron (C4) in Tilled Sc	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two required il Cracks (B6) satterns (B10) an Water Table (C2) surrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	of one is req	— Water- Aquati — True A Hydrog Oxidiz — Presei — Recen — Thin M Gauge	Stained Leaves c Fauna (B13) equatic Plants (Bgen Sulfide Odored Rhizospheres are of Reduced t Iron Reduction fuck Surface (C7	r (C1) s on Living Iron (C4) in Tilled Sc 7)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two required il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is req	— Water- Aquati — True A Hydrog Oxidiz — Presei — Recen — Thin M Gauge	Stained Leaves c Fauna (B13) Aquatic Plants (Bgen Sulfide Odored Rhizospherence of Reduced It Iron Reduction fluck Surface (C7) ar Well Data (D	r (C1) s on Living Iron (C4) in Tilled Sc 7)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two require il Cracks (B6) reatterns (B10) reatterns (C2) reacter (C8) visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is req I Imagery (B ve Surface (I	— Water- — Aquati — True A — Hydrog — Oxidiz — Presei — Recen — Thin M — Gauge — B8) — Other	Stained Leaves c Fauna (B13) Aquatic Plants (Bgen Sulfide Odored Rhizospheres of Reduced to Iron Reduction fluck Surface (C7) e or Well Data (Explain in Remarks)	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) latterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca d Observations: face Water Present?	of one is req	Water- Aquati True A Hydrog Oxidiz Preset Recen Thin M Gay Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced t Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains)	r (C1) s on Living Iron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) latterns (B10) in Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca d Observations: face Water Present?  Yer Table Present?	of one is req	Water- Aquati True A Hydrog Oxidiz Preser Recen Thin N Gauge B8) Other  No X No X	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc. Surface So Drainage P Dry-Season Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water- Aquati True A Hydrog Oxidiz Preset Recen Thin M Gay Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced t Iron Reduction fluck Surface (C7 e or Well Data (D (Explain in Remains)	r (C1) s on Living lron (C4) in Tilled Sc 7) 99) arks)	Roots (C3)	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water-   Aquati   True A   Hydroi   Oxidiz   Preser   Recen   Thin M   Gauge   B8)   Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction Muck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches Depth (inches	r (C1) s on Living lron (C4) in Tilled So 7) 99) arks)	Roots (C3) pils (C6)  Wetland	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two required il Cracks (B6) latterns (B10) latterns (B10) latterns (C2) lurrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) loc Position (D2) lat Test (D5)
Type: Depth (inches): Depth (i	of one is req	Water-   Aquati   True A   Hydroi   Oxidiz   Preser   Recen   Thin M   Gauge   B8)   Other	Stained Leaves c Fauna (B13) Aquatic Plants (B gen Sulfide Odor ed Rhizospheres nce of Reduced at Iron Reduction Muck Surface (C7 e or Well Data (D (Explain in Remains Depth (inches Depth (inches	r (C1) s on Living lron (C4) in Tilled So 7) 99) arks)	Roots (C3) pils (C6)  Wetland	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	dicators (minimum of two requir il Cracks (B6) atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)

Project/Site: Winnebago Tribe Bro	adband Connectivity Pr	oject City/Co	ounty: Thur	ston	Sampling D	Date: 7/19/2023	3
Applicant/Owner: Winnebago	Tribe of Nebraska			State:	<b>NE</b> Sampling P	Point: 30	
Investigator(s): K. Sherman, C.	. Booth, W. Jewell (Ols	son)		Sec	ction, Township, Range	e: S12 T26N R9	E
Landform (hillslope, terrace, etc.):	Field	Local rel	lief (concav	e, convex, non	ne): None		
Slope (%): <b>1-2</b> Lat:	42.232813	Long:		96.351436	Datum:	NAD83	
Soil Map Unit Name: 7880—Onaw	/a silty clay, occasiona	lly flooded			NWI classification:	Riverine	
Are climatic / hydrologic conditions	on the site typical for this	s time of year?	Yes	No X	(If no, explain in Ren	narks)	
Are Vegetation $X$ , Soil , o	or Hydrology sign	nificantly disturbed	d? Ar	e "Normal Circ	 cumstances" present? \	Yes X No	
Are Vegetation , Soil , o	or Hydrology natu	urally problematic	:? (If	needed, expla	ain any answers in Rem	narks.)	
SUMMARY OF FINDINGS - A			`				
Hydrophytic Vegetation Present?	Yes - No		T				
Hydric Soil Present?	Yes No	o X	la the San	-alad Araa			I
Wetland Hydrology Present?	Yes No		within a W	npled Area Vetland?	Yes	No X	ŀ
Remarks:							<del></del>
SP 30 is an upland area within an a respectively; however, the area lack due to farming practices; however, the absence of farming practices. P not typical at this site due to recent	ks a defined bed and ba with the lack of hydric so l'anted corn is present at	nk and OHWM ar oil and sufficient w	nd is not a v vetland hydr	wetland or strea	am channel. Vegetatior ikely hydrophytic vegeta	n is not present at this ation would be prese	is SP ent in
VEGETATION - Use scienti	ific names of plant	ls.					
	Absolute		Indicator		Test worksheet:		
Tree Stratum (Plot size: 30'	' % Cover	Species?	Status		ominant Species	2	(1)
1.				I hat Are Obl	., FACW, or FAC:	0	(A)
3.				Total Number	of Dominant		ļ
4.		<del></del>		Total Number Species Acros		0	(B)
5.				Op00100 / 10. 55	33 Ali Olidia.		(0)
o	<del></del>	Total Cover	<del></del>	Percent of Do	minant Species		
Sapling/Shrub Stratum (Plot siz			l		., FACW, or FAC:	0	(A/B)
1.					,		` .
2.				Prevalence Ir	ndex worksheet:		
3.				Tota	al % Cover of:	Multiply by:	
4.				OBL species		x 1 =	- -
5.				FACW species	s	x 2 =	_
	=	Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)		l	FACU species	<u> </u>	x 4 =	_
1.				UPL species		x 5 =	
2				Column Totals		(A)	_(B)
3.				P	revalence Index = B/A	=	_
4.				Hydrophy	rtic Vegetation Indicat	ors:	
5					apid Test for Hydrophyt		
6					ominance Test is >50%	· ·	
7					evalence Index is <3.0		
8					orphological Adaptation		ng
9.					n Remarks or on a sep	. '	
10				Proble	ematic Hydrophytic Veç	getation <sup>1</sup> (Explain)	
		Total Cover					
Woody Vine Stratum (Plot size: 1.	30' )				of hydric soil and wetla lless disturbed or proble		е
2.				Hydrophyt			
		= Total Cover		Vegetation Present?	Yes	- No -	
Remarks: (Include photo numbers   PP 30	here or on a separate sh	ieet.)					

Sampling Point: 30

ofile Description: (Describe to the depth of Depth Matrix	Red	ox Features			
(inches) Color (moist) %	Color (moist)	% Туре	e <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-30 10YR 3/1 100				Clay	
pe: C=Concentration, D=Depletion, RM=R	educed Matrix, MS=N	lasked Sand G	rains.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil Indicators:				Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sar	ndy Gleyed Mat	rix (S4)	Coast Pra	airie Redox (A16)
Histic Epipedon (A2)	Sar	ndy Redox (S5)		Dark Sur	face (S7)
Black Histic (A3)	Stri	pped Matrix (Se	6)	Iron-Man	ganese Masses (F12)
— Hydrogen Sulfide (A4)	 Loa	my Mucky Min	eral (F1)	Very Sha	llow Dark Surface (TF12)
Stratified Layers (A5)		my Gleyed Ma			rplain in Remarks)
2 cm Muck (A10)	— Dep	oleted Matrix (F	3)	_	
Depleted Below Dark Surface (A11)	Red	dox Dark Surfac	ce (F6)		
Thick Dark Surface (A12)	— Dep	oleted Dark Sur	face (F7)	<sup>3</sup> Indicators of	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		dox Depression			I hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_			unless	disturbed or problematic.
Strictive Layer (if observed): Type: Depth (inches): marks:			ŀ	lydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches):			ŀ	lydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches):			ŀ	lydric Soil Presen	t? Yes No <u>X</u>
Type:  Depth (inches):  marks:			ŀ	lydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches): marks:  /DROLOGY	ired; check all that ap	ply)	ŀ		
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:	ired; check all that ap Water-Stained		ŀ	Secondary Ind	
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requ		Leaves (B9)	ŀ	Secondary Ind Surface Soil	icators (minimum of two requir
Type:  Depth (inches):  marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of one is requ  Surface Water (A1)	Water-Stained	Leaves (B9) (B13)	ŀ	Secondary Ind Surface Soil Drainage Pa	icators (minimum of two requin
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2)	Water-Stained Aquatic Fauna	Leaves (B9) (B13) Plants (B14)	ŀ	Secondary Ind Surface Soil Drainage Pa	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2)
Type: Depth (inches): marks:   **TDROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	Leaves (B9) (B13) Plants (B14)		Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bu	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2)
Type: Depth (inches): marks:  /DROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bu	icators (minimum of two requin I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liv	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish But Saturation V	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveleduced Iron (Celeduction in Tille	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish But Saturation V	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Re	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveduced Iron (C4) eduction in Tille face (C7)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Ro Thin Muck Sur Gauge or Well	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveduced Iron (Caeduction in Tille face (C7) Data (D9)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizo Presence of R Recent Iron Ro Thin Muck Sur Gauge or Well	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveduced Iron (Caeduction in Tille face (C7) Data (D9)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ild Observations:	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveduced Iron (Caeduction in Tille face (C7) Data (D9)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present?  Yes	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur ) Gauge or Well Other (Explain	Leaves (B9) (B13) Plants (B14) ide Odor (C1) perpheres on Liveleduced Iron (Caleduction in Tille face (C7) Data (D9) in Remarks)	ing Roots (C3)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes ter Table Present? Yes	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur ) Gauge or Well Other (Explain  No X Depth No X Depth	Leaves (B9) (B13) Plants (B14) ide Odor (C1) perpheres on Live educed Iron (Caeduction in Tille face (C7) Data (D9) in Remarks)	ing Roots (C3) 4) d Soils (C6)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes ter Table Present? Yes	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur ) Gauge or Well Other (Explain  No X Depth No X Depth	Leaves (B9) (B13) Plants (B14) ide Odor (C1) pospheres on Liveleduced Iron (Creduction in Tille face (C7) Data (D9) in Remarks)  (inches) (inches)	ing Roots (C3) 4) d Soils (C6)	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bui Saturation V Stunted or S Geomorphic FAC-Neutra	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes uration Present? Yes uration Present? Yes	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	Leaves (B9) (B13) Plants (B14) ide Odor (C1) ospheres on Liveduced Iron (Celuction in Tille face (C7) Data (D9) in Remarks)  (inches) (inches) (inches)	ing Roots (C3) 4) d Soils (C6)  Wetland	Secondary Ind Surface Soil Drainage Pa Dry-Season Crayfish Bui Saturation V Stunted or S Geomorphic FAC-Neutra	icators (minimum of two requir I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)

Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Thui	rston	Sampling D	ate: 7/19/202	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: <b>NE</b>	Sampling Po	oint: 31	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (O	lsson)		Sectio	n, Township, Range	: S7 T26N R1	I0E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	re, convex, none):	Concave		
Slope (%): <b>0-2</b> Lat:	42.23521	Long:	-9	96.343208	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa	a silty clay, occasion	nally flooded		11	NWI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for t	his time of year?	Yes	No X (	If no, explain in Rem	narks)	
Are Vegetation X , Soil , or	Hydrology si	gnificantly disturbe	ed? Aı	re "Normal Circum	stances" present? Y	es X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemation	c? (If	needed, explain a	any answers in Rem	arks.)	
SUMMARY OF FINDINGS - A	<i>.</i>						
Hydrophytic Vegetation Present?		No -	T .	•			
Hydric Soil Present?		No X					
Wetland Hydrology Present?		No X	within a V	npled Area	Yes	No X	
Wettarid Trydrology i Tesent:		NO	within a v	vetiana:	165	_ 10	
Remarks:							
SP 31 is an upland area within an ag							
potential wetland. Vegetation is not p							
is unlikely hydrophytic vegetation wo in the vegetation calculations. Climat	•	,	<b>.</b>	•		wever, it is not inclu	Jded
VEGETATION - Use scientif			ide to recen	it fleavy failliaii ev	ents.		
VEGETATION - Ose scientil	Absolute		Indiantas	Dominance Test	t workshoot:		
Tree Stratum (Plot size: 30'	) % Cover	Dominant Species?	Indicator Status	Number of Domir			
1.				That Are OBL, FA	•	0	(A)
2.				,	- ,		( 7
3.				Total Number of	Dominant		
4.			-	Species Across A		0	(B)
5.							` ` ′
		= Total Cover		Percent of Domir	ant Species		
Sapling/Shrub Stratum (Plot size	e: 15' )	-		That Are OBL, F	•	0	(A/B)
1.							' '
2.				Prevalence Inde	x worksheet:		-
3.				Total %	6 Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	-		FACU species		x 4 =	
1.				UPL species		x 5 =	
2.				Column Totals:	0	(A)	(B)
3.				Prev	alence Index = B/A	=	_
4.							
5.					Vegetation Indicate		
6.				· — ·	I Test for Hydrophyti	c Vegetation	
7.					nance Test is >50%		
8.					lence Index is <3.01		
9.					hological Adaptation	\	ting
· ·					temarks or on a sepa atic Hydrophytic Veg	,	
10				— Problema	atic Hydropnytic veg	etation (Explain)	
Woody Vine Stratum (Plot size:	201	= Total Cover		1			
	30' )				hydric soil and wetla s disturbed or proble		be
1					s disturbed or proble	mauc.	
2		<del></del>		Hydrophytic Vegetation			
		= Total Cover		Present?	Yes	No	
Remarks: (Include photo numbers h	ere or on a senarate	sheet )		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
PP 31	cre or on a separate	onect.)					
1							

Sampling Point: 31

Profile Descri Depth	ption: (Describe to Matrix	the depth ne	eded to docu	ment the ind		confirm tl	ne absence of indi	cators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-4	10YR 3/1	95		<del></del>			Clay	
	10YR 4/2	5					Clay	
4-30	10YR 4/2	100					Clay	
							<u></u>	
<sup>1</sup> Type: C=Con	centration, D=Deple	etion, RM=Red	duced Matrix, M	IS=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast P	rairie Redox (A16)
Histic Ep	pipedon (A2)		_	Sandy Red	ox (S5)		Dark Su	rface (S7)
Black His	stic (A3)		_	Stripped Ma	atrix (S6)		Iron-Ma	nganese Masses (F12)
	n Sulfide (A4)		_	Loamy Muc	ky Mineral	(F1)		allow Dark Surface (TF12)
<u> </u>	Layers (A5)			Loamy Gley				Explain in Remarks)
2 cm Mu			_	Depleted M		*	_ `	,
_	d Below Dark Surfac	ce (A11)		_    ' Redox Dark	. ,	F6)		
	ark Surface (A12)	` '		Depleted Da	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
	lucky Mineral (S1)		_	Redox Dep				d hydrology must be present,
	cky Peat or Peat (S	3)	_	<u> </u>	,	,	unless	disturbed or problematic.
							ı	
	yer (if observed):							
Type:								10 V
Depth (inch							Hydric Soil Prese	nt? Yes No X
HYDROLO	GY							
Wetland Hydr	ology Indicators:							
Primary Ind	licators (minimum o	f one is require	ed; check all th	at apply)			Secondary In	dicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Leaves	(B9)		Surface So	oil Cracks (B6)
High Wa	ter Table (A2)		Aquatic Fa	auna (B13)			— Drainage F	Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plants (B	14)		Dry-Seaso	n Water Table (C2)
Water M	arks (B1)		Hydrogen	Sulfide Odor	r (C1)		Crayfish B	urrows (C8)
Sedimen	nt Deposits (B2)		Oxidized F	Rhizospheres	s on Living	Roots (C	3) Saturation	Visible on Aerial Imagery (C9)
_	oosits (B3)		Presence	of Reduced	Iron (C4)		Stunted or	Stressed Plants (D1)
Algal Ma	it or Crust (B4)		Recent Iro	n Reduction	in Tilled So	oils (C6)		ic Position (D2)
	osits (B5)			Surface (C7		,		al Test (D5)
Inundation	on Visible on Aerial	Imagery (B7)		Well Data (D				. ,
Sparsely	Vegetated Concav	e Surface (B8)	Other (Ex	olain in Rema	arks)			
ield Observa	tions:		_					
Surface Water		, NI	n X n	enth (inches	١			
Surrace vvater Water Table Pi				epth (inches) epth (inches)				
Saturation Pre				epth (inches) epth (inches)		Watlan	d Hydrology Prese	ent? Yes No X
includes capill		, IN	<u> </u>	opui (iiiolies	<i></i>	veciali	a riyarology Fiese	163 NO X
, ,			ring well periol	nhotos prev	ious inspe	ctions), if	available:	
Describe Reco	rded Data (stream (	gauge, monito	IIIIU Weli aeliai					
Describe Reco	orded Data (stream (	gauge, monito	illig well, aerial	priotoo, pro	nodo mopo	,,		
Describe Reco	orded Data (stream (	gauge, monito	rilig well, aerial	priotos, prov				
	irded Data (stream (	gauge, monito	ning well, aerial	priotos, prov				

Project/Site: Winnebago Tribe Broa	dband Connectivity Project	City/County: 1	Thurston	Sampling Date	7/19/2023	
Applicant/Owner: Winnebago To	ribe of Nebraska		State: NE	- Sampling Point	32	
Investigator(s): K. Sherman, C. I	Booth, W. Jewell (Olsson)		Section	, Township, Range:	S7 T26N R10E	
Landform (hillslope, terrace, etc.):	Field	Local relief (cor	ncave, convex, none):	None		
Slope (%): <b>1-2</b> Lat:	42.238448	Long:	-96.342224	Datum:	NAD83	
Soil Map Unit Name: <b>7880—Onawa</b>	silty clay, occasionally flo	oded	N <sup>i</sup>	WI classification:	None	
Are climatic / hydrologic conditions or	n the site typical for this time	of year? Yes	No X (If	no, explain in Remark	(s)	
Are Vegetation $X$ , Soil , or	Hydrology significan	tly disturbed?	Are "Normal Circums	tances" present? Yes	X No	
Are Vegetation , Soil , or	Hydrology naturally	problematic?	(If needed, explain ar	ny answers in Remark	s.)	
SUMMARY OF FINDINGS - At	tach site map showing	g sampling poi	nt locations, trans	ects, important fe	atures, etc.	
Hydrophytic Vegetation Present?	Yes - No -					
Hydric Soil Present?	Yes No X	( le the	Sampled Area			
Wetland Hydrology Present?	Yes No X		a Wetland?	Yes	No X	
Remarks: SP 32 is an upland area within an ag potential wetland. Vegetation is not p is unlikely hydrophytic vegetation wo in the vegetation calculations. Climati	resent at this SP due to farm uld be present in the absence	ning practices; how e of farming practic	ever, with the lack of hy ses. Planted corn is pre	dric soil and sufficient sent at this SP; howev	t wetland hydrology,	, it
VEGETATION - Use scientif		it tills site due to re	cent neavy familian eve	1113.		
	•	ninant Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'		ecies? Status	Number of Domina	ant Species		
1			That Are OBL, FA	CW, or FAC:	0 (A	(A)
2			_			
3			Total Number of D		0 (5	'D\
4			Species Across Al	i Strata:	(E	(B)
5	= Total	L Cover	-			
Sapling/Shrub Stratum (Plot size		. 00101	Percent of Domina That Are OBL, FA	•	0 (A	A/B)
1.				_	(,,	υ,
2.			Prevalence Index	worksheet:		
3.	<del></del>		Total %	Cover of:	Multiply by:	
4.			OBL species	x	1 =	
5.			FACW species	x	2 =	
	= Total	Cover	FAC species	x	3 =	
Herb Stratum (Plot size: 5'	)		FACU species		4 =	
1			UPL species		5 =	
2			Column Totals:	<u> </u>	ν) <u> </u>	(B)
3			Preva	lence Index = B/A =		
4			- Hydrophytic V	/egetation Indicators	 :	
5				Test for Hydrophytic V		
6			·	ance Test is >50%	· ·	
7	<u> </u>		3 - Prevale	ence Index is <3.01		
8			4 - Morpho	ological Adaptations¹ (	Provide supporting	
9				marks or on a separat	•	
10			Problemat	tic Hydrophytic Vegeta	tion¹ (Explain)	
W 1 15 Oc 1 (D) 1 :		l Cover				
Woody Vine Stratum (Plot size:	30' )			dric soil and wetland disturbed or problema		
1	<del></del>		Hydrophytic	disturbed of problema	IIIC.	
2	<del></del>	otal Cover	Vegetation	Yes -	No	
		otal Covel	Present?	162 -	_ No <u>-</u>	
Remarks: (Include photo numbers he	ere or on a separate sheet.)					
PP 32						

Sampling Point: 32

ofile Description: (Describe to the depth Depth Matrix	ı ileeded to docu	Redox Featu			e absence of mai	outo: 0.,
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-30 10YR 3/2 55					Clay	
10YR 4/2 45					Silty Clay	
pe: C=Concentration, D=Depletion, RM=	Reduced Matrix, N	/IS=Masked S	and Grains	S.	<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil Indicators:					Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gley	ed Matrix (	S4)	Coast F	Prairie Redox (A16)
Histic Epipedon (A2)	_	Sandy Redo	ox (S5)		Dark Su	ırface (S7)
Black Histic (A3)	_	Stripped Ma	trix (S6)		Iron-Ma	nganese Masses (F12)
Hydrogen Sulfide (A4)	_	Loamy Mucl	ky Mineral	(F1)	Very Sh	nallow Dark Surface (TF12)
Stratified Layers (A5)	_	Loamy Gley	ed Matrix (	(F2)	Other (I	Explain in Remarks)
2 cm Muck (A10)	_	Depleted Ma			_ `	
Depleted Below Dark Surface (A11)	_	Redox Dark		<del>-</del> 6)		
Thick Dark Surface (A12)	_	Depleted Da	ark Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	_	Redox Depr	essions (F	8)		nd hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_	<del>_</del>			unless	s disturbed or problematic.
strictive Layer (if observed):						
Туре:					lvdric Soil Prese	nt? Yes No X
				l	Hydric Soil Prese	nt? Yes No X
Type: Depth (inches):					Hydric Soil Prese	nt? Yes No X
Type: Depth (inches): marks:				l	Hydric Soil Prese	nt? Yes NoX
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is recommend)	quired; check all th	at apply)				nt? Yes No _X
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:		at apply) ained Leaves	(B9)		Secondary Ir	
Type:  Depth (inches):  marks:   **TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is recommend)	Water-Sta		(B9)		Secondary Ir	dicators (minimum of two requir
Type:  Depth (inches):  marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of one is reconstructions)  Surface Water (A1)	Water-Sta	ained Leaves			Secondary Ir Surface So Drainage I	idicators (minimum of two requir
Type: Depth (inches): marks:   **TOROLOGY** tland Hydrology Indicators: Primary Indicators (minimum of one is recompleted by the content of t	Water-Sta Aquatic F True Aqua	ained Leaves auna (B13)	14)		Secondary Ir Surface So Drainage I	dicators (minimum of two requiroil Cracks (B6) Patterns (B10)
Type:  Depth (inches):  marks:   **TDROLOGY*  tland Hydrology Indicators:  Primary Indicators (minimum of one is reconstructed by the second b	Water-Sta Aquatic F True Aqua Hydrogen	ained Leaves auna (B13) atic Plants (B	14) (C1)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) on Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	— Water-Sta — Aquatic F — True Aqua — Hydrogen — Oxidized	ained Leaves auna (B13) atic Plants (B <sup>2</sup> sulfide Odor	14) (C1) on Living		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation	ndicators (minimum of two requinol Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the s	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres	14) (C1) on Living ron (C4)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ndicators (minimum of two requir bil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the se	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I	(C1) on Living ron (C4) in Tilled So	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction	(C1) c on Living ron (C4) in Tilled Sc )	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironic Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is rec Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	— Water-Sta — Aquatic F — True Aqua — Hydrogen — Oxidized — Presence — Recent Iru — Thin Mucl	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7	(C1) con Living ron (C4) in Tilled Sc )	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironic Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	— Water-Sta — Aquatic F — True Aqua — Hydrogen — Oxidized — Presence — Recent Iru — Thin Mucl	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (D)	(C1) con Living ron (C4) in Tilled Sc )	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Basel Sparsely Vegetated Concave Surface (B1) Ind Observations:	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl 37) Gauge or Other (Ex	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (Di plain in Rema	14) (C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Indicator Crust (B4) In	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 37) Gauge or Other (Ex	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (Di plain in Rema	(C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	dicators (minimum of two requironil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Basel Sparsely Vegetated Concave Surface (B1) Ind Observations:	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl 37) Gauge or Other (Ex No X C	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (Di plain in Rema	(C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph	edicators (minimum of two required bil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) on Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Based of the Sparsely Vegetated Concave Surface (Based Observations: face Water Present?  Table Present?  Toronto Visible on Aerial Imagery (Based Observations: face Water Present?  Yes  Table Present?	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl 37) Gauge or Other (Ex No X C	ained Leaves auna (B13) atic Plants (B' Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (Di plain in Rema	(C1) con Living ron (C4) in Tilled Sc ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	edicators (minimum of two required bil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) on Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the se	Water-Sta	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (D) plain in Rema Depth (inches) pepth (inches)	14) (C1) on Living ron (C4) in Tilled So ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	edicators (minimum of two required bil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) of Stressed Plants (D1) of Position (D2) ral Test (D5)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the second by the s	Water-Sta	ained Leaves auna (B13) atic Plants (B Sulfide Odor Rhizospheres of Reduced I on Reduction k Surface (C7 Well Data (D) plain in Rema Depth (inches) pepth (inches)	14) (C1) on Living ron (C4) in Tilled So ) 9) arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	edicators (minimum of two required bil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) of Stressed Plants (D1) of Position (D2) ral Test (D5)

Project/Site: Winnebago Tribe Broad	band Connectivity	Project City/Co	ounty: Thu	rston	Sampling Da	ate: 7/19/202	23
Applicant/Owner: Winnebago Tri	be of Nebraska			State: <b>NE</b>	Sampling Po	int: <b>33</b>	
Investigator(s): K. Sherman, C. B	ooth, W. Jewell (O	Isson)		Section	, Township, Range:	S6 T26N R1	0E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	ve, convex, none):	Concave		
Slope (%): 1-2 Lat:	42.248481	Long:		-96.34523	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa s	silty clay, occasion	nally flooded		N\	WI classification:	None	
Are climatic / hydrologic conditions on	the site typical for t	his time of year?	Yes	No X (If	no, explain in Rema	arks)	
Are Vegetation X , Soil , or H	lydrology si	gnificantly disturbe	ed? A	re "Normal Circums	tances" present? Ye	es X No	
	lydrology na	aturally problemati	c? (l:	f needed. explain ar	ny answers in Rema	ırks.)	
SUMMARY OF FINDINGS - Att	, , <u> </u>	, .	•				
Hydrophytic Vegetation Present?	-	No X	T				
Hydric Soil Present?	<del></del>	No					
*		<del></del>	Is the Sar within a V	mpled Area	Vaa	No X	
Wetland Hydrology Present?	Yes	No X	within a v	vetiano?	Yes	No X	
Remarks:							
SP 33 is an upland area located withir	n an agricultural field	d in Staging Area E	E. This area	was identified durin	ng the WETS Tables	analysis as a pot	ential
wetland. Although this area contains h							
is present at this SP; however, it is not	included in the veg	getation calculation	s. Climatic	conditions are not ty	pical at this site due	to recent heavy r	rainfall
events.  VEGETATION - Use scientific	c names of nla	nte					
VEGETATION - Ose scientilin	Absolute		Indicator	Dominance Test	worksheet:		
<u>Tree Stratum</u> (Plot size: 30'	) % Cover	Species?	Status	Number of Domina			
1.	_′			That Are OBL, FA	•	0	(A)
2.			-				
3.				Total Number of D	ominant		
4.				Species Across All	l Strata:	1	(B)
5.		<u> </u>					
		= Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size:	15' )	_		That Are OBL, FAG	CW, or FAC:	0	(A/B)
1.							
2.				Prevalence Index	worksheet:		
3.				Total %	Cover of:	Multiply by:	
4.				OBL species		x 1 =	
5.				FACW species		x 2 =	
		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	
Amaranthus retroflexus	3	X	FACU	UPL species		x 5 =	
2				Column Totals:	0	(A)	(B)
3.				Preval	lence Index = B/A =		_
4.				Lludua mbudia M	lamatatian Indiaata		
5.					egetation Indicato		
6.		<u> </u>		l — ·	Test for Hydrophytic	vegetation	
7.					ance Test is >50%		
8.				l —	ence Index is <3.01	1 /Di-l	4!
9.					ological Adaptations marks or on a sepa	\	ung
10.					ic Hydrophytic Vege	•	
10.		= Total Cover		_	orrydropriydd Yogd	ration (Explain)	
Woody Vine Stratum (Plot size:	30'	- Total Covel		<sup>1</sup> Indicators of by	/dric soil and wetlan	d bydrology must	ho
1.					disturbed or problei		be
2				Hydrophytic			
Z		= Total Cover		Vegetation	Yes	No X	
		- Total Cover		Present?	163		
Remarks: (Include photo numbers he	re or on a separate	sheet.)					
PP 33	·	,					
İ							

Sampling Point: 33

ofile Description: (Describe to the Depth Matrix		Redox Feat	tures			
	% Color (r	noist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6 10YR 4/2 9	95 7.5YR	4/6 5	С	M	Silty Loam	
6-30 10YR 4/2 9	90 7.5YR	4/6 10	С	М	Silty Loam	
pe: C=Concentration, D=Depletion	, RM=Reduced M	atrix, MS=Masked	Sand Grain	S.		re Lining, M=Matrix
Hydric Soil Indicators:		0 1 0	1.84 ( )	(0.4)		Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			yed Matrix (	(S4)		airie Redox (A16)
Histic Epipedon (A2)		Sandy Red			— Dark Surf	
Black Histic (A3)		Stripped M	` '			ganese Masses (F12)
Hydrogen Sulfide (A4)			cky Mineral	. ,		llow Dark Surface (TF12)
Stratified Layers (A5)			eyed Matrix	(F2)	Other (Ex	plain in Remarks)
2 cm Muck (A10)	44)	X Depleted N		FC)		
Depleted Below Dark Surface (A	.11)		rk Surface (l	,	31	
Thick Dark Surface (A12)			Dark Surface			of hydrophytic vegetation and hydrology must be present,
Sandy Mucky Mineral (S1)		Redox Dep	oressions (F	-8)		disturbed or problematic.
5 cm Mucky Peat or Peat (S3)						
Type: Depth (inches):		<u>-</u>			Hydric Soil Present	1? Yes <u>X</u> No
Strictive Layer (if observed): Type: Depth (inches): marks:		_			Hydric Soil Present	t? Yes <u>X</u> No
Type: Depth (inches):					Hydric Soil Present	1? Yes <u>X</u> No
Type: Depth (inches): marks:					Hydric Soil Present	1? Yes <u>X</u> No
Type: Depth (inches): marks:  /DROLOGY	e is required; chec	k all that apply)				
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators:		k all that apply) ter-Stained Leaves	s (B9)		Secondary Indi	
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one	Wa		s (B9)		Secondary Indi	icators (minimum of two requi
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	Wa Aqu	ter-Stained Leaves			Secondary Indi Surface Soil Drainage Pa	icators (minimum of two requi Cracks (B6)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	Wa Aqı Tru	ter-Stained Leaves uatic Fauna (B13)	314)		Secondary Indi Surface Soil Drainage Pa	icators (minimum of two requir Cracks (B6) htterns (B10) Water Table (C2)
Type:  Depth (inches):  marks:   **TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1)  High Water Table (A2)  Saturation (A3)	Wa Aqu Tru Hyd	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (B	314) or (C1)		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur	icators (minimum of two requir Cracks (B6) htterns (B10) Water Table (C2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Wa Aqu Tru Hyo Oxi	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd	314) or (C1) es on Living		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bui Saturation V	icators (minimum of two requin Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Wa Aqu Tru Hyo Oxi Pre	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odo dized Rhizosphere	B14) or (C1) es on Living I Iron (C4)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	icators (minimum of two requin Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) l'isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Wa Aqı Tru Hyo Oxi Pre Reo	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere ssence of Reduced	B14) or (C1) es on Living Iron (C4) on in Tilled S	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	icators (minimum of two requir Cracks (B6) atterns (B10) Water Table (C2) crows (C8) fisible on Aerial Imagery (C9) stressed Plants (D1)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	— Wa — Aqu — Tru — Hyo — Oxi — Pre — Reo — Thi	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odo dized Rhizosphere esence of Reduced cent Iron Reduction	B14) or (C1) es on Living I Iron (C4) on in Tilled S	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) Trows (C8) Tisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Wa Aqu Tru Oxi Pre Reu Thi Gary (B7)Gar	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C	B14) or (C1) es on Living Iron (C4) n in Tilled S E7)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) Trows (C8) Tisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  //DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su	Wa Aqu Tru Oxi Pre Reu Thi Gary (B7)Gar	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C	B14) or (C1) es on Living Iron (C4) n in Tilled S E7)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) Trows (C8) Tisible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image	Wa Aqu Tru Oxi Pre Reu Thi Gary (B7)Gar	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C	B14) or (C1) es on Living I fron (C4) on in Tilled S E7) D9) narks)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requir Cracks (B6) atterns (B10) Water Table (C2) crows (C8) fisible on Aerial Imagery (C9) stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su	— Wa — Aqu — Tru — Hyo — Oxi — Pre — Ree — Thi gery (B7) — Gai	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C uge or Well Data (I leer (Explain in Rem	B14) or (C1) es on Living I Iron (C4) in in Tilled S E7) D9) harks)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two requir Cracks (B6) atterns (B10) Water Table (C2) crows (C8) fisible on Aerial Imagery (C9) stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Suld Observations: face Water Present?  Yes	WaAquTru	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C uge or Well Data (I ner (Explain in Rem	B14) or (C1) es on Living I Iron (C4) in in Tilled S in in Tilled	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) crows (C8) disible on Aerial Imagery (C9) attressed Plants (D1) attressed Plants (D1) attressed Plants (D5) attressed Plants (D5)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su Id Observations: face Water Present? Yes  Table Present? Yes	WaAquTruHyuOxiPreThiGauOthNoX	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C uge or Well Data (I ner (Explain in Rem  Depth (inches	B14) or (C1) es on Living I Iron (C4) in in Tilled S in in Tilled	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) crows (C8) disible on Aerial Imagery (C9) attressed Plants (D1) attressed Plants (D1) attressed Plants (D5) attressed Plants (D5)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surlated Water Present?  Id Observations:  face Water Present?  Yes  Surration Present?  Yes  Surration Present?  Yes	Wa   Aqu	ter-Stained Leaves uatic Fauna (B13) e Aquatic Plants (I drogen Sulfide Odd dized Rhizosphere esence of Reduced cent Iron Reduction n Muck Surface (C uge or Well Data (I uer (Explain in Rem  Depth (inches  Depth (inches	B14) or (C1) es on Living I Iron (C4) n in Tilled S 67) D9) narks) s)	Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutra	icators (minimum of two require Cracks (B6) atterns (B10) Water Table (C2) crows (C8) disible on Aerial Imagery (C9) attressed Plants (D1) attressed Plants (D1) attressed Plants (D5) attressed Plants (D5)

Applicant/Ourset   Winnebago Tribe of Nebrasks   Sales   La   Sampling Point   Sales   Tribute   The Procession   Sales   La   Sampling Point   Sales   Tribute   The Procession   Sales   Lacost Policy   Concession   Sales   Tribute   The Procession   Sales   Tribute   Tribu	Project/Site: Winnebago Tribe Broadband Connectivi	ty Project City/Co	ounty: Woodb	oury	Sampling D	ate: 7/19/202	23
Landtom (fillelope, terrace, sta:): Field Local relief (concave, convex, nore): Concave Steps (Sope (%) 2.3 tot 1.42.23321 tong: 9-6.328659 Datum: NAD83 Soft Map Unit Name: 1524—Morconick fine sandy loam, 0 to 2 percent stopes, occasionally flooded NW1 classification: None Are climatic / hydrologic conditions on the site bytical for this time of year? Yes No X (if no, explain in Remarks).  Are climatic / hydrologic conditions on the site bytical for this time of year? Yes No X (if no, explain in Remarks).  SUMMARY OF FINDMS - Attach site map showing sampling point locations, transects, important features, etc. Hydrothysis (Yes No X (if needed, explain any answers in Remarks.)  SUMMARY OF FINDMS - Attach site map showing sampling point locations, transects, important features, etc. Hydrothysis (Yes No X (if needed, explain any answers in Remarks.)  SUMMARY OF FINDMS - Attach site map showing sampling point locations, transects, important features, etc. Hydrothysis (Yes No X (if needed, explain any answers in Remarks.)  SUBMARY OF FINDMS - Attach site map showing sampling point locations, transects, important features, etc. Hydrothysis (Yes No X (if needed, explain any answers in Remarks.)  Submitted (If needed, explain any answers in Remarks.)  SUBMARY OF FINDMS - Attach site map showing sampling point locations, transects, important features, etc. Hydrothysis (Yes No X (if needed, explain any answers in Remarks.)  Sp 3d is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential state of the stage of the s	Applicant/Owner: Winnebago Tribe of Nebraska			State: IA	Sampling Po	oint: 34	
Slope (%) 2.3   Lat	Investigator(s): K. Sherman, C. Booth, W. Jewell	(Olsson)		Section	, Township, Range	: S33 T86N R4	17W
Soil Map Unit Name: 1824—Morconick fine sandy loam, 0 to 2 percent slopes, occasionally flooded NWI classification: None Are climatic / hydrologic conditions on the site typical for his time of year? Yes No X (If no, explain in Remarks) Are Vegetation X, Soil or Hydrology significantly disturbed? Are Normal Circumstances' present? Yes X, No Ave Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydric Soil Present? Yes X, No Welland Hydrology Present? Yes X, No Welland Hydrology Present? Yes X, No X, Within a Wetland? Yes No X  Remarks: Separation Present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation is not present at this SP due to farming practices. Planet common the present in the absence of farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation could be present in the absence of farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation. Climatic conditions are not typical at this sate due to recent heavy trainfail events.  **Total Number of Dominant Species** That Are OBL, FACW, or FAC: 0 (A)  **Species** **Species** **Total Number of Dominant Species** That Are OBL, FACW, or FAC: 0 (A)  **Species** **Total Number of Dominant Species** **Total Number of Do	Landform (hillslope, terrace, etc.): Field	Local re	lief (concave,	convex, none):	Concave		
Are Vegetation X , Soil , or Hydrologic sonditions on the site typical for this time of year? Yes	Slope (%): 2-3 Lat: 42.223291	Long:	-96.	320559	Datum:	NAD83	
Are Vegetation X Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation X Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINIDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydricophytic Vegetation Present? Yes No No X is the Sampled Area within a Wetland Hydrology Present? Yes X No X is the Sampled Area within a Wetland? Yes No X w	Soil Map Unit Name: 1524—Morconick fine sandy loa	m, 0 to 2 percent slop	es, occasiona	Ily flooded N	VI classification:	None	
Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINIDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydric Soil Present? Yes X No	Are climatic / hydrologic conditions on the site typical for	or this time of year?	Yes	No X (If	no, explain in Rem	ıarks)	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present?	Are Vegetation X , Soil , or Hydrology	significantly disturbe	d? Are '	'Normal Circums	tances" present? Y	es X No	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?	Are Vegetation , Soil , or Hydrology	<ul> <li>naturally problemation</li> </ul>	c? (If ne	eeded, explain ar	ny answers in Rema	arks.)	
Hydric Soil Present?  Wetland Hydrology Present?  Yes No X  No X  Is the Sampled Area within a Wetland?  Yes No X  Wetland Hydrology Present?  Yes No X  Wetland Hydrology Present?  Yes No X  No X  Wetland Hydrology Present?  Yes No X  Wetland Hydrology Present?  Yes No X  Wetland Hydrology Present?  Yes No X  No X  Wetland Hydrology Present?  Yes No X  No X  Wetland Hydrology Present?  Yes No X  No X  No X  Wetland?  Yes No X  No X   No X  Wetland?  Yes No X   No X  Wetland?  Yes No X   No X   Wetland?  Yes No X   No X   No X   Wetland?  Yes No X   No X   Wetland?  Yes No X   No X   No X   Wetland?  Yes No X    No X    No X    No X    No X   Wetland?  Yes No X    No X    No X    No X    No X   No X     No X    No X     No X    No X    No X    No X    No X    No X    No X	SUMMARY OF FINDINGS - Attach site map	showing sampling					
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks: SP 34 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present at this SP due to farming practices. Planted come is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this size due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')	Hydrophytic Vegetation Present? Yes -	No -					
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks:  SP 34 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted com is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not hydrolad stills size due to recent heavy rainfall events.  VECETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')	Hydric Soil Present? Yes X	No No	lo the Comp	lad Araa			
Remarks: SP 34 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')    Scover Species? Status    Mominance Tost worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)  Prevalence Index worksheet: Total Scover of: Multiply by:  OBL species	^	No X	_		Yes	No X	
SP 24 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation vould be present in the absence of farming practices. Planed corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30')							
wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Planted corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this site due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  VEGETATION - Use of plants.  VEGET							
vegetation would be present in the absence of farming practices. Planted corn is present at this SP; however, it is not included in the vegetation calculations. Climatic conditions are not typical at this side due to recent heavy rainfall events.  VEGETATION - Use scientific names of plants.    Tree Stratum (Plot size: 30' )   Absolute   Spacies?   Status   Spacies?							
VEGETATION - Use scientific names of plants.    Tree Stratum (Plot size: 30' )	,	- ·					луцс
Tree Stratum (Plot size: 30' )		•	•		or, it is not moladed	in the vegetation	
Number of Dominant Species   That Are OBL, FACW, or FAC:   0   (A)	<b>VEGETATION</b> - Use scientific names of p	lants.					
That Are OBL, FACW, or FAC: 0 (A)  2		te Dominant	Indicator De	ominance Test v	worksheet:		
2		er Species?			•		
Species Across All Strata: 0 (B)	1			nat Are OBL, FA	CW, or FAC:	0	(A)
Species Across All Strata: 0 (B)	2		_				
Sapling/Shrub Stratum	J					0	(B)
Sapling/Shrub Stratum	5		——   °	7 (10 000 7 (11	olidia.		(D)
Sapling/Shrub Stratum   (Plot size:15" )   That Are OBL, FACW, or FAC:0	·	= Total Cover		ercent of Domina	ent Species		
Prevalence Index worksheet:   Total % Cover of:	Sapling/Shrub Stratum (Plot size: 15' )	<u> </u>			•	0	(A/B)
Total % Cover of: Multiply by:	1.						, ,
4.       OBL species       x 1 =         5.       = Total Cover       FACW species       x 2 =         FACU species       x 3 =       FACU species       x 4 =         UPL species       x 5 =       Column Totals:       0 (A) (B)         Prevalence Index = B/A =       Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation         5.       1 - Rapid Test for Hydrophytic Vegetation       2 - Dominance Test is >50%         3 - Prevalence Index is ≤ 3.0¹       4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)         9.       4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)         Problematic Hydrophytic Vegetation ¹ (Explain)         1 - Rapid Test for Hydrophytic Vegetation ' (Provide supporting data in Remarks or on a separate sheet)         Problematic Hydrophytic Vegetation ' (Explain)         1 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)         Problematic Hydrophytic Vegetation ' (Explain)         1 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)         Problematic Hydrophytic Vegetation ' (Explain)         1 - Rapid Test for Hydrophytic Vegetation ' (Provide supporting of hydrophytic Vegetation ' (Explain)         1 - Rapid Test for Hydrophytic Vegetation ' (Explain)         2 - Dominance Test is >	2.		Pı	revalence Index	worksheet:		
5.       = Total Cover       FACW species       x 2 = FAC species         Herb Stratum       (Plot size: 5' )       1         1.       UPL species       x 4 = UPL species         UPL species       x 5 = Column Totals: 0 (A) (B)         Prevalence Index = B/A =       Hydrophytic Vegetation Indicators:         5.       1 - Rapid Test for Hydrophytic Vegetation         6.       2 - Dominance Test is >50%         3 - Prevalence Index is ≤3.0°       3 - Prevalence Index is ≤3.0°         4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)       Problematic Hydrophytic Vegetation¹ (Explain)         10.       = Total Cover         Woody Vine Stratum       (Plot size: 30°)       1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         Problematic Hydrophytic Vegetation Present?       Vegetation Present?	3.			Total %	Cover of:	Multiply by:	
Herb Stratum (Plot size: 5' )	4.		0	BL species		x 1 =	
Herb Stratum (Plot size: 5' )	5	<u> </u>	F	ACW species		x 2 =	
1.       UPL species       x 5 =         2.       Column Totals:       0 (A) (B)         3.       Prevalence Index = B/A =         4.       Hydrophytic Vegetation Indicators:         5.       1 - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%       3 - Prevalence Index is ≤3.0¹         4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)       Problematic Hydrophytic Vegetation¹ (Explain)         1.       Problematic Hydrophytic vegetation¹ (Explain)         4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)       Problematic Hydrophytic vegetation¹ (Explain)         4 - Morphytic vegetation numbers be disturbed or problematic.       Problematic Hydrophytic vegetation numbers disturbed or problematic.         4 - Morphytic vegetation numbers here or on a separate sheet.)       Problematic Hydrophytic vegetation numbers here or on a separate sheet.)		= Total Cover					
2.	Herb Stratum (Plot size: 5' )			•			_
3.	1			•		-	<b>—</b> (5)
4. 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size:	2					. ,	— <sup>(B)</sup>
Hydrophytic Vegetation Indicators:   1 - Rapid Test for Hydrophytic Vegetation     2 - Dominance Test is >50%     3 - Prevalence Index is ≤3.0¹     4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)     Problematic Hydrophytic Vegetation ¹ (Explain)     Moody Vine Stratum (Plot size: 30' )     1.				Preval	lence Index = B/A =	-	_
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)    Woody Vine Stratum				Hydrophytic V	egetation Indicate	ors:	
7				1 - Rapid <sup>-</sup>	Test for Hydrophytic	c Vegetation	
8				2 - Domina	ance Test is >50%		
9.				3 - Prevale	ence Index is <3.01		
Problematic Hydrophytic Vegetation (Explain)  Total Cover  Woody Vine Stratum (Plot size: 30' )  1.				•		\	ting
Total Cover   Stratum (Plot size: 30' )	9				•	,	
Woody Vine Stratum   (Plot size: 30'   )	10	<u> </u>		Problemat	ic Hydrophytic Veg	etation ' (Explain)	
1	Mandy Vine Stratum (Diet size)	= Total Cover		1			
2 = Total Cover	,						be
= Total Cover	1		<b> </b>	•	disturbed or proble	mauc.	
Remarks: (Include photo numbers here or on a separate sheet.)	2				V	NI -	
		= Total Cover		-	res	NO -	
	Remarks: (Include photo numbers here or on a separa	ite sheet.)	1				
	, .	,					

Sampling Point: 34

file Description: (Describe to the Depth Matrix	uepui needed to	Redox Fea				<b></b>
	% Color (	moist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4 10YR 4/2 9	95 7.5YF	R 4/6 5	С	M	Sand	
4-30 10YR 4/3 1	00				Sand	
pe: C=Concentration, D=Depletion	, RM=Reduced M	latrix, MS=Masked	Sand Grain	ıs.	<sup>2</sup> Location: PL=Pc	re Lining, M=Matrix
Hydric Soil Indicators:					Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Gle	eyed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)		X Sandy Re	dox (S5)		Dark Sur	face (S7)
Black Histic (A3)		Stripped N	Matrix (S6)		Iron-Man	ganese Masses (F12)
— Hydrogen Sulfide (A4)		Loamy Mu	ucky Mineral	(F1)	Very Sha	allow Dark Surface (TF12)
Stratified Layers (A5)			eyed Matrix		Other (E	xplain in Remarks)
2 cm Muck (A10)		Depleted	Matrix (F3)		_	
Depleted Below Dark Surface (A	11)	Redox Da	rk Surface (l	F6)		
Thick Dark Surface (A12)		Depleted	Dark Surface	e (F7)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Redox De	pressions (F	<del>-</del> 8)		hydrology must be present,
5 cm Mucky Peat or Peat (S3)					unless	disturbed or problematic.
strictive Layer (if observed): Type:  Depth (inches):  marks:		<u>-</u>		F	lydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (inches): narks:				ŀ	lydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (inches):		_		ŀ	lydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (inches): narks:	e is required; chec	ck all that apply)		<u> </u>	7	it? Yes X No
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators:		ck all that apply)	s (B9)	ŀ	Secondary Inc	
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	W	ater-Stained Leave		ŀ	Secondary Inc	licators (minimum of two requin
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	Wa Aq	ater-Stained Leave uatic Fauna (B13)		<u> </u>	Secondary Inc Surface Soi Drainage P	licators (minimum of two requir I Cracks (B6) atterns (B10)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	Wa Aq Tru	ater-Stained Leave	B14)	<u> </u>	Secondary Inc Surface Soi Drainage P	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	Wa Aq Tru Hy	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants (	B14) or (C1)		Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Wa Aq Tr Hy Ox	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od idized Rhizospher	B14) or (C1) es on Living		Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation	licators (minimum of two requin I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Wa Aq Tru Hy Ox Pro	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od	B14) or (C1) es on Living d Iron (C4)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Wa Aq Tru Hy Ox Pru Re	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od didized Rhizospher esence of Reduced	B14) or (C1) es on Living d Iron (C4) on in Tilled S	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)
Type: Depth (inches): marks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Wa Trr Hy Ox Prr Re Th	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od didized Rhizospher esence of Reduced cent Iron Reductio	B14) or (C1) es on Living d Iron (C4) on in Tilled S	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)
Type: Depth (inches):  marks:  DROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	— Wa — Aq — Tru — Hy — Ox — Pru — Re — Th — Ga	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced scent Iron Reductio in Muck Surface ((	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)
Type: Depth (inches):  narks:  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su	— Wa — Aq — Tru — Hy — Ox — Pru — Re — Th — Ga	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced ecent Iron Reductio in Muck Surface (G	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)
Type: Depth (inches): narks:  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sulted Observations:	— Wa — Aq — Tru — Hy — Ox — Pru — Re — Th — Gerry (B7) — Ga urface (B8) — Oth	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced ecent Iron Reductio in Muck Surface (C auge or Well Data ( ther (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) narks)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) © Position (D2)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su d Observations: face Water Present?  Yes	— Wa — Aq — Tru — Hy — Ox — Pru — Re — Th — Garrace (B8) — Ot	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced cent Iron Reductio in Muck Surface (C auge or Well Data ( her (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) marks)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): narks:  DROLOGY  Itland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Sulted Observations:	— Wa — Aq — Tru — Hy — Ox — Pru — Re — Th — Garrace (B8) — Ot	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced ecent Iron Reductio in Muck Surface (C auge or Well Data ( ther (Explain in Rer	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) marks)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic FAC-Neutra	licators (minimum of two requir I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Su td Observations: face Water Present? Yes	Wa	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od didized Rhizospher esence of Reduced cent Iron Reductio in Muck Surface (C auge or Well Data ( her (Explain in Rer  Depth (inche	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) marks)	Roots (C3)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic	licators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) al Test (D5)
Type: Depth (inches): narks:  DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surial Material Present?  In the Concave Surial Present?  I	Wa	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced cent Iron Reductio in Muck Surface (C auge or Well Data ( ther (Explain in Rer  Depth (inche Depth (inche	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) narks)	Roots (C3) oils (C6)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic FAC-Neutra	licators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) al Test (D5)
Type: Depth (inches):	Wa	ater-Stained Leave uatic Fauna (B13) ue Aquatic Plants ( drogen Sulfide Od cidized Rhizospher esence of Reduced cent Iron Reductio in Muck Surface (C auge or Well Data ( ther (Explain in Rer  Depth (inche Depth (inche	B14) or (C1) es on Living d Iron (C4) on in Tilled S C7) D9) narks)	Roots (C3) oils (C6)	Secondary Inc Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S X Geomorphic FAC-Neutra	licators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) C Position (D2) al Test (D5)

Project/Site: Winnebago Tribe Broadband Connectivity Pro	oject City/Co	unty: Woo	dbury	Sampling Dat	te: <b>7/19/20</b>	23
Applicant/Owner: Winnebago Tribe of Nebraska			State: IA	Sampling Poi	nt: <b>35</b>	
Investigator(s): K. Sherman, C. Booth, W. Jewell (Olss	son)		Section	, Township, Range:	S33 T86N R	47W
Landform (hillslope, terrace, etc.): Field	Local rel	lief (concav	e, convex, none):	Concave		
Slope (%): 2-3 Lat: 42.222516	Long:	-(	96.321502	Datum:	NAD83	
Soil Map Unit Name: 1524—Morconick fine sandy loam,	0 to 2 percent s	lopes, occ	asionally floode N	WI classification:	None	
Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes	No X (If	no, explain in Rema	ırks)	
Are Vegetation X , Soil , or Hydrology sign	ificantly disturbed	d? Aı	e "Normal Circums	tances" present? Ye	s X No	
Are Vegetation , Soil , or Hydrology natu	rally problematic	? (If	needed, explain ar	ny answers in Remar	rks.)	
SUMMARY OF FINDINGS - Attach site map sho	wing samplin					
Hydrophytic Vegetation Present? Yes - No						
Hydric Soil Present? Yes No	$\overline{X}$	la tha Car	mmlad Avaa			
Wetland Hydrology Present? Yes No	<del></del>	within a V	npled Area Vetland?	Yes	No X	
Remarks:						
SP 35 is an upland area located within an agricultural field in wetland. Vegetation is not present at this SP due to farming						iential
unlikely hydrophytic vegetation would be present in the abse						e not
included in the vegetation calculations. Climatic conditions a						
VEGETATION - Use scientific names of plant	s.					
Absolute		ndicator	Dominance Test			
Tree Stratum (Plot size: 30' ) % Cover	Species?	Status	Number of Domina That Are OBL, FA	•	0	<b>(</b>
1			That Are Obl., FA	CW, OI FAC.		(A)
3.			Total Number of D	ominant		
4.			Species Across Al		0	(B)
5.				•		•
=	Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size: 15' )			That Are OBL, FA	•	0	(A/B)
1						
2			Prevalence Index			
3				Cover of:	Multiply by:	_
4			OBL species		x 1 =	_
5			FACW species		x 2 =	_
Herb Stratum (Plot size: 5' )	Total Cover		FAC species FACU species		x 3 = x 4 =	_
1			UPL species		x 5 =	_
2			Column Totals:		(A)	(B)
3.				lence Index = B/A =		(-/
4.				•		
5.				egetation Indicator		
6.			· — ·	Test for Hydrophytic	Vegetation	
7.			<del>-</del>	ance Test is >50%		
8.				ence Index is <3.01	(D : 1	e.
9.				ological Adaptations¹ marks or on a separ		ting
10.				tic Hydrophytic Vege	,	
=	Total Cover		<u> </u>	, , , ,	,	
Woody Vine Stratum (Plot size: 30' ) 1.				ydric soil and wetland disturbed or problen		be
2.			Hydrophytic			
	= Total Cover		Vegetation Present?	Yes	No	•
Remarks: (Include photo numbers here or on a separate sh	eet.)					
PP 35	oot.,					

Sampling Point: 35

file Description: (Describe to the depth Depth Matrix		dox Features		ii uie abseiice o	indicators.)
(inches) Color (moist) %	Color (moist)	% T	ype <sup>1</sup> Lo	Texture	Remarks
0-22 10YR 4/3 100				Sand	
<del></del>					
					<u> </u>
					<u> </u>
pe: C=Concentration, D=Depletion, RM=F	Reduced Matrix, MS=	Masked Sand	d Grains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix
Hydric Soil Indicators:				Indicate	ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sa	andy Gleyed I	Matrix (S4)	Co	ast Prairie Redox (A16)
Histic Epipedon (A2)	Sa	andy Redox (	S5)		rk Surface (S7)
Black Histic (A3)	St	ripped Matrix	(S6)	Iro	n-Manganese Masses (F12)
Hydrogen Sulfide (A4)	— Lo	amy Mucky N	Mineral (F1)		ry Shallow Dark Surface (TF12)
Stratified Layers (A5)		amy Gleyed			her (Explain in Remarks)
2 cm Muck (A10)		epleted Matrix			,
Depleted Below Dark Surface (A11)		edox Dark Su			
Thick Dark Surface (A12)		epleted Dark	` '	<sup>3</sup> India	cators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		edox Depress			vetland hydrology must be present,
5 cm Mucky Peat or Peat (S3)		sp. soc	(. •)	ι	inless disturbed or problematic.
				T	
strictive Layer (if observed):					
Type:					
Type: Depth (inches): marks:				Hydric Soil F	Present? Yes No X
Depth (inches): marks:  //DROLOGY				Hydric Soil F	Present? Yes No X
Depth (inches): marks:  DROLOGY tland Hydrology Indicators:					
Depth (inches):  marks:  /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requ				Second	ary Indicators (minimum of two requir
Depth (inches):  marks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)	Water-Staine	d Leaves (B9	)	SecondSurfa	ary Indicators (minimum of two requince Soil Cracks (B6)
Depth (inches):  marks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested and the second se	Water-Stained Aquatic Faun	d Leaves (B9 a (B13)	)	Second Surfa Drain	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10)
TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)	Water-Stainer Aquatic Faun True Aquatic	d Leaves (B9 a (B13) Plants (B14)		Second Surfa Drain Dry-S	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (C	1)	Second Surfa Drain Dry-5 Crayl	ary Indicators (minimum of two requince Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested by the second of	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Coospheres on	1) Living Roots	Second Surfa Drain Dry-S Crayl (C3) Satur	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Coospheres on	1) Living Roots	Second Surfa Drain Dry-S Crayl (C3) Satur	ary Indicators (minimum of two requince Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested by the second of	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Cospheres on Reduced Iron	1) Living Roots (C4)	Second	ary Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	Water-Stained Aquatic Faunt True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Conspheres on Reduced Iron Reduction in T	1) Living Roots (C4)	Second	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B3)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck Su 7) Gauge or We	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Control of the control of the contr	1) Living Roots (C4)	Second	ary Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck Su 7) Gauge or We	d Leaves (B9 a (B13) Plants (B14) Iffide Odor (Conspheres on Reduced Iron Reduction in Tarface (C7) Il Data (D9)	1) Living Roots (C4) Filled Soils (C	Second   Surfa   Drain   Dry-S   Crayl   (C3)   Saturi   Stunt   Stu	ary Indicators (minimum of two requirece Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B3)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck Su Gauge or We	d Leaves (B9 a (B13) Plants (B14) Iffide Odor (Conspheres on Reduced Iron Reduction in Tarface (C7) Il Data (D9)	1) Living Roots (C4) Filled Soils (C	Second   Surfa   Drain   Dry-S   Crayl   (C3)   Saturi   Stunt   Stu	ary Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B5)  Sparsely Vegetated Concave Surface (B5)	Water-Stainer Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck Su Gauge or We Other (Explain	d Leaves (B9 a (B13) Plants (B14) Iffide Odor (Conspheres on Reduced Iron Reduction in Tarface (C7) Il Data (D9)	1) Living Roots (C4) Filled Soils (C	Second   Surfa   Drain   Dry-S   Crayl   (C3)   Saturi   Stunt   Stu	ary Indicators (minimum of two requirece Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B3)  Sparsely Vegetated Concave Surface (B4)  Id Observations:	Water-Stainer Aquatic Faun: True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck Su 7) Gauge or We 0ther (Explain	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Conspheres on Reduced Iron Reduced Iron Iron Iron (C7) Il Data (D9) In in Remarks	1) Living Roots (C4) Filled Soils (C	Second   Surfa   Drain   Dry-S   Crayl   (C3)   Saturi   Stunt   Stu	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (inches):  marks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B3)  Sparsely Vegetated Concave Surface (B3)  Id Observations:  face Water Present?  Yes	Water-Stainer Aquatic Faun: True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su 7) Gauge or We 38) Other (Explain No X Depti	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Conspheres on Reduced Iron Reduction in Tourface (C7) Il Data (D9) In in Remarks In (inches)	Living Roots (C4) filled Soils (C4)	Second   Surfa   Drain   Dry-S   Crayl   (C3)   Saturi   Stunt   Stu	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) iish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Depth (inches):  marks:  DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Billian Surface (Billian Surf	Water-Stainer Aquatic Faun: True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su 7) Gauge or We 38) Other (Explain No X Depti	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Cospheres on Reduced Iron Reduction in Turface (C7) Il Data (D9) n in Remarks h (inches)	Living Roots (C4) filled Soils (C4)	Second Surfa Drain Dry-S Crayl (C3) Satur Stunt 6) X Geor FAC-	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) iish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B1)  Sparsely Vegetated Concave Surface (B1)  Id Observations:  face Water Present?  Yes  uration Present?  Yes  uration Present?  Yes	Water-Stainer Aquatic Faun. True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain No X Depti No X Depti	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Cospheres on Reduced Iron Reduction in Turface (C7) Il Data (D9) n in Remarks h (inches) h (inches)	Living Roots (C4) Tilled Soils (Cd)	Second Surfa Drain Dry-S Crayl (C3) Satur Stunt Stunt FAC-	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) iish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (Billian Sparsely Vegetated Concave Surface (Billian Spar	Water-Stainer Aquatic Faun. True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain No X Depti No X Depti	d Leaves (B9 a (B13) Plants (B14) Ifide Odor (Cospheres on Reduced Iron Reduction in Turface (C7) Il Data (D9) n in Remarks h (inches) h (inches)	Living Roots (C4) Tilled Soils (Cd)	Second Surfa Drain Dry-S Crayl (C3) Satur Stunt Stunt FAC-	ary Indicators (minimum of two requir ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) iish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

Project/Site: Winnebago Tribe Broadbar	nd Connectivity Project	t City/Cou	unty: Wood	dbury	Sampling Da	ite: 7/19/202	23
Applicant/Owner: Winnebago Tribe	of Nebraska			State: IA	Sampling Poi	int: <b>36</b>	
Investigator(s): K. Sherman, C. Boot	th, W. Jewell (Olsson)	)		Section,	, Township, Range:	S33 T86N R4	17W
Landform (hillslope, terrace, etc.): Fie	eld	Local reli	ef (concave	e, convex, none):	Concave		
Slope (%): 4-5 Lat:	42.221051	Long:	-9	6.321394	Datum:	NAD83	
Soil Map Unit Name: 1524—Morconick f	ine sandy loam, 0 to 2	percent slope	s, occasior	nally flooded NV	VI classification:	None	
Are climatic / hydrologic conditions on the	site typical for this time	e of year?	Yes	No X (If	no, explain in Rema	arks)	
Are Vegetation X , Soil , or Hydi	rology significa	ntly disturbed	? Are	e "Normal Circumst	tances" present? Ye	es X No	
Are Vegetation , Soil , or Hydr	rology naturally	/ problematic?	? (If	needed, explain an	ny answers in Rema	rks.)	
SUMMARY OF FINDINGS - Attac	h site map showin	ng sampling					
Hydrophytic Vegetation Present?	Yes - No	-					
Hydric Soil Present?	Yes No	X	la tha Cam	unlad Araa			
1	Yes No		Is the Sam within a W	-	Yes	No X	
						· <del></del>	
Remarks:							
SP 36 is an upland area within an agricult wetland. Vegetation is not present at this	tural field in Staging Are	ea F. This are	ea was iden	tified during the WE	ETS Tables analysis	s as a potential	
unlikely hydrophytic vegetation would be							e not
included in the vegetation calculations. Cl							
VEGETATION - Use scientific n	names of plants.						
			idiodioi	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover Sp	pecies?		Number of Domina	•	0	(4)
1.				That Are OBL, FAC	JVV, OF FAC:	0	(A)
3.				Total Number of Do	ominant		
4			_	Species Across All		0	(B)
5.				•			(-)
-	= Tota	al Cover		Percent of Domina	nt Species		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FAC	•	0	(A/B)
1.							
2.				Prevalence Index	worksheet:		
3.				Total % (	Cover of:	Multiply by:	_
4				OBL species		x 1 =	
5				FACW species		x 2 =	
	= Tota	al Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)			FACU species		x 4 =	_
1				UPL species		x 5 =	— <sub>(D)</sub>
2				Column Totals:	0	(A)	(B)
3				Preval	ence Index = B/A =		_
4				Hydrophytic V	egetation Indicato	rs:	
5				1 - Rapid T	Test for Hydrophytic	Vegetation	
6				2 - Domina	ance Test is >50%		
7				3 - Prevale	ence Index is ≤3.01		
8					ological Adaptations	\	ting
9					marks or on a separ	,	
10	<del></del>			Problemati	ic Hydrophytic Vege	tation (Explain)	
Woody Vine Stratum (Plot size:	30' ) = lota	al Cover		1			
1.	)				dric soil and wetland disturbed or probler		be
1				Hydrophytic	distarbed or probler	natio.	
Z	<del></del> <del>-</del> -	Total Cover		Vegetation	Yes -	No -	
		, J.C. 00 VEI		Present?	163 -		
Remarks: (Include photo numbers here of	or on a separate sheet.	)					
PP 36							

Sampling Point: 36

Depth	Matrix	eptin needed to doct	<b>iment the ind</b> Redox Featu		confirm th	e absence of ind	icators.)		
(inches) Color (		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-22 10YF	R 4/3 100	_				Sand			
		_							
Type: C=Concentration	, D=Depletion, R	M=Reduced Matrix,	MS=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix		
Hydric Soil Indicator	rs:					Indicators f	or Problematic Hydric Soils <sup>3</sup> :		
Histosol (A1)			Sandy Gley	ed Matrix (	S4)	Coast I	Prairie Redox (A16)		
Histic Epipedon (A	2)	-	Sandy Redo	ox (S5)		— Dark S	urface (S7)		
Black Histic (A3)		-	Stripped Ma	atrix (S6)		Iron-Ma	anganese Masses (F12)		
Hydrogen Sulfide (	A4)	-	—     ' ' Loamy Muc	` '	(F1)	_	hallow Dark Surface (TF12)		
Stratified Layers (A	•	-	Loamy Gley				Explain in Remarks)		
2 cm Muck (A10)	-,	-	Depleted Ma		. –,		,		
Depleted Below Da	ark Surface (A11	_	Redox Dark	` '	<del>-</del> 6)				
Thick Dark Surface	•	<u>-</u>	Depleted Da	,	,	<sup>3</sup> Indicator	s of hydrophytic vegetation and		
Sandy Mucky Mine		-	Redox Depr				nd hydrology must be present,		
5 cm Mucky Peat of		_	_ Rodox Bopi	1) 011010001	0)	unless disturbed or problematic.			
<u> </u>									
estrictive Layer (if ob	served):								
Type:									
Depth (inches):						Hydric Soil Prese	ent? Yes No X		
demarks:									
Remarks:									
	icators:								
HYDROLOGY		required; check all tl	nat apply)			Secondary I	ndicators (minimum of two required		
HYDROLOGY Vetland Hydrology Ind	inimum of one is	•	nat apply) ained Leaves	(B9)			ndicators (minimum of two required		
IYDROLOGY Vetland Hydrology Ind Primary Indicators (m	inimum of one is	Water-St		(B9)		Surface S	· · · · · · · · · · · · · · · · · · ·		
IYDROLOGY /etland Hydrology Ind Primary Indicators (m Surface Water (A1	inimum of one is	Water-St Aquatic F	ained Leaves	` ,		Surface S Drainage	Soil Cracks (B6)		
IYDROLOGY  /etland Hydrology Ind Primary Indicators (m Surface Water (A1 High Water Table (	inimum of one is	Water-St Aquatic F True Aqu	ained Leaves	14)		Surface S Drainage Dry-Seas	oil Cracks (B6) Patterns (B10)		
Vetland Hydrology Ind Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1)	inimum of one is ) (A2)	Water-St Aquatic F True Aqu Hydroger	ained Leaves Fauna (B13) natic Plants (B	14) · (C1)	Roots (C3	Surface S Drainage Dry-Seas Crayfish E	oil Cracks (B6) Patterns (B10) on Water Table (C2)		
Vetland Hydrology Ind Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits	inimum of one is ) (A2) s (B2)	— Water-St — Aquatic F — True Aqu — Hydrogei — Oxidized	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres	14) (C1) s on Living	Roots (C3	Surface S Drainage Dry-Seas Crayfish E Saturation	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)		
HYDROLOGY  Vetland Hydrology Ind  Primary Indicators (m  Surface Water (A1  High Water Table (  Saturation (A3)  Water Marks (B1)  Sediment Deposits  Drift Deposits (B3)	inimum of one is ) (A2) (B2)	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence	ained Leaves Fauna (B13) uatic Plants (B n Sulfide Odor Rhizospheres e of Reduced I	14) (C1) s on Living	,	Surface S Drainage Dry-Seas Crayfish E Saturation Stunted o	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)		
Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust	inimum of one is ) (A2) (B2)	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction	14) (C1) s on Living fron (C4) in Tilled So	,	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2)		
Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3)	inimum of one is ) (A2) (B2) (B4)	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres E of Reduced I Iron Reduction Ck Surface (C7	14) (C1) s on Living lron (C4) in Tilled So	,	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)		
Primary Indicators (m. Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	inimum of one is ) (A2) (B2) (B4) on Aerial Imager	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ir Thin Muc	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction	14) r (C1) s on Living lron (C4) in Tilled So r)	,	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2)		
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Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent It Thin Muc y (B7) Gauge o Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres Le of Reduced I Leon Reduction Lek Surface (C7 Tr Well Data (D Ixplain in Rema	14) r (C1) s on Living lron (C4) in Tilled So r) 9)	,	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2)		
Primary Indicators (m. Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate (ield Observations:	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc y (B7) Gauge of ce (B8) Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres Le of Reduced I Leon Reduction Lek Surface (C7 Ir Well Data (D Ixplain in Remain	14) r (C1) s on Living lron (C4) in Tilled So r) 9) arks)	,	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2)		
Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate ield Observations: surface Water Present?	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa  Yes Yes	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc y (B7) Gauge of Other (Ex	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema	14) (C1) s on Living lron (C4) in Tilled So (Y) 9) arks)	pils (C6)	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorp FAC-Neur	Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)		
Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Vater Table Present?	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa  Yes Yes Yes Yes	Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc y (B7) Gauge of Other (Ex	ained Leaves Fauna (B13) Latic Plants (B In Sulfide Odor Rhizospheres Le of Reduced I Leon Reduction Lek Surface (C7 Ir Well Data (D Ixplain in Remain	14) (C1) s on Living lron (C4) in Tilled So (Y) 9) arks)	pils (C6)	Surface S Drainage Dry-Seas Crayfish I Saturatior Stunted o Geomorp	Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)		
Vetland Hydrology Ind Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate Veter Table Present? Vater Table Present? Includes capillary fringe	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa  Yes Yes Yes Yes	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent II Thin Muc y (B7) Gauge o ce (B8) Other (Ex	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living lron (C4) in Tilled So (7) 9) arks)	Wetland	Surface S Drainage Dry-Seas Crayfish E Saturation Stunted o Geomorp FAC-Neur	Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)		
Primary Indicators (m Surface Water (A1 High Water Table ( Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate Field Observations: Furface Water Present? Vater Table Present?	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa  Yes Yes Yes Yes	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent II Thin Muc y (B7) Gauge o ce (B8) Other (Ex	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living lron (C4) in Tilled So (7) 9) arks)	Wetland	Surface S Drainage Dry-Seas Crayfish E Saturation Stunted o Geomorp FAC-Neur	Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)		
Primary Indicators (m. Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate (ield Observations: urface Water Present? Vater Table Present? Includes capillary fringe)	inimum of one is ) (A2) (B2) (B4) on Aerial Imager d Concave Surfa  Yes Yes Yes Yes	Water-St Aquatic F True Aqu Hydrogel Oxidized Presence Recent II Thin Muc y (B7) Gauge o ce (B8) Other (Ex	ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced I ron Reduction ck Surface (C7 r Well Data (D xplain in Rema Depth (inches) Depth (inches)	14) (C1) s on Living lron (C4) in Tilled So (7) 9) arks)	Wetland	Surface S Drainage Dry-Seas Crayfish E Saturation Stunted o Geomorp FAC-Neur	oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)		

Project/Site: Winnebago Tribe Bro	adband Connectivity Pr	roject City/Co	ounty: Woo	dbury	Sampling Date	te: <b>7/26/20</b>	23
Applicant/Owner: Winnebago	Tribe of Nebraska			State: I	Sampling Poi	nt: <b>37</b>	
Investigator(s): K. Sherman, K.	Gaston (Olsson)			Section	on, Township, Range:	S33 T86N R	47W
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	e, convex, none)	: Concave		
Slope (%): <b>4-5</b> Lat:	42.221051	Long:	-(	96.321394	Datum:	NAD83	
Soil Map Unit Name: 1146—Onaw	a silty clay, 0 to 2 per	cent slopes, occ	asionally fl	ooded	NWI classification:	Riverine	<b>)</b>
Are climatic / hydrologic conditions of	on the site typical for thi	is time of year?	Yes	No X	(If no, explain in Rema	arks)	
Are Vegetation X , Soil , o	r Hydrology sig	nificantly disturbe	ed? Aı	e "Normal Circur	nstances" present? Ye	es X No	
Are Vegetation , Soil , o	r Hydrology nat	urally problemation	c? (If	needed, explain	any answers in Remai	rks.)	
SUMMARY OF FINDINGS - A	ttach site map sho	owing sampli					
Hydrophytic Vegetation Present?	Yes - N	lo -					
Hydric Soil Present?	Yes N	lo X	le the Sar	npled Area			
Wetland Hydrology Present?	Yes N	lo X	within a V	-	Yes	No X	
Remarks:							
SP 37 is an upland area located wit channel, respectively; however, the at this SP due to farming practices; present in the absence of farming practices Climatic conditions are not typical at	area lacks a defined be however, with the lack of ractices. Planted soybe t this site due to recent	ed and bank and of of hydric soil and ans are present a heavy rainfall eve	OHWM and sufficient we at this SP; he	is not a wetland o etland hydrology,	or stream channel. Veo it is unlikely hydrophyt	getation is not pre tic vegetation wo	esent uld be
VEGETATION - Use scienti	•			la	4		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Dominance Tes			
1		Орескоз:	Otatus	Number of Dom That Are OBL, F	•	0	(A)
2							
3				Total Number of Species Across		0	(B)
5.				opecies Acioss	All Ottata.		. (B)
Sapling/Shrub Stratum (Plot size		= Total Cover		Percent of Domi That Are OBL, F	•	0	(A/B)
2.				Prevalence Ind	ex worksheet:		
3.				Total '	% Cover of:	Multiply by:	
4				OBL species	- <u></u>	x 1 =	
5				FACW species		x 2 =	
Harla Charles (Diet siese	, <del></del> =	= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)			FACU species		x 4 =	_
1				UPL species		x 5 =	— <sub>(D)</sub>
3.				Column Totals: Pre	valence Index = B/A =	(A)	— <sup>(B)</sup>
4.				Hydrophytic	Vegetation Indicator	rc:	
5.					d Test for Hydrophytic		
6.				l —	inance Test is >50%	vegetation	
7.					alence Index is <3.01		
8.					phological Adaptations	' (Provide suppor	rtina
9					Remarks or on a separ	`	3
10.				Problem	natic Hydrophytic Vege	tation <sup>1</sup> (Explain)	
		= Total Cover					
Woody Vine Stratum (Plot size: 1.	30' )				hydric soil and wetland ss disturbed or problen		t be
2.				Hydrophytic	· · · · · · · · · · · · · · · · · · ·		
		= Total Cover		Vegetation Present?	Yes	NoX	-
Remarks: (Include photo numbers I PP 37	nere or on a separate si	heet.)		Present?			

Sampling Point: 37

Depth (inches) Color (moist) %  0-15 10YR 4/3 100  15-30 10YR 4/3 85	Color (moist)	Features			
0-15 10YR 4/3 100	10VR 5/8	% Type'	Loc <sup>2</sup>	Texture	Remarks
15-30 10YR 4/3 85	10YR 5/8			Silt Loam	
	101110/0	15 C	М	Silt Loam	
		<u> </u>			
pe: C=Concentration, D=Depletion, RM=Rec	luced Matrix, MS=Ma	sked Sand Grain	ıs.	<sup>2</sup> Location: PL=Pore	Lining, M=Matrix
Hydric Soil Indicators:				Indicators for P	roblematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sand	Gleyed Matrix	(S4)	Coast Prair	rie Redox (A16)
Histic Epipedon (A2)	Sand	Redox (S5)		— Dark Surfa	ce (S7)
Black Histic (A3)	— Stripp	ed Matrix (S6)		Iron-Manga	anese Masses (F12)
Hydrogen Sulfide (A4)		y Mucky Mineral	(F1)	_	ow Dark Surface (TF12)
Stratified Layers (A5)		y Gleyed Matrix	, ,		lain in Remarks)
2 cm Muck (A10)		ted Matrix (F3)	( )	_ ` ` '	,
Depleted Below Dark Surface (A11)		x Dark Surface (	F6)		
Thick Dark Surface (A12)		ted Dark Surfac		<sup>3</sup> Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S1)	<del></del> ·	x Depressions (F	` '		nydrology must be present,
5 cm Mucky Peat or Peat (S3)		(.	-,	unless di	sturbed or problematic.
Type: Depth (inches):				Hydric Soil Present?	Yes NoX
lough redox is present in the soil profile, it is t	oo low in the profile to	meet hydric so	il indicator		
TOROLOGY			- Indicator	criteria; therefore, this	soil is non-hydric.
DROLOGY			- Indicator	criteria; therefore, this	soil is non-hydric.
tland Hydrology Indicators:	ed; check all that appl	y)	- Indicator		soil is non-hydric.
tland Hydrology Indicators: Primary Indicators (minimum of one is require		•		Secondary Indic	ators (minimum of two require
tland Hydrology Indicators: Primary Indicators (minimum of one is requireSurface Water (A1)	Water-Stained L	eaves (B9)	i indicator	Secondary Indic	ators (minimum of two require
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Water-Stained L	eaves (B9) 313)	- Indicator	Secondary Indic Surface Soil ( Drainage Patt	ators (minimum of two require Cracks (B6) terns (B10)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained L Aquatic Fauna (I True Aquatic Pla	eaves (B9) 313) nts (B14)	in indication	Secondary Indice Surface Soil ( Drainage Patt Dry-Season V	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide	eaves (B9)  313)  nts (B14)  e Odor (C1)		Secondary Indication Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) ows (C8)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos	eaves (B9) 313) nts (B14) e Odor (C1) oheres on Living		Secondary Indic. Surface Soil C Drainage Patt Dry-Season V Crayfish Burro	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec	eaves (B9) 313) nts (B14) Odor (C1) oheres on Living uced Iron (C4)	Roots (C	Secondary Indic Surface Soil C Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red	eaves (B9) B13) Ints (B14) Codor (C1) Interes on Living Uced Iron (C4) Uction in Tilled S	Roots (C	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) Jerns (B10) Vater Table (C2) Jows (C8) Sible on Aerial Imagery (C9) Pessed Plants (D1)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa	eaves (B9) B13) Ints (B14) Codor (C1) Coheres on Living Uced Iron (C4) Uction in Tilled Sice (C7)	Roots (C	Secondary Indic Surface Soil C Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) Jerns (B10) Vater Table (C2) Jows (C8) Sible on Aerial Imagery (C9) Pessed Plants (D1)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D	eaves (B9)  B13)  Ints (B14)  Odor (C1)  Cheres on Living  Uced Iron (C4)  Uction in Tilled So  Ce (C7)  ata (D9)	Roots (C	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two requir Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
tland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa	eaves (B9)  B13)  Ints (B14)  Odor (C1)  Cheres on Living  Uced Iron (C4)  Uction in Tilled So  Ce (C7)  ata (D9)	Roots (C	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two requir Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain in	eaves (B9) B13) Ints (B14) Codor (C1) Interes on Living Interes on	Roots (C	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) Jerns (B10) Vater Table (C2) Jows (C8) Sible on Aerial Imagery (C9) Pessed Plants (D1)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Id Observations:  face Water Present?  Yes  N	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain in	eaves (B9) B13) Ints (B14) Codor (C1) Interes on Living Uced Iron (C4) Uction in Tilled Size (C7) Interes (D9) Interes (C9) Inches)	Roots (C	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)  Id Observations: face Water Present? Yes N	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain ir	eaves (B9) B13) Ints (B14) POdor (C1) Interes on Living Interes on	Roots (C3	Secondary Indic Surface Soil C Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str X Geomorphic F FAC-Neutral	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present?  Yes Nuration Present?  Yes N	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain ir	eaves (B9) B13) Ints (B14) POdor (C1) Inheres on Living Interest on Li	Roots (C3	Secondary Indice Surface Soil Control Drainage Patt Dry-Season Volume Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Id Observations:  face Water Present? Yes Near Table Present? Yes Near Table Present? Yes Near Table Present? Yes Near Table Surface (B8)  Inudes capillary fringe)	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain in	eaves (B9) B13) Ints (B14) C Odor (C1) Cheres on Living Luced Iron (C4) Luction in Tilled Size (C7) Luced (D9) Remarks) Inches) Inches) Inches)	Roots (C3	Secondary Indic. Surface Soil ( Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str X Geomorphic F FAC-Neutral	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)
tland Hydrology Indicators:  Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present?  Yes Nuration Present?  Yes N	Water-Stained L Aquatic Fauna (I True Aquatic Pla Hydrogen Sulfide Oxidized Rhizos Presence of Rec Recent Iron Red Thin Muck Surfa Gauge or Well D Other (Explain in	eaves (B9) B13) Ints (B14) C Odor (C1) Cheres on Living Luced Iron (C4) Luction in Tilled Size (C7) Luced (D9) Remarks) Inches) Inches) Inches)	Roots (C3	Secondary Indic. Surface Soil ( Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str X Geomorphic F FAC-Neutral	ators (minimum of two require Cracks (B6) terns (B10) Vater Table (C2) tows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5)

Landform (hillslope, terrace, etc.):  Slope Slope (%):  2-3 Lat:  42.264444 Long: -96.859289 Datum: NADE Soil Map Unit Name: 6811—Moody silty clay loam, 2 to 6 percent slopes NWI classification:  Are climatic / hydrologic conditions on the site typical for this time of year?  Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present?  Yes No X  Is the Sampled Area	None  No  etc.
Landform (hillslope, terrace, etc.): Slope	None  No  etc.
Slope (%): 2-3 Lat: 42.264444 Long: -96.859289 Datum: NADE Soil Map Unit Name: 6811—Moody silty clay loam, 2 to 6 percent slopes NWI classification:  Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks)  Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X  Hydric Soil Present? Yes No X  Wetland Hydrology Present? Yes No X  Remarks: SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Dominant Species? Status Dominant Species  That Are OBL, FACW, or FAC: 0	None No etc.
Soil Map Unit Name: 6811—Moody silty clay loam, 2 to 6 percent slopes   NWI classification:    Are climatic / hydrologic conditions on the site typical for this time of year? Yes   No   X   (If no, explain in Remarks)    Are Vegetation   Soil   Or Hydrology   significantly disturbed?   Are "Normal Circumstances" present? Yes   X    Are Vegetation   Soil   Or Hydrology   naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present?   Yes   No   X    Hydric Soil Present?   Yes   No   X    Wetland Hydrology Present?   Yes   No   X    Wetland Hydrology Present?   Yes   No   X    Wetland Hydrology Present?   Yes   No   X    Wetland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size:   30'   )   Absolute   Dominant   Indicator    Tree Stratum (Plot size:   30'   )   W Cover   Species?   Status    Tree Stratum (Plot size:   30'   )   Tree Stratum   Number of Dominant Species    That Are OBL, FACW, or FAC:   0	None No etc.
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks)  Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X  Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X  Remarks:  SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Dominant Indicator Species? Status That Are OBL, FACW, or FAC: 0	No etc.
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X	etc.
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X  Remarks:  SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Dominant Species? Status Number of Dominant Species  That Are OBL, FACW, or FAC: 0	etc.
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X  Remarks:  SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' )    Absolute Dominant Indicator Status   Dominant Species    Tree Stratum (Plot size: 30' )    Tree Stratum (Plot size: 30' )    That Are OBL, FACW, or FAC: 0	<u> </u>
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X  Remarks: SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' )    Absolute Dominant Indicator Status  Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0	<u> </u>
Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X  Remarks: SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30' ) Absolute Dominant Indicator Species? Status Number of Dominant Species 1. Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0	<u> </u>
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks:  SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Absolute Dominant Indicator Species? Status Number of Dominant Species  Tree Stratum (Plot size: 30') % Cover Species? Status That Are OBL, FACW, or FAC: 0	
Wetland Hydrology Present? Yes No X within a Wetland? Yes No X  Remarks:  SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Absolute Dominant Indicator Species? Status Number of Dominant Species  Tree Stratum (Plot size: 30') % Cover Species? Status That Are OBL, FACW, or FAC: 0	
Remarks: SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.  VEGETATION - Use scientific names of plants.  Absolute Dominant Indicator Species? Status Number of Dominant Species 1. Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0	
SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Climatic conditions are not typical at this site recent heavy rainfall events.    VEGETATION - Use scientific names of plants.	due to
Tree Stratum (Plot size: 30' )	
Tree Stratum     (Plot size:     30'     )     % Cover     Species?     Status     Number of Dominant Species       1.     That Are OBL, FACW, or FAC:     0	
1. That Are OBL, FACW, or FAC: 0	
2.	(A)
3 Total Number of Dominant	
4 Species Across All Strata: 1	(B)
5	
= Total Cover Percent of Dominant Species Sapling/Shrub Stratum (Plot size: 15' ) That Are OBL, FACW, or FAC: 0	(A/B)
1	
2. Prevalence Index worksheet:	
3. Total % Cover of: Multip	y by:
4 OBL species x 1 =	
5 FACW species	
= Total Cover	
1. Festuca trachyphylla 50 X FACU UPL species x 5 =	
2. Veronica peregrina 15 FACW Column Totals: 0 (A)	(B)
3. Chenopodium album 15 FACU Prevalence Index = B/A =	`
4. Ambrosia artemisiifolia 10 FACU	
5. rumex crispus 10 FAC Hydrophytic Vegetation Indicators:	
6. 1 - Rapid Test for Hydrophytic Vegetation	1
7. 2 - Dominance Test is >50%	
3 - Prevalence Index is <3.01  8.  4. Marriage Adaptation of (Dravide)	
9. 4 - Morphological Adaptations¹ (Provide data in Remarks or on a separate sheet)	
10. Problematic Hydrophytic Vegetation <sup>1</sup> (E)	
100 = Total Cover	. ,
Woody Vine Stratum (Plot size: 30' )   1.   1 Indicators of hydric soil and wetland hydrolog present, unless disturbed or problematic.	/ must be
2. Hydrophytic	
= Total Cover Vegetation Yes No Present?	X

Sampling Point: 38

offile Description: (Describe to the depth Depth Matrix		ox Features			
(inches) Color (moist) %	Color (moist)	% Ty	pe <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-22 10YR 3/2 90				Clay Loam	
10YR 2/1 10				Clay	
pe: C=Concentration, D=Depletion, RM=F	Reduced Matrix, MS=N	lasked Sand	Grains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix
Hydric Soil Indicators:				Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	San	idy Gleyed M	atrix (S4)	Coast Pra	irie Redox (A16)
Histic Epipedon (A2)	San	dy Redox (S	5)	Dark Surf	ace (S7)
Black Histic (A3)	Stri	pped Matrix (	S6)	Iron-Mang	anese Masses (F12)
Hydrogen Sulfide (A4)	 Loa	my Mucky Mi	ineral (F1)	Very Shal	low Dark Surface (TF12)
Stratified Layers (A5)		my Gleyed M			plain in Remarks)
2 cm Muck (A10)		leted Matrix		_ `	
Depleted Below Dark Surface (A11)		lox Dark Surf			
Thick Dark Surface (A12)	— Dep	leted Dark S	urface (F7)	<sup>3</sup> Indicators o	f hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Red	lox Depression	ons (F8)		hydrology must be present,
5 cm Mucky Peat or Peat (S3)	_			unless o	isturbed or problematic.
strictive Layer (if observed):					
Туре:				Hydric Soil Present	? Yes No X
				Hydric Soil Present	? Yes No X
Type: Depth (inches):				Hydric Soil Present	? Yes No X
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:					
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is required)				Secondary Indi	cators (minimum of two requir
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators:	uired; check all that ap Water-Stained				cators (minimum of two requir
Type:  Depth (inches):  marks:   /DROLOGY  tland Hydrology Indicators:  Primary Indicators (minimum of one is required)		Leaves (B9)		Secondary Indi	cators (minimum of two requir Cracks (B6)
Type:  Depth (inches):  marks:   **TOROLOGY**  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested Surface Water (A1)	Water-Stained	Leaves (B9) (B13)		Secondary Indi Surface Soil Drainage Pa	cators (minimum of two requir Cracks (B6)
Type: Depth (inches): marks:   **TOROLOGY** tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2)	Water-Stained Aquatic Fauna	Leaves (B9) (B13) lants (B14)		Secondary Indi Surface Soil Drainage Pa	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2)
Type:  Depth (inches):  marks:   **TDROLOGY*  tland Hydrology Indicators:  Primary Indicators (minimum of one is requested by the second of th	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi	Leaves (B9) (B13) lants (B14) de Odor (C1)		Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on L	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leaduced Iron (eduction in Til	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Til	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf () Gauge or Well	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Till face (C7) Data (D9)	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B)	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Till face (C7) Data (D9)	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Id Observations:	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Till face (C7) Data (D9) in Remarks)	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two require Cracks (B6) tterns (B10) Water Table (C2) rows (C8) sible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  TOROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Id Observations: face Water Present?  Yes	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Till face (C7) Data (D9) in Remarks)	) Living Roots (C3	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two require Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Id Observations: face Water Present? Yes ter Table Present? Yes	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (reduction in Tilface (C7) Data (D9) in Remarks) (inches)	) Living Roots (C3 C4) lled Soils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	cators (minimum of two require Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Id Observations: face Water Present? face Water Present? Yes uration Present? Yes Ves	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (eduction in Till face (C7) Data (D9) in Remarks)	) Living Roots (C3 C4) lled Soils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	cators (minimum of two require Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Id Observations: face Water Present?	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (ceduction in Til face (C7) Data (D9) in Remarks) (inches) (inches) (inches)	) Living Roots (C3 C4) Iled Soils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Id Observations: face Water Present? face Water Present? Yes uration Present? Yes Ves	Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhize Presence of Re Recent Iron Re Thin Muck Surf Gauge or Well Other (Explain  No X Depth No X Depth No X Depth	Leaves (B9) (B13) lants (B14) de Odor (C1) espheres on Leduced Iron (ceduction in Til face (C7) Data (D9) in Remarks) (inches) (inches) (inches)	) Living Roots (C3 C4) Iled Soils (C6)	Secondary Indi Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	cators (minimum of two requir Cracks (B6) tterns (B10) Water Table (C2) rows (C8) isible on Aerial Imagery (C9) tressed Plants (D1) Position (D2) Test (D5)

Project/Site: Winnebago Tribe Broa	adband Connecti	ivity Project City.	/County: Dix	con	Sampling D	Date: 7/19/2	2023
Applicant/Owner: Winnebago T	Tribe of Nebrask	(a		State: <b>NE</b>	Sampling P	oint: 39	)
Investigator(s): K. Sherman, C.	Booth, W. Jewe	ell (Olsson)		Section	, Township, Range	e: <b>S32 T27N</b>	R5E
Landform (hillslope, terrace, etc.):	Ditch	Loca	l relief (conca	ave, convex, none):	Concave		
Slope (%): <b>2-3</b> Lat:	42.264283	Long	:	-96.856347	Datum:	NAD83	
Soil Map Unit Name: 7099—Zook s	silty clay loam,	0 to 2 percent slope	s, occasion	ally flooded N	WI classification:	None	)
Are climatic / hydrologic conditions of	on the site typical	for this time of year?	? Yes	No X (If	no, explain in Rer	marks)	
Are Vegetation , Soil , or	r Hydrology	significantly distu	rbed?	Are "Normal Circums	tances" present? \	res X N	О
	r Hydrology	naturally problem		(If needed, explain ar	·		
SUMMARY OF FINDINGS - A	· · · ·						; <u>.</u>
Hydrophytic Vegetation Present?	Yes	No X					
Hydric Soil Present?	Yes	No X					
•		<del>,-</del>		ampled Area	V	No. V	
Wetland Hydrology Present?	Yes	No X	within a	Wetland?	Yes	NoX	
Remarks:	ain a ditah sauth	of 959th Dood at Wa	kofiold Boro	Point 102 Climatic of	anditions are not to	rnical at this site	duo to
SP 39 is an upland area located with recent heavy rainfall events.	nin a ditch south	of 858th Road at Wa	ketield Bore	Point 102. Climatic co	onditions are not ty	/pical at this site (	due to
recent fleavy familian events.							
<b>VEGETATION</b> - Use scientif	fic names of	plants.					
	Abso		Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) <u>% Co</u>	over Species?	Status	Number of Domina	•	0	(4)
1.				That Are OBL, FA	CVV, or FAC:	0	(A)
3.				Tatal Normalian of D			
4.				Total Number of D Species Across All		3	(B)
5.				opeoles / toloss / til	r Otrata.		_ (D)
o		= Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size	e: 15'	)		That Are OBL, FA	•	0	(A/B)
1.		, '		,	,		_ ( , , ,
2.				Prevalence Index	worksheet:		
3.				Total %	Cover of:	Multiply by	
							:
4.				OBL species		x 1 =	<u>:                                    </u>
4. 5.				OBL species FACW species		x 1 = x 2 =	<u></u>
4. 5.		= Total Cover		· ·			<u>:</u>
4. 5. Herb Stratum (Plot size: 5'	)			FACW species FAC species FACU species		x 2 = x 3 = x 4 =	<u>:</u> —— ——
	)	0 X	UPL	FACW species FAC species		x 2 = x 3 =	:
Herb Stratum (Plot size: 5'	)	0 X 0 X	FACU	FACW species FAC species FACU species UPL species Column Totals:	0	x 2 = x 3 = x 4 = x 5 = (A)	: (B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis		0 X 0 X	FACU UPL	FACW species FAC species FACU species UPL species Column Totals:	0 lence Index = B/A	x 2 = x 3 = x 4 = x 5 = (A)	
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia	2	0 X 0 X 7 X	FACU UPL FACU	FACW species FAC species FACU species UPL species Column Totals: Preval	lence Index = B/A	x 2 = x 3 = x 4 = x 5 = (A)	
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis	1	X 0 X 7 X	FACU UPL	FACW species FAC species FACU species UPL species Column Totals: Preval	lence Index = B/A  /egetation Indicat	x 2 = x 3 = x 4 = x 5 = (A) = ecors:	
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus	11	X 0 X 7 X	FACU UPL FACU	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V 1 - Rapid	lence Index = B/A /egetation Indicat Test for Hydrophyt	x 2 = x 3 = x 4 = x 5 = (A) =	
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli	20 11 11 11 11 5	X 0 X 7 X 0 0 0 0	FACU UPL FACU FACU	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 2 - Domina	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50%	x 2 = x 3 = x 4 = x 5 = (A) = cors:	
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens	20 11 10 10 11	X 0 X 7 X 0 0 0 0	FACU UPL FACU FACU OBL	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale	lence Index = B/A /egetation Indicat Test for Hydrophyt	x 2 = x 3 = x 4 = x 5 = (A) = cors:	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli	20 11 11 11 11 5	X 0 X 7 X 0 X 0 0 0 0 0 5 3	FACU UPL FACU FACU OBL FACW	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0	x 2 = x 3 = x 4 = x 5 = (A) = cors: ic Vegetation	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli  8. Cyperus esculentus	20 11 11 11 11 5 3	X 0 X 7 X 0 0 0 0 3 3	FACU UPL FACU FACU OBL FACW FACW	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho data in Re	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0  blogical Adaptation	x 2 = x 3 = x 4 = x 5 = (A) =  cors: ic Vegetation  1 ins¹ (Provide supparate sheet)	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli  8. Cyperus esculentus  9. Asclepias syriaca  10. Digitaria sanguinalis	20 11 10 11 11 5 3	X 0 X 7 X 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FACU UPL FACU FACU OBL FACW FACW FACW	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho data in Re	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0  blogical Adaptation marks or on a sep	x 2 = x 3 = x 4 = x 5 = (A) =  cors: ic Vegetation  1 ins¹ (Provide supparate sheet)	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli  8. Cyperus esculentus  9. Asclepias syriaca  10. Digitaria sanguinalis  Woody Vine Stratum (Plot size:	20 11 10 11 11 5 3 3	X 0 X 7 X 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FACU UPL FACU FACU OBL FACW FACW FACW	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho data in Re Problemat	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0  plogical Adaptation marks or on a sep ic Hydrophytic Veg  /dric soil and wetla	x 2 = x 3 = x 4 = x 5 = (A) = cors: ic Vegetation  1 ns¹ (Provide supparate sheet) getation¹ (Explair	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli  8. Cyperus esculentus  9. Asclepias syriaca  10. Digitaria sanguinalis  Woody Vine Stratum (Plot size: 1.	20 11 10 11 10 5 3 3 2 10	X 0 X 7 X 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FACU UPL FACU FACU OBL FACW FACW FACW	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho data in Re Problemat  1 Indicators of hy present, unless	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0  blogical Adaptation marks or on a sep ic Hydrophytic Veg	x 2 = x 3 = x 4 = x 5 = (A) = cors: ic Vegetation  1 ns¹ (Provide supparate sheet) getation¹ (Explair	(B)
Herb Stratum (Plot size: 5'  1. Bromus japonicus  2. Ambrosia artemisiifolia  3. Convolvulus arvensis  4. Amaranthus retroflexus  5. Setaria faberi  6. Schoenoplectus pungens  7. Echinochloa crus-galli  8. Cyperus esculentus  9. Asclepias syriaca  10. Digitaria sanguinalis  Woody Vine Stratum (Plot size:	20 11 10 11 10 5 3 3 2 10	X 0 X 7 X 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FACU UPL FACU OBL FACW FACW FACW FACU	FACW species FAC species FACU species UPL species Column Totals: Preval  Hydrophytic V  1 - Rapid 2 - Domina 3 - Prevale 4 - Morpho data in Re Problemat	lence Index = B/A  /egetation Indicat Test for Hydrophyt ance Test is >50% ence Index is ≤3.0  plogical Adaptation marks or on a sep ic Hydrophytic Veg  /dric soil and wetla	x 2 = x 3 = x 4 = x 5 = (A) = cors: ic Vegetation  1 ns¹ (Provide supparate sheet) getation¹ (Explair	(B)

Sampling Point: 39

file Description: (Describe to the depth Depth Matrix		Redox Featu	res			
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22 10YR3/2 100					Clay Loam	
					<u> </u>	
					<u> </u>	
pe: C=Concentration, D=Depletion, RM=R	Reduced Matrix, MS	S=Masked S	and Grains		<sup>2</sup> Location: PL=P	ore Lining, M=Matrix
Hydric Soil Indicators:					Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	;	Sandy Gleye	ed Matrix (S	64)	Coast P	rairie Redox (A16)
Histic Epipedon (A2)	<u> </u>	Sandy Redo	ox (S5)		Dark Su	rface (S7)
Black Histic (A3)	;	Stripped Ma	trix (S6)		Iron-Ma	nganese Masses (F12)
Hydrogen Sulfide (A4)		Loamy Mucl	ky Mineral (	F1)	Very Sh	allow Dark Surface (TF12)
Stratified Layers (A5)		Loamy Gley	ed Matrix (I	<del>-</del> 2)	Other (E	explain in Remarks)
2 cm Muck (A10)		Depleted Ma	atrix (F3)		<del></del>	
Depleted Below Dark Surface (A11)		Redox Dark	Surface (F	6)		
Thick Dark Surface (A12)	_	Depleted Da	ark Surface	(F7)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	!	Redox Depr	essions (F8	3)		d hydrology must be present,
5 cm Mucky Peat or Peat (S3)					uniess	disturbed or problematic.
Strictive Layer (if observed): Type: Depth (inches):				I	Hydric Soil Prese	nt? Yes No X
Type: Depth (inches):					Hydric Soil Prese	nt? Yes No X
Type: Depth (inches):					Hydric Soil Prese	nt? Yes No X
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators:						
Type: Depth (inches): marks:  /DROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requ					Secondary In	dicators (minimum of two requir
Type: Depth (inches): marks:  TOROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1)	Water-Stair	ned Leaves	(B9)		Secondary In Surface Sc	dicators (minimum of two requir
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requ Surface Water (A1) High Water Table (A2)	Water-Stair Aquatic Fau	ned Leaves ( una (B13)			Secondary In Surface So Drainage F	dicators (minimum of two requir oil Cracks (B6) Patterns (B10)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stair Aquatic Fau True Aquati	ned Leaves ( una (B13) ic Plants (B1	14)		Secondary In Surface Sc Drainage F Dry-Seaso	dicators (minimum of two requir oil Cracks (B6) Patterns (B10) n Water Table (C2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stair Aquatic Fau True Aquati Hydrogen S	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor	14) (C1)		Secondary In Surface So Drainage F Dry-Seaso Crayfish B	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rl	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor nizospheres	14) (C1) on Living F		Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (inches): marks:  TDROLOGY tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres f Reduced I	14) (C1) on Living F ron (C4)	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Ri Presence o Recent Iron	ned Leaves ( una (B13) ic Plants (B1 Gulfide Odor nizospheres f Reduced II I Reduction	14) (C1) on Living F ron (C4) in Tilled So	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) In Water Table (C2) Jurrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stair Aquatic Fat True Aquati Hydrogen S Oxidized Ri Presence o Recent Iron	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor nizospheres f Reduced II Reduction i Surface (C7	(C1) on Living Fron (C4) in Tilled So	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two requir bil Cracks (B6) Patterns (B10) n Water Table (C2) currows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres f Reduced II Reduction Surface (C7 Vell Data (D8	(C1) on Living F ron (C4) in Tilled So )	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two required in Cracks (B6) Patterns (B10) In Water Table (C2) Furrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)
Type: Depth (inches):  marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stair Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Oauge or W	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres f Reduced II Reduction Surface (C7 Vell Data (D8	(C1) on Living F ron (C4) in Tilled So )	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two required in Cracks (B6) Patterns (B10) In Water Table (C2) Furrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)
Type: Depth (inches): marks:  TDROLOGY  tland Hydrology Indicators: Primary Indicators (minimum of one is requested Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Water-Stair Aquatic Fau Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W 8) Other (Expl	ned Leaves ( una (B13) ic Plants (B1 Sulfide Odor hizospheres f Reduced II Reduction Surface (C7 Vell Data (D8	(C1) on Living F ron (C4) in Tilled So )	Roots (C3	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two required in Cracks (B6) Patterns (B10) In Water Table (C2) Furrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)
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Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Dix	con	Sampling Dat	te: <b>7/19/202</b>	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: NE	Sampling Poir	nt: <b>40</b>	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (O	lsson)		Section	n, Township, Range:	S32 T27N R	5E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (conca	ave, convex, none):	Concave		
Slope (%): <b>1-2</b> Lat:	42.270684	Long:		-96.858476	Datum:	NAD83	
Soil Map Unit Name: 7153—Kenne	bec silt loam, rarely	flooded		١	IWI classification:	None	
Are climatic / hydrologic conditions of	n the site typical for t	his time of year?	Yes	No X (I	lf no, explain in Rema	rks)	
Are Vegetation , Soil , or	Hydrology si	gnificantly disturbe	•d? /	Are "Normal Circum	stances" present? Ye	s X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemati	c? /	(If needed, explain a	any answers in Remar	ks.)	
SUMMARY OF FINDINGS - A							
Hydrophytic Vegetation Present?		No X	Ť.	,	· ·		
Hydric Soil Present?		No X	l				
Wetland Hydrology Present?		No X		ampled Area Wetland?	Yes	No X	
Wetland Hydrology Present?		NO	Within a	wellanu:	162	NO	
Remarks: SP 40 is an upland area located in a events.			3. Climatic	c conditions are not t	typical at this site due	to recent heavy ra	ainfall
<b>VEGETATION - Use scientif</b>	ic names of pla	nts.					
	Absolute	Dominant	Indicator	Dominance Test			
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domin That Are OBL, FA	•	1	<b>(\</b> \
1				That Are OBL, FA	ACVV, OI FAC.		(A)
3.				Total Number of I	Dominant		
4.				Species Across A		2	(B)
5.					•		` ,
		= Total Cover		Percent of Domin	ant Species		
Sapling/Shrub Stratum (Plot size	: 15' )	-		That Are OBL, FA	•	50	(A/B)
1. Morus alba	5	X	FAC		•		
2.				Prevalence Inde	x worksheet:		
3.				Total %	Cover of:	Multiply by:	
4				OBL species		x 1 = 0	_
5				FACW species		x 2 = 0	
Harle Christians (Dist since	5	= Total Cover		FAC species		x 3 = 15	_
Herb Stratum (Plot size: 5'  1. Bromus inermis	)	Χ	FACU	FACU species UPL species		x 4 = 400 x 5 = 0	_
1. Biomus mermis			FACU	Column Totals:		(A) 415	— (B)
3.					alence Index = B/A =	3.95	— <sup>(D)</sup>
4.				Fieva	alefice fridex – B/A –	3.93	_
5.		<del></del>		Hydrophytic '	Vegetation Indicator	s:	
6.	<del></del>			1 - Rapid	Test for Hydrophytic	Vegetation	
7.				2 - Domir	nance Test is >50%		
8.	<del></del>			<u> </u>	lence Index is ≤3.01		
					nological Adaptations¹		ing
9.		<del></del>			emarks or on a separa atic Hydrophytic Vege	,	
10.	100	= Total Cover		— Flobleilla	alic Hydrophylic vege	lation (Explain)	
Woody Vine Stratum (Plot size:	30' )	- Total Covel			nydric soil and wetland s disturbed or problem		be
2.				Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	NoX	
Remarks: (Include photo numbers he PP 40	ere or on a separate	sheet.)		•			

Sampling Point: 40

ofile Description: (Description)	Matrix	ptii iiccaca to t	Redox Feat				,
(inches) Color (m	oist) %	Color (mo	oist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22 10YR 2	2/1 100					Clay Loam	
		_					
		_					
		_					
pe: C=Concentration, [	D=Depletion, RN	M=Reduced Mat	rix, MS=Masked	Sand Grains	s.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix
Hydric Soil Indicators:						Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gle	yed Matrix (	S4)	Coast	Prairie Redox (A16)
Histic Epipedon (A2)			Sandy Red	lox (S5)		Dark S	Surface (S7)
Black Histic (A3)			Stripped M	atrix (S6)		Iron-M	anganese Masses (F12)
—	4)		_	cky Mineral	(F1)		hallow Dark Surface (TF12)
Stratified Layers (A5	•			yed Matrix (			(Explain in Remarks)
2 cm Muck (A10)	•		Depleted M		. ,	_	,
Depleted Below Dark	Surface (A11)			k Surface (F	<del>-</del> 6)		
Thick Dark Surface (	, ,			ark Surface	,	<sup>3</sup> Indicator	rs of hydrophytic vegetation and
Sandy Mucky Minera	•			ressions (F		wetla	and hydrology must be present,
5 cm Mucky Peat or			_ `	`	- /	unles	ss disturbed or problematic.
					Ī		
strictive Layer (if obse	rved):						
Type:			<u>-</u>				
Type: Depth (inches): marks:					l	Hydric Soil Pres	ent? Yes No X
Depth (inches): marks:  /DROLOGY			-		l	Hydric Soil Pres	ent? Yes No X
Depth (inches): marks:  /DROLOGY tland Hydrology Indic		required; check	all that apply)				
Depth (inches): marks:  /DROLOGY tland Hydrology Indicators (min				s (RQ)		Secondary I	ndicators (minimum of two requi
Depth (inches): marks:  DROLOGY tland Hydrology Indic. Primary Indicators (min Surface Water (A1)	imum of one is	Wate	er-Stained Leaves	s (B9)		Secondary I	ndicators (minimum of two requin
Depth (inches): marks:  DROLOGY tland Hydrology Indice Primary Indicators (min Surface Water (A1) High Water Table (A	imum of one is	Wate Aqua	er-Stained Leaves atic Fauna (B13)			Secondary I Surface S Drainage	ndicators (minimum of two requi Soil Cracks (B6) Patterns (B10)
Depth (inches): marks:  DROLOGY tland Hydrology Indic. Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3)	imum of one is	Wate Aqua True	er-Stained Leaves atic Fauna (B13) Aquatic Plants (E	314)		Secondary I Surface S Drainage Dry-Seas	ndicators (minimum of two requir Soil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (inches): marks:  TDROLOGY tland Hydrology Indic. Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	imum of one is	Wate Aqua True Hydr	er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo	314) or (C1)		Secondary I Surface S Drainage Dry-Seas Crayfish I	ndicators (minimum of two requin Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Depth (inches): marks:  TDROLOGY tland Hydrology Indic. Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (	imum of one is	Wate Aqua True Hydr Oxid	er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo ized Rhizosphere	314) or (C1) es on Living l		Secondary I Surface S Drainage Dry-Seas Crayfish I	ndicators (minimum of two requirements of two requirements (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Depth (inches): marks:  DROLOGY tland Hydrology Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	imum of one is a second	— Wate — Aqua — True — Hydr — Oxid — Pres	er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo ized Rhizosphere ence of Reduced	314) or (C1) as on Living l Iron (C4)	Roots (C3	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturation	ndicators (minimum of two requirements of two requirements) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
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Depth (inches): marks:  TDROLOGY tland Hydrology Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated of Id Observations: face Water Present? ter Table Present? uration Present?	2) 32) 4) Aerial Imagery Concave Surface Yes Yes Yes Yes		er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo ized Rhizosphere ence of Reduced ent Iron Reductior Muck Surface (C ge or Well Data (I r (Explain in Rem  Depth (inches Depth (inches	314) or (C1) os on Living la lron (C4) on in Tilled Sc 7) D9) harks)	Roots (C3	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturatio Stunted of Geomorp FAC-Neu	ndicators (minimum of two requirements of the control of two requirements of two requirements (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)
Depth (inches): marks:  TDROLOGY tland Hydrology Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated of Id Observations: face Water Present? ter Table Present? uration Present?	2) 32) 4) Aerial Imagery Concave Surface Yes Yes Yes Yes		er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo ized Rhizosphere ence of Reduced ent Iron Reductior Muck Surface (C ge or Well Data (I r (Explain in Rem  Depth (inches Depth (inches	314) or (C1) os on Living la lron (C4) on in Tilled Sc 7) D9) harks)	Roots (C3	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturatio Stunted of Geomorp FAC-Neu	ndicators (minimum of two requirements of the control of two requirements of two requirements (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)
Depth (inches): marks:  TDROLOGY tland Hydrology Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated of Id Observations: face Water Present? ter Table Present? uration Present?	2) 32) 4) Aerial Imagery Concave Surface Yes Yes Yes Yes		er-Stained Leaves atic Fauna (B13) Aquatic Plants (E ogen Sulfide Odo ized Rhizosphere ence of Reduced ent Iron Reductior Muck Surface (C ge or Well Data (I r (Explain in Rem  Depth (inches Depth (inches	314) or (C1) os on Living la lron (C4) on in Tilled Sc 7) D9) harks)	Roots (C3	Secondary I Surface S Drainage Dry-Seas Crayfish I Saturatio Stunted of Geomorp FAC-Neu	ndicators (minimum of two requirements of the control of two requirements of two requirements (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) thic Position (D2) tral Test (D5)

Project/Site: Winnebago Tribe Broa	adband Connectivity	Project City/Co	ounty: Dix	con	Sampling Da	te: <b>7/19/202</b>	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: NE	Sampling Poi	nt: <b>41</b>	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (O	Isson)		Section	n, Township, Range:	S32 T27N R	5E
Landform (hillslope, terrace, etc.):	Slope	Local re	elief (conca	ave, convex, none):	Convex		
Slope (%): <b>7-8</b> Lat:	42.273736	Long:		-96.86195	Datum:	NAD83	
Soil Map Unit Name: 7153—Kenne	bec silt loam, rarely	flooded		N	IWI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for t	his time of year?	Yes	No X (I	f no, explain in Rema	ırks)	
Are Vegetation , Soil , or	Hydrology si	gnificantly disturbe	ed?	Are "Normal Circums	stances" present? Ye	s X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemation	c? (	(If needed, explain a	ny answers in Remai	rks.)	
SUMMARY OF FINDINGS - A	ttach site map sl	nowing samplin	ng point	locations, trans	ects, important f	eatures, etc.	
Hydrophytic Vegetation Present?	Yes	No X					
Hydric Soil Present?	Yes	No X	le the S	ampled Area			
Wetland Hydrology Present?	Yes	No X		Wetland?	Yes	No X	
Remarks: SP 41 is an upland outpoint for Wetla are not typical at this site due to rece	ent heavy rainfall ever	nts.	Nebraska	Highway 35 at Wak	efield Bore Point 104	. Climatic condition	ons
VEGETATION - Use scientif			l., .l.,	Dominance Test	workshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Domin			
1.		<u> </u>		That Are OBL, FA	•	0	(A)
2.							
3.				Total Number of D	Dominant		
4				Species Across A	II Strata:	2	(B)
5							
Sapling/Shrub Stratum (Plot size	e: <u>15'</u> )	= Total Cover		Percent of Domina That Are OBL, FA	•	0	(A/B)
1	<del></del>	<del></del>		Prevalence Index	x worksheet:	<del></del>	
3.					Cover of:	Multiply by:	
4.		<del></del>		OBL species		x 1 =	_
5.				FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
Digitaria sanguinalis	65	X	FACU	UPL species		x 5 =	
2. Thlaspi arvense	25	X	FACU	Column Totals:	0	(A)	(B)
3. Amaranthus retroflexus	10		FACU	Preva	alence Index = B/A =		
4				Hydrophytic	Vegetation Indicator	 's:	
5		<del></del>			Test for Hydrophytic		
6		<u> </u>		<u> </u>	nance Test is >50%	J	
7				3 - Preval	lence Index is <3.01		
8				4 - Morph	ological Adaptations¹	(Provide support	ting
9		<del></del>			emarks or on a separ	,	
10				Problema	itic Hydrophytic Vege	tation ˈ (Explain)	
Woody Vine Stratum (Plot size: _ 1.	30' 100	= Total Cover			ydric soil and wetland s disturbed or problen		be
2.	<u> </u>			Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	NoX	
Remarks: (Include photo numbers h	ere or on a separate	sheet.)					

Sampling Point: 41

Profile Descrip	otion: (Describe to Matrix	the depth nee		nent the ind		confirm t	he absence of indi	icators.)
(inches)	Color (moist)	% 0	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-22	10YR 3/1	100			<del></del>		Loam	
							<u> </u>	
<sup>1</sup> Type: C=Con	centration, D=Deple	tion, RM=Redu	ced Matrix, M	S=Masked S	Sand Grain	S.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast F	Prairie Redox (A16)
Histic Ep	ipedon (A2)		_	Sandy Redo	ox (S5)		Dark Su	urface (S7)
Black His	stic (A3)			Stripped Ma	atrix (S6)		Iron-Ma	anganese Masses (F12)
— Hydroge	n Sulfide (A4)			Loamy Muc	ky Mineral	(F1)	Very Sh	nallow Dark Surface (TF12)
Stratified	Layers (A5)		_	Loamy Gley	ed Matrix (	(F2)		Explain in Remarks)
2 cm Mu	ck (A10)			Depleted Ma	atrix (F3)			
— Depleted	Below Dark Surfac	e (A11)		Redox Dark	Surface (F	F6)		
	rk Surface (A12)			Depleted Da	ark Surface	∈ (F7)	<sup>3</sup> Indicators	s of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)			Redox Depr	ressions (F	8)		nd hydrology must be present,
5 cm Mu	cky Peat or Peat (S	3)	_				unles	s disturbed or problematic.
							I	
	yer (if observed):							
Type:							Libratula Onli Duna	No. V
Depth (inch	es):						Hydric Soil Prese	ent? Yes No X
Remarks:								
HYDROLOG	GY							
Wetland Hydro	ology Indicators:							
Primary Ind	icators (minimum of	one is required	l; check all tha	t apply)			Secondary Ir	ndicators (minimum of two required)
	Nater (A1)	· ·		ned Leaves	(B9)			oil Cracks (B6)
High Wa	ter Table (A2)		— Aquatic Fa	una (B13)	` ,		— Drainage I	Patterns (B10)
Saturatio				ic Plants (B	14)			on Water Table (C2)
Water Ma	` '			Sulfide Odor				Burrows (C8)
	t Deposits (B2)		<u> </u>	hizospheres	` '	Roots (C:	_ `	Visible on Aerial Imagery (C9)
_	osits (B3)			of Reduced I	_		<del></del>	Stressed Plants (D1)
<u> </u>	t or Crust (B4)			n Reduction	` '	oils (C6)		nic Position (D2)
	osits (B5)			Surface (C7		0.10 (00)		ral Test (D5)
	on Visible on Aerial	magery (B7)		Vell Data (D	•			(20)
	Vegetated Concav	. , ,	<b>—</b>	lain in Rema	,			
			_ ` '			ı		
Field Observa			V -					
Surface Water		No	<del></del>	pth (inches)				
Water Table Pr		No		pth (inches)		\\\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.	al I le aducate ann Burne	
Saturation Pres		No	X De	epth (inches)	·	wetian	d Hydrology Pres	ent? Yes No X
(includes capill	rded Data (stream o	auge monitori	na well perial r	nhotos nrev	ious inspe	ctions) if	available:	
Pesonine Meco	idou Dala (sileaili (	aago, monitolii	ig woii, aciidi	onotos, prev	ious irispei	ouo113 <i>]</i> , Il	avallable.	
Remarks:								

Project/Site: Winnebago Tribe Broad	Iband Connectivity	Project City/Co	ounty: Dixo	on	Sampling Da	ate: 7/19/20	)23
Applicant/Owner: Winnebago Tr	ibe of Nebraska			State: <b>NE</b>	Sampling Po	oint: <b>42</b>	
Investigator(s): K. Sherman, C. B	Booth, W. Jewell (O	lsson)		Section	, Township, Range	: S32 T27N I	R5E
Landform (hillslope, terrace, etc.):	Ditch	Local re	elief (conca	/e, convex, none):	Concave		
Slope (%): <b>2-3</b> Lat:	42.273797	Long:	-	96.861858	Datum:	NAD83	
Soil Map Unit Name: 7153—Kenneb	ec silt loam, rarely	/ flooded		N\	VI classification:	None	
Are climatic / hydrologic conditions on	the site typical for t	his time of year?	Yes	No X (If	no, explain in Rem	narks)	
Are Vegetation , Soil , or I	-lydrology si	ignificantly disturbe	ed? A	re "Normal Circums	tances" present? Y	es X No	)
Are Vegetation , Soil , or h	Hydrology n	aturally problemation	c? (I	f needed, explain ar	nv answers in Rema	arks.)	
SUMMARY OF FINDINGS - Att			•				
Hydrophytic Vegetation Present?	Yes X	No .	Ĭ	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
Hydric Soil Present?	Yes X	No					
•			Is the Sar within a \	mpled Area	V V	N.	
Wetland Hydrology Present?	Yes X	No	within a v	wetiand?	Yes X	_ No	
Remarks:							
typical at this site due to recent heavy  VEGETATION - Use scientifi		nts.					
	Absolute		Indicator	Dominance Test v	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina	•	2	/A\
1.				That Are OBL, FAC	JVV, OI FAC.	3	_ (A)
3.				Total Number of D	ominant		
4.				Species Across All		3	(B)
5.							- (5)
·		= Total Cover		Percent of Domina	int Species		
Sapling/Shrub Stratum (Plot size:	15' )	_		That Are OBL, FAC		100	(A/B)
1.							<b>-</b> ` ′
2.				Prevalence Index	worksheet:		
3.				Total %	Cover of:	Multiply by:	
4.				OBL species		x 1 =	
5.				FACW species		x 2 =	
		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)	.,		FACU species		x 4 =	
Echinochloa crus-galli	35	<u> </u>	FACW	UPL species		x 5 =	
2. Panicum virgatum	30	<u> </u>	FAC	Column Totals:	0	(A)	(B)
Persicaria pensylvanica	20	X	FACW	Preval	lence Index = B/A =	=	
4. Amaranthus tuberculatus	15		OBL	Hydrophytic V	egetation Indicate	ors:	
5					Test for Hydrophytic		
6.				· — ·	ance Test is >50%	z regetation	
7				_	ence Index is <3.01		
8.				l —	ological Adaptations		rting
9	<u> </u>				marks or on a sepa	\	3
10				Problemat	ic Hydrophytic Veg	etation <sup>1</sup> (Explain)	1
	100	= Total Cover					
Woody Vine Stratum (Plot size:	30' )	_			dric soil and wetlar disturbed or proble		t be
2.				Hydrophytic			
		= Total Cover		Vegetation Present?	Yes X	No	_
Remarks: (Include photo numbers he PP 42	re or on a separate	sheet.)					

Depth	Texture Remarks  Clay Loam  PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils³:  Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present? Yes X No
10YR 3/1   50   7.5YR 4/6   5   C   M	Clay Loam Clay Loam Clay Loam Clay Loam Clay Loam  2Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils³:  Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
10YR 4/2   42   7.5YR 4/7   3   C   M     8-22   10YR 3/1   45   7.5YR 4/8   10   C   M     10YR 4/2   40   7.5YR 4/9   5   C   M     10YR 4/2   40   7.5YR 4/9   7.5Y	Clay Loam  Clay Loam  Clay Loam  Clay Loam  2Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils³:  Coast Prairie Redox (A16)  Dark Surface (S7)  Iron-Manganese Masses (F12)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
10YR 3/1	Clay Loam  Clay Loam  2Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils³:  Coast Prairie Redox (A16)  Dark Surface (S7)  Iron-Manganese Masses (F12)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
10YR 4/2 40 7.5YR 4/9 5 C M  10YR 4/2 40 7.5YR 4/9 5 C M  11Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators:  Histosol (A1) Sandy Gleyed Matrix (S4)  Black Histic Epipedon (A2) Sandy Redox (S5)  Black Histic (A3) Stripped Matrix (S6)  Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)  Stratified Layers (A5) Depleted Matrix (F2)  2 cm Muck (A10) Depleted Below Dark Surface (A11) XRedox Dark Surface (F6)  Thick Dark Surface (A12) Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1) Redox Depressions (F8)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:	Clay Loam  2 Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils3:  Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)  3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Mineral (S1)  5 cm Mucky Mineral (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Remarks:	<sup>2</sup> Location: PL=Pore Lining, M=Matrix  Indicators for Problematic Hydric Soils <sup>3</sup> :  Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Redox (S5)  Stripped Matrix (S6)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  X Redox Dark Surface (F6)  Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1)  Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:	Indicators for Problematic Hydric Soils <sup>3</sup> :  Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histosol (A1) Histic Epipedon (A2)  Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)  2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Stratified Layer (if observed): Type: Depth (inches):  Remarks:  HYDROLOGY  Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) X Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)	Coast Prairie Redox (A16)  Dark Surface (S7)  Iron-Manganese Masses (F12)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)   3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:  HYDROLOGY	Dark Surface (S7)  Iron-Manganese Masses (F12)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)   3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)   Restrictive Layer (if observed):  Type:  Depth (inches):  Remarks:  HYDROLOGY	Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)  Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Remarks:	Very Shallow Dark Surface (TF12)  Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)  Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Remarks:	Very Shallow Dark Surface (TF12)  Other (Explain in Remarks) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Stratified Layers (A5)  2 cm Muck (A10)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:	Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Remarks:	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Remarks:	wetland hydrology must be present, unless disturbed or problematic.
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3)  Restrictive Layer (if observed): Type: Depth (inches):  Remarks:	wetland hydrology must be present, unless disturbed or problematic.
Sandy Mucky Mineral (S1)  5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:	wetland hydrology must be present, unless disturbed or problematic.
5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type: Depth (inches):  Remarks:  HYDROLOGY	unless disturbed or problematic.
Type: Depth (inches):  Remarks:  HYDROLOGY	Hydric Soil Present? Yes X No
HYDROLOGY	nydric Soil Present? Tes No
HYDROLOGY	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
X Surface Water (A1) Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
X High Water Table (A2)  Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)  True Aquatic Plants (B14)	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	<u> </u>
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C	
Drift Deposits (B3) Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Reduction in Tilled Soils (C6)	X Geomorphic Position (D2)
Iron Deposits (B5)Thin Muck Surface (C7)	X FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
Field Observations:	
Surface Water Present? Yes X No Depth (inches) 2	
Nater Table Present? Yes X No Depth (inches) 8	
<del></del> · ` ` ` <del></del>	d Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	available:
Remarks:	

Slope (%):  Soil Map Unit Name:  7153—Kennebec Are climatic / hydrologic conditions on th Are Vegetation  , Soil , or Hydrologic	oth, W. Jewell (Olope 42.275533 silt loam, rarely e site typical for the drologysidrology	Local Long:		ve, convex, none): -96.862162	Sampling Poil , Township, Range: Convex Datum:	S32 T27N R	15E
Landform (hillslope, terrace, etc.): SI Slope (%): 6-7 Lat: Soil Map Unit Name: 7153—Kennebec Are climatic / hydrologic conditions on th Are Vegetation , Soil , or Hydrologic	42.275533  silt loam, rarely e site typical for t drologysi drologyn	Local Long: r flooded his time of year?		ve, convex, none): -96.862162	Convex		R5E
Slope (%):  Soil Map Unit Name:  Are climatic / hydrologic conditions on the Are Vegetation  , Soil  , or Hydrologic conditions on the Are Vegetation  , Soil  , or Hydrologic conditions on the Are Vegetation	42.275533 c silt loam, rarely e site typical for t drology si drology n	Long: r flooded his time of year?		-96.862162			
Soil Map Unit Name: 7153—Kennebec  Are climatic / hydrologic conditions on th  Are Vegetation , Soil , or Hydrologic	e silt loam, rarely e site typical for t drology si drology n	r flooded his time of year?			Datum:		
Are climatic / hydrologic conditions on the Are Vegetation, Soil, or Hydrologic conditions on the Are Vegetation, Soil, and the Are Vegetation, and the Are Vegetation	e site typical for t drologysi	his time of year?	Yes		Datam.	NAD83	
Are Vegetation, Soil, or Hyd	drology si		Yes	N	WI classification:	None	
	drologyn	gnificantly distur		No X (If	no, explain in Rema	nrks)	
Are Vegetation Soil or Hy		-	bed?	Are "Normal Circums	tances" present? Ye	s X No	
Ale vedetation . Soil . Of rivi		aturally problema	atic? (	If needed, explain ar	nv answers in Remai	rks.)	
SUMMARY OF FINDINGS - Attac	ch site map sl	, .					
Hydrophytic Vegetation Present?	Yes	No X	1		, p		
Hydric Soil Present?		No X					
		<del></del>		ampled Area Wetland?	Vaa	No. V	
Wetland Hydrology Present?	Yes	No X	within a	vvetiand?	Yes	No X	
Remarks:							
SP 43 is an upland area along the west to recent heavy rainfall events.  VEGETATION - Use scientific							
	Absolute	Dominant	Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina	•	0	(4)
1				That Are OBL, FA	GW, or FAC:	0	(A)
3.				Total Number of D	amain amt		
4				Total Number of D Species Across Al		2	(B)
5.					· Sudiai		(5)
·		= Total Cover		Percent of Domina	ent Species		
Sapling/Shrub Stratum (Plot size:	15' )	_		That Are OBL, FA	•	0	(A/B)
1.							, ,
2.	_			Prevalence Index	worksheet:		
3.	_			Total %	Cover of:	Multiply by:	
4.				OBL species		x 1 =	<u> </u>
5.				FACW species		x 2 =	
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	_)			FACU species		x 4 =	
Digitaria sanguinalis	65	X	FACU	UPL species		x 5 =	
2. Portulaca oleracea	20	X	FACU	Column Totals:		(A)	(B)
3. Ipomoea purpurea	15		FACU	Preva	lence Index = B/A =		_
4				Hydrophytic V	egetation Indicator	rs:	
5					Test for Hydrophytic		
6.				2 - Domina	ance Test is >50%	· ·	
7				3 - Prevale	ence Index is <3.01		
8.				4 - Morpho	ological Adaptations¹	(Provide suppor	ting
9.					marks or on a separ	,	-
10				Problemat	ic Hydrophytic Vege	tation <sup>1</sup> (Explain)	
	100	= Total Cover					
Woody Vine Stratum (Plot size:1.	30' )				dric soil and wetland disturbed or problen		be
2.				Hydrophytic			
		= Total Cove	er	Vegetation Present?	Yes	NoX	:
Remarks: (Include photo numbers here PP 43	or on a separate	sheet.)		•			

SOIL

Sampling Point: 43

Profile Descri	ption: (Describe to Matrix	the depth ne		nent the ind		confirm t	he absence of ind	icators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-22	10YR 3/1	100	· · · · · ·				Loam	
						•		
Type: C=Cor	centration, D=Deple	etion, RM=Red	uced Matrix, M	S=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix
Hydric Soi	I Indicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	ed Matrix (	(S4)	Coast F	Prairie Redox (A16)
Histic Ep	pipedon (A2)			Sandy Redo	ox (S5)		— Dark S	urface (S7)
Black Hi	stic (A3)			Stripped Ma	atrix (S6)		Iron-Ma	anganese Masses (F12)
_	n Sulfide (A4)		_	Loamy Muc	` ,	(F1)		hallow Dark Surface (TF12)
<b>—</b> ' ~	Layers (A5)			Loamy Gley				Explain in Remarks)
2 cm Mu				Depleted M		/		,
	d Below Dark Surfac	e (A11)		Redox Dark	, ,	F6)		
	ark Surface (A12)	- ( )		Depleted Da	,	,	<sup>3</sup> Indicator	s of hydrophytic vegetation and
	lucky Mineral (S1)			Redox Depi				nd hydrology must be present,
	icky Peat or Peat (S	3)		rtodox Bopi	1) 01101000	0)	unles	s disturbed or problematic.
	, ,						•	
estrictive La	yer (if observed):							
Туре:								
Depth (inch	nes):						Hydric Soil Prese	ent? Yes No X
HYDROLO	GY							
Vetland Hydr	ology Indicators:							
Primary Inc	licators (minimum o	f one is require	d; check all tha	t apply)			Secondary In	ndicators (minimum of two required
Surface	Water (A1)		Water-Stai	ned Leaves	(B9)		Surface S	oil Cracks (B6)
High Wa	iter Table (A2)		Aquatic Fa	una (B13)			 Drainage	Patterns (B10)
Saturation	on (A3)		True Aquat	ic Plants (B	14)		Dry-Seaso	on Water Table (C2)
Water M	arks (B1)		Hydrogen S	Sulfide Odor	(C1)		Crayfish E	Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized R	hizospheres	on Living	Roots (C	3) Saturation	visible on Aerial Imagery (C9)
	posits (B3)		Presence of	of Reduced I	ron (C4)	`	Stunted o	r Stressed Plants (D1)
	at or Crust (B4)		_	n Reduction	, ,	oils (C6)	_	nic Position (D2)
`	oosits (B5)			Surface (C7		( )		tral Test (D5)
Inundation	on Visible on Aerial	Imagery (B7)		Vell Data (D			_	. ,
Sparsely	Vegetated Concav	e Surface (B8)	Other (Exp	lain in Rema	arks)			
ield Observa	ations:		_					
surface Water		s No	X De	epth (inches)	١			
Vater Table P				pth (inches)				
Saturation Pre				epth (inches)		Wetlan	d Hydrology Pres	ent? Yes No X
ncludes capil				(101100)		1.5		
	orded Data (stream g	gauge, monitor	ing well, aerial i	photos, prev	ious inspe	ctions), if	available:	
	,,	, , , , , , , , , , , , , , , , , , , ,	J , I	,,	•	,,		
Remarks:								

Applicant/Owner: Winnebago T		vity Project City/	/County: Dix	kon	Sampling Da	ate: 7/19/20	23
	ribe of Nebrask	<u></u> а		State: <b>NE</b>	Sampling Po	int: 44	
Investigator(s): K. Sherman, C.	Booth, W. Jewe	II (Olsson)		Section,	, Township, Range:	S32 T27N	R5E
Landform (hillslope, terrace, etc.):	Slope	Local	l relief (conca	ave, convex, none):	Convex		
Slope (%): <b>1-2</b> Lat:	42.273491	Long	j:	-96.871353	Datum:	NAD83	
Soil Map Unit Name: 6603—Alcest	er silty clay loar	n, 2 to 6 percent sl	opes	NV	VI classification:	None	
Are climatic / hydrologic conditions o	n the site typical	for this time of year?	? Yes	No X (If	no, explain in Rem	arks)	
Are Vegetation , Soil , or	Hydrology	significantly distur	rbed?	Are "Normal Circumst	tances" present? Ye	es X No	1
Are Vegetation , Soil , or	Hydrology	naturally problema	atic?	(If needed, explain an	v answers in Rema	arks.)	
SUMMARY OF FINDINGS - A	· · · ·						
Hydrophytic Vegetation Present?	Yes	No X	Ť			· · · · · ·	
Hydric Soil Present?	Yes	No X					
•	-	<del>,-</del>		ampled Area ı Wetland?	Yes	No X	
Wetland Hydrology Present?	Yes	No <u>X</u>	Within a	i vvetianu :	res	No X	
Remarks: SP 44 is an upland area located adja site due to recent heavy rainfall even VEGETATION - Use scientif	nts.		iue) at Waket	field Bore Point 106. (	Climatic conditions	are not typical at	this
VEGETATION - USE SCIENTIL				Dominanaa Taatu	workshoot:		
Tree Stratum (Plot size: 30'	Absol		Indicator Status	Dominance Test v  Number of Domina			
1.				That Are OBL, FAC	•	0	(A)
2.							- ` ′
3.				Total Number of Do	ominant		
4.		<u> </u>		Species Across All	Strata:	3	(B)
5.							_'
		= Total Cover		Percent of Domina			
Sapling/Shrub Stratum (Plot size	e: <u>15'</u>	)		That Are OBL, FAC	CW, or FAC:	0	(A/B)
1. Morus rubra	3		FACU				
2. Gleditsia triacanthos	2	X	FACU	Prevalence Index			
3.					Cover of:	Multiply by:	_
4				OBL species		x 1 =	
5		— <del></del>		FACW species		x 2 =	
	,5	= Total Cover		FAC species FACU species		x 3 =	_
Herh Stratum (Plot size: 5'	,	. v		I ACO species			
Herb Stratum (Plot size: 5'	75	۱ X	FACII	LIPI species		x 4 =	
1. Portulaca oleracea	<u>75</u>		FACU	UPL species		x 5 =	— — (B)
Portulaca oleracea     Taraxacum officinale	10	)	FACU	Column Totals:	0 ence Index = B/A =	x 5 = (A)	(B)
Portulaca oleracea     Taraxacum officinale     Trifolium repens	10	)	FACU FACU	Column Totals:	0 ence Index = B/A =	x 5 = (A)	(B)
Portulaca oleracea     Taraxacum officinale     Trifolium repens     Rumex crispus	10	)	FACU	Column Totals: Preval  Hydrophytic V	ence Index = B/A =	x 5 = (A)	(B)
Portulaca oleracea     Taraxacum officinale     Trifolium repens     Rumex crispus	10	)	FACU FACU	Column Totals: Preval  Hydrophytic V	ence Index = B/A =	x 5 = (A)	(B)
Portulaca oleracea     Taraxacum officinale     Trifolium repens     Rumex crispus     6.	10	)	FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid T  2 - Domina	ence Index = B/A =  egetation Indicator  Fest for Hydrophyticance Test is >50%	x 5 = (A)	(B)
1. Portulaca oleracea 2. Taraxacum officinale 3. Trifolium repens 4. Rumex crispus 5. 6. 7.	10	)	FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid 1  2 - Domina 3 - Prevale	ence Index = B/A =  egetation Indicator  Fest for Hydrophytic  ance Test is >50%  ence Index is ≤3.01	x 5 = (A)	
1. Portulaca oleracea 2. Taraxacum officinale 3. Trifolium repens 4. Rumex crispus 5. 6. 7. 8.	10	)	FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho	ence Index = B/A =  egetation Indicator  Fest for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations	x 5 = (A)  ors: c Vegetation  s¹ (Provide suppo	
1. Portulaca oleracea 2. Taraxacum officinale 3. Trifolium repens 4. Rumex crispus 5. 6. 7. 8. 9.	10	)	FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho  data in Rei	ence Index = B/A =  egetation Indicator  Fest for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations  marks or on a sepa	x 5 =  (A)  ors:  c Vegetation  of (Provide supporate sheet)	rting
1. Portulaca oleracea 2. Taraxacum officinale 3. Trifolium repens 4. Rumex crispus 5. 6. 7. 8.	10 10 5		FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho  data in Rei	ence Index = B/A =  egetation Indicator  Fest for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations	x 5 =  (A)  ors:  c Vegetation  of (Provide supporate sheet)	rting
1. Portulaca oleracea 2. Taraxacum officinale 3. Trifolium repens 4. Rumex crispus 5. 6. 7. 8. 9.	10		FACU FACU	Column Totals: Preval  Hydrophytic V  1 - Rapid T  2 - Domina  3 - Prevale  4 - Morpho  data in Rei  Problemati	ence Index = B/A =  egetation Indicator  Fest for Hydrophytic  ance Test is >50%  ence Index is ≤3.0¹  blogical Adaptations  marks or on a sepa	x 5 =  (A)  ors: c Vegetation  orate sheet) etation¹ (Explain)  and hydrology mus	rting

SOIL

	ption: (Describe to			ment the ind		confirm t	he absence of indic	ators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-2	10YR3/1	100	Color (moist)	/0	1,700		Loam	Nemans
U-Z	1011371	100		- —			LUaiii	
1- 0.0							2	
	centration, D=Depl	etion, RM=Re	educed Matrix, M	S=Masked S	Sand Grain	S.		ore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		_	Sandy Gley	∕ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Ep	ipedon (A2)		_	Sandy Red	ox (S5)		Dark Sur	face (S7)
Black His	stic (A3)		<del>-</del>	Stripped Ma	atrix (S6)		Iron-Man	ganese Masses (F12)
Hydroge	n Sulfide (A4)		_	Loamy Muc	cky Mineral	(F1)	Very Sha	allow Dark Surface (TF12)
<u> </u>	Layers (A5)		_	_ Loamy Gley	•	, ,		xplain in Remarks)
2 cm Mu			_	Depleted M		` ,	_	•
	l Below Dark Surfa	ce (A11)		_    ' Redox Dark	, ,	F6)		
	rk Surface (A12)	( ,	_	Depleted Da	`	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
	lucky Mineral (S1)		_	Redox Depi				d hydrology must be present,
	cky Peat or Peat (S	33)	_		,	ς,	unless	disturbed or problematic.
	· · /!f = beemined).						1	
	yer (if observed):							
Type:		ravel					Under Call Process	40 Van No Y
Depth (inch	es):	2					Hydric Soil Presen	t? Yes No X
HYDROLO	GY							
	ology Indicators:							
_	licators (minimum o	of one is requi	ired: check all the	at anply)			Secondary Ind	licators (minimum of two required)
	Water (A1)	// C.15 12 12 1		ined Leaves	(B9)			il Cracks (B6)
_	ter Table (A2)			auna (B13)	(20)			atterns (B10)
	` '				04.4\			
Saturation — Water M	on (A3) arks (B1)			atic Plants (B			Dry-Seasor Crayfish Bu	Water Table (C2)
	` '		<u> </u>	Sulfide Odor	` '	D 1- (0)	<b>—</b> ′	,
	t Deposits (B2)			Rhizospheres	•	Roots (C.	′ <del>–</del>	Visible on Aerial Imagery (C9)
	oosits (B3)			of Reduced I	, ,			Stressed Plants (D1)
<u> </u>	t or Crust (B4)		_	on Reduction		oils (C6)		c Position (D2)
	osits (B5)	, ,	_	k Surface (C7	•		FAC-Neutra	ıl Test (D5)
	on Visible on Aerial	0 , ,	′ <b>–</b>	Well Data (D	,			
Sparsely —	Vegetated Concav	/e Surface (B8	Other (Exp	plain in Rema	arks) 			
Field Observa	tions:							
Surface Water	Present? Yes	s	No X De	epth (inches)	<b>(</b> )			
Water Table P	resent? Yes	s	No X De	epth (inches)	)			
Saturation Pres	sent? Ye	s	No X De	epth (inches)	)	Wetlan	d Hydrology Presei	nt? Yes No_X_
(includes capill	ary fringe)					<u> </u>		
Describe Reco	rded Data (stream	gauge, monit	oring well, aerial	photos, prev	√ious inspe	ctions), if	available:	
Remarks:								
Normanio.								

Sampling Point: 44

Project/Site: Winnebago Tribe Broa	adband Connectivity F	Project City/Co	unty: Dixe	on	Sampling Da	ate: 7/19/202	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: N	NE Sampling Po	oint: 45	
Investigator(s): K. Sherman, C.	Booth, W. Jewell (Ol	lsson)		Sect	ion, Township, Range	S32 T27N R	5E
Landform (hillslope, terrace, etc.):	Gravel Lot	Local re	lief (conca	ve, convex, none	): None		
Slope (%): <b>0-1</b> Lat:	42.273151	Long:		96.873848	Datum:	NAD83	
Soil Map Unit Name: 6603—Alcest	er silty clay loam, 2	to 6 percent slope	es		NWI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for th	nis time of year?	Yes	No X	(If no, explain in Rem	arks)	
Are Vegetation $X$ , Soil $X$ , or	Hydrology sig	gnificantly disturbe	d? A	re "Normal Circu	mstances" present? Y	es X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemation	;? (I	f needed, explair	n any answers in Rema	arks.)	
SUMMARY OF FINDINGS - A	ttach site map sh	owing samplin	g point l	ocations, trai	nsects, important	features, etc.	
Hydrophytic Vegetation Present?	Yes -	No -					
Hydric Soil Present?	Yes -	No -	le the Sa	mpled Area			
Wetland Hydrology Present?	Yes	No X		Wetland?	Yes	No X	
Remarks: SP 45 is an upland area within a gra gravel. Although vegetation is not pre wetland hydrology. Climatic condition	esent in this area, it is ns are not typical at th	unlikely dominant is site due to recer	hydrophyti	c vegetation wou		•	
VEGETATION - Use scientif				Тв: т.	-4		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Dominance Te Number of Dom			
1.			Otatao		FACW, or FAC:	0	(A)
2.		·					,
3.				Total Number of	of Dominant		
4		<u> </u>		Species Across	s All Strata:	0	(B)
5		. <u> </u>					
Sapling/Shrub Stratum (Plot size	e: 15' )	= Total Cover		Percent of Dom	ninant Species FACW, or FAC:	0	(A/B)
1.	. 15			That Are OBL,	FACW, OF FAC.		(A/D)
2		· <u> </u>		Prevalence Inc	dex worksheet:		
3.	<del></del>	·			% Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.		·		FACW species		x 2 =	_
		= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)			FACU species		x 4 =	_
1.		. <u> </u>		UPL species		x 5 =	
2		. <u> </u>		Column Totals:	0	(A)	(B)
3		. <u> </u>		Pre	evalence Index = B/A =	=	
4		. <u> </u>		Hydrophyti	c Vegetation Indicate	ors:	
5		. <u> </u>			oid Test for Hydrophytic		
6		. <u> </u>		I — ·	ninance Test is >50%		
7				3 - Pre	valence Index is <3.01		
8		·		4 - Mor	phological Adaptations	s1 (Provide support	ting
9					Remarks or on a sepa	,	
10		. <u> </u>		Probler	natic Hydrophytic Veg	etation¹ (Explain)	
W 1 1/2 0/ / / / / / / / / / / / / / / / / /		= Total Cover					
Woody Vine Stratum (Plot size:	30' )				f hydric soil and wetlar ess disturbed or proble		be
2.	<del></del>	·		Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	No -	
Remarks: (Include photo numbers h	oro or on a concrete	shoot )		Fieselli			
PP 45	oro or on a separate s	5.1001.)					

SOIL Sampling Point: 45

<b>file Descrip</b> Depth	Matrix			Redox Feat				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
oe: C=Con	centration, D=Deple	tion, RM=	Reduced Matrix, M	1S=Masked	Sand Grain	S.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)			Sandy Gley	yed Matrix (	(S4)	Coast F	Prairie Redox (A16)
Histic Ep	ipedon (A2)		_	Sandy Red	lox (S5)		— Dark Si	urface (S7)
Black His	stic (A3)		_	Stripped M			Iron-Ma	anganese Masses (F12)
_	n Sulfide (A4)		_	Loamy Mud	` '	(F1)		nallow Dark Surface (TF12)
	Layers (A5)		_	Loamy Gle	•	. ,		Explain in Remarks)
2 cm Mu	• , ,		_	Depleted M		(1 2)		Explain in Nomano)
	Below Dark Surfac	o (A11)	_	Redox Darl		E6)		
_ '	rk Surface (A12)	5 (A11)	_	Depleted D	,	,	31, 1: 0 0 0 0 0 0	af buduanbutia vanatatian and
_	` ,		_	- '		` '		s of hydrophytic vegetation and nd hydrology must be present,
_	ucky Mineral (S1)	0)	_	Redox Dep	ressions (r	-0)		s disturbed or problematic.
_ 5 cm Mud	cky Peat or Peat (S	3)						
trictive La	yer (if observed):							
Туре:	Gra	vel						
	es):	Surface ent at the s		nit cannot be	taken. Due		ydric Soil Prese	ent? Yes No
Depth (inche narks: estrictive lay land hydrold	rer of gravel is prese	Surface ent at the s		oit cannot be	taken. Due		-	
Depth (inchenarks: estrictive lay land hydrold	es):  ver of gravel is prese pgy, it is assumed th	Surface ent at the s		bit cannot be	taken. Due		-	
Depth (inchenarks: estrictive lay land hydrologous)	es):  ver of gravel is prese pgy, it is assumed the  GY  plogy Indicators:	Surface ent at the s ne soil is n	on-hydric.		taken. Due		of dominant hyd	rophytic vegetation and sufficien
Depth (inchernarks: estrictive layland hydrological displayed)  DROLOGitland Hydrogrammary India	es):  ver of gravel is prese pgy, it is assumed the  GY  plogy Indicators: icators (minimum of	Surface ent at the s ne soil is n	on-hydric. quired; check all th	at apply)			of dominant hydronic dominant	rophytic vegetation and sufficient
Depth (inchenarks: estrictive layerand hydrological bydrological bydro	rer of gravel is prese ogy, it is assumed the GY ology Indicators: icators (minimum of Water (A1)	Surface ent at the s ne soil is n	on-hydric. quired; check all th Water-Sta	at apply) iined Leaves			of dominant hydrodomic	rophytic vegetation and sufficie  ndicators (minimum of two requipoli Cracks (B6)
Depth (inchenarks: estrictive layerand hydrological hydro	es):  ver of gravel is prese pgy, it is assumed the  GY  blogy Indicators: icators (minimum of  Water (A1) ter Table (A2)	Surface ent at the s ne soil is n	on-hydric. quired; check all th:Water-Sta	at apply) iined Leaves auna (B13)	s (B9)		of dominant hydrodomic Secondary Ir Surface S	rophytic vegetation and sufficient a
Depth (incher narks: strictive lay and hydrold DROLOC land Hydro Primary Indi Surface V High Wat Saturatio	es):  er of gravel is prese ogy, it is assumed the  GY  blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3)	Surface ent at the s ne soil is n	on-hydric. quired; check all the Water-Sta Aquatic Fa True Aqua	at apply) iined Leaves auna (B13) atic Plants (E	s (B9)		Secondary Ir Surface S Drainage Dry-Seaso	rophytic vegetation and sufficient a
Depth (inchenarks: strictive lay and hydrolo  DROLOC land Hydro  Primary Indi Surface V High Wat Saturatio Water Ma	rer of gravel is prese ogy, it is assumed the GY blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1)	Surface ent at the s ne soil is n	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo	s (B9) 314) r (C1)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E	ndicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (inchenarks: estrictive lay land hydrolo tland Hydro Primary Indi Surface V High Wat Saturatio Water Ma	es):  er of gravel is prese ogy, it is assumed the  GY  blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3)	Surface ent at the s ne soil is n	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen	at apply) iined Leaves auna (B13) atic Plants (E	s (B9) 314) r (C1)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E	rophytic vegetation and sufficiendicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (inchenarks: estrictive lay land hydrological land hydrologi	rer of gravel is prese ogy, it is assumed the GY blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1)	Surface ent at the s ne soil is n	quired; check all th Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo	s (B9) 314) r (C1) s on Living	e to the lack	Secondary Ir Surface S Drainage Dry-Seaso Crayfish E Saturation	rophytic vegetation and sufficiendicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (inchenarks: estrictive lay land hydrological land hydrologi	rer of gravel is preserved, it is assumed the second of th	Surface ent at the s ne soil is n	quired; check all th Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	at apply) iined Leaves auna (B13) atic Plants (B Sulfide Odo Rhizosphere	s (B9) B14) or (C1) s on Living Iron (C4)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	rophytic vegetation and sufficient and control of two requipies of the control of two requipies of two requi
Depth (inchenarks: estrictive lay land hydrological land land land land land land land la	rer of gravel is preserby, it is assumed the copy, it is assumed the colors (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) to Deposits (B2) osits (B3)	Surface ent at the s ne soil is n	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced	G (B9)  B14)  or (C1)  s on Living  Iron (C4)  n in Tilled S	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	ndicators (minimum of two requolicators (B10) On Water Table (C2) Burrows (C8) Visible on Aerial Imagery (C9) r Stressed Plants (D1)
Depth (inchenarks: estrictive lay land hydrolo Eland Hydrolo Eland Hydrolo Eland Hydrolo Surface V High Wat Saturatio Water Ma Sedimen Drift Depo	rer of gravel is preserby, it is assumed the responsive forms of the responsiv	Surface ent at the s ne soil is n	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Irc	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction	G (B9) G14) or (C1) s on Living Iron (C4) or in Tilled S	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficiend and cators (minimum of two requipoil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) It Visible on Aerial Imagery (C9) or Stressed Plants (D1) onic Position (D2)
Depth (inchenarks: estrictive lay land hydrolo Eland Hydro	rer of gravel is preserby, it is assumed the responsibility of the	Surface ent at the s ne soil is n  one is rec	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Ird Thin Muck	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction s Surface (C	s (B9) s14) or (C1) s on Living Iron (C4) on in Tilled S 7)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficient and cators (minimum of two required coil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) It Visible on Aerial Imagery (C9) or Stressed Plants (D1) onic Position (D2)
Depth (inchenarks: estrictive lay land hydrolo Eland Hydrolo Eland Hydro Primary Indi Surface V High Water Ma Sedimen Drift Depo Algal Mat Iron Depo Inundatio Sparsely	rer of gravel is preser ogy, it is assumed the orgy, it is assumed the orgy in the same of the organization of the organizatio	Surface ent at the s ne soil is n  one is rec	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Ird Thin Muck	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E	s (B9) s14) or (C1) s on Living Iron (C4) on in Tilled S 7)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficiend and cators (minimum of two requipoil Cracks (B6) Patterns (B10) On Water Table (C2) Burrows (C8) It Visible on Aerial Imagery (C9) or Stressed Plants (D1) onic Position (D2)
Depth (inchenarks: estrictive lay land hydrolo Eland Hydro	rer of gravel is prese ogy, it is assumed the ology Indicators: icators (minimum of Nater (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I Vegetated Concave	Surface ent at the s ne soil is n  one is rec  frone is rec  lmagery (E e Surface (	quired; check all the Water-Star Aquatic Farrue Aqua Hydrogen Oxidized Farresence Recent Iron Thin Muck (S7) Gauge or B8) Other (Exp.)	at apply) ined Leaves auna (B13) atic Plants (B Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C' Well Data (E plain in Rem	s (B9) B14) or (C1) s on Living Iron (C4) on in Tilled S 7) D9) arks)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficient and cators (minimum of two requipoil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) I Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Depth (inchenarks: estrictive lay land hydrold DROLOC tland Hydrol Surface V High Water Ma Saturatio Water Ma Sediment Drift Dept Algal Mat Iron Dept Inundatio Sparsely d Observat	rer of gravel is preserby, it is assumed the copy, it is assumed the copy, it is assumed the copy in t	Surface ent at the second solutions of the soil is not second solutions.  Tone is recommended to the solution of the solutions of the solution	quired; check all the Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Irc Thin Muck 37) Gauge or Other (Ex	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E plain in Rem	s (B9) B14) or (C1) s on Living Iron (C4) n in Tilled S 7) D9) aarks)	e to the lack	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficient and cators (minimum of two requipoil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) I Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2)
Depth (inchenarks: estrictive lay land hydrological land land land land land land land la	rer of gravel is preserby, it is assumed the property of the p	Surface ent at the s ne soil is n f one is rec Imagery (E	quired; check all the Water-Star Aquatic Faragraph — Oxidized Faragraph — Presence — Recent Iron Thin Muck 187) — Gauge or 188) — Other (Exp. No X D	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C' Well Data (E plain in Rem epth (inches	s (B9)  B14)  or (C1)  s on Living Iron (C4)  n in Tilled S  7)  D9)  parks)	Roots (C3)	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	rophytic vegetation and sufficiendicators (minimum of two requioil Cracks (B6) Patterns (B10) On Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) r Stressed Plants (D1) nic Position (D2) ral Test (D5)
Depth (inchenarks: Destrictive lay land hydrological land land land land land land land la	rer of gravel is preserved by, it is assumed the copy, it is assumed the copy, it is assumed the copy, it is assumed the copy in the copy	Surface ent at the s ne soil is n f one is rec Imagery (E	quired; check all the Water-Star Aquatic Faragraph — Oxidized Faragraph — Presence — Recent Iron Thin Muck 187) — Gauge or 188) — Other (Exp. No X D	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E plain in Rem	s (B9)  B14)  or (C1)  s on Living Iron (C4)  n in Tilled S  7)  D9)  parks)	Roots (C3)	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted of	rophytic vegetation and sufficiendicators (minimum of two requioil Cracks (B6) Patterns (B10) On Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) Ir Stressed Plants (D1) Inic Position (D2) Iral Test (D5)
Depth (inchernarks: estrictive lay land hydrological land land land land land land land la	rer of gravel is preserver of gravel is preserver of gravel is preserver of gravel is preserver of gravel is assumed the second of the second	Surface ent at the s ne soil is n f one is rec Imagery (E e Surface (	quired; check all the Water-State Aquatic Fate Hydrogen Oxidized Fate Presence Recent Inc Thin Muck Gay Gauge or B8) Other (Exp	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E plain in Rem epth (inches epth (inches	s (B9)  314)  or (C1)  s on Living Iron (C4)  on in Tilled S  7)  O9)  arks)	Roots (C3) oils (C6)	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	rophytic vegetation and sufficiendicators (minimum of two requioil Cracks (B6) Patterns (B10) On Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) r Stressed Plants (D1) nic Position (D2) ral Test (D5)
Depth (inchernarks: estrictive lay land hydrological land land land land land land land la	rer of gravel is preserved by, it is assumed the copy, it is assumed the copy, it is assumed the copy, it is assumed the copy in the copy	Surface ent at the s ne soil is n f one is rec Imagery (E e Surface (	quired; check all the Water-State Aquatic Fate Hydrogen Oxidized Fate Presence Recent Inc Thin Muck Gay Gauge or B8) Other (Exp	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E plain in Rem epth (inches epth (inches	s (B9)  314)  or (C1)  s on Living Iron (C4)  on in Tilled S  7)  O9)  arks)	Roots (C3) oils (C6)	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	rophytic vegetation and sufficiendicators (minimum of two requioil Cracks (B6) Patterns (B10) On Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) Ir Stressed Plants (D1) Inic Position (D2) Iral Test (D5)
Depth (inchernarks: estrictive lay land hydrological land land land land land land land la	rer of gravel is preserver of gravel is preserver of gravel is preserver of gravel is preserver of gravel is assumed the second of the second	Surface ent at the s ne soil is n f one is rec Imagery (E e Surface (	quired; check all the Water-State Aquatic Fate Hydrogen Oxidized Fate Presence Recent Inc Thin Muck Gay Gauge or B8) Other (Exp	at apply) ined Leaves auna (B13) atic Plants (E Sulfide Odo Rhizosphere of Reduced on Reduction c Surface (C Well Data (E plain in Rem epth (inches epth (inches	s (B9)  314)  or (C1)  s on Living Iron (C4)  on in Tilled S  7)  O9)  arks)	Roots (C3) oils (C6)	Secondary Ir Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	rophytic vegetation and sufficiendicators (minimum of two requioil Cracks (B6) Patterns (B10) On Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C9) Ir Stressed Plants (D1) Inic Position (D2) Iral Test (D5)

Applicant/Owner: Winnebago Tril		Project City/C	ounty: Da	kota	Sampling Date	e: <b>7/26/20</b>	23
	oe of Nebraska			State: NE	Sampling Poin	nt: <b>46</b>	
Investigator(s): K. Sherman, K. Ga	aston (Olsson)			Section,	Гownship, Range:	S27 T29N I	R9E
Landform (hillslope, terrace, etc.):	Pasture	Local r	elief (conca	ave, convex, none): C	onvex		
Slope (%): <b>2-3</b> Lat:	42.461777	Long:		-96.384699	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa s	ilty clay, occasio	nally flooded		NW	l classification:	None	
Are climatic / hydrologic conditions on	the site typical for	this time of year?	Yes	No X (If n	o, explain in Remar	rks)	
Are Vegetation , Soil , or H	ydrology s	ignificantly disturb	ed?	Are "Normal Circumsta	nces" present? Yes	x X No	
Are Vegetation , Soil , or H	ydrology n	aturally problemat	ic?	(If needed, explain any	answers in Remark	ks.)	
SUMMARY OF FINDINGS - Atta	, , ,	, ,					
Hydrophytic Vegetation Present?	Yes	No X	Ť.	,	· ·	· · · · · · · · · · · · · · · · · · ·	
Hydric Soil Present?	Yes	No X					
•		<del></del>		ampled Area Wetland?	Voc	No. Y	
Wetland Hydrology Present?	Yes	No X	within a	wetiand?	Yes	No X	
Remarks: SP 46 documents an upland area withi to recent heavy rainfall events.  VEGETATION - Use scientific			t of the Nor	th Bore Site. Climatic c	conditions are not ty	pical at this site	due
VEGETATION - Use scientific				Dominance Test we	orkshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Dominan			
1.	_ ′			That Are OBL, FAC	•	1	(A)
2.					-		• ` ′
3.				Total Number of Dor	minant		
4.				Species Across All S	Strata:	3	(B)
5							
Sapling/Shrub Stratum (Plot size:	15' )	= Total Cover		Percent of Dominant That Are OBL, FAC	•	33	(A/B)
1.				Prevalence Index w	vorkshoot:		
2. 3.				Total % C		Multiply by:	
J				OBL species		x 1 =	
5.				FACW species		x 2 =	_
J		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	
1. Taraxacum officinale	<b>_</b> ′ 20	X	FACU	UPL species		x 5 =	
2. Poa pratensis	20	X	FAC	Column Totals:	0 (	(A)	(B)
3. Digitaria sanguinalis	20	X	FACU	Prevale	nce Index = B/A =	· ·	
4. Convolvulus arvensis	10		UPL		<del>-</del>		
	10		UPL		getation Indicators		
5. Bromus inermis			UPL	1 - Rapid Te	est for Hydrophytic \	Vegetation	
Bromus inermis     Melilotus officinalis	10						
	10 10		FACU	_	ice Test is >50%		
6. Melilotus officinalis			FACU	3 - Prevalen	ce Index is <3.01	/D	-4:
Melilotus officinalis     Ambrosia artemisiifolia		·	FACU	3 - Prevalen 4 - Morpholo	ce Index is <3.0¹ ogical Adaptations¹	`	rting
Melilotus officinalis     Ambrosia artemisiifolia     9.			FACU	3 - Prevalen 4 - Morpholo data in Rem	ce Index is <3.01 ogical Adaptations1 arks or on a separa	ate sheet)	Ü
<ul><li>6. Melilotus officinalis</li><li>7. Ambrosia artemisiifolia</li><li>8.</li></ul>	10	= Total Cover	FACU	3 - Prevalen 4 - Morpholo data in Rem	ce Index is <3.0¹ ogical Adaptations¹	ate sheet)	Ü
Melilotus officinalis     Ambrosia artemisiifolia		= Total Cover	FACU	3 - Prevalen 4 - Morpholo data in Rem Problematic   1 Indicators of hyd	ce Index is <3.01 ogical Adaptations1 arks or on a separa	ate sheet) ation <sup>1</sup> (Explain) hydrology musi	ŭ

SOIL

Sampling Point: 46

Profile Description: (Describe to the Depth Matrix		nent the indica Redox Feature		the absence of indic	cators.)		
(inches) Color (moist) %			Type <sup>1</sup> Loc	<sup>2</sup> Texture	Remarks		
0-7 10YR 4/3 10				Silt Loam			
7-9 10YR 3/2 10	00			Silt Loam			
9-25 10YR 4/3 10	00			Silt Loam			
<sup>1</sup> Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, MS	S=Masked Sar	nd Grains.	<sup>2</sup> Location: PL=Pe	ore Lining, M=Matrix		
Hydric Soil Indicators:				Indicators fo	r Problematic Hydric Soils <sup>3</sup> :		
Histosol (A1)		Sandy Gleyed	Matrix (S4)	Coast P	rairie Redox (A16)		
Histic Epipedon (A2)	_	Sandy Redox	(S5)	Dark Su	rface (S7)		
Black Histic (A3)	_	Stripped Matri	x (S6)	Iron-Ma	nganese Masses (F12)		
Hydrogen Sulfide (A4)	_	Loamy Mucky	Mineral (F1)		allow Dark Surface (TF12)		
Stratified Layers (A5)		Loamy Gleyed			explain in Remarks)		
2 cm Muck (A10)		Depleted Matr	, ,	_ `	. ,		
Depleted Below Dark Surface (A1	_	Redox Dark S	` ,				
Thick Dark Surface (A12)		Depleted Dark	` ,	<sup>3</sup> Indicators	of hydrophytic vegetation and		
Sandy Mucky Mineral (S1)		Redox Depres	` '		d hydrology must be present,		
5 cm Mucky Peat or Peat (S3)	_		(, ,	unless disturbed or problematic.			
Restrictive Layer (if observed):							
Type:							
Depth (inches):	_			Hydric Soil Prese	nt? Yes No X		
Remarks:	_			<b>,</b>			
HYDROLOGY							
HYDROLOGY Wetland Hydrology Indicators:							
	is required; check all tha	t apply)		Secondary In	dicators (minimum of two required)		
Wetland Hydrology Indicators:		t apply) ned Leaves (B	9)		dicators (minimum of two required)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1)	Water-Stair	ned Leaves (B	9)	Surface Sc	il Cracks (B6)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	Water-Stair Aquatic Fa	ned Leaves (B una (B13)	•	Surface So Drainage F	vil Cracks (B6) Patterns (B10)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stain Aquatic Fa True Aquat	ned Leaves (B una (B13) ic Plants (B14	, )	Surface Sconding Price Sco	ril Cracks (B6) Patterns (B10) In Water Table (C2)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Staii Aquatic Fa True Aquat Hydrogen \$	ned Leaves (B una (B13) ic Plants (B14 Sulfide Odor (C	) (21)	Surface So Drainage F Dry-Seaso Crayfish Bo	vil Cracks (B6) Patterns (B10) In Water Table (C2) Patrows (C8)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	— Water-Staii — Aquatic Fa — True Aquat — Hydrogen S — Oxidized R	ned Leaves (B una (B13) iic Plants (B14 Sulfide Odor (C hizospheres o	) c1) n Living Roots (	Surface So  Drainage F  Dry-Seaso  Crayfish Bo  (C3)  Saturation	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	— Water-Stai — Aquatic Fa — True Aquat — Hydrogen S — Oxidized R — Presence c	ned Leaves (B una (B13) iic Plants (B14 Sulfide Odor (C hizospheres o of Reduced Iro	) C1) n Living Roots ( n (C4)	Surface So  Drainage F  Dry-Seaso  Crayfish Bo  Saturation  Stunted or	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence of Recent Iror	ned Leaves (B una (B13) ic Plants (B14 Sulfide Odor (C hizospheres o of Reduced Iron n Reduction in	) c1) n Living Roots (	Surface So  Drainage F  Dry-Seaso  Crayfish Bo  (C3)  Saturation  Stunted or  Geomorph	vill Cracks (B6) Patterns (B10) In Water Table (C2) Parrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2)		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	— Water-Staii — Aquatic Fa — True Aquat — Hydrogen S — Oxidized R — Presence c — Recent Iror — Thin Muck	ned Leaves (B una (B13) cic Plants (B14 Sulfide Odor (C hizospheres o of Reduced Iron n Reduction in Surface (C7)	) C1) n Living Roots ( n (C4)	Surface So  Drainage F  Dry-Seaso  Crayfish Bo  (C3)  Saturation  Stunted or  Geomorph	vil Cracks (B6) Patterns (B10) In Water Table (C2) Purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)		
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Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/	County: Wo	oodbury	Sampling Da	ate: <b>7/12/20</b> 2	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State: IA	Sampling Po	oint: <b>47</b>	
Investigator(s): K. Davenport, C	. Booth, K. Sherma	n (Olsson)		Section	, Township, Range:	S26 T29N R	₹9E
Landform (hillslope, terrace, etc.):	Slope	Local	relief (conca	ave, convex, none):	Convex		
Slope (%): <b>2-3</b> Lat:	42.461589	Long:		-96.375634	Datum:	NAD83	
Soil Map Unit Name: 1E3—Ida silt	loam, 14 to 20 perce	ent slopes, seve	rely eroded	l N	WI classification:	None	
Are climatic / hydrologic conditions o	n the site typical for t	this time of year?	Yes	No X (If	no, explain in Rem	arks)	
Are Vegetation , Soil , or	Hydrology s	ignificantly disturb	bed?	Are "Normal Circums	tances" present? Ye	es X No	
		aturally problema		(If needed, explain ar			
SUMMARY OF FINDINGS - A	, ,,						
Hydrophytic Vegetation Present?	Yes	No X		,	,p = 1 tunit		
Hydric Soil Present?	<del></del>						
, and the second	Yes	<del></del>		ampled Area			
Wetland Hydrology Present?	Yes	No X	within a	Wetland?	Yes	No X	
Remarks:							
SP 47 documents an upland area at	the eastern bore poi	nt of the North Bo	re Site. Clin	natic conditions are n	ot typical at this site	due to recent he	avy
rainfall events.	·				, ·		•
VEGETATION - Use scientif	fic names of pla	nto					
VEGETATION - USE SCIENTIN	•		localita adam	Dominance Test	workshoot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Domina			
1.		<del> </del>		That Are OBL, FA	•	1	(A)
2.	<del></del>						. ' ′
3.	<u> </u>			Total Number of D	ominant		
4.				Species Across All		4	(B)
5.							• ` ′
		= Total Cover		Percent of Domina	ant Species		
Sapling/Shrub Stratum (Plot size	e: 15' )	_		That Are OBL, FAC	•	25	(A/B)
1.							• ` '
2.				Prevalence Index	worksheet:		
3.	<del></del>	<del></del>		Total %	Cover of:	Multiply by:	
4.				OBL species	_	x 1 =	_
5.				FACW species		x 2 =	_
-	<del></del>	= Total Cover		FAC species		x 3 =	_
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
1. Asclepias tuberosa		X	UPL	UPL species		x 5 =	_
2. Poa pratensis	20	X	FAC	Column Totals:		(A)	(B)
3. Convolvulus arvensis	15	X	UPL	Preval	lence Index = B/A =	· · · —	<b>—</b> ` ′
4. Brassica rapa	10	X	UPL				
5. Digitaria sanguinalis	10		FACU	Hydrophytic V	egetation Indicate	ors:	
6. Ambrosia artemisiifolia	8		FACU	1 - Rapid	Test for Hydrophytic	Vegetation	
7. Taraxacum officinale			FACU	2 - Domina	ance Test is >50%		
8. Lotus corniculatus				3 - Prevale	ence Index is <3.01		
			FACU		ological Adaptations	`	ting
9. Asclepias syriaca	5		FACU		marks or on a sepa	,	
10. Trifolium pratense	2		FACU	Problemat	ic Hydrophytic Veg	etation ˈ (Explain)	
	100	= Total Cover					
Woody Vine Stratum (Plot size:	30' )				dric soil and wetlar		be
1					disturbed or proble	matic.	
2				Hydrophytic			
		= Total Cove	er	Vegetation Present?	Yes	No_X	_
		1 ()		Present?			
Remarks: (Include photo numbers h	ere or on a separate	sneet.)					
PP 47a and 47b							

								Sampling Point:	47
Profile Descrip	ption: (Describe to	the dept	h needed to d	locument the i	ndicator or	confirm th	ne absence of ind	icators.)	
Depth	Matrix	2/	0.1./	Redox Fea		12	<b>-</b> .	5 .	
(inches)	Color (moist)	<u>%</u>	Color (mo	oist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	10YR 4/3	70					Loam		
0.40	10YR 2/1	30					Loam		
6-18	10YR 4/3	80					Loam		
	10YR 3/1	20	-				Loam		
<sup>1</sup> Type: C=Con	centration, D=Depl	etion, RM=	Reduced Mat	rix, MS=Masked	Sand Grair	 ns.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix	
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric	Soils <sup>3</sup> :
Histosol (				Sandy Gl	eyed Matrix	(S4)		Prairie Redox (A16)	
	ipedon (A2)			Sandy Re	-	()		urface (S7)	
Black His				_ ′	Matrix (S6)			anganese Masses (F12	١
	` '			_ · · ·	` '	L /E4\		-	
<u> </u>	n Sulfide (A4) Layers (A5)				ucky Minera eyed Matrix	` '		hallow Dark Surface (Tf Explain in Remarks)	12)
2 cm Mu	• , ,				Matrix (F3)	(1 2)		Explain in Nemarks)	
		oo (A11)			ark Surface (	(E6)			
	Below Dark Surface	Se (ATT)			•	` '	31	f bdrbti	lian and
	rk Surface (A12)				Dark Surfac			s of hydrophytic vegeta nd hydrology must be p	
	ucky Mineral (S1)	10)		Redox De	epressions (F	ro)		s disturbed or problema	
5 cm Muc	cky Peat or Peat (S	53)							
Postrictive La	yer (if observed):								
Restrictive La									
Type:									
	es):						Hydric Soil Prese	ent? Yes	No X
Type:	es):						Hydric Soil Prese	ent? Yes	No X
Type: Depth (inch	es):						Hydric Soil Prese	ent? Yes	No <u>X</u>
Type: Depth (inch	es):						Hydric Soil Prese	ent? Yes	No <u>X</u>
Type: Depth (inch Remarks:							Hydric Soil Prese	ent? Yes	No X
Type: Depth (inche) Remarks:  HYDROLOG							Hydric Soil Prese	ent? Yes	No X
Type: Depth (inching properties)  Remarks:  HYDROLOG  Wetland Hydro	GY	f one is re	quired; check	all that apply)				ent? Yes	
Type: Depth (inchese Primary Indepth)	GY ology Indicators:	f one is re	•	all that apply) r-Stained Leave	es (B9)		Secondary In		
Type: Depth (inchese Name of Surface Name of S	GY ology Indicators: icators (minimum o	one is red	Wate		, ,		Secondary II	ndicators (minimum of t	
Type: Depth (incherent line) Remarks:  HYDROLOG Wetland Hydrog Primary Ind Surface N	Ology Indicators: icators (minimum o Water (A1) ter Table (A2)	f one is red	Wate	r-Stained Leave	` '		Secondary In Surface S Drainage	ndicators (minimum of t	
Type: Depth (incherent incherent inc	GY  blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3)	f one is re	Wate Aqua True	er-Stained Leave tic Fauna (B13)	(B14)		Secondary II Surface S Drainage Dry-Seaso	ndicators (minimum of to oil Cracks (B6) Patterns (B10)	
Type: Depth (inched) Remarks:  HYDROLOG Wetland Hydro Primary Ind Surface V High Wat Saturatio Water Ma	GY  blogy Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3)	f one is red	Wate Aqua True Hydr	r-Stained Leave tic Fauna (B13) Aquatic Plants	(B14) lor (C1)	) Roots (C	Secondary II Surface S Drainage Dry-Sease Crayfish E	ndicators (minimum of t oil Cracks (B6) Patterns (B10) on Water Table (C2)	wo require
Type: Depth (inched) Remarks:  HYDROLOG Wetland Hydro Primary Ind Surface V High Wat Saturatio Water Ma	GY  plogy Indicators: icators (minimum of Water (A1)) ter Table (A2) in (A3) arks (B1)	f one is red	Wate Aqua True Hydr	er-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc	(B14) lor (C1) res on Living	y Roots (C	Secondary II Surface S Drainage Dry-Sease Crayfish E Saturation	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	wo require
Type: Depth (inched) Remarks:  HYDROLOG Wetland Hydro Primary Ind Surface N High Wat Saturatio Water Ma Sedimen Drift Dep	ology Indicators: icators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	one is red	Wate Aqua True Hydr Oxidi	er-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher	(B14) lor (C1) res on Living d Iron (C4)		Secondary In Surface S Drainage Dry-Sease Crayfish E S Saturation Stunted o	ndicators (minimum of tooil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Image	wo require
Type: Depth (inched) Remarks:  HYDROLOG Wetland Hydro Primary Ind Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mar	ology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	one is red	— Wate — Aqua — True — Hydr — Oxidi — Prese — Rece	or-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor	wo require
Type: Depth (inched) Remarks:  HYDROLOG Wetland Hydro Primary Ind Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mai	ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Wate Aqua True Hydr Oxidi Preso Rece	or-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reduction	(B14) for (C1) fes on Living d Iron (C4) on in Tilled S		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) nic Position (D2)	wo require
Type: Depth (inchine Primary Indigent Mater Mate	ology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	Imagery (I	Wate Aqua True Hydr Oxidi Prese Rece Thin B7) Gaug	er-Stained Leave stic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reduction	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S C7) (D9)		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) nic Position (D2)	wo require
Type: Depth (inchine Primary Indigent Mater Mate	ology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav	Imagery (I	Wate Aqua True Hydr Oxidi Prese Rece Thin B7) Gaug	er-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reductic Muck Surface ( ge or Well Data	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S C7) (D9)		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) nic Position (D2)	wo require
Type: Depth (inch: Remarks:  HYDROLOG  Wetland Hydro Primary Ind Surface V High Water Ma Saturatio Water Ma Sedimen Drift Dep Algal Ma' Iron Depo Inundatio Sparsely  Field Observa	ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav tions:	Imagery (I re Surface	Wate Aqua True Hydr Oxidi Prese Rece Thin B7) Gaue (B8) Othe	er-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reductic Muck Surface (G ge or Well Data r (Explain in Re	(B14) lor (C1) les on Living d Iron (C4) on in Tilled S (C7) (D9) marks)		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) nic Position (D2)	wo require
Type: Depth (inch: Remarks:  HYDROLOG  Wetland Hydro Primary Ind Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Ma' Iron Depu Inundatio Sparsely  Field Observa Surface Water	ology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav tions: Present?	Imagery (I ve Surface	Wate Aqua True Hydri Oxidi Presi Rece Thin B7) Gaug (B8) Othe	er-Stained Leave stic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reductio Muck Surface (G ge or Well Data r (Explain in Red Depth (inche	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S C7) (D9) marks)		Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tool Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) nic Position (D2)	wo require
Type: Depth (inch: Remarks:  HYDROLOG  Wetland Hydro Primary Ind Surface V High Water Ma Saturatio Water Ma Sedimen Drift Dep Algal Ma' Iron Depo Inundatio Sparsely  Field Observa	ology Indicators: icators (minimum of Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav tions: Present? Yes	Imagery (1 re Surface	Wate Aqua True Hydr Oxidi Prese Rece Thin B7) Gaue (B8) Othe	r-Stained Leave tic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reductic Muck Surface (G ge or Well Data r (Explain in Red Depth (inche	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S C7) (D9) marks)	Soils (C6)	Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neur	ndicators (minimum of tooil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) onic Position (D2) tral Test (D5)	wo require
Type: Depth (inch: Remarks:  HYDROLOG  Wetland Hydro Primary Ind Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mai Iron Dept Inundatio Sparsely  Field Observa Surface Water Water Table Pr	ology Indicators: icators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concav tions: Present? Yes sent? Yes	Imagery (1 re Surface	Wate Aqua True Hydr Oxidi Press Rece Thin B7) Gaug (B8) Othe	er-Stained Leave stic Fauna (B13) Aquatic Plants ogen Sulfide Oc zed Rhizospher ence of Reduce ent Iron Reductio Muck Surface (G ge or Well Data r (Explain in Red Depth (inche	(B14) lor (C1) res on Living d Iron (C4) on in Tilled S C7) (D9) marks)	Soils (C6)	Secondary II Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi	ndicators (minimum of tooil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) on Visible on Aerial Imagor Stressed Plants (D1) onic Position (D2) tral Test (D5)	wo require

US Army Corps of Engineers Midwest Region - Version 2.0

Remarks:

Project/Site: Winnebago Tribe Broa	dband Connectivity	Project City/Co	ounty: Thur	ston	Sampling D	oate: 7/13/202	23
Applicant/Owner: Winnebago T	ribe of Nebraska			State:	NE Sampling P	oint: 48	
Investigator(s): K. Davenport, C	. Booth, K. Shermai	n (Olsson)		Sec	ction, Township, Range	: S5 T26N R1	0E
Landform (hillslope, terrace, etc.):	Field	Local re	elief (concav	e, convex, none	e): None		
Slope (%): <b>0-1</b> Lat:	42.236075	Long:	-	96.33918	Datum:	NAD83	
Soil Map Unit Name: 7880—Onawa	silty clay, occasion	nally flooded			NWI classification:	None	
Are climatic / hydrologic conditions of	n the site typical for t	his time of year?	Yes	No X	(If no, explain in Ren	narks)	
Are Vegetation X , Soil , or	Hydrology si	gnificantly disturbe	ed? Ar	e "Normal Circ	<del>_</del> umstances" present? Y	es X No	
Are Vegetation , Soil , or	Hydrology na	aturally problemation	c? (If	needed, explai	in any answers in Rem	arks.)	
SUMMARY OF FINDINGS - A	, ,,		•				
Hydrophytic Vegetation Present?	Yes -	No -	<u> </u>	•	· ·		
Hydric Soil Present?		No X					
Wetland Hydrology Present?		No X	within a V	npled Area	Yes	No X	
wettand rivulology i resent:		<u> </u>	within a v	retialia:		_ 10	
Remarks:							
SP 48 is an upland area within an ag		•				•	ation
is not present at this SP due to farming							
vegetation would be present in the all calculations. Climatic conditions are	0 1		•	,	wever, it is not included	I in the vegetation	
VEGETATION - Use scientif	,,		vy raimaii ev	ents.			
VEGETATION - Ose scientil	Absolute		Indicator	Dominance T	est worksheet:		
<u>Tree Stratum</u> (Plot size: 30'	) % Cover	Dominant Species?	Indicator Status		minant Species		
1.					FACW, or FAC:	0	(A)
2.	<u> </u>			,	,		()
3.				Total Number	of Dominant		
4.				Species Acros		0	(B)
5.				•			` ,
		= Total Cover		Percent of Dor	minant Species		
Sapling/Shrub Stratum (Plot size	: 15' )	-			FACW, or FAC:	0	(A/B)
1.							, ,
2.		<del></del>		Prevalence In	dex worksheet:		-
3.		<del></del>		Tota	al % Cover of:	Multiply by:	
4.				OBL species		x 1 =	_
5.	,			FACW species	<u></u>	x 2 =	_
		= Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5'	)	_		FACU species		x 4 =	_
1.				UPL species		x 5 =	
2.				Column Totals	: 0	(A)	(B)
3.				Pr	revalence Index = B/A	=	
4.				11 1			
5.					tic Vegetation Indicat		
6.					pid Test for Hydrophyti	ŭ	
7.					minance Test is >50%		
8.					evalence Index is <3.01		
9.					orphological Adaptation n Remarks or on a sepa	\	ting
-					ematic Hydrophytic Vec	,	
10		- Total Cover		<u> </u>	made riyuropriyde veç	jetation (Explain)	
Woody Vine Stratum (Plot size:	30' )	= Total Cover		1, 1, 1	61 12 9 1 d		
					of hydric soil and wetla less disturbed or proble		be
1				Hydrophyti		matic.	
		= Total Cover		Vegetation		Ne	
		= Total Cover		Present?	Yes	No	
Remarks: (Include photo numbers he	ere or on a separate	sheet.)					
PP 48	<del></del>	,					
1							

SOIL

_	•	-	needed to d			confirm th	ne absence of indica	ators.)
Depth (inches)	Color (moist)	%	Color (mo	Redox Feat	ures Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Pomorko
<u>`                                    </u>	Color (moist)	100	Color (mo	IST) 70	1 ype			Remarks
0-30	10YR 3/2	100					Clay Loam	
							<del></del>	
							·	
	-						·	
							<del></del>	
Type: C=Cond	centration, D=De	pletion, RM=F	Reduced Matr	ix, MS=Masked S	Sand Grain	s	<sup>2</sup> Location: PL=Pol	re Lining, M=Matrix
Hydric Soil	Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (	A1)			Sandy Gley	ed Matrix (	(S4)	Coast Pra	airie Redox (A16)
	pedon (A2)			Sandy Red		,	— Dark Surf	` '
Black His	. ,			Stripped Ma	` ,		_	ganese Masses (F12)
	Sulfide (A4)			Loamy Muc		(F1)		llow Dark Surface (TF12)
<u> </u>	Layers (A5)			Loamy Gle				plain in Remarks)
2 cm Muc				Depleted M		(' <del>-</del> /		pium m romano,
	Below Dark Surf	face (A11)		Redox Dark	. ,	F6)		
	rk Surface (A12)	, ,		Depleted D	`	,	<sup>3</sup> Indicators o	of hydrophytic vegetation and
	ucky Mineral (S1			Redox Dep				hydrology must be present,
	cky Peat or Peat				100010110 (.	0,	unless	disturbed or problematic.
_	er (if observed)	):	-					
Type: Depth (inche	20).						Hydric Soil Present	t? Yes No X
Deptil (illolic	=s). 							11 163
HYDROLOG	N.							
-	ology Indicators		'!· -b-ook 4	" # - + annly)			Casandon Indi	( (i-i-a) of two required)
	cators (minimum	of one is requ		,	(DO)			Cracks (RS)
_	Vater (A1)		_	r-Stained Leaves	(B9)			Cracks (B6)
	er Table (A2)			tic Fauna (B13)			Drainage Pa	
Saturation				Aquatic Plants (B			<u> </u>	Water Table (C2)
Water Ma	` ,		<b>—</b> '	gen Sulfide Odo	` '	=	Crayfish Bur	` '
	Deposits (B2)			zed Rhizosphere	•	Roots (C	′ <del>–</del>	risible on Aerial Imagery (C9)
Drift Depo			_	nce of Reduced	` '			Stressed Plants (D1)
	or Crust (B4)		_	nt Iron Reduction		oils (C6)	<u> </u>	Position (D2)
Iron Depo	` '			Muck Surface (C	•		FAC-Neutra	l Test (D5)
	n Visible on Aeri	0 , (	<i>'</i> — "	e or Well Data (D	,			
Sparsely	Vegetated Conc	ave Surface (E	38) <u>Other</u>	(Explain in Rem	arks)			
Field Observat	tions:							
Surface Water F	Present? Y	'es	No X	Depth (inches	)			
Water Table Pre	esent? Y	'es	No X	Depth (inches	)			
Saturation Pres	ent? Y	'es	No X	Depth (inches	)	Wetlan	d Hydrology Presen	t? Yes No X
(includes capilla	ary fringe)							
Describe Recor	ded Data (strear	n gauge, mon	itoring well, a	erial photos, pre	vious inspe	ctions), if	available:	
Remarks:								

Sampling Point: 48

Applicant/Owner: Winnebago Trib Investigator(s): K. Davenport, C. B		Project City/C	County: Wo	Joubury	Sampling Date:	7/13/20	23
Investigator(s): K Davennert C B	e of Nebraska			State: IA S	Sampling Point:	49	
investigator(s). R. Davenport, C. B	Booth, K. Sherma	n (Olsson)		Section, Towns	hip, Range:	S5 T26N R	10E
Landform (hillslope, terrace, etc.):	Field	Local r	relief (conc	ave, convex, none): None			
Slope (%): <b>0-1</b> Lat:	42.229670	Long:		-96.322075 Date	ım:	NAD83	
Soil Map Unit Name: 1237B—Sarpy le	oamy fine sand, 2	2 to 5 percent slo	pes, occa	sionally flooded NWI class	sification:	None	
Are climatic / hydrologic conditions on t	he site typical for t	this time of year?	Yes	No X (If no, exp	lain in Remarks	5)	
Are Vegetation , Soil , or Hy	ydrology s	ignificantly disturb	ed?	Are "Normal Circumstances"	present? Yes	X No	
Are Vegetation , Soil , or Hy	ydrology n	aturally problemat	tic?	(If needed, explain any answ	ers in Remarks.	.)	
SUMMARY OF FINDINGS - Atta		, ,					
Hydrophytic Vegetation Present?	Yes	No X	Ť	<u> </u>	_ <b>.</b>	· ·	
Hydric Soil Present?	Yes	No X					
•		<del></del>		ampled Area · Wetland?	'es N	o X	
Wetland Hydrology Present?	Yes	No X	Within a	vvetialiu:	es N	o <u>X</u>	
Remarks: SP 49 is an upland area located in a gracent heavy rainfall events.	assland at the eas	stern bore point of	the South I	Bore Site. Climatic conditions	are not typical	at this site du	e to
VECETATION Line colombidio	nomes of ale						
VEGETATION - Use scientific			1 12 4	Dominance Test worksh	oot:		
Tree Stratum (Plot size: 30'	Absolute ) % Cover	Dominant Species?	Indicator Status	Number of Dominant Spec			
1.	_ ′			That Are OBL, FACW, or		0	(A)
2.							•
3.				Total Number of Dominan	t		
4				Species Across All Strata:		3	(B)
5							
		= Total Cover		Percent of Dominant Spec			
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FACW, or	FAC:	0	(A/B)
1.				December 1 and 1 a	<b>.</b>		
2				Prevalence Index works		Maritim Inc. Inc.	
3				Total % Cover of		Multiply by:	_
4				OBL species  FACW species	x 1 x 2		_
5		= Total Cover		FAC species	x 2		
Herb Stratum (Plot size: 5'	,	- Total Cover		FACU species	x 4		_
1. Bromus inermis	_′ <sub>30</sub>	X	FACU	UPL species	x		_
2. Solidago missouriensis	25	<del>- X</del> -	UPL	Column Totals:	(A)		— (B)
3. Verbena stricta	20		UPL	Prevalence In			` ′
4. Portulaca oleracea	10		FACU				
5. Cornus drummondii	10		FAC	Hydrophytic Vegetati			
6. Asclepias syriaca	5		FACU	1 - Rapid Test for		getation	
7.	<del></del>			2 - Dominance Te			
8.				3 - Prevalence Inc	_		
				4 - Morphological data in Remarks of			rting
					•	,	
9.				Problematic Hydro	nhvtic Vegetati	on <sup>1</sup> (Explain)	
		= Total Cover		Problematic Hydro	ophytic Vegetati	on <sup>1</sup> (Explain)	
9.	30' )	= Total Cover		Problematic Hydro  1Indicators of hydric soi present, unless disturbe	I and wetland h	ydrology mus	

SOIL

Depth (inches) Color (m	Matrix oist) %	Color (mo	Redox Featu pist) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-22 10YR 3		<u> </u>				Sandy Loam	
<u> </u>	<del></del>					<del></del>	
	<del></del>	_					
		_					
		_	<del></del>				
ype: C=Concentration, [	)=Depletion, R	M=Reduced Mat	rix, MS=Masked S	Sand Grain	s.	<sup>2</sup> Location: PL=Po	re Lining, M=Matrix
Hydric Soil Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy Gley	ed Matrix (	(S4)	Coast Pr	airie Redox (A16)
Histic Epipedon (A2)			Sandy Red	ox (S5)		— Dark Sur	face (S7)
Black Histic (A3)			Stripped Ma				ganese Masses (F12)
Hydrogen Sulfide (A4	1)		Loamy Muc	, ,	(F1)		llow Dark Surface (TF12)
Stratified Layers (A5)	,		Loamy Gley				κplain in Remarks)
2 cm Muck (A10)			Depleted M		,	<del>-</del> `	,
Depleted Below Dark	Surface (A11)	١	Redox Dark		F6)		
Thick Dark Surface (	` '	,	Depleted D	,	,	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Minera			Redox Dep				I hydrology must be present,
5 cm Mucky Peat or				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0,	unless	disturbed or problematic.
<u> </u>	` ,						
estrictive Layer (if obse	rved):						
estrictive Layer (if obse Type:	rved): 						
	rved): 					Hydric Soil Presen	t? Yes No X
Type:	rved): 					Hydric Soil Presen	t? Yes No X
Type: Depth (inches):	rved): 					Hydric Soil Presen	t? Yes No_X
Type: Depth (inches):	rvea):					Hydric Soil Presen	t? Yes No X
Type: Depth (inches): emarks:	rved):					Hydric Soil Presen	t? Yes No_X
Type: Depth (inches): emarks:						Hydric Soil Presen	t? Yes No <u>X</u>
Type: Depth (inches): emarks:  IYDROLOGY //etland Hydrology Indica	ators:	roquired; check	all that apply)				
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indicators (minimary Indicators (minimary)	ators:	•	,	· (BO)		Secondary Ind	icators (minimum of two required
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indicators (minimary Indicators (Minimary Surface Water (A1))	ators: mum of one is	Wate	er-Stained Leaves	· (B9)		Secondary Ind	icators (minimum of two required
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indica Primary Indicators (mini Surface Water (A1) High Water Table (A)	ators: mum of one is	Wate Aqua	er-Stained Leaves atic Fauna (B13)	,		Secondary Ind Surface Soi Drainage Pa	icators (minimum of two required I Cracks (B6) atterns (B10)
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indicators (minimary Indicators (M	ators: mum of one is	Wate Aqua True	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B	314)		Secondary Ind Surface Soi Drainage Pa	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2)
Type: Depth (inches): emarks:  IYDROLOGY  /etland Hydrology Indica Primary Indicators (mini Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ators: imum of one is	Wate Aqua True Hydro	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo	314) r (C1)		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimal surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (I	ators: imum of one is	Wate Aqua True Hydro Oxidi	er-Stained Leaves etic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizosphere	314) r (C1) s on Living		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches): emarks:  IYDROLOGY  /etland Hydrology Indica Primary Indicators (mini Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ators: imum of one is	Wate Aqua True Hydro Oxidi	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo	314) r (C1) s on Living		Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimal surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (I	ators: imum of one is 2)	Wate Aqua True Hydre Oxidi	er-Stained Leaves etic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizosphere	314) r (C1) s on Living Iron (C4)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimal surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	ators: imum of one is 2)	Wate Aqua True Hydre Oxidi Prese	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizospheres ence of Reduced	314) r (C1) s on Living Iron (C4) i in Tilled So	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimary Indicators	ators: imum of one is 2) 32)	Wate Aqua True Hydre Oxidi Prese Rece	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizospheres ence of Reduced ent Iron Reduction	314) r (C1) s on Living lron (C4) in Tilled So 7)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimark) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (Ba) Iron Deposits (B5)	ators: imum of one is 2) 32) 4) Aerial Imagery	Wate Aqua True Oxidi Prese Rece Thin y (B7)Gaug	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odor ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7	s14) r (C1) s on Living Iron (C4) in Tilled So 7)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indicators (minimark) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Inundation Visible on	ators: imum of one is 2) 32) 4) Aerial Imagery	Wate Aqua True Oxidi Prese Rece Thin y (B7)Gaug	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odor ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7 ge or Well Data (D	s14) r (C1) s on Living Iron (C4) in Tilled So 7)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimark) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C1)	ators: imum of one is 2) 32) 4) Aerial Imagery	Wate Aqua True Oxidi Prese Rece Thin y (B7)Gaug	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odor ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7 ge or Well Data (D	s14) r (C1) s on Living lron (C4) n in Tilled So 7) opp) arks)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches):  emarks:  IYDROLOGY  /etland Hydrology Indicators (minimal surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (B1) Indicators:  Indicators (B5) Inundation Visible on Sparsely Vegetated (B1) Indicators (B1) Indicators (B2) Indicators (B3) Indicators (B4) Indicato	ators: mum of one is 2) 32) 4) Aerial Imagery Concave Surface	Wate Aqua True Hydre Oxidi Prese Rece Thin y (B7) Gaug ce (B8) Other	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7 ge or Well Data (D or (Explain in Rema	s14) r (C1) s on Living lron (C4) in Tilled So 7) 09) arks)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inches): emarks:  IYDROLOGY  Vetland Hydrology Indicates Primary Indicators (minimal surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Algal Mat or Crust (B3) Inon Deposits (B5) Inundation Visible on Sparsely Vegetated (Called Observations: urface Water Present?	ators: mum of one is  2)  32)  4)  Aerial Imagery Concave Surfact  Yes	— Wate — Aqua — True — Hydru — Oxidi — Presu — Rece — Thin y (B7) — Gaug ce (B8) — Othe	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odor ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7 ge or Well Data (D r (Explain in Rema	s14) r (C1) s on Living Iron (C4) in Tilled Sc 7) 09) arks)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)
Type: Depth (inches): emarks:  PYDROLOGY  Vetland Hydrology Indicators (minimal surface Water (A1)) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Vegetated (Vegetated Vegetated (Vegetated Vegetated Vegetated (Vegetated Vegetated Vegetated (Vegetated Vegetated Vegetated Vegetated Vegetated (Vegetated Vegetated Vegetate	ators: imum of one is  2)  32)  4)  Aerial Imagery Concave Surfact  Yes Yes	Wate	er-Stained Leaves atic Fauna (B13) Aquatic Plants (B ogen Sulfide Odo ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (Ci ge or Well Data (D or (Explain in Remandal) Depth (inches	s14) r (C1) s on Living Iron (C4) in Tilled Sc 7) 09) arks)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation N Stunted or S Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)
Type: Depth (inches): emarks:  IYDROLOGY /etland Hydrology Indicators (minimal surface Water (A1)) High Water Table (A1) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C1) ield Observations: urface Water Present? //ater Table Present?	ators: imum of one is  2)  32)  4)  Aerial Imagery Concave Surfact  Yes Yes Yes Yes	Wate	er-Stained Leaves attic Fauna (B13) Aquatic Plants (B ogen Sulfide Odor ized Rhizospheres ence of Reduced ent Iron Reduction Muck Surface (C7 ge or Well Data (D or (Explain in Remains Depth (inches Depth (inches	s14) r (C1) s on Living Iron (C4) in Tilled So 7) 09) arks)	Roots (C3	Secondary Ind Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation \ Stunted or S Geomorphic FAC-Neutra	icators (minimum of two required I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) /isible on Aerial Imagery (C9) Stressed Plants (D1) Position (D2) Il Test (D5)

Sampling Point: 49

Project/Site: Winnebago Tribe Broadba	and Connectivity P	roject City/C	ounty: Em	erson/Thurston	Sampling Date	e: <b>11/8/202</b>	23
Applicant/Owner: Winnebago Tribe	of Nebraska			State: NE	Sampling Poin	t: <b>50</b>	
Investigator(s): K. Sherman (Olsson	n)			Section, T	ownship, Range:	S12 T26N R	8E
Landform (hillslope, terrace, etc.): Sle	оре	Local re	elief (conca	ive, convex, none): N	one		
Slope (%): <b>2</b> Lat:	42.245670	Long:		-96.471403	Datum:	NAD83	
Soil Map Unit Name: 8079- Monona sil	t loam, 6 to 11 pe	ercent slopes, e	eroded	NWI	classification:	None	
Are climatic / hydrologic conditions on the	ne site typical for th	nis time of year?	Yes	No X (If no	o, explain in Rema	rks)	
Are Vegetation , Soil , or Hyd	lrology sigr	nificantly disturb	ed?	Are "Normal Circumsta	inces" present Yes	X No	
Are Vegetation , Soil , or Hyd	lrology natı	urally problemat	tic? (	(If needed, explain any	answers in Remai	rks.)	
SUMMARY OF FINDINGS - Attac	ch site map sh	owing sampl	ling poin	t locations, transe	cts, important	features, etc.	
Hydrophytic Vegetation Present?	Yes No	o X					
Hydric Soil Present?	Yes X N	0	Is the Sa	ampled Area			
Wetland Hydrology Present?	Yes X N	0		Wetland?	Yes X	No	
Remarks:							
Wetland 50 is a PEMA/PEMC wetland learea is still considered a wetland having	met the criteria fo	r hydric soils an			ytic vegetatio was i	not observed, th	is
VEGETATION - Use scientific	names of plan	its.		_			
Tree Stratum (Plot size: 20)	Absolute	Dominant	Indicator	Dominance Test we			
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Dominan That Are OBL, FAC	•	1	(A)
2.					_	<del></del>	(71)
3.				Total Number of Dor	minant		
4.				Species Across All S		4	(B)
5.			-		_		
	=	Total Cover		Percent of Dominant	t Species		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FAC	N, or FAC:	25	(A/B)
1							
2				Prevalence Index w			
3				Total % Co		Multiply by:	_
4				OBL species		κ1 =	_
5		<del></del>		FACW species		× 2 =	_
Herb Stratum (Plot size: 5'	,  ——=	: Total Cover		FAC species FACU species		< 3 = < 4 =	_
1. Hordeum jubatum	30	Χ	FAC	UPL species		× 5 =	_
Medicago sativa	30	$\frac{\chi}{X}$	FACU	Column Totals:		A)	— (B)
3. Trifolium repens	20	$\frac{X}{X}$	FACU		ice Index = B/A =		_(
Taraxacum officinale	20	X	FACU		_		
5.					getation Indicators		
6.				I — ·	est for Hydrophytic	√egetation	
7.				<del>-</del>	ce Test is >50%		
8.					ce Index is <3.01	(Drewid	utius :
9.				•	ogical Adaptations¹ arks or on a separa	`	ung
10.					Hydrophytic Veget		
	100 =	Total Cover		-	, 3	, , ,	
Woody Vine Stratum (Plot size:1.	30' )			,	ric soil and wetland isturbed or problem	, ,,	t be
2.				Hydrophytic			
		= Total Cover		Vegetation Present?	Yes	NoX	
Remarks: (Include photo numbers here PP 52	or on a separate		-	Vegetation	Yes	NoX	

	Matrix	J the dept	ii iieeded to do	Redox Feat		i commin u	he absence of in	uicators.)
Depth (inches)		0/	Color (mois			Loc <sup>2</sup>	Toyturo	Domarka
(inches)	Color (moist)	<u>%</u>	Color (moist	<u> </u>	Type <sup>1</sup>		Texture	Remarks
0-6	10YR 4/2	80	10YR 4/6	5	C	M	CL	
	10YR 2/1	15						_
0.40	40\/D 4/0	100						
6-12	10YR 4/2	100					CL	
							2	
	entration, D=Depl	etion, RM=	-Reduced Matri	x, MS=Masked	d Sand Gra	ins.		-Pore Lining, M=Matrix or Problematic Hydric Soils <sup>3</sup>
Hydric Soil				0	1.84-4-4-4	(2.4)		-
Histosol (	,			Sandy Gle	•	(S4)		rairie Redox (A16)
_	pedon (A2)			Sandy Rec	` '		_	rface (S7)
Black His	, ,			Stripped M	, ,		_	nganese Masses (F12)
_ ′ ′	Sulfide (A4)			Loamy Mu	-			allow Dark Surface (TF12)
	Layers (A5)			Loamy Gle	-	(F2)	Other (E	Explain in Remarks)
2 cm Muc	k (A10)			X Depleted N				
Depleted	Below Dark Surface	ce (A11)		Redox Dar	•	` '		
Thick Dar	rk Surface (A12)			Depleted D	ark Surfac	e (F7)		of hydrophytic vegetation an
Sandy Mu	ucky Mineral (S1)			Redox Dep	oressions (F	<del>-</del> 8)		id hydrology must be present disturbed or problematic.
5 cm Muc	cky Peat or Peat (S	33)		_			umcss	disturbed of problematic.
etrictive I av	ver (if observed):							
•	, (							
Type:	, , ,					н	lydric Soil Prese	nt? Yes X No
Type: Depth (inche	, , ,					н	lydric Soil Prese	nt? Yes X No
Type:	, , ,					н	lydric Soil Prese	nt? Yes X No
Type: Depth (inche	, , ,					н	lydric Soil Prese	nt? Yes <u>X</u> No
Type: Depth (inche	, , ,					Н	lydric Soil Prese	nt? Yes <u>X</u> No
Type: Depth (inche	es):					Н	lydric Soil Prese	nt? Yes <u>X</u> No
Type: Depth (incherent incherent inc	es):  GY  plogy Indicators:					Н		
Type: Depth (incher emarks:  YDROLOG etland Hydro	BY  blogy Indicators: cators (minimum c	of one is re		,		н	Secondary In	dicators (minimum of two req
Type: Depth (incher emarks:  YDROLOG etland Hydro	es):  GY  plogy Indicators:	of one is re		ıll that apply) Stained Leave:	s (B9)	H	Secondary In Surface Sc	dicators (minimum of two req
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary India Surface V	BY  blogy Indicators: cators (minimum c	of one is re	Water-S	,	s (B9)	H	Secondary In Surface Sc	dicators (minimum of two req
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary India Surface V	es):  plogy Indicators: cators (minimum of Water (A1) er Table (A2)	of one is re	Water-S Aquatic	Stained Leave		Н	Secondary In Surface So	dicators (minimum of two req
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Wat	blogy Indicators: cators (minimum ovater (A1) er Table (A2) n (A3)	of one is re	Water-S Aquatic True Ac	Stained Leaves Fauna (B13)	314)	H	Secondary In Surface So Drainage F Dry-Seaso	dicators (minimum of two req oil Cracks (B6) Patterns (B10)
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Wat Saturation Water Ma	blogy Indicators: cators (minimum ovater (A1) er Table (A2) n (A3)	of one is re	Water-S Aquatic True Ac Hydrogo	Stained Leave Fauna (B13) quatic Plants (I	B14) or (C1)		Secondary In Surface Sc Drainage F Dry-Seaso Crayfish Bu	dicators (minimum of two req oil Cracks (B6) Patterns (B10) n Water Table (C2)
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Wat Saturation Water Ma	es):  Dlogy Indicators: cators (minimum of Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	of one is re	Water-S Aquatic True Ac Hydrogo	Stained Leave Fauna (B13) quatic Plants (I en Sulfide Odd	B14) or (C1) es on Living		Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation	dicators (minimum of two req oil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Wat Saturation Water Ma Sediment Drift Depo	es):  Dlogy Indicators: cators (minimum of Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	of one is re	Water-S Aquatic True Ac Hydrogo Oxidize	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere	B14) or (C1) es on Living I Iron (C4)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or	dicators (minimum of two reconstruction  of two reconstruct
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Wat Saturation Water Ma Sediment Drift Depo	plogy Indicators: cators (minimum of Water (A1) er Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4)	of one is re	Water-S Aquatic True Ac Hydroge Oxidize Presence Recent	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced	B14) or (C1) es on Living I Iron (C4) on in Tilled S	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoll Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inchesemarks:  YDROLOG etland Hydrog Primary India Surface V High Water Saturation Water Ma Sediment Drift Depo	plogy Indicators: cators (minimum of Water (A1) er Table (A2) in (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4)		Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C	B14) or (C1) es on Living I Iron (C4) n in Tilled S	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two required of two requi
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary India Surface V High Water Saturation Water Ma Sediment Drift Depo Inundation	es):  Dlogy Indicators: cators (minimum of Vater (A1) er Table (A2) en (A3) arks (B1) t Deposits (B2) posits (B3) er or Crust (B4) posits (B5) en Visible on Aerial	Imagery (i	Water-S Aquatic True Ac Hydrogo Oxidize Presence Recent Thin Mu	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odd d Rhizosphere ce of Reduced Iron Reduction uck Surface (C or Well Data (I	B14) or (C1) es on Living I Iron (C4) on in Tilled S 77) D9)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoll Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) ic Position (D2)
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary Indi Surface V High Water Ma Sediment Drift Depo X Algal Mat Iron Depo Inundation Sparsely	Dlogy Indicators: Cators (minimum of Vater (A1) Per Table (A2) In (A3) It Deposits (B2) Dosits (B3) It or Crust (B4) Dosits (B5) In Visible on Aerial Vegetated Concav	Imagery (i	Water-S Aquatic True Ac Hydrogo Oxidize Presence Recent Thin Mu	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C	B14) or (C1) es on Living I Iron (C4) on in Tilled S er D9)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoll Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) ic Position (D2)
Type: Depth (inchesemarks:  YDROLOG etland Hydro Primary India Surface V High Water Ma Sediment Drift Depot X Algal Mat Iron Depot Inundation Sparsely eld Observate	blogy Indicators: cators (minimum of Vater (A1) ter Table (A2) the Deposits (B2) to Deposits (B3) to or Crust (B4) to sits (B5) to Visible on Aerial Vegetated Concavitions:	Imagery (i ve Surface	Water-S Aquatic True Ac Hydroge Oxidize Presence Recent Thin Mc B7) Gauge (B8) Other (B	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odd d Rhizosphere ce of Reduced Iron Reduction uck Surface (C or Well Data (I Explain in Rem	B14) or (C1) es on Living I Iron (C4) n in Tilled S 77) D9) narks)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoll Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) ic Position (D2)
Type: Depth (inchesemarks:  YDROLOG etland Hydrog Primary India Surface V High Water Ma Sediment Drift Depot X Algal Mat Iron Depot Inundation Sparsely of	plogy Indicators: cators (minimum of Water (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concav tions: Present? Yes	Imagery (i ve Surface	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu B7) Gauge (B8) Other (B	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C or Well Data (I Explain in Rem	B14) or (C1) es on Living I Iron (C4) n in Tilled S 77) D9) narks)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoll Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) ic Position (D2)
Type: Depth (inchesemarks:  YDROLOG etland Hydrog Primary India Surface V High Water Saturation Water Ma Sediment Drift Depo Inundation Sparsely eld Observat urface Water I ater Table Pri	plogy Indicators: cators (minimum of Vater (A1) ter Table (A2) to (A3) to Deposits (B2) to Toust (B4) to or Crust (B4) to or Crust (B4) to or Crust (B5) to Vegetated Concave tions: Present? Yes	Imagery (i /e Surface	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu B7) Gauge (B8) Other (B	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C or Well Data (I Explain in Rem Depth (inches	B14)  or (C1) es on Living I Iron (C4) n in Tilled S 77) D9) narks)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph FAC-Neutr	dicators (minimum of two recoil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) ic Position (D2) ral Test (D5)
Type: Depth (inchesemarks:  YDROLOG etland Hydrog Primary India Surface V High Water Ma Sediment Drift Depot X Algal Mat Iron Depot Inundation Sparsely of	by blogy Indicators: cators (minimum of Vater (A1) arks (B1) to Deposits (B2) posits (B3) arks (B5) or Crust (B4) posits (B5) or Visible on Aerial Vegetated Concavitions:  Present? Yes sent? Yes sent? Yes	Imagery (i /e Surface	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu B7) Gauge (B8) Other (B	Stained Leaves Fauna (B13) quatic Plants (I en Sulfide Odo d Rhizosphere ce of Reduced Iron Reduction uck Surface (C or Well Data (I Explain in Rem	B14)  or (C1) es on Living I Iron (C4) n in Tilled S 77) D9) narks)	g Roots (C3)	Secondary In Surface So Drainage F Dry-Seaso Crayfish Bo Saturation Stunted or Geomorph	dicators (minimum of two recoil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (Ct. Stressed Plants (D1) ic Position (D2) ral Test (D5)

Project/Site: Winnebago Tribe Broadban	d Connectivity P	roject City/Co	ounty: Em	nerson/Thurston	Sampling Da	te: 11/8/20	23
Applicant/Owner: Winnebago Tribe of	of Nebraska			State: <b>NE</b>	Sampling Poi	nt: <b>51</b>	
Investigator(s): K. Sherman (Olsson)				Section,	Township, Range:	S12 T26N F	R8E
Landform (hillslope, terrace, etc.): Flat		Local re	elief (conca	ave, convex, none):	None		
Slope (%): <b>0</b> Lat: 4	2.245722	Long:		-96.471563	Datum:	NAD83	
Soil Map Unit Name: 8079- Monona silt	loam, 6 to 11 pe	ercent slopes, e	roded	NV	VI classification:	None	
Are climatic / hydrologic conditions on the	site typical for th	nis time of year?	Yes	No X (If I	no, explain in Rema	arks)	
Are Vegetation , Soil , or Hydro	ology sigi	nificantly disturbe	ed?	Are "Normal Circums	tances" present'Ye	s X No	
Are Vegetation , Soil , or Hydro	ology nat	urally problemati	ic? (	(If needed, explain an	ny answers in Rema	arks.)	
<b>SUMMARY OF FINDINGS - Attack</b>	n site map sh	owing sampl	ing poin	t locations, trans	ects, importan	t features, etc	<b>:</b> .
Hydrophytic Vegetation Present? Y	es N	o X					
Hydric Soil Present? Y	es - N	o -	Is the Sa	ampled Area			
Wetland Hydrology Present? Y	es N	o X		Wetland?	Yes	No X	
Danisadas							
Remarks: Upland outpoint for Wetland 50 at the Ce	ntral Office locat	ion					
Opiand outpoint for Wetland 50 at the Cer	nital Office local	OII.					
VEGETATION - Use scientific n	ames of plar	ıts.		T			1
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test v			
1.	70 Cover	Opecies:	Otatus	Number of Domina That Are OBL, FAC	•	1	(A)
2.					,		. (71)
3.				Total Number of D	ominant		
4.				Species Across All		4	(B)
5.							
	·	Total Cover		Percent of Domina	nt Species		
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FAC	CW, or FAC:	25	(A/B)
1.							•
2.				Prevalence Index			
3.				Total % 0	Cover of:	Multiply by:	
4				OBL species		x 1 =	_
5.				FACW species		x 2 =	_
Harb Stratum (Diet eizer	=	Total Cover		FAC species		x 3 =	
Herb Stratum (Plot size: 5' )  1. Trifolium repens	30	Χ	FACU	FACU species UPL species		x 4 =	_
Taraxacum officinale	30	$\frac{\lambda}{X}$	FACU	Column Totals:	0	X 5 =	— (B)
Hordeum jubatum	20	$\frac{X}{X}$	FAC		ence Index = B/A =		— <sup>(D)</sup>
4. Setaria viridis	20	$\frac{X}{X}$	UPL	Ticvaic	SHEET HIGHEX - BITA -		_
5.			- OI L	Hydrophytic Ve	egetation Indicato	rs:	
6.	<del></del>			1 - Rapid T	est for Hydrophytic	Vegetation	
7.				2 - Domina	ince Test is >50%		
8.					nce Index is <3.01		
9.					logical Adaptations narks or on a sepa	\	orting
-					c Hydrophytic Vege		
10	100 =	Total Cover			c riyaropriyac vega	etation (Explain)	'
Woody Vine Stratum (Plot size: 3	0' )	- Total Cover		<sup>1</sup> Indicators of by	dric soil and wetlar	nd hydrology mu	et ho
1.	/				disturbed or proble		אי איכ
2.				Hydrophytic	· ·		
		= Total Cover		Vegetation	Yes	No X	
				Present?			•
Remarks: (Include photo numbers here o	or on a separate	sheet.)					
PP 53							

SOIL Sampling Point: 51

<b>ifile Descri</b> p Depth	Matrix			Redox Featu	ıres			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
ne: C=Con	centration, D=Depl	etion RM=	Reduced Matrix	MS=Masked	Sand Gra	———	<sup>2</sup> l ocation: Pl =	Pore Lining, M=Matrix
	Indicators:	Cuon, ruvi	Ttoddocd Matrix	, Wie Widoked	Carla Ore			r Problematic Hydric Soils <sup>3</sup> :
Histosol				Sandy Gley	ed Matrix	(\$4)		rairie Redox (A16)
	ipedon (A2)		-	Sandy Gley Sandy Red		(34)	_	rface (S7)
_			-	_			_	` ,
Black His			-	Stripped Ma				nganese Masses (F12)
_	n Sulfide (A4)		_	Loamy Mud	-			allow Dark Surface (TF12)
_	Layers (A5)		<del>-</del>	Loamy Gle		(F2)	Other (E	xplain in Remarks)
_ 2 cm Mu	, ,		_	Depleted M	` '			
_	l Below Dark Surfac	ce (A11)	_	Redox Dark		` '	2	
_	rk Surface (A12)		<u>-</u>	Depleted D				of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		_	Redox Dep	ressions (	F8)		d hydrology must be present, disturbed or problematic.
5 cm Mu	cky Peat or Peat (S	3)					unioco	dictarbed of problematic.
Туре:	yer (if observed): Condes):	crete Surface				I	Hydric Soil Presei	nt? Yes <u>-</u> No <u>-</u>
Type: Depth (inch marks:	Condines):	Surface	ne surface, and a	soil nit canno	ot he taker			
Type: Depth (inch marks: estrictive lay	Condines):	Surface		soil pit canno	ot be taker			nt? Yes No
Type: Depth (inch marks: estrictive lay	Concession	Surface		soil pit canno	ot be taker			
Type: Depth (inch marks: estrictive lay	yer of concrete is progy, it is assumed s	Surface		soil pit canno	ot be taker			
Type: Depth (inch marks: estrictive lay land hydrole	yer of concrete is progy, it is assumed s	Surface		ı soil pit canno	ot be taker			
Type: Depth (inch marks: estrictive lay land hydrole tland Hydrole	Concrete is programmed sets.	Surface resent at th soils are no	on-hydric.		ot be taker		e lack of sufficient	
Type: Depth (inch marks: estrictive lay land hydrole tland Hydro	yer of concrete is progy, it is assumed so	Surface resent at th soils are no	on-hydric. quired; check all				e lack of sufficient	hydrophytic vegetation and
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG tland Hydro Primary Ind Surface N	yer of concrete is proogy, it is assumed so	Surface resent at th soils are no	on-hydric.  quired; check all	that apply)			e lack of sufficient  Secondary Inc. Surface So	hydrophytic vegetation and
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG tland Hydro Primary Ind Surface N	yer of concrete is progy, it is assumed sology Indicators: licators (minimum of Water (A1) ter Table (A2)	Surface resent at th soils are no	quired; check all	that apply)	s (B9)		e lack of sufficient  Secondary Inc. Surface So Drainage P	hydrophytic vegetation and dicators (minimum of two required il Cracks (B6)
Type: Depth (inch marks: estrictive lay land hydrole tland Hydro Primary Ind Surface \ High Wa Saturatio	yer of concrete is progy, it is assumed sology Indicators: licators (minimum of Water (A1) ter Table (A2)	Surface resent at th soils are no	quired; check all  Water-Si  Aquatic F	that apply) ained Leaves auna (B13)	s (B9)		e lack of sufficient  Secondary Inc. Surface So Drainage P	hydrophytic vegetation and dicators (minimum of two requil Cracks (B6) atterns (B10) n Water Table (C2)
Type: Depth (inch marks: estrictive lay land hydrole  TDROLOG tland Hydro Primary Ind Surface V High Wa Saturatio Water Mi	yer of concrete is progy, it is assumed s  GY  ology Indicators: licators (minimum of Water (A1) ter Table (A2) on (A3)	Surface resent at th soils are no	quired; check all  Water-Si  Aquatic F  True Aqu  Hydroge	that apply) ained Leaves Fauna (B13) uatic Plants (E	s (B9) 314) r (C1)	n. Due to th	e lack of sufficient  Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inch marks: estrictive lay land hydrole  TDROLOG tland Hydre Primary Ind Surface V High Wa Saturatio Water Ma	yer of concrete is progy, it is assumed so  GY  ology Indicators: licators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	Surface resent at th soils are no	quired; check all  Water-Si  Aquatic F  True Aqu  Hydrogei  Oxidized	that apply) tained Leaves Fauna (B13) uatic Plants (E n Sulfide Odo	s (B9) 314) r (C1) s on Living	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (inch marks: estrictive lay land hydrole  TDROLOG  tland Hydro Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep	gyer of concrete is progy, it is assumed states (ST)  cology Indicators: dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) on the Deposits (B2) dosits (B3)	Surface resent at th soils are no	quired; check all  Water-Si Aquatic F True Aqu Hydroge Oxidized Presence	that apply) cained Leaves Fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere	s (B9) 314) r (C1) s on Living Iron (C4)	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inch marks: estrictive lay land hydrol  TDROLOG tland Hydro Primary Ind Surface V High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma	gyer of concrete is progy, it is assumed some solutions of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is minimum of the concrete is m	Surface resent at th soils are no	quired; check all  Water-Si Aquatic F True Aqu Hydroge Oxidized Presence Recent Is	that apply) tained Leaves fauna (B13) uatic Plants (E n Sulfide Odo Rhizospheres of Reduced	s (B9) s14) r (C1) s on Living Iron (C4) i in Tilled \$	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two required il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) to Position (D2)
Type: Depth (inch marks: estrictive lay land hydrol  TDROLOG  tland Hydro Primary Ind Surface V High Wa Saturatio Water Mi Sedimen Drift Dep Algal Mai	yer of concrete is progy, it is assumed solver (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) osits (B3) tt or Crust (B4) osits (B5)	Surface resent at the soils are no	quired; check all  Water-Si  Aquatic F  True Aqu  Hydroge  Oxidized  Presence  Recent In	that apply) cained Leaves Fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C	s (B9) s14) r (C1) s on Living lron (C4) in Tilled \$	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two requil Cracks (B6) eatterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG  tland Hydrolo  Surface V High Wa Saturatio Water Mater Ma	gyer of concrete is progy, it is assumed some solutions of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is progy, it is assumed solutions (minimum of the concrete is minimum of the concrete is m	Surface resent at the soils are not of one is real.	quired; check all  Water-Si  Aquatic I  True Aqu  Hydrogei  Oxidized  Presence  Recent Ii  Thin Muc	that apply) tained Leaves fauna (B13) uatic Plants (E n Sulfide Odo Rhizospheres of Reduced	s (B9) s14) r (C1) s on Living Iron (C4) in Tilled \$ 7)	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two required il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) to Position (D2)
Type: Depth (inch marks: estrictive lay land hydrole  TDROLOG  tland Hydro  Primary Ind Surface V  High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dept Inundatic Sparsely	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so cology Indicators: licators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) on the Deposits (B2) cosits (B3) to or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concavers.	Surface resent at the soils are not of one is real.	quired; check all  Water-Si  Aquatic I  True Aqu  Hydrogei  Oxidized  Presence  Recent Ii  Thin Muc	that apply) cained Leaves fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E	s (B9) s14) r (C1) s on Living Iron (C4) in Tilled \$ 7)	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG  tland Hydrolog  Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Depo Inundatic Sparsely	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so concrete is progy, it is assumed so concept in the concept in	Surface resent at the soils are not of one is recorded.  Imagery (E. Surface)	quired; check all  Water-St  Aquatic I  True Aqu  Hydroget  Oxidized  Presencet  Recent It  Thin Muc  37)  Gauge o  B8)  Other (E	that apply) cained Leaves fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E	s (B9) s14) r (C1) s on Living lron (C4) in Tilled \$ 7) D9) arks)	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inch marks: estrictive lay land hydrol  TDROLOG tland Hydro Primary Ind Surface V High Wa' Saturatio Water May Sedimen Drift Dep Algal Ma' Iron Depo Inundatic Sparsely Id Observa face Water	concrete is progy, it is assumed some solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:  ger of concrete is progy, it is assumed solutions:	esent at the soils are not soi	quired; check all  Water-Si Aquatic F True Aqu Hydroge Oxidized Presence Recent In Thin Muc	that apply) rained Leaves Fauna (B13) ratic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E xplain in Rem	s (B9) s14) r (C1) s on Living lron (C4) n in Tilled 5 7) D9) arks)	n. Due to th	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) ratterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (inch marks: estrictive lay land hydrol  TDROLOG  tland Hydro Primary Ind Surface N High Wa Saturatio Water M: Sedimen Drift Dep Algal Ma Iron Depo Inundatic Sparsely Id Observa face Water ter Table Pi	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so cology Indicators: licators (minimum of the Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concaverations:  Present? Yes resent? Yes	Surface resent at the soils are not soils ar	quired; check all  Water-Si Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc 37) Gauge o Other (E	that apply)  cained Leaves  Fauna (B13)  uatic Plants (E n Sulfide Odo  Rhizosphere e of Reduced  ron Reduction ck Surface (C' r Well Data (E xplain in Rem  Depth (inches	s (B9) s (H9) r (C1) s on Living lron (C4) r in Tilled 5 7) D9) arks)	g Roots (C3	Secondary Inc. Surface So. Drainage P Dry-Seasor Crayfish Bu Saturation Stunded or Geomorphi FAC-Neutra	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) In Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) Ial Test (D5)
Type: Depth (inch marks: estrictive lay land hydrol  TDROLOG  tland Hydro Primary Ind Surface V High Wa Saturatio Water Mai Sedimen Drift Dep Algal Mai Iron Depi Inundatic Sparsely Id Observa face Water ter Table Programs	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so cology Indicators: licators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) to Crust (B4) cosits (B3) to r Crust (B4) cosits (B5) on Visible on Aerial vegetated Concavitions:  Present? Yes sent? Yes sent? Yes	Surface resent at the soils are not soils ar	quired; check all  Water-Si Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc 37) Gauge o Other (E	that apply) rained Leaves Fauna (B13) ratic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E xplain in Rem	s (B9) s (H9) r (C1) s on Living lron (C4) r in Tilled 5 7) D9) arks)	g Roots (C3	Secondary Inc Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) In Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) Ial Test (D5)
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG  tland Hydrolo  Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dept Inundatic Sparsely Id Observa face Water ter Table Pouration Presidudes capill	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so concrete is progy, it is assumed so concept in the concept in	Surface resent at the soils are not of one is real largery (E. Surface)	quired; check all  Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent It Thin Muc 37) Gauge o B8) Other (E	that apply) cained Leaves Fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E xplain in Rem Depth (inches Depth (inches	(B9)  (C1)  (C1)  (C1)  (Iron (C4)  (In Tilled (C4)  (In	g Roots (C3	Secondary Ind Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) In Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) Ial Test (D5)
Type: Depth (inch marks: estrictive lay land hydrolo  TDROLOG  tland Hydrolo  Surface V High Wa Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dept Inundatic Sparsely Id Observa face Water ter Table Pouration Presidudes capill	yer of concrete is progy, it is assumed so concrete is progy, it is assumed so cology Indicators: licators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) to Crust (B4) cosits (B3) to r Crust (B4) cosits (B5) on Visible on Aerial vegetated Concavitions:  Present? Yes sent? Yes sent? Yes	Surface resent at the soils are not of one is real largery (E. Surface)	quired; check all  Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent It Thin Muc 37) Gauge o B8) Other (E	that apply) cained Leaves Fauna (B13) uatic Plants (E n Sulfide Odo Rhizosphere e of Reduced ron Reduction ck Surface (C' r Well Data (E xplain in Rem Depth (inches Depth (inches	(B9)  (C1)  (C1)  (C1)  (Iron (C4)  (In Tilled (C4)  (In	g Roots (C3	Secondary Ind Surface So Drainage P Dry-Seasor Crayfish Bu Saturation Stunted or Geomorphi FAC-Neutra	hydrophytic vegetation and dicators (minimum of two requ il Cracks (B6) latterns (B10) In Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) Ic Position (D2) Ial Test (D5)

Applicant/Owner: Winnebago Tribe	and Connectivity Proje	ect City/County:	Emerson/Thurston	Sampling Date:	11/8/2023	
Applicant/Owner.	e of Nebraska		State: NE	Sampling Point:	52	
Investigator(s): K. Sherman (Olsso	n)		Section, T	ownship, Range:	S12 T26N R8E	
Landform (hillslope, terrace, etc.): FI	at	Local relief (co	oncave, convex, none): N	lone		
Slope (%): <b>0</b> Lat:	42.235421	Long:	-96.472638	Datum:	NAD83	
Soil Map Unit Name: 6603- Alcester si	ity clay loam, 2 to 6	percent slopes	NW	l classification:	None	
Are climatic / hydrologic conditions on the	he site typical for this t	time of year? Yes	X No(If no	o, explain in Remarks	s)	
Are Vegetation , Soil , or Hyd	drology signific	antly disturbed?	Are "Normal Circumsta	ances" present Yes	X No	
Are Vegetation , Soil , or Hyd	drology natural	lly problematic?	(If needed, explain any	answers in Remarks	s.)	
SUMMARY OF FINDINGS - Atta	ch site map show	ing sampling p	oint locations, transe	ects, important fe	atures, etc.	
Hydrophytic Vegetation Present?	Yes No	Х				
Hydric Soil Present?	Yes - No		ne Sampled Area			
Wetland Hydrology Present?	Yes No		nin a Wetland?	Yes N	o X	
		<u> </u>				
Remarks: SP 52 is an upland area located at the apredominantly gravel/parking lot.  VEGETATION - Use scientific			Site. A soil sample could r	not be taken since the	e area was	
VEGETATION - Ose scientific	•		Dominance Test w	orksheet		—
Tree Stratum (Plot size: 30'		Dominant Indicate Species? Status	101			
1.	· · — — —		That Are OBL, FAC	•	0 (	(A)
2.			_			
3.			Total Number of Do	minant		
4			Species Across All S	Strata:	0 (	(B)
5						
Sapling/Shrub Stratum (Plot size:	15' )	otal Cover	Percent of Dominan That Are OBL, FAC	•	(4	A/B)
1.						,
2.			Prevalence Index v	vorksheet:		
3.			Total % Co	over of:	Multiply by:	
4.			OBL species	x 1	=	
5	<u> </u>		FACW species	x 2	2 =	
	= To	otal Cover	FAC species	x 3		
Herb Stratum (Plot size: 5'	)		FACU species	x 4	l <b>–</b>	
<b>—</b>					-	
1. Trifolium repens	_ 3 _	FACI		x 5	5 =	
2. Taraxacum officinale	3 =	UPL	Column Totals:	0 (A)	5 =	(B)
Taraxacum officinale     3.			Column Totals:		5 =	(B)
2. Taraxacum officinale 3. 4.	3		Column Totals:	0 (A)	5 =	(B)
<ul><li>2. Taraxacum officinale</li><li>3.</li><li>4.</li><li>5.</li></ul>	3		Column Totals: Prevaler Hydrophytic Ve	$\frac{0}{\text{Index} = B/A} = \frac{A}{A}$	5 =(	(B)
<ul><li>2. Taraxacum officinale</li><li>3.</li><li>4.</li><li>5.</li><li>6.</li></ul>	3		Column Totals: Prevaler Hydrophytic Veg 1 - Rapid Te	0 (A) nce Index = B/A = getation Indicators:	5 =(	(B)
<ol> <li>Taraxacum officinale</li> <li>4.</li> <li>6.</li> <li>7.</li> </ol>	3		Column Totals: Prevaler  Hydrophytic Veg  1 - Rapid Te  2 - Dominar	0 (A) nce Index = B/A = getation Indicators: est for Hydrophytic Ve	5 =(	(B)
2. Taraxacum officinale 3. 4. 5. 6. 7. 8.	3		Column Totals: Prevaler  Hydrophytic Veg  1 - Rapid Te  2 - Dominar  3 - Prevalen  4 - Morpholo	o (A)  getation Indicators: est for Hydrophytic Vence Test is >50% lice Index is <3.01 logical Adaptations1 (F	egetation  Provide supporting	
2. Taraxacum officinale 3. 4. 5. 6. 7. 8. 9.	3		Column Totals: Prevaler  Hydrophytic Veg  1 - Rapid Te  2 - Dominar  3 - Prevalen  4 - Morphole  data in Rem	o (A)  getation Indicators: est for Hydrophytic Vence Test is >50% ace Index is ≤3.0¹ ogical Adaptations¹ (Flarks or on a separate	egetation  Provide supporting e sheet)	
2. Taraxacum officinale 3. 4. 5. 6. 7. 8.	3	UPL	Column Totals: Prevaler  Hydrophytic Veg  1 - Rapid Te  2 - Dominar  3 - Prevalen  4 - Morphole  data in Rem	o (A)  getation Indicators: est for Hydrophytic Vence Test is >50% lice Index is <3.01 logical Adaptations1 (F	egetation  Provide supporting e sheet)	
2. Taraxacum officinale 3. 4. 5. 6. 7. 8. 9.	3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Column Totals: Prevaler  Hydrophytic Veg  1 - Rapid Te  2 - Dominar  3 - Prevalen  4 - Morpholo data in Rem Problematic	o (A)  getation Indicators: est for Hydrophytic Vence Test is >50% ace Index is ≤3.0¹ ogical Adaptations¹ (Flarks or on a separate	egetation  Provide supporting a sheet) ion¹ (Explain)	ıg

SOIL

Sampling Point:

epth	Matrix			Redox Featu	ıres			
nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
							-	
2.2							2	
	centration, D=Deple	tion, Kivi=Ke	duced Matrix,	MS=Maskeu	Sana Gra	ains.		=Pore Lining, M=Matrix or Problematic Hydric Soils <sup>3</sup>
Histosol (	Indicators:			Sandy Gley	ad Matriy	/Q/I)		Prairie Redox (A16)
-	ipedon (A2)		_	Sandy Gley Sandy Red		(54)		rairie Redox (A16) irface (S7)
_			_	_				
Black His	` ,		_	Stripped Ma	. ,	· (E4)		nganese Masses (F12)
	n Sulfide (A4) Layers (A5)		_	Loamy Muc Loamy Gley	-			allow Dark Surface (TF12) Explain in Remarks)
2 cm Mu	• • •		_	Depleted M		(FZ)	- 001161 (1	explain in Remarks)
-	ck (A10) I Below Dark Surfac	·≏ (Δ11)	_	Redox Dark	, ,	(F6)		
-	rk Surface (A12)	·C (A11)	_	Depleted Da		` '	<sup>3</sup> Indicators	of hydrophytic vegetation and
-	ucky Mineral (S1)		_	Redox Depi				nd hydrology must be present,
- ′	cky Peat or Peat (S	3)	_		100010110 (.	,	unless	s disturbed or problematic.
· · · · · · · · · · · · · · · · · · ·	(if abanyad):							
rictive La	yer (if observed):					Ī		
ma.	Cond							
ype: epth (inch	es):	Surface				F	lydric Soil Prese	ent? Yes - No -
epth (inch						F	lydric Soil Prese	ent? Yes No
epth (inch arks:	es):	Surface		" " sannot k	-kon [			
epth (inchearks: strictive lay	es):	Surface ent at the surf	ace, and a so	oil pit cannot b	oe taken. [			ydrophytic vegetation and wet
epth (inchearks: strictive lay	es):  /er of gravel is prese	Surface ent at the surf	face, and a so	bil pit cannot b	oe taken. [			
epth (inchearks: strictive lay	es): /er of gravel is preseassumed soils are i	Surface ent at the surf	face, and a so	nil pit cannot b	oe taken. [			
epth (incher arks: strictive lay blogy, it is	es): /er of gravel is preseassumed soils are i	Surface ent at the surf	face, and a sc	oil pit cannot t	oe taken. [			
epth (inch arks: strictive lay blogy, it is DROLOG and Hydro rimary Ind	yer of gravel is prese assumed soils are in GY ology Indicators: icators (minimum o	Surface ent at the surf non-hydric.	red; check all	that apply)			ack of sufficient h	ydrophytic vegetation and wet
epth (inch arks: strictive lay blogy, it is DROLOG and Hydro rimary Ind	es): //er of gravel is prese assumed soils are i	Surface ent at the surf non-hydric.	red; check all				ack of sufficient h	ydrophytic vegetation and wet
epth (inch arks: strictive lay blogy, it is DROLOG and Hydro rimary Ind Surface \	yer of gravel is prese assumed soils are in GY ology Indicators: icators (minimum o	Surface ent at the surf non-hydric.	red; check all Water-Sta Aquatic F	that apply) ained Leaves Fauna (B13)	s (B9)		Secondary Ir Surface So	ydrophytic vegetation and wet
epth (inch arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \ High Wai Saturatio	yer of gravel is prese assumed soils are in GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3)	Surface ent at the surf non-hydric.	red; check allWater-StateAquatic FTrue Aqu	that apply) ained Leaves Fauna (B13) atic Plants (B	5 (B9) 314)		Secondary Ir Surface So Drainage I	ydrophytic vegetation and wet dicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2)
epth (inch arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \ High Wai Saturatio	yer of gravel is prese assumed soils are in GY ology Indicators: icators (minimum or Water (A1) ter Table (A2)	Surface ent at the surf non-hydric.	red; check allWater-StateAquatic FTrue Aqu	that apply) ained Leaves Fauna (B13)	5 (B9) 314)		Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B	ydrophytic vegetation and wet adicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8)
epth (inch arks: strictive lay blogy, it is DROLOG and Hydro rimary Ind Surface \ High Wai Saturatio Water Ma	yer of gravel is prese assumed soils are in GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3)	Surface ent at the surf non-hydric.	red; check all Water-Sta Aquatic F True Aqu Hydroger	that apply) ained Leaves Fauna (B13) atic Plants (B	s (B9) 314) r (C1)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation	ydrophytic vegetation and wet adicators (minimum of two requal Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9
epth (incherks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \ High Wat Saturatio Water Ma	yer of gravel is prese assumed soils are in a soil of the soil of	Surface ent at the surf non-hydric.	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized	that apply) ained Leaves Fauna (B13) atic Plants (B n Sulfide Odo	s (B9) 314) r (C1) s on Living	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation	ydrophytic vegetation and wet adicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8)
epth (inch arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep	yer of gravel is prese assumed soils are in GY ology Indicators: icators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2)	Surface ent at the surf non-hydric.	red; check all Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	that apply) ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres	s (B9) 314) r (C1) s on Living Iron (C4)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and wet adicators (minimum of two requoil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
epth (incher arks: strictive lay blogy, it is  DROLOG and Hydrorimary Indexide Naturation Water Market Mark	yer of gravel is prese assumed soils are in assumed soils (minimum or assume (in a	ent at the surf	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent In	that apply) ained Leaves Fauna (B13) attic Plants (B n Sulfide Odor Rhizospheres	s (B9)  314) r (C1) s on Living Iron (C4) n in Tilled \$	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and wet  dicators (minimum of two requoil Cracks (B6)  Patterns (B10)  on Water Table (C2)  urrows (C8)  Visible on Aerial Imagery (C9)  Stressed Plants (D1)
epth (incher arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \( \) High Water Ma Saturatio Water Ma Sedimen Drift Depo	yer of gravel is prese assumed soils are in assumed as in assume as in as i	Surface ent at the surf non-hydric.  f one is requir	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent Int  Thin Muc  Gauge or	that apply) ained Leaves Fauna (B13) natic Plants (B n Sulfide Odor Rhizospheres of Reduced on Reduction ck Surface (C7 r Well Data (D	6 (B9) 814) r (C1) s on Living Iron (C4) n in Tilled 8 7)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and well adicators (minimum of two requiling Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Wisible on Aerial Imagery (C9) Stressed Plants (D1) Inic Position (D2)
epth (incher arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \( \) High Water Ma Saturatio Water Ma Sedimen Drift Depo	yer of gravel is prese assumed soils are in assumed soils (minimum or assume (in a	Surface ent at the surf non-hydric.  f one is requir	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent Int  Thin Muc  Gauge or	that apply) ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced on Reduction k Surface (C7	6 (B9) 814) r (C1) s on Living Iron (C4) n in Tilled 8 7)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and wei adicators (minimum of two requil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
epth (incher arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \( \) High Water Ma Saturatio Water Ma Sedimen Drift Depo	yer of gravel is prese assumed soils are in assumed as in assume as in assume as in a soil a	Surface ent at the surf non-hydric.  f one is requir	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent Int  Thin Muc  Gauge or	that apply) ained Leaves Fauna (B13) natic Plants (B n Sulfide Odor Rhizospheres of Reduced on Reduction ck Surface (C7 r Well Data (D	6 (B9) 814) r (C1) s on Living Iron (C4) n in Tilled 8 7)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and wei adicators (minimum of two requil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
epth (inch arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Inundatio Sparsely	yer of gravel is press assumed soils are in GY ology Indicators: icators (minimum or Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Vegetated Concave tions:	Surface ent at the surf non-hydric.  f one is requir	red; check all  Water-Sta Aquatic F  True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex	that apply) ained Leaves Fauna (B13) natic Plants (B n Sulfide Odor Rhizospheres of Reduced on Reduction ck Surface (C7 r Well Data (D	s (B9) s (B14) r (C1) s on Living Iron (C4) n in Tilled \$ 7) D9) arks)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and well adicators (minimum of two requiling Cracks (B6) Patterns (B10) In Water Table (C2) In Water Table (C2) In Wisible on Aerial Imagery (C9) Stressed Plants (D1) Inic Position (D2)
epth (inchearks: strictive lay blogy, it is  DROLOG and Hydrorimary Ind Surface V High War Saturatio Water Ma Sedimen Drift Dep Algal Mar Iron Depo Inundatio Sparsely I Observa	yer of gravel is prese assumed soils are in assumed in assume assumed in assume	Surface  ent at the surface.  f one is require  Imagery (B7) e Surface(B8)	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent In  Thin Muc  Gauge or  Other (Ex	that apply) ained Leaves fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced fron Reduction ck Surface (Ci r Well Data (Ci xplain in Remander	s (B9)  r (C1) s on Living Iron (C4) n in Tilled S  7)  D9) arks)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	ydrophytic vegetation and wet dicators (minimum of two req oil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) nic Position (D2) ral Test (D5)
epth (inch arks: strictive lay blogy, it is  DROLOG and Hydro rimary Ind Surface V High Wai Saturatio Water Ma Sedimen Drift Depo Algal Mai Iron Depo Inundatio Sparsely I Observa ace Water ration Pres	yer of gravel is prese assumed soils are researched by the soils are researched by the soils are researched by the soils (B2) arks (B1) arks (B1) arks (B3) arks (B4) arks (B5)	ent at the surfnon-hydric.  f one is requir  Imagery (B7) e Surface(B8)	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent In  Thin Muc  Gauge or  Other (Ex	that apply) ained Leaves Fauna (B13) latic Plants (B n Sulfide Odor Rhizospheres e of Reduced fron Reduction ck Surface (C7 r Well Data (E cplain in Remand	s (B9)  r (C1) s on Living Iron (C4) n in Tilled S  7)  D9) arks)	Due to the la	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or	ydrophytic vegetation and wet dicators (minimum of two req oil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) nic Position (D2) ral Test (D5)
epth (incher arks: strictive lay blogy, it is  DROLOG  and Hydro rimary Ind Surface \( \) High Water Ma Saturatio Water Ma Sedimen Drift Depo Algal Mat Iron Depo Inundatio Sparsely  I Observa ace Water er Table Proportion Presides capille	yer of gravel is prese assumed soils are in assumed in assume assumed in assume	Surface  ent at the surf non-hydric.  f one is require  f one is require  Surface(B8)  No	red; check all  Water-Sta  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent In  Thin Muc  Gauge or  Other (Ex	that apply) ained Leaves Fauna (B13) natic Plants (B n Sulfide Odor Rhizospheres of Reduced on Reduction ok Surface (C7 r Well Data (D xplain in Remain Depth (inches Depth (inches	6 (B9)  314)  r (C1)  s on Living Iron (C4)  n in Tilled 5  7)  D9)  arks)	Roots (C3)	Secondary Ir Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or Geomorph FAC-Neut	ydrophytic vegetation and wet dicators (minimum of two req oil Cracks (B6) Patterns (B10) on Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9 Stressed Plants (D1) nic Position (D2) ral Test (D5)

Project/Site: Winnebago Tribe Broadb	and Connectivity P	roject City/Co	ounty: <b>Em</b>	erson/Thurston	Sampling Da	te: <b>11/8/2</b> 0	23
Applicant/Owner: Winnebago Trib	e of Nebraska			State: <b>NE</b>	Sampling Poi	nt: <b>53</b>	
Investigator(s): K. Sherman (Olsso	n)			Section,	Township, Range:	S42 T27N	R6E
Landform (hillslope, terrace, etc.): H	illslope	Local re	lief (conca	ive, convex, none):	Convex		
Slope (%): <b>2</b> Lat:	42.277056	Long:		-96.72649	Datum:	NAD83	
Soil Map Unit Name: 6750- Nora silt le	oam, 11 to 17 perc	ent slopes, ero	ded	NV	VI classification:	None	
Are climatic / hydrologic conditions on t	he site typical for th	nis time of year?	Yes >	X No (If	no, explain in Rema	arks)	
Are Vegetation , Soil , or Hy	drology sigr	nificantly disturbe	ed? /	Are "Normal Circums	tances" present Ye	s X No	,
Are Vegetation , Soil , or Hy	drology natu	urally problemati	c? (	(If needed, explain ar	ny answers in Rema	arks.)	
SUMMARY OF FINDINGS - Atta	ch site map sh	owing sampl	ing point	t locations, trans	sects, important	t features, etc	c.
Hydrophytic Vegetation Present?	Yes No	o X					
Hydric Soil Present?	Yes No	o X	le the Sa	ampled Area			
Wetland Hydrology Present?	Yes No	0 X		Wetland?	Yes	No X	
		<del></del>			-		
Remarks:	=	0 0.1					
SP 53 is an upland area located on a s	ope at the Emerso	n Office Site.					
VEGETATION - Use scientific	names of plan	ts.					
	Absolute	Dominant	Indicator	Dominance Test	worksheet:		
Tree Stratum (Plot size: 30'	) % Cover	Species?	Status	Number of Domina			
1				That Are OBL, FAC	CW, or FAC:	1	(A)
2.							
3.				Total Number of D		•	(5)
4				Species Across All	i Strata:	3	(B)
5		T-4-1 0					
		: Total Cover		Percent of Domina	•		( <b>.</b>
Sapling/Shrub Stratum (Plot size:	15' )			That Are OBL, FA	CW, or FAC:	33	(A/B)
1				Danielana a la dan			
2				Prevalence Index		NA. dain lee lee e	
3.				Total % (	Cover or.	Multiply by:	_
4				OBL species		x 1 =	_
5	<del>-</del>	Total Cover		FACW species		x 2 =	
Herb Stratum (Plot size: 5'	, <del></del> =	: Total Cover		FAC species FACU species		x 3 = x 4 =	_
1. Poa pratensis	_) 40	X	FAC	UPL species		_	
Digitaria sanguinalis	40	$\frac{X}{X}$	UPL	Column Totals:	0	X 5 =	(B)
Trifolium repens	20	$\frac{X}{X}$	FACU		ence Index = B/A =	(A)	(D)
· · · · · · · · · · · · · · · · · · ·			FACO	Fievale	ence index = b/A =		
4				Hydrophytic Ve	egetation Indicato	rs:	
5				1 - Rapid T	Test for Hydrophytic	Vegetation	
6				2 - Domina	ance Test is >50%		
7				3 - Prevale	ence Index is <3.01		
8				· ·	ological Adaptations	`	orting
9.					marks or on a sepa		
10				Problemati	ic Hydrophytic Vege	etation¹ (Explain	)
		: Total Cover					
Woody Vine Stratum (Plot size:  1.	30' )				dric soil and wetlar disturbed or proble		st be
2.				Hydrophytic			
		= Total Cover		Vegetation	Yes	No X	
				Present?	-	_	-
Remarks: (Include photo numbers here	e or on a separate :	sheet.)					
PP 50, 50a							

SOIL

Sampling Point: 53

Depth	Matrix			Redox Featu	ıres			
inches)	Color (moist)	%	Color (moi	st) %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-20	10YR 3/3	100					Silty Loam	
e: C=Con	centration, D=Depl	etion, RM=	Reduced Mat	rix, MS=Masked	Sand Gra	ins.	<sup>2</sup> Location: PL:	Pore Lining, M=Matrix
lydric Soil	Indicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)			Sandy Gley	∕ed Matrix (	(S4)	Coast P	rairie Redox (A16)
Histic Ep	ipedon (A2)			Sandy Red	ox (S5)		Dark Su	ırface (S7)
Black His	stic (A3)			Stripped Ma	atrix (S6)		Iron-Ma	nganese Masses (F12)
– Hydrogei	n Sulfide (A4)			Loamy Muc	ky Mineral	(F1)	Very Sh	allow Dark Surface (TF12)
Stratified	Layers (A5)			Loamy Gle	yed Matrix	(F2)	Other (E	Explain in Remarks)
2 cm Mu	ck (A10)			Depleted M	latrix (F3)		<del></del>	
Depleted	l Below Dark Surfa	ce (A11)		Redox Dark	k Surface (I	F6)		
_ Thick Da	rk Surface (A12)			Depleted D	ark Surface	e (F7)		of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)			Redox Dep	ressions (F	<del>-</del> 8)		nd hydrology must be present, s disturbed or problematic.
5 cm Mu	cky Peat or Peat (S	33)					uniess	disturbed or problematic.
trictive La	yer (if observed):							
	yer (ii observed).							
уре:		crete						
Depth (inch	Con	crete Surface					Hydric Soil Prese	nt? Yes <u>-</u> No <u>-</u>
Depth (inch	Con						Hydric Soil Prese	nt? Yes <u>-</u> No <u>-</u>
Depth (inch	Con						Hydric Soil Prese	nt? Yes <u>-</u> No <u>-</u>
DROLOG	Con es):	Surface	quired; check	all that apply)				
DROLOG land Hydro Primary Ind	Con es):  GY  ology Indicators:	Surface	Water	-Stained Leaves	s (B9)		Secondary In	
DROLOG land Hydro Surface \	GY ology Indicators: icators (minimum o	Surface	Water	,	s (B9)		Secondary In	dicators (minimum of two requ
DROLOG land Hydro Surface \	GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2)	Surface	Water Aquat True A	-Stained Leaves ic Fauna (B13) Aquatic Plants (E	314)		Secondary In Surface So Drainage F	dicators (minimum of two requ oil Cracks (B6) Patterns (B10) n Water Table (C2)
DROLOG and Hydro rimary Ind Surface V High Wa	GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2)	Surface	Water Aquat True A	-Stained Leaves ic Fauna (B13)	314)		Secondary In Surface So Drainage F	dicators (minimum of two requ bil Cracks (B6) Patterns (B10)
DROLOGIAND SURFACE NEW YORK SURFACE NEW YORK SATURATION WATER ME SEGIMEN	Con es):  GY  ology Indicators: icators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	Surface	Water Aquat True A Hydro Oxidiz	-Stained Leaves ic Fauna (B13) Aquatic Plants (E gen Sulfide Odo ed Rhizosphere:	314) r (C1) s on Living		Secondary In Surface So Drainage F Dry-Seaso Crayfish B	dicators (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)
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# **APPENDIX D**

Photo Log



Project Name: Winnebago Tribe Broadband Connectivity Project Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

**Project No.** 021-05175

Photo: 1

Direction Photo Taken: North

Description:
Sample Point (SP) 1 is an upland area in a pasture in Staging Area A. The National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD) depict this area as a riverine and stream channel, respectively. The area lacks all three wetland indicators, a defined bed and bank, and ordinary high-water mark (OHWM) and is not a wetland or stream channel.



Photo: 2

Direction Photo Taken: South

Description: SP 2 is an upland area in an agricultural pasture that slopes north in Staging Area A. The NWI and NHD depict this area as a riverine and stream channel, respectively; however, the area lacks a defined bed and bank and OHWM and is not a stream channel. Although hydric soil is present, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.





**Project Name:**Winnebago Tribe Broadband
Connectivity Project

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175



Direction Photo Taken: Northeast

Description: SP 3 is an upland area located in an agricultural pasture in Staging Area A. This area was identified during the Climates Analysis for Wetlands Tables (WETS Tables) analysis as a potential wetland. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.



Photo: 4a

Direction Photo Taken: Northeast

Description: Wetland 4 is a Palustrine **Emergent Temporarily** Flooded/Seasonally Flooded (PEMA/C) wetland fringe along the southern bank of Channel 4, an intermittent channel, within Staging Area A. Channel 4 is approximately two feet wide at the OHWM and flows west to east across Staging Area A. This area was identified during the WETS Tables analysis as a potential wetland. The NWI and NHD depict this area as a riverine and stream channel, respectively.





Project Name: Winnebago Tribe Broadband Connectivity Project

**Site Location:**Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 4b

Direction Photo Taken: East

Description: View of Channel 4 dominated by reed canary grass. Channel 4 has an OHWM of two feet.



Photo: 5

Direction Photo Taken: East

Description: SP 5 is an upland outpoint for Wetland 4 (PEMA/C) in Staging Area A. This area was identified during the WETS Tables analysis as a potential wetland; however, the area lacks all three wetland indicators.





Project Name: Winnebago Tribe Broadband Connectivity Project Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 6

Direction Photo Taken: Southeast

Description: Wetland 6 is a PEMA/C wetland fringe along the southern bank of Channel 4, an intermittent channel, within Staging Area A. Channel 4 is approximately two feet wide at the OHWM and flows west and east across Staging Area A. This area was identified during the WETS Tables analysis as a potential wetland. The NWI and NHD depict this area as a riverine and stream channel, respectively.



Photo: 7

Direction Photo Taken: South

Description: SP 7 is an upland outpoint for Wetland 6 (PEMA/C) within a grassy field abutting the northern edge of the wetland in Staging Area A.





Project Name: Winnebago Tribe Broadband Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Connectivity Project Photo: 8 **Direction Photo** Taken: Northeast Description: SP 8 documents an upland area located within a depression along the western edge of Staging Area A. Photo: 9 Direction Photo Taken: West Description: SP 9 is an upland area along the southern boundary of Staging Area B. This area is depicted by the NHD as a stream channel; however, this area lacks a defined bed and bank and OHWM and is not a stream channel. Although the area contains hydric soil, the area lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.



Project Name: Winnebago Tribe Broadband Connectivity Project

Site Location:

Project No. 021-05175

Photo: 10

**Direction Photo** Taken: South

Description:

SP 10 is an upland area in an agricultural field planted with corn in Staging Area B. This area was identified during the WETS Tables analysis as a potential wetland; however, the area lacks hydric soil and sufficient wetland hydrology is upland.



Photo: 11

**Direction Photo** Taken: North

Description:

SP 11 is an upland area in an abandoned agricultural field in Staging Area C. Corn is present at this SP; however, it is not included in the vegetation calculations. This area was identified during the WETS Tables analysis as a potential wetland; however, the area lacks all three wetland indicators.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 12

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175



Description: SP 12 is an upland area located within an agricultural field in Staging Area D. This area was identified during the WETS Tables analysis as a potential wetland. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.



Photo: 13

Direction Photo Taken: North

Description:
SP 13 is an upland area located within an agricultural field in
Staging Area D. This area was identified during the WETS Tables analysis as a potential wetland. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 14

**Site Location:**Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: North

Description: SP 14 is an upland area located within an agricultural field in Staging Area D. This area was identified during the WETS Tables analysis as a potential wetland; however, the area lacks all three wetland indicators.



Photo: 15

Direction Photo Taken: North

Description:
SP 15 is an upland area located at the toe of a slope along the edge of an agricultural field in Staging Area D. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.





**Project Name:**Winnebago Tribe Broadband
Connectivity Project

**Site Location:**Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 16

Direction Photo

Taken: Southwest

Description:
Wetland 16 is a PEMA/C
wetland within an
agricultural field in

Staging Area E. This area was identified during the WETS Tables analysis as a potential

wetland.



Photo: 17

Direction Photo Taken: North

Description: Wetland 17 is a PEMA/C wetland within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the presence of hydric soils and wetland hydrology indicators, it is likely hydrophytic vegetation would be present in the absence of farming practices.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 18

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

**Project No.** 021-05175

Direction Photo Taken: East

Description: Wetland 18 is a PEMA/C wetland within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the presence of hydric soils and wetland hydrology indicators, it is likely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 19

Direction Photo Taken: North

Description: SP 19 is an upland outpoint for to Wetlands 16, 17, and 18 located in an agricultural field in Staging Area E. The area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





Site Location: Project No. **Project Name:** Winnebago Tribe Broadband 021-05175 Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Connectivity Project Photo: 20 **Direction Photo** Taken: East Description: SP 20 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland. Photo: 21 Direction Photo Taken: East Description: SP 21 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland; however, the area lacks all three wetland indicators and is upland.



Project No. **Project Name:** Site Location: Winnebago Tribe Broadband Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. 021-05175 Connectivity Project Photo: 22 **Direction Photo** Taken: West Description: SP 22 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices. Photo: 23 **Direction Photo** Taken: Southwest Description: Wetland 23 is a PEMA/C wetland located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland.



Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 24

**Site Location:** Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: East

Description: SP 24 is the upland outpoint for Wetland 23 (PEMA/C) and Wetland 25 (PEMÁ/C) located in an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 25

Direction Photo Taken: Southwest

Description:
Wetland 25 is a PEMA/C
wetland located in an
agricultural field in
Staging Area E. This
area was identified during
the WETS Tables
analysis as a potential
wetland.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 26

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: Southwest

Description: SP 26 is an upland area located in an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 27

Direction Photo Taken: East

Description: SP 27 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





**Project Name:**Winnebago Tribe Broadband
Connectivity Project

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 28

Direction Photo Taken: West

Description: SP 28 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 29

Direction Photo Taken: East

Description: SP 29 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





Project Name: Winnebago Tribe Broadband Connectivity Project Photo:30 Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: South

Description: SP 30 is an upland area within an agricultural field in Staging Area E. This area is depicted by the NWI and NHD as a riverine and stream channel, respectively; however, the area lacks a defined bed and bank and OHWM and is not a wetland or stream channel. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic



Photo: 31

Direction Photo Taken: West

vegetation would be present in the absence of farming practices.

Description: SP 31 is an upland area within an agricultural field planted with corn in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





**Project Name:** Winnebago Tribe Broadband Connectivity Project

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 32

**Direction Photo** Taken: Southwest

Description:

SP 32 is an upland area within an agricultural field planted with corn in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 33

**Direction Photo** Taken: Northwest

Description:

SP 33 is an upland area located within an agricultural field in Staging Area E. This area was identified during the WETS Tables analysis as a potential wetland. Although this area contains hydric soil, it lacks dominant hydrophytic vegetation and sufficient wetland hydrology and is upland.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 34

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: Southwest

Description: SP 34 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 35

Direction Photo Taken: South

Description: SP 35 is an upland area located within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





**Project Name:** Winnebago Tribe Broadband Connectivity Project

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Photo: 36

**Direction Photo** Taken: Northeast

Description:

SP 36 is an upland area within an agricultural field in Staging Area F. This area was identified during the WETS Tables analysis as a potential wetland. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Photo: 37

**Direction Photo** Taken: Northwest

Description:

SP 37 is an upland area located within an agricultural field in Staging Area F. The NWI and NHD depict this area as a riverine habitat and stream channel, respectively; however, the area lacks a defined bed and bank and OHWM and is not a wetland or stream channel. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.





Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 38 Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. **Direction Photo** Taken: Southwest Description: SP 38 is an upland area located on a slope north of 858th Road at Wakefield Bore Point 101. Photo: 39 **Direction Photo** Taken: West Description: SP 39 is an upland area located within a ditch south of 858th Road at Wakefield Bore Point 102.



Project Name: Winnebago Tribe Broadband Connectivity Project Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Photo: 40 **Direction Photo** Taken: South Description: SP 40 is an upland area located in a grassy field at Wakefield Bore Point 103. Photo: 41 **Direction Photo** Taken: Southwest Description: SP 41 is an upland outpoint for Wetland 45 (PEMA/C) along the east side of Nebraska Highway 35 at Wakefield Bore Point 104.



Project Name: Winnebago Tribe Broadband Connectivity Project Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Photo: 42 **Direction Photo** Taken: South Description: Wetland 42 is a PEMA/C wetland in the eastern roadside ditch of Nebraska Highway 35 at Wakefield Bore Point 104. Photo: 43 **Direction Photo** Taken: Southeast Description: SP 43 is an upland area along the west side of Nebraska Highway 35 at Wakefield Bore Point 105.



Project Name:
Winnebago Tribe Broadband
Connectivity Project
Photo: 44

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: Southeast

Description: SP 44 is an upland area located adjacent to a gravel road (West 1st Avenue) at Wakefield Bore Point 106.



Photo: 45

Direction Photo Taken: South

Description:
SP 45 is an upland area within a gravel parking lot at Wakefield Bore Point 107. A soil sample cannot be taken at this location due to the presence of gravel. Although vegetation is not present in this area, it is unlikely dominant hydrophytic vegetation would be present due to the lack of sufficient wetland hydrology.





Project Name: Winnebago Tribe Broadband Connectivity Project Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Photo: 46 Direction Photo Taken: Northwest Description: SP 46 documents an upland area within a pasture at the western bore point of the North Bore Site. Photo: 47a **Direction Photo** Taken: North Description: SP 47 documents an upland area at the eastern bore point of the North Bore Site.



Project Name: Winnebago Tribe Broadband Connectivity Project Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Photo: 47b **Direction Photo** Taken: South Description: View of the area north of the eastern bore point of the North Bore Site. Photo: 48 Direction Photo Taken: North Description: SP 48 is an upland area within an agricultural field at the western bore point of the South Bore Site. The area has received recent rainfall. Vegetation is not present at this SP due to farming practices; however, with the lack of hydric soil and sufficient wetland hydrology, it is unlikely hydrophytic vegetation would be present in the absence of farming practices.



Project Name: Winnebago Tribe Broadband Project No. 021-05175 Site Location: Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa. Connectivity Project Photo: 49 **Direction Photo** Taken: Southeast Description: SP 49 is an upland area located in a grassland at the eastern bore point of the South Bore Site. Photo: 50 **Direction Photo** Taken: East Description: Wetland 50 is a PEMA/C wetland located at the Central Office Site. Dominant hydrophytic vegetation was not observed, but the area had hydric soils and wetland hydrology.



Project Name: Winnebago Tribe Broadband Connectivity Project

Site Location:

Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Project No. 021-05175

Direction Photo Taken: Northeast

Photo: 51

Description: SP 51 is an upland outpoint for Wetland 50 (PEMA/C) within the Central Office Site.



Photo: 52

Direction Photo Taken: Northeast

Description: SP 52 is located at the alternative location for the Central Office. It was within a gravel parking lot and a soil pit could not be taken.





Project No. 021-05175

Project Name: Winnebago Tribe Broadband Connectivity Project

**Site Location:**Dakota, Dixon, Thurston, and Wayne Counties, Nebraska and Woodbury County, Iowa.

Photo: 53a

Direction Photo Taken: South

Description: SP 53 is an upland area located on a slope at the Emerson Office Site. This area contains nonhydrophytic vegetation Hydric soils and wetland hydrology were not observed.

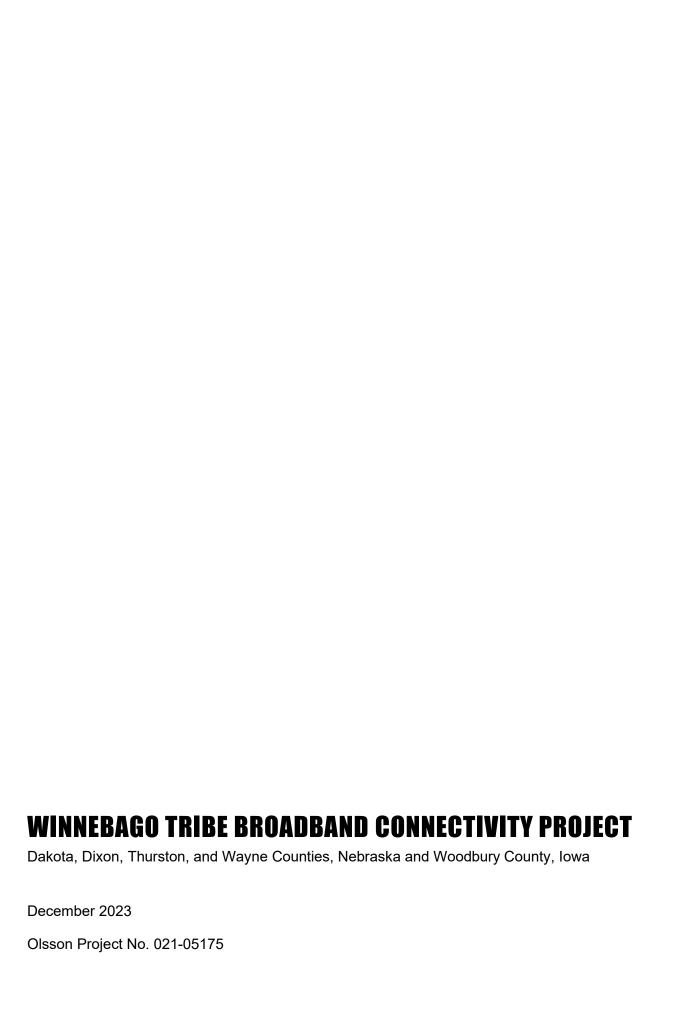


Photo: 53b

Direction Photo Taken: North

Description: View of the Emerson Office Site facing north.





#### **United States Department of Agriculture**

Natural Resources Conservation Service
Nebraska State Office
Federal Building, Room 152
100 Centennial Mall North
Lincoln, NE 68508-3866
(402) 437-5300

http://www.ne.nrcs.usda.gov

Date: September 21, 2023

Subject: LNU – Farmland Protection

Winnebago Tribe Broadband Connectivity Project

NEPA/FPPA Evaluation Thurston County, Nebraska

To: Olsson Associates

Attn: Kari Sherman (ksherman@olsson.com) File Code: 310

We have reviewed the information provided in your correspondence dated August 24, 2023, concerning the proposed broadband connectivity project located in Thurston County, Nebraska. This review is part of the National Environmental Policy Act (NEPA) evaluation for the National Telecommunications and Information Administration. We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The purpose of the Farmland Protection Policy act is to minimize the permanent and irreversible conversion of important farmland into nonagricultural uses. The project as outlined at this time involves temporary staging areas which will not permanently convert the farmland and the areas of impact will revert to agricultural use after construction in completed. Due to this reason, the proposed project is exempt from provisions of FPPA and no further consideration for protection is necessary.

If the project changes and there will be permanent farmland conversion, please provide our office with a map of the project footprint and a brief project description and we will evaluate the study area as required by the FPPA.

If you have further questions, please contact Elizabeth Gray at 402.437.4068 or by email at Elizabeth.gray@usda.gov (preferred).

Sincerely,

ELIZABETH GRAY GRAY

Date: 2023.09.21 11:35:58 -05'00'

ELIZABETH GRAY
USDA-NRCS Nebraska Assistant State Soil Scientist

Attachment: NA

# Appendix D

U.S. Fish and Wildlife Service (USFWS)
Section 7 Compliance Documentation

#### August 24, 2023

Mr. Jeff Runge U. S. Fish and Wildlife Service 9325 South Alda Road, Suite B Wood River, NE 68883

RE: Winnebago Tribe of Nebraska Broadband Project

Project code: 2023-0119474

#### Dear Mr. Runge:

Olsson, Inc. (Olsson), on behalf of the Winnebago Tribe of Nebraska in cooperation with the National Telecommunications and Information Administration (NTIA), is in the process of performing an environmental review as the proposed project will use federal funds by way of a federal grant. This includes advance coordination with applicable agencies to maintain compliance with appropriate federal and state regulations. The proposed project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities. The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises system. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way and under the Missouri River in the project area. The buried fiber optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using vibratory plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. The project location is included on Figure 1. No tree removal is expected to occur for the project.

The United States Fish and Wildlife Service's Information for Planning and Consultation (IPaC) resource list resulted in six species: four listed, one proposed, and one candidate species. The table below summarizes the listed species and our evaluation of potential project impacts on the species. A copy of the IPaC list is attached. A copy of the Nebraska Consistency Letter for the Northern Long-eared Bat Determination Key is also attached.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Mammals				
Northern Long- eared Bat	Myotis septentrionalis	FE, SE	During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.	If tree removal is required, removal will occur outside the breeding season (June 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Tricolored Bat	Perimyotis subflavus	PE	During the summer, maternity and other roosts are mainly in dead or live tree foliage. Maternity colonies may also utilize human-made structures (buildings, bridges, etc.) or tree cavities. Caves, mines, and rock crevices may be used at night roosts. Most foraging occurs in riparian areas within forested landscapes. Hibernation sites are often in caves, mines, or cavelike tunnels.	If tree removal is required, removal will occur outside the breeding season (May 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.
			Birds	
Piping Plover	Charadrius melodus	FT, ST	Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands. Reproduction - The female lays four eggs in its small, shallow nest lined with pebbles or broken shells.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
			Fish	
Pallid Sturgeon	Scaphirhynchus albus	FE, SE	Pallid sturgeon primarily reside in the main channels of the Missouri River and Lower Mississippi River from Montana to Louisiana. Adult pallid sturgeon inhabit large, deep turbid river channels, usually in strong current over firm sand or gravel.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Clams				
Scaleshell Mussel	Leptodea leptodon	FE, SE	Scaleshell mussels are most likely to be found in clear, fast-moving streams and rivers with gravel or sand bottoms. They can be found within riffles or fast-moving currents. This species requires good water quality.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Insects				
Monarch Butterfly	Danaus plexippus	С	Monarchs live mainly in prairies, meadows, grasslands, and roadsides where there are abundant flowers and milkweed plants. As caterpillars, they feed exclusively on milkweed, which makes the monarch toxic to predators such as birds. The monarch's survival depends on this chemical defense. Adults are generalists and nectar from a variety of blooming plants.	The monarch butterfly is a candidate species for protection under the Endangered Species Act but has not been listed or proposed for listing; therefore, no regulatory

Common Name	Scientific Name	Status*	Habitat	Potential Impact
				requirements are in place for the species.

<sup>\*</sup> FT= Federally Threatened, FE= Federally Endangered, ST= State Threatened, SE= State Endangered, PE= Proposed Endangered, C= Candidate

The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. Based on a review of existing resources, NTIA believes the project would have no effect to Federally-listed or proposed threatened or endangered species. Please advise us of any concerns you may have related to possible effects of the project listed above on such species or critical habitat. Nebraska Games and Parks have also been notified.

We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact Kari Sherman at 402-282-4072 or ksherman@olsson.com.

Sincerely,

Kurth

Kari Sherman Natural Resources and Planning

#### Olsson

2111 South 67th Street, Suite 200 Omaha, NE 68106 402-282-4072 ksherman@olsson.com

Enclosures:
Location Map
IPaC Resource List
Consistency Letter for Northern Long-eared Bat Determination Key



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

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

In Reply Refer To: August 21, 2023

Project Code: 2023-0119474

Project Name: Winnebago Tribe of Nebraska Broadband Connectivity Project

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website (https://ipac.ecosphere.fws.gov/) at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

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

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

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/media/endangered-species-consultation-handbook or at our Nebraska Field Office webpage (https://www.fws.gov/office/nebraska-ecological-services/project-planning-and-review-under-endangered-species-act). We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Consultation Code in the header of this letter (i.e., YEAR-XXXXXXXX) with any request for consultation or correspondence about your project that you submit to our office.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts and permitting see https://www.fws.gov/program/migratory-bird-permit The MBTA has no provision for allowing take of migratory birds that may be unintentionally

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

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

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

**Platte River System:** The Platte River, its tributaries, and associated wetland habitats are resources of national importance. Due to the cumulative effect of many water depletion projects

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

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

**Note:** IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

#### Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# OFFICIAL SPECIES LIST

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

This species list is provided by:

#### **Nebraska Ecological Services Field Office**

9325 B South Alda Rd., Ste B Wood River, NE 68883-9565 (308) 382-6468

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

#### Illinois-Iowa Ecological Services Field Office

Illinois & Iowa Ecological Services Field Office 1511 47th Ave Moline, IL 61265-7022 (309) 757-5800

### **PROJECT SUMMARY**

Project Code: 2023-0119474

Project Name: Winnebago Tribe of Nebraska Broadband Connectivity Project

Project Type: Distribution Line - New Construction - Below Ground

Project Description: The Project would provide qualified broadband service to approximately

600 unserved Native American households, 40 unserved Native American and/or Tribal businesses, and 16 Tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection

of service.

The Project will occur over the entire Winnebago Reservation.

Construction is expected to start in 2024.

#### **Project Location:**

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@42.2510254,-96.57505717561948,14z">https://www.google.com/maps/@42.2510254,-96.57505717561948,14z</a>



Counties: Iowa and Nebraska

#### **ENDANGERED SPECIES ACT SPECIES**

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

#### **MAMMALS**

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species.  Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

#### **BIRDS**

NAME	STATUS
Pining Ployer Charadrius melodus	Threatened

Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>

#### **FISHES**

Endangered

#### Pallid Sturgeon Scaphirhynchus albus

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7162">https://ecos.fws.gov/ecp/species/7162</a>

#### **CLAMS**

NAME STATUS

Scaleshell Mussel Leptodea leptodon

Endangered

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5881">https://ecos.fws.gov/ecp/species/5881</a>

#### **INSECTS**

NAME STATUS

Monarch Butterfly *Danaus plexippus* 

Candidate

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

#### **CRITICAL HABITATS**

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

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

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

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

# **MIGRATORY BIRDS**

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

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

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this

list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black Tern <i>Chlidonias niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3093">https://ecos.fws.gov/ecp/species/3093</a>	Breeds May 15 to Aug 20
Black-billed Cuckoo <i>Coccyzus erythropthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>	Breeds May 15 to Oct 10
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9294">https://ecos.fws.gov/ecp/species/9294</a>	Breeds May 1 to Aug 31
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

#### PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

#### **Probability of Presence (■)**

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

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

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

#### **Breeding Season** (

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

#### Survey Effort (|)

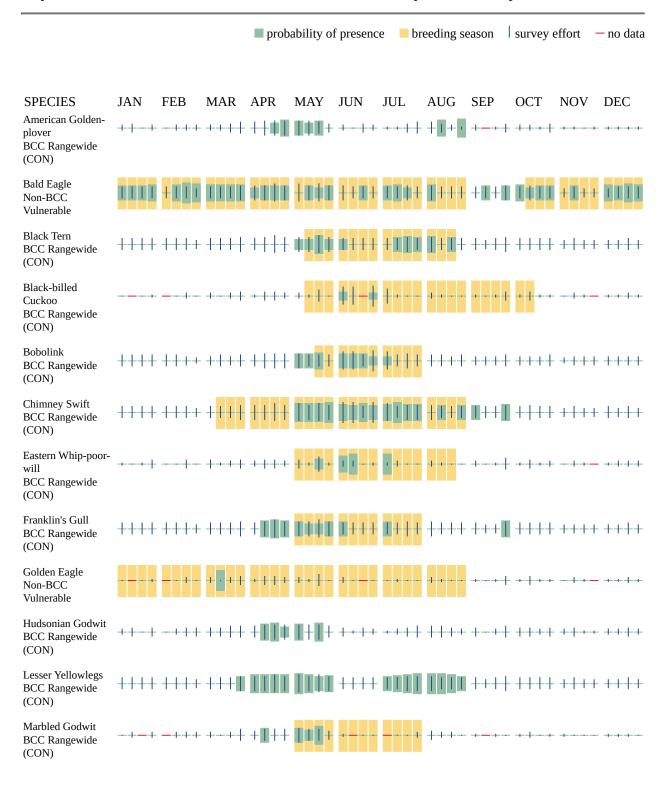
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

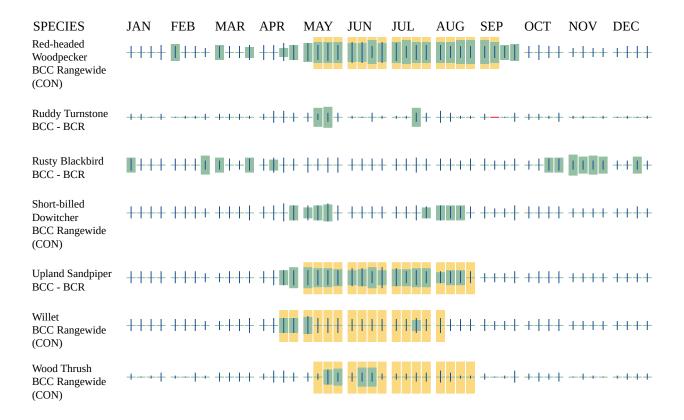
#### No Data (-)

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

#### **Survey Timeframe**

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





Additional information can be found using the following links:

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

## **MIGRATORY BIRDS FAQ**

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

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

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

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern</u> (<u>BCC</u>) and other species that may warrant special attention in your project location.

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

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

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles)

potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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

#### Details about birds that are potentially affected by offshore projects

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

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

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

#### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

08/21/2023 15

### **WETLANDS**

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of</u> Engineers District.

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

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit <a href="https://www.fws.gov/wetlands/data/mapper.HTML">https://www.fws.gov/wetlands/data/mapper.HTML</a>

### FRESHWATER EMERGENT WETLAND

- PEM1Ch
- PEM1Ad
- PEM1Ah
- PEM1A
- <u>PEM1F</u>
- PEM1Cd
- PEM1Fh
- PEM1C
- PEM1Cx
- PEM1Ax

### LAKE

- L1UBG
- L1UBH
- L2UBF

### FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PFOA

### RIVERINE

R2UBH

### FRESHWATER POND

PABGx

08/21/2023 16

### **IPAC USER CONTACT INFORMATION**

Agency: Winnebago Tribe of Nebraska

Name: Kari Sherman

Address: 2111 S 67th St. Suite 200

City: Omaha State: NE Zip: 68106

Email ksherman@olsson.com

Phone: 4022824072

### LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration

From: Porath, Mark T <mark\_porath@fws.gov> on behalf of Nebraskaes, FW6

<Nebraskaes@fws.gov>

Sent: Saturday, September 2, 2023 10:41 AM

To: Kari Sherman

**Cc:** NGPC EnvReview; joy.johnson@winnebagotribe.com;

jewel.parker@winnebagotribe.com

Subject: Winnebago Tribe of Nebraska Broadband Project IPaC 2023-0094299

Attachments: 23-08-21 NRPL Winnebago EA TE USFWS Letter Final.pdf

### This Message Is From an External Sender

This message came from outside your organization. Please take care when clicking links or opening attachments. When in doubt, use the Report Phish button or contact IT to have the message analyzed.

### Good morning Kari,

Based on the information you have provided our office for the above mentioned project, you have concluded "no effect" to designated critical habitat or to species that are federally listed or proposed for federal listing, on behalf of the lead federal action agency.

We appreciate you informing us of your analysis. In section 7(a)(3) of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C 1531 et. seq.), and the implementing regulations under section 7(a)(2) of the ESA, the Service is not required to review or concur with projects where "no effect" determinations have been made for all species or designated critical habitat potentially affected by a project. Therefore, we acknowledge the receipt of your "no effect" determination and recommend that you maintain your documentation and rationale in your project file.

In addition to the Endangered Species Act, all activities (federal and non-federal) are responsible for complying with the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (Eagle Act). Please note that this response does not authorize avian mortality for species that are protected under the MBTA or the Eagle Act. For more information regarding the Eagle Act or MBTA, and any associated resources including Service recommendations and best management practices, please visit our Nebraska Ecological Service project planning website at: <a href="https://www.fws.gov/office/nebraska-ecological-services/project-planning-and-review-under-endangered-species-act">https://www.fws.gov/office/nebraska-ecological-services/project-planning-and-review-under-endangered-species-act</a> If you believe trust resources under these Acts will be affected by this activity, we recommend that you contact our office for further recommendations.

We appreciate your efforts to ensure the conservation of threatened and endangered species and other Federal trust resources.

Regards,

Mark

Mark Porath Nebraska Project Leader/Field Supervisor Ecological Services, Mountain-Prairie Region U.S. Fish and Wildlife Service

Office: 308-382-6468
Cell: 308-216-2077
mark porath@fws.gov
nebraskaes@fws.gov

Nebraska Field Office U.S. Fish and Wildlife Service 9325 South Alda Road Wood River, Nebraska 68883 NebraskaES@fws.gov

For a species list, visit <a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a>
Office information <a href="https://www.fws.gov/nebraskaes/index.php">https://ecos.fws.gov/ipac/</a>

From: Kari Sherman < <a href="mailto:ksherman@olsson.com">ksherman@olsson.com</a> Sent: Monday, August 28, 2023 8:54 AM
To: Nebraskaes, FW6 < <a href="mailto:ksherman@olsson.com">ksherman@olsson.com</a> Sent: Monday, August 28, 2023 8:54 AM
To: Nebraskaes, FW6 < <a href="mailto:ksherman@olsson.com">ksherman@olsson.com</a> Sent: Monday, August 28, 2023 8:54 AM
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To: Nebraskaes, FW6 < <a href="mailto:ksherman@olsson.com">ksherman@olsson.com</a> Sent: Monday, August 28, 2023 8:54 AM
To: Nebraskaes@fws.gov>

**Cc:** NGPC EnvReview < ngpc.envreview@nebraska.gov >; Krista Schnepf < kschnepf@olsson.com > **Subject:** [EXTERNAL] RE: Winnebago Tribe of Nebraska Broadband Project IPaC 2023-0094299

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good morning Mark!

We have completed the IPaC review for the entire Winnebago Broadband Project.

Attached is a letter with details.

If you have any questions, please contact me.

Thanks!

### Kari Sherman

Environmental **D** 402.282.4072 **C** 402.350.8902

2111 S. 67th Street, Suite 200 Omaha, NE 68106 **O** 402.341.1116



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From: Porath, Mark T <mark\_porath@fws.gov> On Behalf Of Nebraskaes, FW6

Sent: Sunday, July 16, 2023 9:53 AM

**To:** Kari Sherman < <u>ksherman@olsson.com</u>>

Cc: NGPC EnvReview <ngpc.envreview@nebraska.gov>

Subject: Winnebago Tribe of Nebraska Broadband Project IPaC 2023-0094299

#### This Message Is From an External Sender

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### Good morning Kari,

Thank you for contacting us with a preview of your proposed project and attaching the IPaC species list. For your consideration as you develop the project's BA/BE, please remember that the two bat species (Northern Long-eared and Tricolor) are currently transitioning (e.g., uplisting, proposed) and new information will be issued later in 2023 or early 2024.

We look forward to working with you and thank you for your interest in protecting and conserving Nebraska's and our Nation's natural resources is deeply appreciated.

Regards, Mark

Mark Porath Nebraska Project Leader/Field Supervisor Ecological Services, Mountain-Prairie Region U.S. Fish and Wildlife Service Office: 308-382-6468

Cell: 308-216-2077 <u>mark\_porath@fws.gov</u> <u>nebraskaes@fws.gov</u>

Nebraska Field Office U.S. Fish and Wildlife Service 9325 South Alda Road Wood River, Nebraska 68883

### NebraskaES@fws.gov

For a species list, visit <a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a> Office information https://www.fws.gov/nebraskaes/index.php

From: Kari Sherman <ksherman@olsson.com>

Sent: Monday, July 10, 2023 11:51 AM To: Nebraskaes, FW6 < Nebraskaes@fws.gov >

**Cc:** Krista Schnepf < kschnepf@olsson.com >; Susan Opperman < sopperman@olsson.com >

Subject: [EXTERNAL] Winnebago Tribe of Nebraska Broadband Project

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

### Good morning!

Attached is a request for comments on a project on the Winnebago Reservation.

If you have any questions, please reach out.

Thanks!

### Kari Sherman

Environmental **D** 402.282.4072 **C** 402.350.8902

2111 S. 67th Street, Suite 200 Omaha, NE 68106



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August 24, 2023

U. S. Fish and Wildlife Service 1511 47<sup>th</sup> Ave Moline, IL 61265

RE: Winnebago Tribe of Nebraska Broadband Project

Project code: 2023-0119474

### To whom it may concern:

Olsson, Inc. (Olsson), on behalf of the Winnebago Tribe of Nebraska in cooperation with the National Telecommunications and Information Administration (NTIA), is in the process of performing an environmental review as the proposed project will use federal funds by way of a federal grant. This includes advance coordination with applicable agencies to maintain compliance with appropriate federal and state regulations. The proposed project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities. The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises system. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way and under the Missouri River in the project area. The buried fiber optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using vibratory plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. The project location is included on Figure 1. No tree removal is expected to occur for the project.

The United States Fish and Wildlife Service's Information for Planning and Consultation (IPaC) resource list resulted in six species: four listed, one proposed, and one candidate species. The table below summarizes the listed species and our evaluation of potential project impacts on the species. A copy of the IPaC list is attached. A copy of the Nebraska Consistency Letter for the Northern Long-eared Bat Determination Key is also attached.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
			Mammals	
Northern Long- eared Bat	Myotis septentrionalis	FE, SE	During the summer, northern long- eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non- reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.	Tree removal will not occur. If tree removal is required, removal will occur outside the breeding season (June 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Tricolored Bat	Perimyotis subflavus	PE	During the summer, maternity and other roosts are mainly in dead or live tree foliage. Maternity colonies may also utilize human-made structures (buildings, bridges, etc.) or tree cavities. Caves, mines, and rock crevices may be used at night roosts. Most foraging occurs in riparian areas within forested landscapes. Hibernation sites are often in caves, mines, or cavelike tunnels.	Tree removal will not occur. If tree removal is required, removal will occur outside the breeding season (May 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.
			Birds	
Piping Plover	Charadrius melodus	FT, ST	Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands. Reproduction - The female lays four eggs in its small, shallow nest lined with pebbles or broken shells.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
			Fish	
Pallid Sturgeon	Scaphirhynchus albus	FE, SE	Pallid sturgeon primarily reside in the main channels of the Missouri River and Lower Mississippi River from Montana to Louisiana. Adult pallid sturgeon inhabit large, deep turbid river channels, usually in strong current over firm sand or gravel.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
			Clams	
Scaleshell Mussel	Leptodea leptodon	FE, SE	Scaleshell mussels are most likely to be found in clear, fast-moving streams and rivers with gravel or sand bottoms. They can be found within riffles or fast-moving currents. This species requires good water quality.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
			Insects	
Monarch Butterfly	Danaus plexippus	С	Monarchs live mainly in prairies, meadows, grasslands, and roadsides where there are abundant flowers and milkweed plants. As caterpillars, they feed exclusively on milkweed, which makes the monarch toxic to predators such as birds. The monarch's survival depends on this chemical defense.	The monarch butterfly is a candidate species for protection under the Endangered Species Act but has not been listed or proposed for listing; therefore, no

Common Name	Scientific Name	Status*	Habitat	Potential Impact
			Adults are generalists and nectar from a variety of blooming plants.	regulatory requirements are in place for the species.

<sup>\*</sup> FT= Federally Threatened, FE= Federally Endangered, ST= State Threatened, SE= State Endangered, PE= Proposed Endangered, C= Candidate

The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. Based upon a review of existing resources, NTIA believes the project would have no effect to Federally-listed or proposed threatened or endangered species. Please advise us of any concerns you may have related to possible effects of the project listed above on such species or critical habitat. Iowa Department of Natural Resources has also been notified.

We would appreciate a response within 30 days. If you need any further information or wish to discuss the Project, please contact Kari Sherman at 402-282-4072 or ksherman@olsson.com.

Sincerely,

Ku Da

Kari Sherman Natural Resources and Planning

#### Olsson

2111 South 67th Street, Suite 200 Omaha, NE 68106 402-282-4072 ksherman@olsson.com

Enclosures:
Location Map
IPaC Resource List
Consistency Letter for Northern Long-eared Bat Determination Key

August 24, 2023

Iowa Department of Natural Resources 502 E 9<sup>th</sup> St Des Moines, IA 50319-0034

RE: Winnebago Tribe of Nebraska Broadband Project

To whom it may concern:

Olsson, Inc. (Olsson), on behalf of the Winnebago Tribe of Nebraska in cooperation with the National Telecommunications and Information Administration (NTIA), is in the process of performing an environmental review as the proposed project will use federal funds by way of a federal grant. This includes advance coordination with applicable agencies to maintain compliance with appropriate federal and state regulations. The proposed project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities. proposed action involves the construction of a multi-conduit, underground Fiber to the Premises system. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way and under the Missouri River in the project area. The buried fiber optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using vibratory plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. The project location is included on Figure 1. No tree removal is expected to occur for the project.

The United States Fish and Wildlife Service's Information for Planning and Consultation (IPaC) resource list resulted in six species: four listed, one proposed, and one candidate species. The table below summarizes the listed species and our evaluation of potential project impacts on the species. A copy of the IPaC list is attached.

The Iowa Department of Natural Resources Natural Areas Inventory was used to evaluate listed species for the project. This list resulted in an additional twelve species that are found within the county. The table below summarizes the species listed for the project.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
			Mammals	
Northern Long- eared Bat	Myotis septentrionalis	FE, SE	During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.	Tree removal will not occur. If tree removal is required, removal will occur outside the breeding season (June 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Tricolored Bat	Perimyotis subflavus	PE	During the summer, maternity and other roosts are mainly in dead or live tree foliage. Maternity colonies may also utilize human-made structures (buildings, bridges, etc.) or tree cavities. Caves, mines, and rock crevices may be used at night roosts. Most foraging occurs in riparian areas within forested landscapes. Hibernation sites are often in caves, mines, or cavelike tunnels.	Tree removal will not occur. If tree removal is required, removal will occur outside the breeding season (May 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.
	l		Birds	
Piping Plover	Charadrius melodus	FT, ST	Piping plovers use wide, flat, open, sandy beaches with very little grass or other vegetation. Nesting territories often include small creeks or wetlands. Reproduction - The female lays four eggs in its small, shallow nest lined with pebbles or broken shells.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Barn Owl	Tyto alba	FE	Barn owls nest and roost in dark, secluded places. They can be found within tree cavities or more commonly in old barns or abandoned buildings. They hunt in grassland habitats along field or wetland edges.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Interior Least Tern	Sterna antillarum athaloassos	FE	Interior least terns use dry riverine sandbars in wide, braided rivers, and along the shores of reservoirs and lakes. They can also be found on sand and gravel piles at mining operations.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
			Fish	
Pallid Sturgeon	Scaphirhynchus albus	FE, SE	Pallid sturgeon primarily reside in the main channels of the Missouri River and Lower Mississippi River from Montana to Louisiana. Adult pallid sturgeon inhabit large, deep turbid river channels, usually in strong current over firm sand or gravel.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Blacknose Shiner	Notropis heterolepis	ST	Blacknose shiners can be found within small streams, slow-moving rivers, or lakes with sandy bottoms.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Topeka Shiner	Notropis topeka	FE, ST	Topeka shiners prefer prairie streams with stable stream channels. They can also be found in off-channel oxbows with sandy or gravel bottoms. Topeka shiners need clear, clean water.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.

Common Name	Scientific Name	Status*	Habitat	Potential Impact		
	Insects					
Dakota Skipper	Hesperia dacotae	SE	Dakota skippers can be found within two types of prairies: moist bluestem prairie and dry, upland prairie. They prefer environments that have not been influenced by humans, including agriculture.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		
Powesheik Skipperling	Oarisma powesheik	FE, ST	Powesheik skipperlings can be found within prairie fens, grassy lake or stream margins, moist meadows, or native prairie. This species relies on unplowed, native prairies.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		
Monarch Butterfly	Danaus plexippus	С	Monarchs live mainly in prairies, meadows, grasslands, and roadsides where there are abundant flowers and milkweed plants. As caterpillars, they feed exclusively on milkweed, which makes the monarch toxic to predators such as birds. The monarch's survival depends on this chemical defense. Adults are generalists and nectar from a variety of blooming plants.	The monarch butterfly is a candidate species for protection under the Endangered Species Act but has not been listed or proposed for listing; therefore, no regulatory requirements are in place for the species.		
			Plants			
Bigroot Prickly- pear	Opuntia macrorhiza	SE	Bigroot prickly-pear can be found within dry, rocky, or sandy prairies.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		
Narrow-leaved Milkweed	Asclepias stenophylla	SE	Narrow-leaved milkweed can be found within dry prairies or in loess and gravel prairies.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		
Silver Buffaloberry	Shepherdia argentea	ST	Silver buffaloberry can be found in dry uplands and prairie woodland edges and loess bluffs.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		
Wooly Milkweed	Asclepias Ianuginose	ST	Wooly milkweed can be found within sandy or rocky soils of prairies, dry upland woods, or gravelly hillside prairies.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.		

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Spring Ladies' tresses	Spiranthes vernalis	ST	Spring Ladies' tresses can be found in dry to moist meadows, prairies, fields, along roadsides, and occasionally in bogs.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Leathery Grape Fern	Botrychium multifidum	ST	Leathery grape fern can be found in open areas, sometimes at forest edges or in forest openings.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.

<sup>\*</sup> FT= Federally Threatened, FE= Federally Endangered, ST= State Threatened, SE= State Endangered, PE-Proposed Endangered, C=Candidate

The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. NTIA does not anticipate that the project will result in an undertaking of any State-listed or proposed threatened or endangered species. Please advise us of any concerns you may have related to possible effects of the project listed above on such species or critical habitat. USFWS has also been consulted.

We would appreciate a response within 30 days. If you need any further information or wish to discuss the Project, please contact Kari Sherman at 402-282-4072 or ksherman@olsson.com.

Sincerely,

Kari Sherman

Ku Dla

Natural Resources and Planning

### Olsson

2111 South 67th Street, Suite 200 Omaha, NE 68106 402-282-4072 ksherman@olsson.com

Enclosures: **Location Map** 

**IPaC Resources List** 

Iowa Department of Natural Resources Natural Areas Inventory



### **Listed Species In a County**

<< Back To Query Page

### WOODBURY County, IA

County	Common	Scientific Name	Class	State	Federal	Link To Species
WOODBURY	Name Bald Fagle	Haliaeetus	BIRDS	<b>Status</b> S	Status	Profile PDF
WOODBOKI	Daid Lagie	leucocephalus				PDE
WOODBURY	Barn Owl	Tyto alba	BIRDS	E		PDF
WOODBURY	Interior Least Tern	Sterna antillarum athalassos	BIRDS	Е		
WOODBURY	Piping Plover	Charadrius melodus	BIRDS	E	T	PDF
WOODBURY	Blacknose Shiner	Notropis heterolepis	FISH	T		PDF
WOODBURY	Pallid Sturgeon	Scaphirhynchus albus	FISH	Е	Е	PDF
WOODBURY	Topeka Shiner	Notropis topeka	FISH	Т	Е	PDF
WOODBURY	Dakota Skipper	Hesperia dacotae	INSECTS	E	T	
WOODBURY	Dusted Skipper	Atrytonopsis hianna	INSECTS	S		
WOODBURY	Edwards' Hairstreak	Satyrium edwardsii	INSECTS	S		
WOODBURY	Hickory Hairstreak	Satyrium caryaevorum	INSECTS	S		
WOODBURY	Leonard's Skipper	Hesperia leonardus	INSECTS	S		
WOODBLIRY	Olympia Marble	Euchloe olympia	INSECTS	S		
	Ottoe Skipper	Hesperia ottoe	INSECTS	S		
WOODBURY	Powesheik	Oarisma powesheik		T	E	
	Skipperling					
	Regal Fritillary	Speyeria idalia	INSECTS	S		
WOODBURY	Wild Indigo Dusky Wing	Erynnis baptisiae	INSECTS	S		
WOODBURY	Northern Long- eared Bat	Myotis septentrionalis	MAMMALS		Т	
WOODBURY	Beardtongue	Penstemon albidus	PLANTS (DICOTS)	S		
WOODBURY	Bigroot Prickly- pear	Opuntia macrorhiza	PLANTS (DICOTS)	Е		
WOODBURY	Black Bugbane	Cimicifuga racemosa	PLANTS (DICOTS)	S		
WOODBURY	Frost Grape	Vitis vulpina	PLANTS (DICOTS)	S		
WOODBURY	Missouri Milk- vetch	Astragalus missouriensis	PLANTS (DICOTS)	S		
WOODBURY	Narrow-leaved Milkweed	Asclepias stenophylla	PLANTS (DICOTS)	Е		
WOODBURY	Silver Buffalo- berry	Shepherdia argentea	PLANTS (DICOTS)	Т		
WOODBURY	Ten Petaled Mentzelia	Mentzelia decapetala	PLANTS (DICOTS)	S		
WOODBURY	Wooly Milkweed	Asclepias lanuginosa	PLANTS (DICOTS)	Т		
WOODBURY	Alkali Muhly	Muhlenbergia asperifolia	PLANTS (MONOCOTS)	S		
WOODBURY	Alpine Rush	Juncus alpinus	PLANTS (MONOCOTS)	S		
WOODBURY	· · · · · · · · · · · · · · · · · · ·	Heteranthera limosa	PLANTS (MONOCOTS)	S		
WOODBURY	Buffalo Grass	Buchloe dactvloides	PLANTS (MONOCOTS)	S		
WOODBURY		Carex aggregata	PLANTS (MONOCOTS)			
WOODBURY		Potamogeton amplifolius	PLANTS (MONOCOTS)	S		PDF
WOODBURY	Rocky Mountain	Carex saximontana	PLANTS (MONOCOTS)	S		
WOODBLIDY	Sedge Sand Bluestem	Andropogon hallii	PLANTS (MONOCOTS)	S		
MOODBOKA	Slender Sedge Spear	Carex tenera Stipa comata	PLANTS (MONOCOTS) PLANTS (MONOCOTS)	S		

### Natural Areas Inventory

	Needlegrass				
WOODBURY	Spring Ladies'- tresses	Spiranthes vernalis	PLANTS (MONOCOTS)	Т	
WOODBURY	Tall Millet-grass	Milium effusum	PLANTS (MONOCOTS)	S	
WOODBURY	Tumble Grass	Schedonnardus paniculatus	PLANTS (MONOCOTS)	S	
WOODBURY	Leathery Grape Fern	Botrychium multifidum	PLANTS (PTERIODOPHYTES)	Т	
WOODBURY	Prairie Moonwort	Botrychium campestre	PLANTS (PTERIODOPHYTES)	S	
WOODBURY	Bullsnake	Pituophis catenifer sayi	REPTILES	S	PDF
WOODBURY	Smooth Green Snake	Liochlorophis vernalis	REPTILES	S	PDF

DNR Home | Site Policy

Leading lowans in caring for our natural resources. v3.0.3742

From: casey.laskowski@dnr.iowa.gov

Sent: Thursday, September 14, 2023 1:39 PM

To: Kari Sherman

**Subject:** 2023-1744 Environmental Review Request - Winnebago Tribe Broadband

**Connectivity Project** 

### This Message Is From an External Sender

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42.2243/-96.3169; Woodbury County

Sec. 28/T86N/R47W

Thank you for inviting Department comment on the impact of this project. The Department has searched for records of rare species and significant natural communities in the project area and found no site-specific records that would be impacted by this project. However, these records and data are not the result of thorough field surveys. If listed species or rare communities are found during the planning or construction phases, additional studies and/or mitigation may be required.

This email is a record of review for protected species, rare natural communities, state lands and waters in the project area, including review by personnel representing state parks, preserves, recreation areas, fisheries and wildlife but does not include comment from the Environmental Services Division of this Department. This email does not constitute a permit. Other permits may be required from the Department or other state or federal agencies before work begins on this project.

If you have questions about this letter or require further information, please contact me at (515) 330-6432.

Environmental Review requests can be submitted electronically to: <u>SLER@dnr.iowa.gov</u>.

Sincerely,



Casey Laskowski | Environmental Specialist lowa Department of Natural Resources P 515-330-6432 | F 515-725-8202 | 502 E. 9th St., Des Moines, IA 50319 www.iowadnr.gov August 24, 2023

Jessica Tapp Nebraska Game and Parks Commission 2200 North 33<sup>rd</sup> Street Lincoln, NE 68503

RE: Winnebago Tribe of Nebraska Broadband Project

Dear Ms. Tapp:

Olsson, Inc. (Olsson), on behalf of the Winnebago Tribe of Nebraska in cooperation with the National Telecommunications and Information Administration (NTIA), is in the process of performing an environmental review as the proposed project will use federal funds by way of a federal grant. This includes advance coordination with applicable agencies to maintain compliance with appropriate federal and state regulations. The proposed project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities, proposed action involves the construction of a multi-conduit, underground Fiber to the Premises system. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way and under the Missouri River in the project area. The buried fiber optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using vibratory plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. The project location is included on Figure 1. No tree removal is expected to occur for the project.

The United States Fish and Wildlife Service's Information for Planning and Consultation (IPaC) resource list resulted in six species: four listed, one proposed, and one candidate species. The table below summarizes the listed species and our evaluation of potential project impacts on the species. A copy of the IPaC list is attached.

The Nebraska Game and Parks Conservation Environmental Review Tool (CERT) was used to evaluate listed species for the project. The CERT resulted in, "Potential impacts on listed species may occur as a result of this project." The table below summarizes the species listed for the project.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Northern Long-eared Bat	Myotis septentrionalis	FE, SE	During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.	Tree removal will not occur. If tree removal is required, removal will occur outside the breeding season (June 1 through July 31). If removal cannot occur outside the breeding season, a survey will be completed.

Common Name	Scientific Name	Status*	Habitat	Potential Impact
Pallid Sturgeon	Scaphirhynchus albus	FE, SE	Pallid sturgeon primarily reside in the main channels of the Missouri River and Lower Mississippi River from Montana to Louisiana. Adult pallid sturgeon inhabit large, deep turbid river channels, usually in strong current over firm sand or gravel.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Sturgeon Chub	Macrhybopsis gelida	SE	Sturgeon chub can be found in fast, free flowing river with high turbidity and low visibility.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
Lake Sturgeon	Acipenser fulvescens	ST	Lake sturgeon occupy the bottom habitats of large freshwater lakes and rivers. They spend a majority of their time in lakes or coastal systems but migrate to large rivers to lay eggs in rocky, swift flowing parts of the river.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.
American Ginseng	Panax quinquefolius	ST	American ginseng can be found in the understory of deciduous forests with rich, moist soils. It is most likely found on hillsides and wooded ravines within dense, shaded woodlands.	Suitable habitat is unlikely present as majority of the project would occur within ROW or agricultural fields; therefore, it is unlikely the species will be impacted by the project.

<sup>\*</sup> FT= Federally Threatened, FE= Federally Endangered, ST= State Threatened, SE= State Endangered

The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. NTIA does not anticipate that the project will result in an undertaking of any State-listed or proposed threatened or endangered species. Please advise us of any concerns you may have related to possible effects of the project listed above on such species or critical habitat. USFWS has also been consulted.

We would appreciate a response within 30 days. If you need any further information or wish to discuss the Project, please contact Kari Sherman at 402-282-4072 or ksherman@olsson.com.

Sincerely,

Kuran

Kari Sherman Natural Resources and Planning

### Olsson

2111 South 67th Street, Suite 200 Omaha, NE 68106 402-282-4072 ksherman@olsson.com

Enclosures: Location Map IPaC CERT



# **Environmental Review Report**

## **Project Information**

Report Generation Date: 8/21/2023 08:29:35 AM
Project Title: Winnebago Tribe Fiber EA

User Project Number(s): 021-05175

System Project ID: NE-CERT-010517

Project Type: Communications, Fiber Optic Cable (below ground)

Project Activities: None Selected
Project Size: 120,604.74 acres

County(s): Dakota; Dixon; Thurston; Wayne Watershed(s): Elkhorn; Missouri Tributaries

Watershed(s) HUC 8: Blackbird-Soldier; Lewis and Clark Lake; Logan

Watershed(s) HUC 12: Bacon Creek-Missouri River; Big Slough Creek-Logan Creek Dredge; City

of Wakefield-Logan Creek Dredge; Coon Creek +

Biologically Unique Landscape(s): Missouri River; Thurston-Dakota Bluffs

Township/Range and/or Section(s): 025N005E; 025N006E; 025N007E; 026N005E; 026N006E; 026N007E;

026N008E; 026N009E; 026N010E; 027N005E; 027N006E; 027N007E;

027N008E; 027N009E; 027N010E

Latitude/Longitude: 42.229309 / -96.596339

### **Contact Information**

Organization: Olsson

Contact Name: Kari Sherman
Contact Phone: 4022824072

Contact Email: ksherman@olsson.com

Contact Address: 2111 S 67th, Suite 200 Omaha NE 68106

Prepared By:

Submitted On Behalf Of: NTIA

#### **Project Description**

The Winnebago Tribe in coordination with National Telecommunications and Information Administration, have received a grant to deploy a broadband infrastructure network on the Winnebago Reservation and in the the adjacent communities. For this specific area, a horizontal bore will be used under the Missouri River.

### Introduction

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

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

The Commission has responsibility for protecting state-listed endangered and threatened species under authority of the Nongame and Endangered Species Conservation Act (NESCA) (Neb. Rev. Stat. § 37-801 to 37-811). Pursuant to § 37-807 (3) of NESCA, all state agencies shall, in consultation with the Commission, ensure projects they authorize (i.e., issue a permit for), fund or carry out do not jeopardize the continued existence of state-listed endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. If a proposed project may affect state-listed species or designated critical habitat, further consultation with the Commission is required.

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

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

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

The Service has responsibility for conservation and management of fish and wildlife resources for the benefit of the American public under the following authorities: 1) Endangered Species Act of 1973 (ESA); 2) Fish and Wildlife Coordination Act; 3) Bald and Golden Eagle Protection Act; and 4) Migratory Bird Treaty Act. The National Environmental Policy Act (NEPA) requires compliance with all of these statutes and regulations.

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

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

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

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

### Overall Results

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

More information needed - refer to the following sections. Answer the habitat question(s) in the section below.
 Additional consultation with the Nebraska Game and Parks Commission and/or the U.S. Fish and Wildlife Service may or may not be required. Refer to the "Conservation Conditions Agreement" section for additional information.

### **Questions and Conservation Conditions**

#### American Ginseng

This project is within or near the modeled distribution of the state-listed threatened American ginseng (*Panax quinquefolius*).

Habitat Question for American Ginseng:

Does the Action Area or the area of potential effect include mature deciduous forest along a river bluff or otherwise affect or alter vegetation in a mature deciduous forest along a river bluff (floodplain forests are not suitable habitat)?

U	nknown
_X_ N	o. Conservation measures are not needed for this species unless otherwise indicated.
Y	es. The following conservation measures must be implemented in order to avoid adverse impacts on Americar
Ginsen	g:

**AG CM-1:** A qualified biologist will survey according to protocol during the growing season (May 15 - August 31) immediately prior to construction/ground disturbance activities, tree planting, or herbicide application. Note: The species is easier to identify during the fruiting period (July - August) than during the blooming period (May - July). If the species is found, then further consultation with the Nebraska Game and Parks Commission is required prior to commencing the project or activity. If the species is not found during the survey, then work may proceed.

### Lake Sturgeon, Pallid Sturgeon, Sturgeon Chub

This project is within or near the modeled distribution of the state-listed threatened lake sturgeon (*Acipenser fulvescens*), the state and federally listed endangered pallid sturgeon (*Scaphirhynchus albus*) and the state-listed endangered sturgeon chub (*Macrhybopsis gelida*).

Habitat Question for Lake Sturgeon, Pallid Sturgeon and Sturgeon Chub:

Would the proposed project be implemented in the river, connected backwater areas, or impact water quality or flows, including out-of-channel high bank flows?

	Unknown
_X_	No. Conservation measures are not needed for these species unless otherwise indicated.
	Yes. The following conservation measures must be implemented in order to avoid adverse impacts on lake
sturg	eon, pallid sturgeon, and/or sturgeon chub:

#### Lake Sturgeon, Pallid Sturgeon, Sturgeon Chub

This project is within or near the modeled distribution of the state-listed threatened lake sturgeon (*Acipenser fulvescens*), the state and federally listed endangered pallid sturgeon (*Scaphirhynchus albus*) and the state-listed endangered sturgeon chub (*Macrhybopsis gelida*).

The following conservation measures must be implemented in order to avoid adverse impacts on lake sturgeon, pallid sturgeon and/or sturgeon chub:

### LS, PS, & SC CM-80.2:

- a) Work will not occur within the banks of a river, stream or connected backwater area. (Exception Boat docks and ramps can be installed from August 1 to March 1.)
- b) The project or activity will not impact water quality or flows, including out-of-channel high bank flows.
- c) Best Management Practices will be installed to avoid and minimize sedimentation from upland soil disturbances.
- d) If bridge work is a part of this project, bridge deck debris will be captured and/or contained to prevent material from entering the wet or dry channel, streambed or riverbed.
- e) Water and spoil will not be discharged directly into the channel from March 1 July 31.

### Northern Long-eared Bat

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

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

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

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

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

Habitat Questions for Northern Long-eared Bat:

Unknown.	
No. Conservation measures are not needed for this species unless otherwise indicated. Additional hab	itat
questions for this species are not applicable if suitable habitat is not present.	
X Yes. The following conservation measures must be implemented in order to avoid adverse impacts on	northern
long-eared bat.	

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

**NLEB CM-2:** No removal of suitable trees or roosting structures between June 1 and July 31 (pup-rearing season).

**NLEB CM-3:** No removal of trees or woody vegetation. (This condition supercedes NLEB CM-2 if both conditions are listed.)

### **Conservation Measures Agreement**

Applicant/project proponent signature

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

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

X Option 1. For all species for which there is habitat present (as indicated by checking "yes" to a habitat question) I understand and agree to implement and/or incorporate the conservation measures for those species as indicated. By agreeing to implement and/or incorporate the conservation measures for those species as indicated, no further consultation with the Nebraska Game and Parks Commission is required. However, further consultation between the lead federal agency and the U.S. Fish and Wildlife Service (Service) may be required. Contact the Service for additional information. Sign and date on the line below, and also sign and date the "Certification" section. Submit a copy of the signed report with any type of permit/application required for the project.

<b>o</b> ,	elow, and also sign and date the "Certification" section. Submit a eplication required for the project.
Kurzy	8/24/2023
Applicant/project proponent signature	Date
below. When submitting the project as "Final" in Cl	more of the conservation measures. Sign the "Certification" section ERT, please attach a separate document explaining your they cannot be implemented. Then, contact the Nebraska Game life Service for further information.
,	d with "Unknown," then sign the "Certification" section below, submit braska Game and Parks Commission and the U.S. Fish and Wildlife
unlikely to impact listed species, then sign the "Cert No further consultation with the Nebraska Game an U.S. Fish and Wildlife Service may be necessary de	o" or if the "Overall Results" section indicated the project was tification" section below and submit the project as "Final" in CERT. and Parks Commission is required. Additional coordination with the epending on the determination made by the lead federal agency copy of the signed report with any type of permit/application needed
Certification	
type, project activities, answers to questions) is true size, or configuration of the project change, or if any	port (including project location, project size/configuration, project e, accurate, and complete. If the project type, activities, location, y of the answers to any questions asked in this report change, then nd running the revised project through CERT to get an updated
hurch	8/24/2023

Date

### **Additional Considerations**

### **Bald and Golden Eagle Protection Act**

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

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

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

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

We recommend the project proponent comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712: Ch. 128 as amended) (MBTA). The project proponent should also comply with Nebraska Revised Statute §37-540, which prohibits take and destruction of nests or eggs of protected birds (as defined in Nebraska Revised Statute §37-237.01). Construction activities in grassland, wetland, stream, woodland, and river bank habitats that would result in impacts on birds, their nests or eggs protected under these laws should be avoided. Although the provisions of these laws are applicable year-round, most migratory bird nesting activity in Nebraska occurs during the period of May 1 to July 15. However, some migratory birds are known to nest outside of the aforementioned primary nesting season period. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15, whereas sedge wrens, which occur in some wetland habitats, normally nest from July 15 to September 10. If development in this area is planned to occur during the primary nesting season or at any other time which may result in impacts to birds, their nests or eggs protected under these laws, we request that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the absence or presence of nesting migratory birds. If a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities, the Nebraska Game and Parks Commission and the Nebraska Field Office, U.S. Fish and Wildlife Service should be contacted immediately. For more information on avoiding impacts to migratory birds, their nests and eggs, or to report active bird nests that cannot be avoided by planned construction activities, please contact the U.S. Fish and Wildlife Service and/or the Nebraska Game and Parks Commission (contact information within report). Adherence to these guidelines will help avoid unnecessary impacts on migratory birds.

#### **Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act (FWCA) requires consultation with the U.S. Fish and Wildlife Service (Service) and the State fish and wildlife agency (i.e., Nebraska Game and Parks Commission) for the purpose of preventing loss of and damage to fish and wildlife resources in the planning, implementation, and operation of federal and federaly funded, permitted, or licensed water resource development projects. This statute requires that federal

agencies take into consideration the effect that the water related project would have on fish and wildlife resources, to take action to prevent loss or damage to these resources, and to provide for the development and improvement of these resources. The comments in this letter are provided as technical assistance only and are not the document required of the Secretary of the Interior pursuant to Section 2(b) of FWCA on any required federal environmental review or permit. This technical assistance is valid only for the described conditions and will have to be revised if significant environmental changes or changes in the proposed project take place. In order to determine whether the effects to fish and wildlife resources from the proposed project are being considered under FWCA, the lead federal agency must notify the Service in writing of how the comments and recommendations in this technical assistance letter are being considered into the proposed project.

#### Section 404 of the Clean Water Act

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

# **Agency Contact Information**

Nebraska Game and Parks Commission

Environmental Review Team 2200 North 33rd Street Lincoln, NE 68503 phone: (402) 471-5423

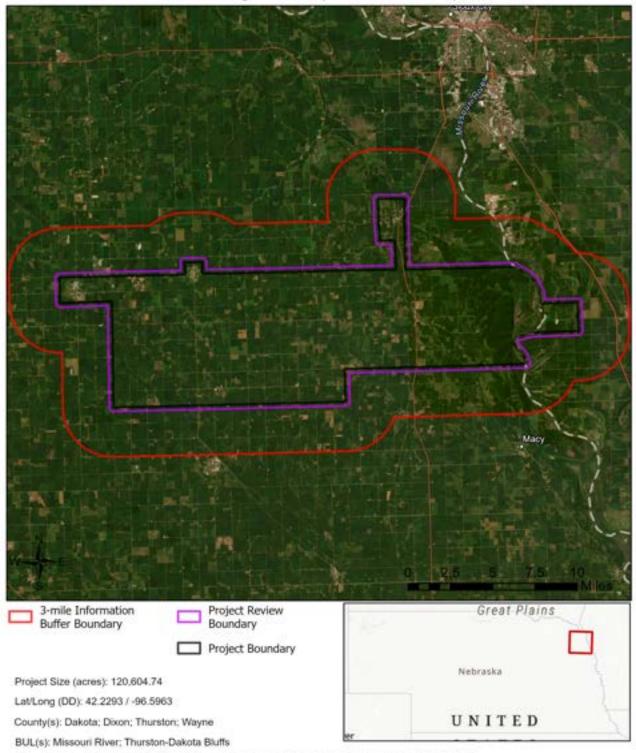
email: ngpc.envreview@nebraska.gov

U.S. Fish and Wildlife Service

Nebraska Ecological Services 9325 South Alda Road Wood River, NE 68883 phone: (308) 382-6468

email: nebraskaes@fws.gov

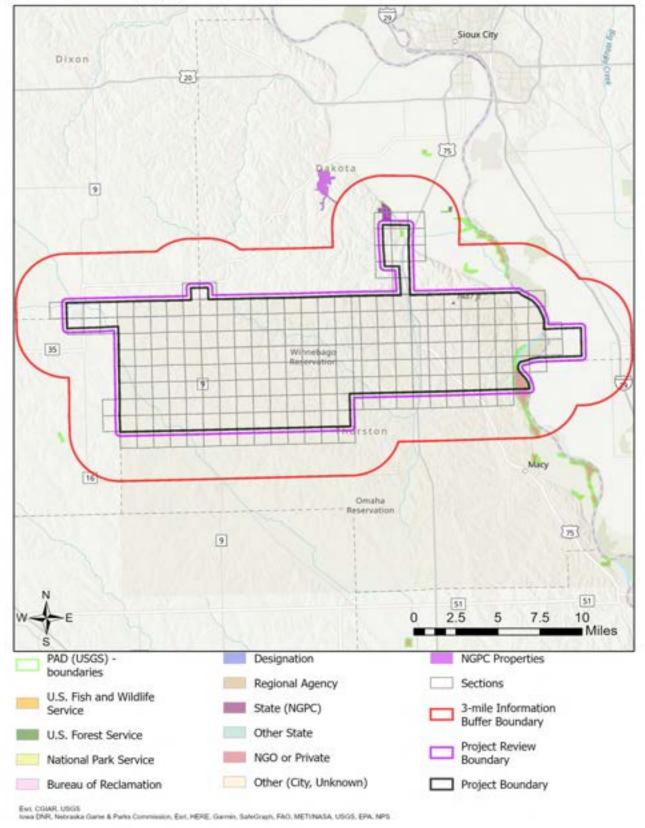
Winnebago Tribe Fiber EA Aerial Image Basemap With Locator Map



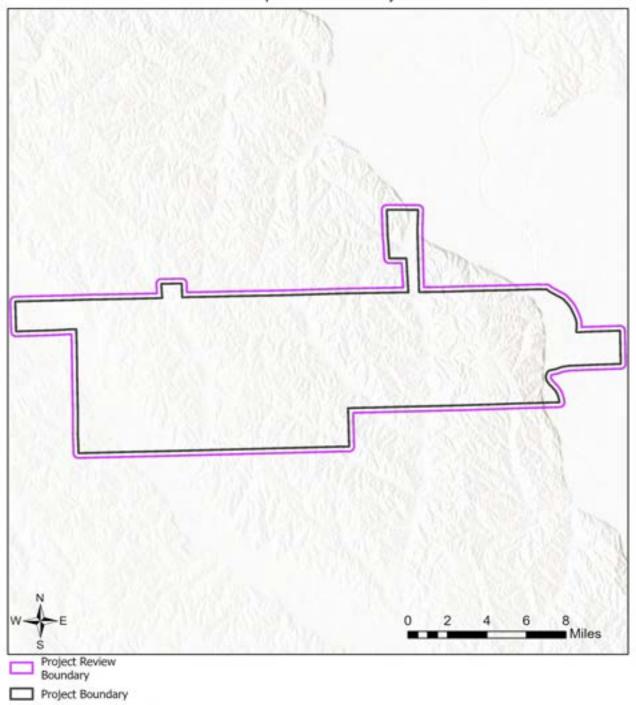
Township/Range/Section(s): T25R05ES01; T25R05ES02; T25R05ES03; T25R05ES11; T25R05ES12 +

Earthstar Geographics Iowa DNR, Nebraska Game & Parks Commission, Earl, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS-Esrl, HERE, Garmin, FAO, NOAA, USGS, EPA

Winnebago Tribe Fiber EA
Topographic Basemap With Sections and Protected Areas



Winnebago Tribe Fiber EA Web Map As Submitted By User



Ewi, CGMR, USGS

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

Area Name	Owner/Manager	Information Source
Wetlands Reserve Program (WRP)_Dakota,Nebraska	Private	USGS Protected Areas Database
Wetlands Reserve Program (WRP)_Thurston,Nebraska	Private	USGS Protected Areas Database

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

Name	Other Information	SRank	GRank
Bur Oak-Basswood-Ironwood Forest	Bur Oak-Basswood-Ironwood Forest	S2S3	GNR
Cottonwood-Peachleaf Willow Riparian Woodland	Cottonwood-Peachleaf Willow Riparian Woodland	<b>S</b> 3	G3G4
Eastern Bulrush Deep Marsh	Eastern Bulrush Deep Marsh	<b>S</b> 3	GNR
Eastern Cottonwood-Dogwood Riparian Woodland	Eastern Cottonwood-Dogwood Riparian Woodland	S2?	GNR
Eastern Riparian Forest	Eastern Riparian Forest	S3	G3G5
Eastern Sedge Wet Meadow	Eastern Sedge Wet Meadow	S1	GNR
Missouri River Valley Dune Grassland	Missouri River Valley Dune Grassland	S2	GNR
Red Oak-Basswood-Ironwood Forest	Red Oak-Basswood-Ironwood Forest	S2	G3G4
Missouri River Biologically Unique Landscape	Link to BUL document		
Thurston-Dakota Bluffs Biologically Unique Landscape	Link to BUL document		
Large Intact Block of Habitat for At-risk Species			

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

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Acipenser fulvescens	Lake Sturgeon		Т	Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Agastache scrophulariifolia	Purple Giant-hyssop			Tier 2	S1	G4	Vascular Plant - Dicots
Allium tricoccum var. burdickii	Ramp			Tier 2	S2	G4G5	Vascular Plant - Monocots
Anguilla rostrata	American Eel			Tier 2	SNR	G4	Vertebrate Animal - Fishes
Anodonta suborbiculata	Flat Floater			Tier 1	S1	G5	Invertebrate Animal - Freshwater Mussels
Aralia racemosa	Spikenard			Tier 2	S1	G5	Vascular Plant - Dicots

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

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Boechera dentata	Short's Rock Cress			Tier 2	S2	G5	Vascular Plant - Dicots
Brachyelytrum erectum	Bearded Short-husk			Tier 2	S2	G5	Vascular Plant - Monocots
Caulophyllum thalictroides	Blue Cohosh			Tier 2	S1	G5	Vascular Plant - Dicots
Cirsium discolor	Field Thistle				S1S2	G5	Vascular Plant - Dicots
Cuscuta umbrosa	Big-fruit Dodder			Tier 2	S1S3	G5	Vascular Plant - Dicots
Cycleptus elongatus	Blue Sucker			Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Dactylorhiza viridis	Long-bract Green Orchid			Tier 2	S1	G5	Vascular Plant - Monocots
Dryopteris carthusiana	Spinulose Wood Fern			Tier 2	S2	G5	Vascular Plant - Leptosporangiate Ferns
Erysimum inconspicuum	Small-flower Wallflower			Tier 2	S2	G5	Vascular Plant - Dicots
Erythronium mesochoreum	Prairie Fawn-lily			Tier 2	S2	G4G5	Vascular Plant - Monocots
Galearis spectabilis	Showy Orchis			Tier 2	S1	G5	Vascular Plant - Monocots
Hybognathus argyritis	Western Silvery Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Hybognathus placitus	Plains Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Lasionycteris noctivagans	Silver-haired Bat			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lilium michiganense	Turk's Cap Lily				S2S4	G5	Vascular Plant - Monocots
Lota lota	Burbot			Tier 2	S1	G5	Vertebrate Animal - Fishes
Macrhybopsis gelida	Sturgeon Chub		Е	Tier 1	S1	G3	Vertebrate Animal - Fishes
Macrhybopsis hyostoma	Shoal Chub			Tier 2	S3	G5	Vertebrate Animal - Fishes
Macrhybopsis meeki	Sicklefin Chub			Tier 1	S1	G3	Vertebrate Animal - Fishes
Macrhybopsis storeriana	Silver Chub			Tier 2	S2	G5	Vertebrate Animal - Fishes
Matteuccia struthiopteris var. pensylvanica	Ostrich Fern			Tier 2	S1	G5T5	Vascular Plant - Leptosporangiate Ferns
Myotis septentrionalis	Northern Long-eared Myotis	Т	Т	Tier 1	S1S2	G1G2	Vertebrate Animal - Mammals
Nelumbo lutea	American Lotus			Tier 2	S1S3	G4	Vascular Plant - Dicots
Patis racemosa	Black-seed Ricegrass			Tier 2	S2	G5	Vascular Plant - Monocots
Pellaea atropurpurea	Purple-stem Cliff-brake			Tier 2	S2	G5	Vascular Plant - Leptosporangiate Ferns

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

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Perimyotis subflavus	Tricolored Bat			Tier 1	S3	G2G3	Vertebrate Animal - Mammals
Pimephales notatus	Bluntnose Minnow			Tier 2	S3	G5	Vertebrate Animal - Fishes
Platygobio gracilis	Flathead Chub			Tier 1	S2	G5	Vertebrate Animal - Fishes
Polyodon spathula	Paddlefish			Tier 2	S2	G4	Vertebrate Animal - Fishes
Ranunculus recurvatus var. recurvatus	Hooked Buttercup			Tier 2	S2	G5T5	Vascular Plant - Dicots
Scaphirhynchus albus	Pallid Sturgeon	Е	Е	Tier 1	S1	G2	Vertebrate Animal - Fishes
Stachys hispida	Hispid Hedge-nettle			Tier 2	S1	G5T4Q	Vascular Plant - Dicots
Ulmus thomasii	Rock Elm				S2S4	G5	Vascular Plant - Dicots
Viburnum lentago	Nannyberry			Tier 2	S1	G5	Vascular Plant - Dicots

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

Asio flammeus Short-eared Owl Range Tier 1 S2 G5 Vertebrate Animal - Birds  Atrytone arogos iowa Iowa Skipper Range Tier 1 S1 G2G3T2T3 Invertebrate Animal - Butterflie	•	• • • •	•			• ,.			•
Ammodramus henslowiiHenslow's SparrowRangeTier 1S1G4Vertebrate Animal - BirdsAnodonta suborbiculataFlat FloaterRangeTier 1S1G5Invertebrate Animal - Freshwar MusselsAsio flammeusShort-eared OwlRangeTier 1S2G5Vertebrate Animal - BirdsAtrytone arogos iowaIowa SkipperRangeTier 1S1G2G3T2T3Invertebrate Animal - Butterflie	Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Anodonta suborbiculata  Flat Floater  Range  Tier 1  S1  G5  Invertebrate Animal - Freshwar Mussels  Asio flammeus  Short-eared Owl  Range  Tier 1  S2  G5  Vertebrate Animal - Birds  Atrytone arogos iowa  Iowa Skipper  Range  Tier 1  S1  G2G3T2T3  Invertebrate Animal - Butterflie	Acipenser fulvescens	Lake Sturgeon	Model		Т	Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Asio flammeus Short-eared Owl Range Tier 1 S2 G5 Vertebrate Animal - Birds  Atrytone arogos iowa Iowa Skipper Range Tier 1 S1 G2G3T2T3 Invertebrate Animal - Butterflie	Ammodramus henslowii	Henslow's Sparrow	Range			Tier 1	S1	G4	Vertebrate Animal - Birds
Atrytone arogos iowa Iowa Skipper Range Tier 1 S1 G2G3T2T3 Invertebrate Animal - Butterflie	Anodonta suborbiculata	Flat Floater	Range			Tier 1	S1	G5	Invertebrate Animal - Freshwater Mussels
_ <del></del>	Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	Vertebrate Animal - Birds
and Skippers	Atrytone arogos iowa	Iowa Skipper	Range			Tier 1	S1	G2G3T2T3	Invertebrate Animal - Butterflies and Skippers
Boloria selene Nebraska Fritillary Range Tier 1 SNR G5T3T4 Invertebrate Animal - Butterflie nebraskensis and Skippers		Nebraska Fritillary	Range			Tier 1	SNR	G5T3T4	Invertebrate Animal - Butterflies and Skippers
<u>Calidris subruficollis</u> Buff-breasted Sandpiper Range Tier 1 S2N G4 Vertebrate Animal - Birds	Calidris subruficollis	Buff-breasted Sandpiper	Range			Tier 1	S2N	G4	Vertebrate Animal - Birds
<u>Catocala nuptialis</u> Married Underwing Range Tier 1 SNR G3 Invertebrate Animal - Underwird Moths	Catocala nuptialis	Married Underwing	Range			Tier 1	SNR	G3	Invertebrate Animal - Underwing Moths
<u>Catocala whitneyi</u> Whitney Underwing Range Tier 1 S1 G2G3 Invertebrate Animal - Underwing Moths	Catocala whitneyi	Whitney Underwing	Range			Tier 1	S1	G2G3	Invertebrate Animal - Underwing Moths
Coccyzus erythropthalmus Black-billed Cuckoo Range Tier 1 S3 G5 Vertebrate Animal - Birds	Coccyzus erythropthalmus	Black-billed Cuckoo	Range			Tier 1	S3	G5	Vertebrate Animal - Birds

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

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Cycleptus elongatus	Blue Sucker	Range			Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Danaus plexippus	Monarch	Range			Tier 1	S2	G4	Invertebrate Animal - Butterflies and Skippers
Emydoidea blandingii	Blanding's Turtle	Range		NC	Tier 1	S4	G4	Vertebrate Animal - Turtles
Euphyes bimacula illinois	Two-spotted Skipper	Range			Tier 1	S3	G4T1T2	Invertebrate Animal - Butterflies and Skippers
Euphyes conspicua buchholzi	Bucholz Black Dash	Range			Tier 1	S1	G4G5T1	Invertebrate Animal - Butterflies and Skippers
Fundulus sciadicus	Plains Topminnow	Range			Tier 1	S3	G4	Vertebrate Animal - Fishes
Haliaeetus leucocephalus	Bald Eagle	Range			Tier 2	S3	G5	Vertebrate Animal - Birds
Hesperia ottoe	Ottoe Skipper	Range			Tier 1	S2	G3	Invertebrate Animal - Butterflies and Skippers
Hybognathus argyritis	Western Silvery Minnow	Range			Tier 1	S2	G4	Vertebrate Animal - Fishes
Hybognathus placitus	Plains Minnow	Range			Tier 1	S2	G4	Vertebrate Animal - Fishes
Hylocichla mustelina	Wood Thrush	Range			Tier 1	S3	G4	Vertebrate Animal - Birds
Lanius Iudovicianus	Loggerhead Shrike	Range			Tier 1	S3	G4	Vertebrate Animal - Birds
Lasionycteris noctivagans	Silver-haired Bat	Range			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lasiurus borealis	Eastern Red Bat	Range			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
<u>Lasiurus cinereus</u>	Hoary Bat	Range			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lethe eurydice fumosus	Smoky-eyed Brown	Range			Tier 1	<b>S</b> 3	G5T3T4	Invertebrate Animal - Butterflies and Skippers
Macrhybopsis gelida	Sturgeon Chub	Model		Е	Tier 1	S1	G3	Vertebrate Animal - Fishes
Myotis lucifugus	Little Brown Myotis	Range			Tier 1	SNR	G3	Vertebrate Animal - Mammals
Myotis septentrionalis	Northern Long-eared Myotis	Range	Т	Т	Tier 1	S1S2	G1G2	Vertebrate Animal - Mammals
Panax quinquefolius	American Ginseng	Model		Т	Tier 1	S1	G3G4	Vascular Plant - Flowering Plants
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G2G3	Vertebrate Animal - Mammals
Perognathus flavescens perniger	Plains Pocket Mouse	Range			Tier 1	SNR	G5TNR	Vertebrate Animal - Mammals

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

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Platygobio gracilis	Flathead Chub	Range			Tier 1	S2	G5	Vertebrate Animal - Fishes
Scaphirhynchus albus	Pallid Sturgeon	Model	Е	Е	Tier 1	S1	G2	Vertebrate Animal - Fishes
Speyeria idalia	Regal Fritillary	Range			Tier 1	<b>S</b> 3	G3?	Invertebrate Animal - Butterflies and Skippers



# United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Nebraska Ecological Services Field Office 9325 B South Alda Rd., Ste B Wood River, NE 68883-9565

Phone: (308) 382-6468 Fax: (308) 384-8835

In Reply Refer To: 06/07/2024 15:23:46 UTC

Project Code: 2023-0119474

Project Name: Winnebago Tribe of Nebraska Broadband Connectivity Project

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website (<a href="https://ipac.ecosphere.fws.gov/">https://ipac.ecosphere.fws.gov/</a>) at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

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

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

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

Project code: 2023-0119474

birds.php.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/media/endangered-species-consultation-handbook or at our Nebraska Field Office webpage (https://www.fws.gov/office/nebraska-ecological-services/project-planning-and-review-under-endangered-species-act). We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Consultation Code in the header of this letter (i.e., YEAR-XXXXXXXX) with any request for consultation or correspondence about your project that you submit to our office.

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

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and

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

their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-

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

**Platte River System:** The Platte River, its tributaries, and associated wetland habitats are resources of national importance. Due to the cumulative effect of many water depletion projects

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

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

**Note:** IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

### Attachment(s):

Project code: 2023-0119474

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether

any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

## **Nebraska Ecological Services Field Office**

9325 B South Alda Rd., Ste B Wood River, NE 68883-9565 (308) 382-6468

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

## Illinois-Iowa Ecological Services Field Office

Illinois & Iowa Ecological Services Field Office 1511 47th Ave Moline, IL 61265-7022 (309) 757-5800

## **PROJECT SUMMARY**

Project code: 2023-0119474

Project Code: 2023-0119474

Project Name: Winnebago Tribe of Nebraska Broadband Connectivity Project

Project Type: Distribution Line - New Construction - Below Ground

Project Description: The Project would provide qualified broadband service to approximately

600 unserved Native American households, 40 unserved Native American and/or Tribal businesses, and 16 Tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection

of service.

The Project will occur over the entire Winnebago Reservation.

Construction is expected to start in 2024.

## **Project Location:**

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@42.2510254,-96.57505717561948,14z">https://www.google.com/maps/@42.2510254,-96.57505717561948,14z</a>



Counties: Iowa and Nebraska

## **ENDANGERED SPECIES ACT SPECIES**

Project code: 2023-0119474

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Project code: 2023-0119474 06/07/2024 15:23:46 UTC

**MAMMALS** 

**NAME STATUS** 

Northern Long-eared Bat *Myotis septentrionalis* 

Endangered

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/9045

Tricolored Bat Perimyotis subflavus

**Proposed** 

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515

**Endangered** 

**BIRDS** 

**NAME STATUS** 

Piping Plover Charadrius melodus

Threatened

Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except

those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/6039

**FISHES** 

NAME **STATUS** 

Pallid Sturgeon Scaphirhynchus albus

Endangered

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162

**CLAMS** 

NAME **STATUS** 

Scaleshell Mussel Leptodea leptodon

Endangered

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5881

**INSECTS** 

**NAME STATUS** 

Monarch Butterfly Danaus plexippus

Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

### CRITICAL HABITATS

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

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

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

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

## **BALD & GOLDEN EAGLES**

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

- 1. The <u>Bald and Golden Eagle Protection Act</u> of 1940.
- 2. The Migratory Birds Treaty Act of 1918.
- 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to <u>Bald Eagle Nesting and Sensitivity to Human Activity</u>

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Oct 15 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

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

## **Probability of Presence (■)**

Project code: 2023-0119474

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

## **Breeding Season** (

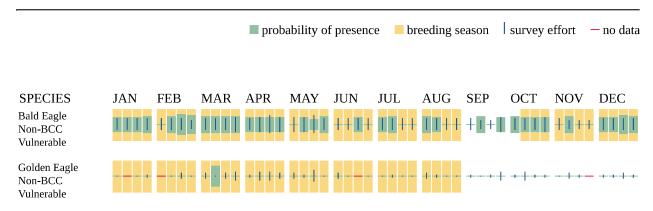
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

## Survey Effort (|)

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

### No Data (-)

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



Additional information can be found using the following links:

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

## **MIGRATORY BIRDS**

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10561">https://ecos.fws.gov/ecp/species/10561</a>	Breeds elsewhere
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Oct 15 to Aug 31
Black Tern <i>Chlidonias niger surinamenisis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3093">https://ecos.fws.gov/ecp/species/3093</a>	Breeds May 15 to Aug 20
Black-billed Cuckoo <i>Coccyzus erythropthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>	Breeds May 15 to Oct 10
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9454">https://ecos.fws.gov/ecp/species/9454</a>	Breeds May 20 to Jul 31

NAME	BREEDING SEASON
Cerulean Warbler <i>Setophaga cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/2974">https://ecos.fws.gov/ecp/species/2974</a>	Breeds Apr 21 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a>	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10678">https://ecos.fws.gov/ecp/species/10678</a>	Breeds May 1 to Aug 20
Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10567">https://ecos.fws.gov/ecp/species/10567</a>	Breeds May 1 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8329">https://ecos.fws.gov/ecp/species/8329</a>	Breeds Jun 1 to Aug 20
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9482">https://ecos.fws.gov/ecp/species/9482</a>	Breeds elsewhere
Le Conte's Sparrow <i>Ammospiza leconteii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9469">https://ecos.fws.gov/ecp/species/9469</a>	Breeds Jun 1 to Aug 15
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/3631">https://ecos.fws.gov/ecp/species/3631</a>	Breeds Mar 1 to Jul 15

NAME	BREEDING SEASON
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds May 1 to Jul 31
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a>	Breeds Apr 1 to Sep 15
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9561">https://ecos.fws.gov/ecp/species/9561</a>	Breeds elsewhere
Prairie Loggerhead Shrike <i>Lanius ludovicianus excubitorides</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8833">https://ecos.fws.gov/ecp/species/8833</a>	Breeds Feb 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9398">https://ecos.fws.gov/ecp/species/9398</a>	Breeds May 10 to Sep 10
Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/10633">https://ecos.fws.gov/ecp/species/10633</a>	Breeds elsewhere
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9478">https://ecos.fws.gov/ecp/species/9478</a>	Breeds elsewhere
Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9603">https://ecos.fws.gov/ecp/species/9603</a>	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9294">https://ecos.fws.gov/ecp/species/9294</a>	Breeds May 1 to Aug 31

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NAME	BREEDING SEASON
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10669">https://ecos.fws.gov/ecp/species/10669</a>	Breeds Apr 20 to Aug 5
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

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

## **Probability of Presence (■)**

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

## **Breeding Season** (

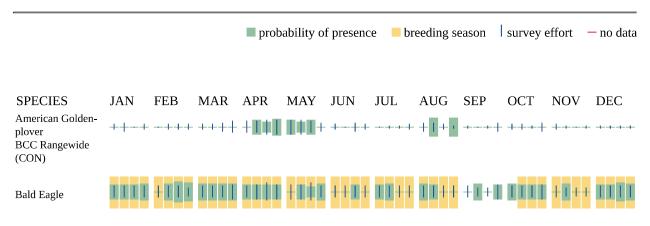
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

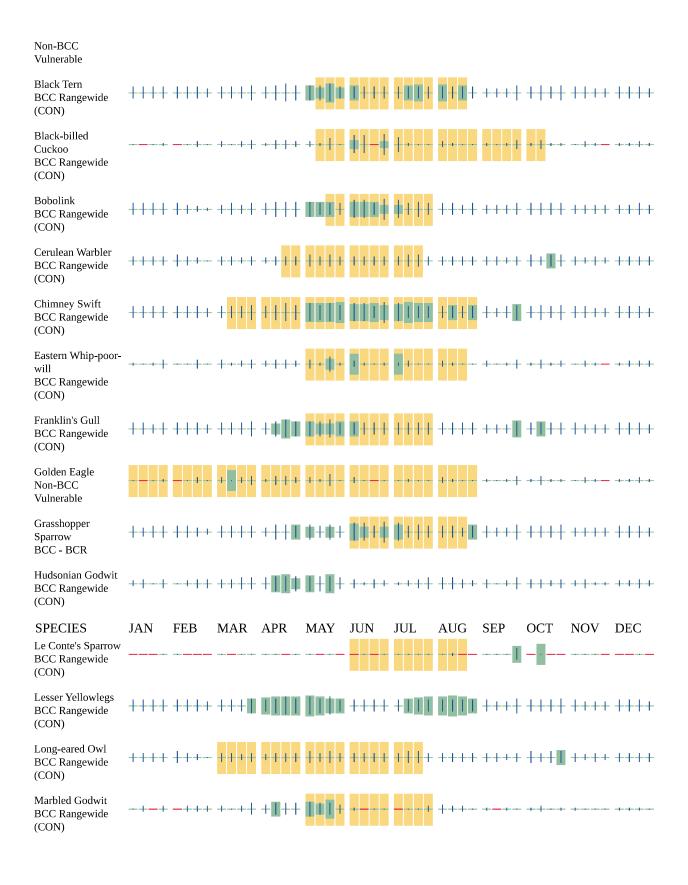
## Survey Effort (|)

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

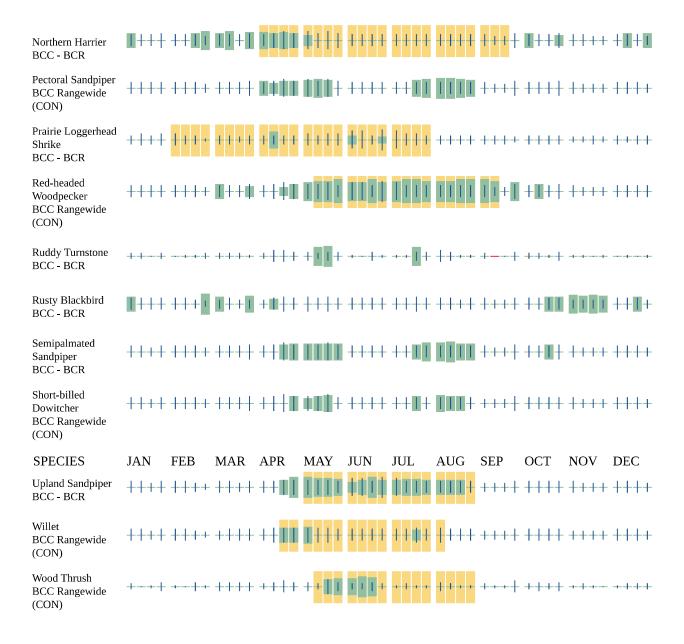
### No Data (-)

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





Project code: 2023-0119474



### Additional information can be found using the following links:

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

## **WETLANDS**

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

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

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit <a href="https://www.fws.gov/wetlands/data/mapper.HTML">https://www.fws.gov/wetlands/data/mapper.HTML</a>

### FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PFOA

### FRESHWATER POND

PABGx

#### FRESHWATER EMERGENT WETLAND

- PEM1Ah
- PEM1C
- PEM1Ax
- PEM1Fh
- PEM1Ad
- PEM1Cx
- PEM1Ch
- PEM1Cd
- PEM1F
- PEM1A

### LAKE

- L1UBG
- L2UBF
- L1UBH

### RIVERINE

R2UBH

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## **IPAC USER CONTACT INFORMATION**

Agency: Winnebago Tribe of Nebraska

Name: Kari Sherman

Address: 2111 S 67th St. Suite 200

City: Omaha State: NE Zip: 68106

Email ksherman@olsson.com

Phone: 4022824072

## LEAD AGENCY CONTACT INFORMATION

Lead Agency: National Telecommunications and Information Administration

You have indicated that your project falls under or receives funding through the following special project authorities:

• FAST-41



## **Environmental Review Report**

## **Project Information**

Report Generation Date: 5/31/2024 02:29:17 PM

Project Title: Winnebago Tribe of Nebraska Broadband Connectivity Project

User Project Number(s): 021-05175

System Project ID: NE-CERT-011740

Project Type: Communications, Fiber Optic Cable (below ground)

Project Activities: None Selected
Project Size: 141,946.88 acres

County(s): Dakota; Dixon; Thurston; Wayne Watershed(s): Elkhorn; Missouri Tributaries

Watershed(s) HUC 8: Blackbird-Soldier; Lewis and Clark Lake; Logan

Watershed(s) HUC 12: Bacon Creek-Missouri River; Big Slough Creek-Logan Creek Dredge; City

of Wakefield-Logan Creek Dredge; Coon Creek +

Biologically Unique Landscape(s): Missouri River; Thurston-Dakota Bluffs

Township/Range and/or Section(s): 025N005E; 025N006E; 025N007E; 026N005E; 026N006E; 026N007E;

026N008E; 026N009E; 026N010E; 027N005E; 027N006E; 027N007E; 027N008E; 027N009E; 027N010E; 028N008E; 028N009E; 029N009E

Latitude/Longitude: 42.235989 / -96.589738

## **Contact Information**

Organization: Olsson
Contact Name: Cara Booth
Contact Phone: 4023411116

Contact Email: cbooth@olsson.com

Contact Address: 2111 S 67th Street Unit 200 Omaha NE 68106

Prepared By:

Submitted On Behalf Of:

### **Project Description**

The Winnebago Tribe, in coordination with National Telecommunications and Information Administration, has received a grant to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities.

# The Nebraska Nongame and Endangered Species Conservation Act (NESCA)

The Nebraska Game and Parks Commission (NGPC) has responsibility for protecting state-listed endangered and threatened species under authority of the Nongame and Endangered Species Conservation Act (NESCA) (Neb. Rev. Stat. § 37-801 to 37-811). Pursuant to §37-807 (3) of NESCA, all state agencies shall, in consultation with the Commission, ensure projects they authorize (i.e., issue a permit for), fund or carry out do not jeopardize the continued existence of state-listed endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. If a proposed project may affect state-listed species or designated critical habitat, further consultation with the Commission is required.

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

- If project proponents agree to implement conservation conditions, as outlined in the report and applicable to the project type, then this document serves as documentation of consultation and the following actions can be taken to move forward with the project:
  - Sign the report in the designated areas.
  - · Upload the signed and dated PDF report into the project within CERT.
  - Change the edit status to Final from Draft status.
  - By agreeing to and implementing the conservation conditions as outlined (if applicable), then further consultation (i.e., contacting the Commission) is not required.
- If the report indicates the project may have impacts on state-listed species, then the following actions must be taken:
  - Project proponent is required to contact and consult with the Commission. Contact information can be found under Agency Contact Information.

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

## **Disclaimer**

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

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

Utilize the Information for Planning and Consultation (IPaC) Tool, available at <a href="IPaC: Home (fws.gov">IPaC: Home (fws.gov</a>) to begin informal consultation with the U.S. Fish & Wildlife Service.

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

## **Overall Results**

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

More information needed, please answer the questions under the Question and Conservation
Conditions section. If conservation conditions are required, review the Conservation Conditions Agreement
section. Additional consultation with the Nebraska Game and Parks Commission may or may not be required;
please review all the information provided in this document.

## **Questions and Conservation Conditions**

### **American Ginseng**

This project is within or near the modeled distribution of the state-listed threatened American ginseng (*Panax quinquefolius*).

Habitat Question for American Ginseng:

Does the Action Area or the area of potential effect include mature deciduous forest along a river bluff or otherwise affect or alter vegetation in a mature deciduous forest along a river bluff (floodplain forests are not suitable habitat)?

Unk	nown
X No.	Conservation measures are not needed for this species unless otherwise indicated.
Yes	. The following conservation measures must be implemented in order to avoid adverse impacts on American
Ginseng:	

**AG CM-1:** A qualified biologist will survey according to protocol during the growing season (May 15 - August 31) immediately prior to construction/ground disturbance activities, tree planting, or herbicide application. Note: The species is easier to identify during the fruiting period (July - August) than during the blooming period (May - July). If the species is found, then further consultation with the Nebraska Game and Parks Commission is required prior to commencing the project or activity. If the species is not found during the survey, then work may proceed.

### Lake Sturgeon, Pallid Sturgeon, Sturgeon Chub

This project is within or near the modeled distribution of the state-listed threatened lake sturgeon (*Acipenser fulvescens*), the state and federally listed endangered pallid sturgeon (*Scaphirhynchus albus*) and the state-listed endangered sturgeon chub (*Macrhybopsis gelida*).

Habitat Question for Lake Sturgeon, Pallid Sturgeon and Sturgeon Chub:

Would the proposed project be implemented in the river, connected backwater areas, or impact water quality or flows, including out-of-channel high bank flows?

Unknown
X No. Conservation measures are not needed for these species unless otherwise indicated.
Yes. The following conservation measures must be implemented in order to avoid adverse impacts on lake
sturgeon, pallid sturgeon, and/or sturgeon chub:

## LS, PS, & SC CM-80.2:

- a) Work will not occur within the banks of a river, stream or connected backwater area. (Exception Boat docks and ramps can be installed from August 1 to March 1.)
- b) The project or activity will not impact water quality or flows, including out-of-channel high bank flows.
- c) Best Management Practices will be installed to avoid and minimize sedimentation from upland soil disturbances.
- d) If bridge work is a part of this project, bridge deck debris will be captured and/or contained to prevent material from entering the wet or dry channel, streambed or riverbed.
- e) Water and spoil will not be discharged directly into the channel from March 1 July 31.

### Report Generation Date: 5/31/2024 02:29:17 PM

### Northern Long-eared Bat

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

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

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

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

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

Habitat Questions for Northern Long-eared Bat:

listed.)

Unknown No. Conservation measures are not needed for this species unless otherwise indicated. <b>Additional habitat</b> questions for this species are not applicable if suitable habitat is not presentX Yes. The following conservation measures must be implemented in order to avoid adverse impacts on Northern ong-eared bat.
NLEB CM-2: No removal of suitable trees or roosting structures between June 1 and July 31 (pup-rearing season).

NLEB CM-3: No removal of trees or woody vegetation. (This condition supercedes NLEB CM-2 if both conditions are

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

# **Conservation Measures Agreement**Based on the information contained in the report, follow the instructions for A, B or C below.

A) If one or more of the habitat questions were answered with "Yes", insert an "X" for one of the two Options below:					
question) I understand and agree to implement and/or	pitat present (as indicated by checking "Yes" to a habitat incorporate the conservation measures for those species the conservation measures for those species as indicated Commission is required.				
Sign and date on the line below, and also sign and dat dated (i.e. certified) report with any type of permit/appl	te the Certification section. Submit a copy of the signed ar lication required for the project.	nd			
Cara Book	06/03/2024				
Applicant/project proponent signature	Date				
pelow. When submitting the project as "Final" in CER	ore of the conservation measures. Sign the Certification s T, please attach a separate document explaining your cor be implemented. Then, contact the Nebraska Game and	ncerns			
he Nebraska Game and Parks Commission for more i	d with "Unknown" then leave your project as "Draft" and information. Once your concerns are addressed with the n and date under the Certification section, upload the repous to "Final".				
project as "Final" in CERT. Once these steps are com	o" then sign the Certification section below and submit the pleted, no additional correspondence with the Nebraska he signed report with any type of permit/application needs	Game			
Additional coordination with the U.S. Fish and Wildlife made by the lead federal agency pursuant to their obli	Service may be necessary depending on the determination gations under the Endangered Species Act (ESA).	on			
project activities, answers to questions) is true, accura configuration of the project change; if a species listing	including project location, project size/configuration, project and complete. If the project type, activities, location, size status is reclassified; if a new species is listed; or if any of then this information is no longer valid, and we recommen updated report.	ze, or of the			
CaraBook	06/03/2024				
Applicant/project proponent signature	Date				

## **Federal Laws**

The following federal laws contribute to the conservation and management of fish and wildlife resources in the United States: Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, Clean Water Act, and the Fish and Wildlife Coordination Act. The National Environmental Policy Act (NEPA) requires compliance with these statutes and regulations.

U.S. Fish and Wildlife Service

Nebraska Ecological Services 9325 South Alda Road Wood River, NE 68883 Phone: (308) 382-6468

Email: nebraskaes@fws.gov

U.S. Army Corps of Engineers

Omaha Regulatory Office 8901 South 154 Street Omaha, NE 68138 Phone: (402) 896-0896

Email: NE404Reg@usace.army.mil

### **Bald and Golden Eagle Protection Act**

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

### Nebraska Specific Information

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

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

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

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

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

#### **Fish and Wildlife Coordination Act**

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

#### Section 404 of the Clean Water Act

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

## **Agency Contact Information**

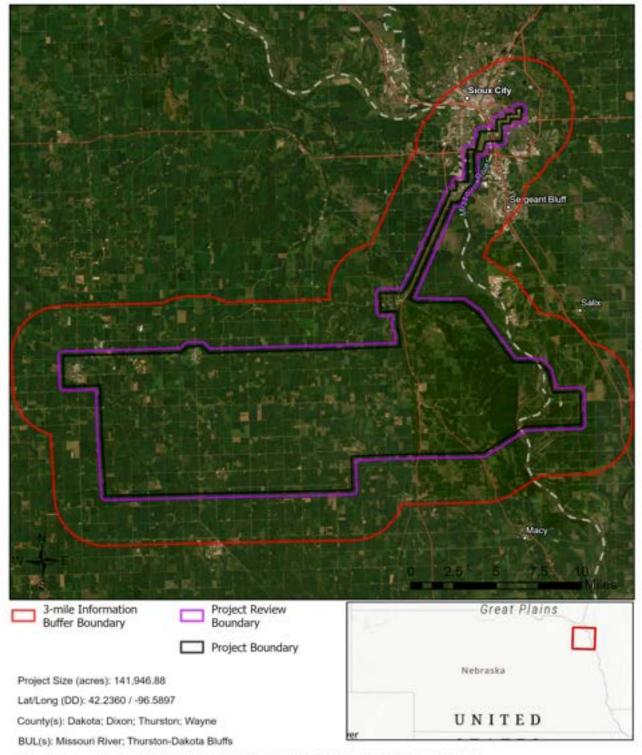
Nebraska Game and Parks Commission

Environmental Review Team 2200 North 33rd Street Lincoln, NE 68503

Phone: (402) 471-5423

Email: ngpc.envreview@nebraska.gov

## Winnebago Tribe of Nebraska Broadband Connectivity Project Aerial Image Basemap With Locator Map

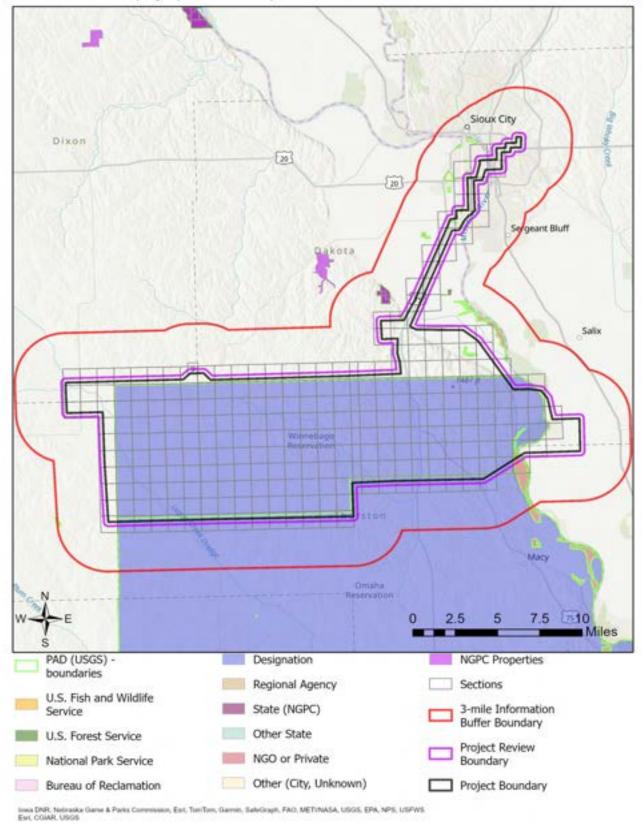


Township/Range/Section(s): T25R05ES01; T25R05ES02; T25R05ES03; T25R05ES10; T25R05ES11 +

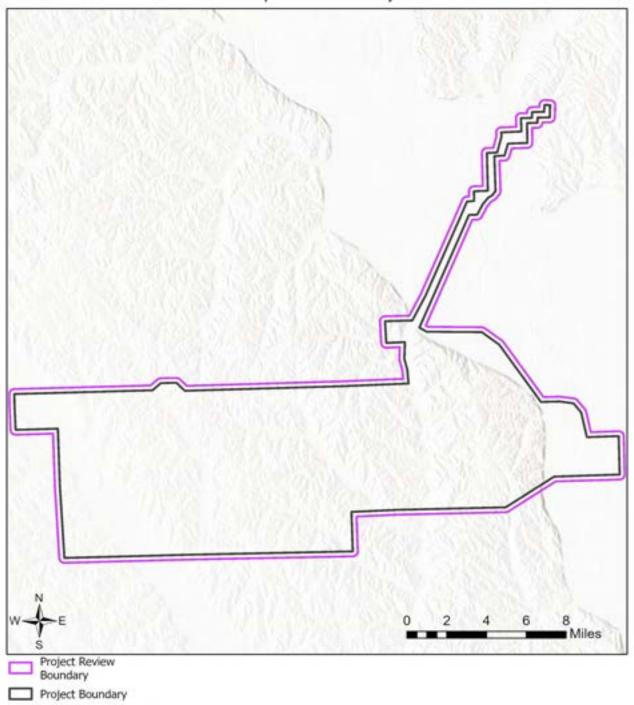
Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS Earthstar Geographics

Iowa DNR, Nebraska Game & Parks Commission, Esti, Tom/Tom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS

## Winnebago Tribe of Nebraska Broadband Connectivity Project Topographic Basemap With Sections and Protected Areas



## Winnebago Tribe of Nebraska Broadband Connectivity Project Web Map As Submitted By User



Ewi, CGMR, USGS

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

Area Name	Owner/Manager	Information Source
Beermann Park	City Land	USGS Protected Areas Database
Cardinal Park (South Sioux City High School Athletic Fields)	City Land	USGS Protected Areas Database
Cottonwood Cove Park	City Land	USGS Protected Areas Database
Lundberg Field	City Land	USGS Protected Areas Database
Odd Fellow Lodge Park	City Land	USGS Protected Areas Database
Omaha Reservation	Designation	USGS Protected Areas Database
Siouxland Trails	City Land	USGS Protected Areas Database
Sportsmanship Field	City Land	USGS Protected Areas Database
Wetlands Reserve Program (WRP), Dakota, NE	Private	USGS Protected Areas Database
Wetlands Reserve Program (WRP), Thurston, NE	Private	USGS Protected Areas Database
Winnebago Reservation	Designation	USGS Protected Areas Database

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

Name	Other Information	SRank	GRank
Bur Oak-Basswood-Ironwood Forest	Bur Oak-Basswood-Ironwood Forest	S2S3	GNR
Cottonwood-Peachleaf Willow Riparian Woodland	Cottonwood-Peachleaf Willow Riparian Woodland	<b>S</b> 3	G3G4
Eastern Bulrush Deep Marsh	Eastern Bulrush Deep Marsh	<b>S</b> 3	GNR
Eastern Cottonwood-Dogwood Riparian Woodland	Eastern Cottonwood-Dogwood Riparian Woodland	S2?	GNR
Eastern Riparian Forest	Eastern Riparian Forest	<b>S</b> 3	G3G5
Eastern Sedge Wet Meadow	Eastern Sedge Wet Meadow	S1	GNR
Missouri River Valley Dune Grassland	Missouri River Valley Dune Grassland	S2	GNR
Red Oak-Basswood-Ironwood Forest	Red Oak-Basswood-Ironwood Forest	S2	G3G4
Missouri River Biologically Unique Landscape	Link to BUL document		
Thurston-Dakota Bluffs Biologically Unique Landscape	Link to BUL document		
Large Intact Block of Habitat for At-risk Species			

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

Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Acipenser fulvescens	Lake Sturgeon		Т	Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Agastache scrophulariifolia	Purple Giant-hyssop			Tier 2	S1	G4	Vascular Plant - Dicots
Allium tricoccum var. burdickii	Ramp			Tier 2	S2	G4G5	Vascular Plant - Monocots
Anguilla rostrata	American Eel			Tier 2	SNR	G4	Vertebrate Animal - Fishes
Anodonta suborbiculata	Flat Floater			Tier 1	S1	G5	Invertebrate Animal - Freshwater Mussels
Aralia racemosa	Spikenard			Tier 2	S1	G5	Vascular Plant - Dicots
Boechera dentata	Short's Rock Cress			Tier 2	S2	G5	Vascular Plant - Dicots
Brachyelytrum erectum	Bearded Short-husk			Tier 2	S2	G5	Vascular Plant - Monocots
Caulophyllum thalictroides	Blue Cohosh			Tier 2	S1	G5	Vascular Plant - Dicots
Cirsium discolor	Field Thistle				S1S2	G5	Vascular Plant - Dicots
Cuscuta umbrosa	Big-fruit Dodder			Tier 2	S1S3	G5	Vascular Plant - Dicots
Cycleptus elongatus	Blue Sucker			Tier 1	S1	G3G4	Vertebrate Animal - Fishes
Dactylorhiza viridis	Long-bract Green Orchid			Tier 2	S1	G5	Vascular Plant - Monocots
Dryopteris carthusiana	Spinulose Wood Fern			Tier 2	S2	G5	Vascular Plant - Leptosporangiate Ferns
Erysimum inconspicuum	Small-flower Wallflower			Tier 2	S2	G5	Vascular Plant - Dicots
Erythronium mesochoreum	Prairie Fawn-lily			Tier 2	S2	G4G5	Vascular Plant - Monocots
Galearis spectabilis	Showy Orchis			Tier 2	S1	G5	Vascular Plant - Monocots
Haliaeetus leucocephalus	Bald Eagle			Tier 2	S3	G5	Vertebrate Animal - Birds
Hybognathus argyritis	Western Silvery Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Hybognathus placitus	Plains Minnow			Tier 1	S2	G4	Vertebrate Animal - Fishes
Lasionycteris noctivagans	Silver-haired Bat			Tier 1	S3	G3G4	Vertebrate Animal - Mammals
Lilium michiganense	Turk's Cap Lily				S2S4	G5	Vascular Plant - Monocots
Lota lota	Burbot			Tier 2	S1	G5	Vertebrate Animal - Fishes
Macrhybopsis gelida	Sturgeon Chub		E	Tier 1	S1	G3	Vertebrate Animal - Fishes
Macrhybopsis hyostoma	Shoal Chub			Tier 2	S3	G5	Vertebrate Animal - Fishes
Macrhybopsis meeki	Sicklefin Chub			Tier 1	S1	G3	Vertebrate Animal - Fishes

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

		at 1.01. op			•		
Scientific Name	Common Name	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Macrhybopsis storeriana	Silver Chub			Tier 2	S2	G5	Vertebrate Animal - Fishes
Matteuccia struthiopteris var. pensylvanica	Ostrich Fern			Tier 2	S1	G5T5	Vascular Plant - Leptosporangiate Ferns
Myotis septentrionalis	Northern Long-eared Myotis	Т	Т	Tier 1	S1S2	G1G2	Vertebrate Animal - Mammals
Nelumbo lutea	American Lotus			Tier 2	S1S3	G4	Vascular Plant - Dicots
Patis racemosa	Black-seed Ricegrass			Tier 2	S2	G5	Vascular Plant - Monocots
Pellaea atropurpurea	Purple-stem Cliff-brake			Tier 2	S2	G5	Vascular Plant - Leptosporangiate Ferns
Perimyotis subflavus	Tricolored Bat			Tier 1	S3	G2G3	Vertebrate Animal - Mammals
Pimephales notatus	Bluntnose Minnow			Tier 2	S3	G5	Vertebrate Animal - Fishes
Platygobio gracilis	Flathead Chub			Tier 1	S2	G5	Vertebrate Animal - Fishes
Polyodon spathula	Paddlefish			Tier 2	S2	G4	Vertebrate Animal - Fishes
Ranunculus recurvatus var. recurvatus	Hooked Buttercup			Tier 2	S2	G5T5	Vascular Plant - Dicots
Scaphirhynchus albus	Pallid Sturgeon	Е	Е	Tier 1	S1	G2	Vertebrate Animal - Fishes
Stachys hispida	Hispid Hedge-nettle			Tier 2	S1	G5T4Q	Vascular Plant - Dicots
Ulmus thomasii	Rock Elm				S2S4	G5	Vascular Plant - Dicots
Viburnum lentago	Nannyberry			Tier 2	S1	G5	Vascular Plant - Dicots

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

		•			υ,	•		•
Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Acipenser fulvescens	Lake Sturgeon	Model		Т	Tier 1	S1	G3G4	
Ammodramus henslowii	Henslow's Sparrow	Range			Tier 1	S1	G4	
Anodonta suborbiculata	Flat Floater	Range			Tier 1	S1	G5	
Argynnis idalia	Regal Fritillary	Range			Tier 1	S3	G3?	
Asio flammeus	Short-eared Owl	Range			Tier 1	S2	G5	
Atrytone arogos iowa	Iowa Skipper	Range			Tier 1	S1	G2G3T2T3	

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

Boloria myrina nebraska Fritillary Range Tier 1 SNR G5?T3T4  nebraskensis  Calidris subruficollis Buff-breasted Sandpiper Range Tier 1 S2N G4  Catocala nuptialis Married Underwing Range Tier 1 SNR G3  Catocala whitneyi Whitney Underwing Range Tier 1 S1 G2G3  Coccyzus erythropthalmus Black-billed Cuckoo Range Tier 1 S1 G3G4  Canaus plexippus Blue Sucker Range Tier 1 S1 G3G4  Danaus plexippus Monarch Range Tier 1 S2 G4  Emydoidea blandingii Blanding's Turtle Range Tier 1 S4 G4  Euphyes bimacula illinois Two-spotted Skipper Range Tier 1 S3 G4T1T2  Euphyes conspicua Bucholz Black Dash Range Tier 1 S1 G4G5T1  buchholzi  Fundulus sciadicus Plains Topminnow Range Tier 1 S3 G4  Haliaeetus leucocephalus Bald Eagle Range Tier 1 S2 G3  Hesperia ottoe Ottoe Skipper Range Tier 1 S2 G3  Hybognathus argyritis Western Silvery Minnow Range Tier 1 S2 G4  Hybognathus placitus Plains Minnow Range Tier 1 S2 G4  Hybognathus placitus Plains Minnow Range Tier 1 S2 G4  Hybognathus placitus Plains Minnow Range Tier 1 S2 G4	
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Euphyes bimacula illinoisTwo-spotted SkipperRangeTier 1S3G4T1T2Euphyes conspicua buchholziBucholz Black DashRangeTier 1S1G4G5T1Fundulus sciadicusPlains TopminnowRangeTier 1S3G4Haliaeetus leucocephalusBald EagleRangeTier 2S3G5Hesperia ottoeOttoe SkipperRangeTier 1S2G3Hybognathus argyritisWestern Silvery MinnowRangeTier 1S2G4Hybognathus placitusPlains MinnowRangeTier 1S2G4	
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Hybognathus argyritisWestern Silvery MinnowRangeTier 1S2G4Hybognathus placitusPlains MinnowRangeTier 1S2G4	
Hybognathus placitus Plains Minnow Range Tier 1 S2 G4	
<u>Hylocichla mustelina</u> Wood Thrush Range Tier 1 S3 G4	
<u>Lanius Iudovicianus</u> Loggerhead Shrike Range Tier 1 S3 G4	
Lasionycteris noctivagans Silver-haired Bat Range Tier 1 S3 G3G4	
<u>Lasiurus borealis</u> Eastern Red Bat Range Tier 1 S3 G3G4	
<u>Lasiurus cinereus</u> Hoary Bat Range Tier 1 S3 G3G4	
Lethe eurydice fumosus Smoky-eyed Brown Range Tier 1 S3 G5T3T4	
Macrhybopsis gelida Sturgeon Chub Model E Tier 1 S1 G3	
Myotis lucifugus Little Brown Myotis Range Tier 1 SNR G3G4	
Myotis septentrionalis Northern Long-eared Range E E Tier 1 S1S2 G2G3 Myotis	
Panax quinquefolius American Ginseng Model T Tier 1 S1 G3G4	

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

Scientific Name	Common Name	Data Type	USFWS	State	SGCN	SRank	GRank	Taxonomic Group
Perimyotis subflavus	Tricolored Bat	Range			Tier 1	S3	G3G4	
Perognathus flavescens perniger	Plains Pocket Mouse	Range			Tier 1	SNR	G5TNR	
Platygobio gracilis	Flathead Chub	Range			Tier 1	S2	G5	
Scaphirhynchus albus	Pallid Sturgeon	Model	Е	Е	Tier 1	S1	G2	

## Appendix E

Section 106 Compliance

## **Cultural Resources Introduction**

Olsson, on behalf of Winnebago (the Proponent), has proposed the construction of the Winnebago Broadband project (the Project) in Dakota, Dixon, and Thurston Counties of Nebraska, and within Monona and Woodbury Counties of Iowa. Beaver Creek Archaeology, Inc. (BCA) was hired by Olsson on behalf of the Proponent to complete a cultural resources investigation, including a cultural resources literature review. The purpose of this investigation was to assess what, if any, cultural resources or historic properties are documented within the Project Area that may potentially be impacted by the Project.

While the vast majority of the Project is located within the exterior reservation bounds of the Winnebago Tribe of Nebraska, there are large segments of the Project being proposed off-reservation in Nebraska and Iowa. Accordingly, the Bureau of Indian Affairs (BIA) Aberdeen Office, Winnebago Tribal Historic Preservation Office (THPO), Nebraska State Historic Preservation Office (SHPO), and the Iowa SHPO are all to be directly involved in the project. Moreover, the United States Army Corps of Engineers (USACE) is also involved in the project as part of the Proponent's compliance efforts with the Clean Water Act (CWA). The overall lead federal agency for the project is the National Telecommunications and Information Administration (NTIA). Neither the Nebraska nor Iowa SHPO offices will be deferring any of their consultation responsibilities for the off-reservation portions of the Project. Federal and State agency consultation efforts are being led or otherwise overseen by the NTIA project lead.

## **Cultural Resources Objective**

Due to federal agency(ies) participation in the Project, this project is considered a federal undertaking, and it is subject to the federal laws and regulations of the Section 106 process under the National Historic Preservation Act (NHPA), as amended and defined in 36 CFR Part 800, as well as the National Environmental Policy Act (NEPA). The NHPA requires the agency to consider what effects the undertaking will have on Historic Properties within the survey area, and the agency requires that the applicant provide the necessary data for the agency to consider such effects. The three central objectives of this study are to assist the Proponent with their compliance obligations, identify and assess project impacts to cultural resources located within the survey area, and provide National Register of Historic Places (NRHP) recommendations for Historic Properties encountered within the survey area. In addition, the scientific objective of the study is to gather more comparative information that can be used to answer questions posed in the state plan.

Historic Properties, as defined in the NHPA [54 U.S.C. § 300308], consist of any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource." Cultural resource(s) is a generic and overarching term used by Cultural Resource Management (CRM) professionals and can be used in reference to different site types, including archaeological, historical, and architectural sites, as well as properties of traditional, cultural, or religious importance that may or may not be eligible for inclusion on the NRHP.

### **Evaluation Criteria**

To be eligible for inclusion on the NRHP, a site must usually be more than 50 years old, and retain sufficient historic integrity to communicate significance based on one or more of the following seven aspects of

integrity: location, design, setting, materials, workmanship, feeling, and association. Furthermore, the site must meet at least one of the following criteria:

- (a) Associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) Associated with the lives of persons significant in our past; or
- (c) Embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinctions; or
- (d) Have yielded, or maybe likely to yield, information important in prehistory or history.

In addition, cultural resources that hold traditional, cultural, or religious significance may be eligible for the NRHP if the National Register Criteria mentioned above are met.

### **Cultural Resources Literature Search**

Beaver Creek Archaeology (BCA) personnel conducted a literature search and review with both the Nebraska and Iowa SHPOs as well as with the BIA Aberdeen Office archaeologist. The literature searches indicated that fifty-two (52) projects overlapped with the Project.

The literature (files) searches revealed that the site distribution is moderate to dense within 150' of the Project and contained forty (40) previously recorded cultural resource sites, thirty-one (31) THPO sensitive and protected site locations (some of which overlap with previously documented cultural resources sites on file with the SHPO), seven (7) historic Indian locations, and one notable location. Of the 40 previously documented sites, five (5) have been listed on the NRHP. These results are included in tabular form in Tables 1 and 2 below. Twenty-six (26) of the aforementioned previously recorded cultural resource sites cross into the Project. These results are included in tabular form in Table 3 below. Of those 26 previously documented cultural resource sites, four (4) have been listed on the NRHP.

Additionally, Olsson personnel Rodney Martin conducted a sensitive areas review and discussion with the Winnebago THPO, Sunshine Bear, for the portion of the project located within the exterior bounds of the Winnebago reservation. The need to know of this review and discussion was provided to BCA by Olsson. As part of the THPO sharing of this information, neither Olsson nor BCA will release the results or any other details of the THPO-sensitive areas, aside from listing the number of areas considered and subsequently avoided as part of the project designing process.

Table 1. Previously recorded Cultural Resources within 150' of the Project Area.

SITS #	Affiliation	Description	NRHP Status
		Cultural Material (Ineligible	
25TS49	Farm/Ranch	Determined by SHPO)	Ineligible
		Cultural Material (Ineligible	
25TS48	Period Unknown	Determined by SHPO)	Ineligible
25TS6	Period Unknown	Burials	Unevaluated

SITS #	Affiliation	Description	NRHP Status
		Cultural Material (Ineligible	
25TS33	Period Unknown	Determined by SHPO)	Ineligible
25TS10	Period Unknown	Bison Bone, Shell, FCR, Pottery	Unevaluated
231310	T CHOO OTHEROWIT	Projectile Points, Awl, Flakes, Bison	Onevaluatea
		Bone, Shell & Pottery, Bean and	
25TS11	Period Unknown	Squash Seeds	Unevaluated
	Education,	·	
	Omaha,		
25TS22	Winnebago	Cultural Material	Unevaluated
25TS2	Period Unknown	Depressions, 1 Pit, Small Burial	Unevaluated
		Swedish Evangelical Lutheran Salem	Eligible/Listed on the
DX09-001	Historical	Church (On the Register #83001088)	NRHP
		CM Scatter: Chipped Stone Tools,	
25DX50	Plains Woodland	Body Sherds	Eligible
		Emerson City Park (On the Register	Eligible/Listed on the
DX04-003	Historical	#100002165)	NRHP
		Ben Bonderson Farm (On the	Eligible/Listed on the
DK00-113	Historical	Register #06000993)	NRHP
25047	Plains Woodland,		
25DK7	St. Helena Phase	Unknown	Unevaluated
25DK9	St. Helena Phase	Unknown	Unevaluated
25DK15	Period Unknown	Cultural Material	Unevaluated
25DK16	Period Unknown	Human Remains	Unevaluated
25DK14	St. Helena Phase	Cultural Material	Eligible
25DK2	Period Unknown	Burial Mounds/Cemetery	Eligible
25DK20	Period Unknown	Cultural Material	Unevaluated
		4 Structures, 2 Foundations, CM	
25 DV54	F A	Scatter: Historic Artifacts, Faunal	to althought a
25DK51	Euro-American	Remains	Ineligible
25DK8	Period Unknown	Cultural Material	Unevaluated
25DK501	Euro-American	Water Powered Flour Mill	Ineligible
25TS14	Omaha	Village	Unevaluated
35045	Doriod University	Ton-wa-ton-ga/Omaha Big Village	Eligible/Listed on the
25DK5	Period Unknown	(On the Register #73001058)	NRHP
25TS9	Woodland	Cultural Material  Cornelius O'Connor House (On the	Unevaluated
DK00-001	Historical	Register #77000826)	Eligible/Listed on the NRHP
25DK1	Period Unknown	Cultural Material	Unevaluated
25DK1 25DK22	Period Unknown	Cultural Material	Eligible
25DK22 25DK4	Period Unknown	Cultural Material	Unevaluated
25DK47	Period Unknown	Cultural Material	Eligible
230147	I CHOO OHKHOWII	Cultural Material  Cultural Material (Ineligible	LIIGIDIE
25TS49	Farm/Ranch	Determined by SHPO)	Ineligible
231343	I allii/ Nalicii	Determined by SHFO)	mengible

NOTE: Bolded sites are listed on the National Register of Historic Places (NRHP).

lowa sites with undefined boundaries near the project include 13WD184 and 13WD189. Based on the file search results, the undefined site locations are approximately 200' from the project's centerline.

Table 2. Iowa SHPO Historic Indian Locations (HILD) within 150' of the Project Area.

HILD	Description				
7	Floyd's Bluff post, County Seat				
	1848-(13WD184)				
1053	1854 Battle				
10	Omaha Claim				
	Winnebago Tribe of Nebraska				
956	Reservation Property, WinneVagas				
	Casino				
057/059	Winnebago Tribe of Nebraska				
957/958	Property				
	Lewis and Clark CampLewis and				
	Clark Expedition 17-20 Aug 1804				
1106	Also, has a Notable Location				
	Number: XX7906: Lewis and Clark				
	camp				
651	Omaha Tti-ttaga Ziga Village				

The Iowa SHPO has one Notable Location documented within 150' of the proposed Project Area. That location is XX7906: Lewis and Clark camp, which is also listed as HILD 1106.

### **Cultural Resources Literature Review Conclusion**

The purpose of this cultural resources literature search and review is to update the Proponent and the NTIA with the knowledge of previously recorded cultural resources, THPO sensitive areas, and previous cultural inventories within and surrounding the proposed project area.

In addition, this literature review emphasizes the importance of avoiding or otherwise minimizing potential impacts or adverse effects to NRHP-listed resources, cultural resources recommended as eligible or unevaluated for the NRHP, and areas considered sensitive to the consulting THPOs. Moreover, this review seeks to highlight and alert the Proponent as to the numerous previously documented human remains locations within and immediately adjacent to the proposed project.

As a result, BCA recommends additional cultural resource inventories. Prior to such inventories being initiated, due to the number and nature of sites to be affected by the proposed project, BCA further recommends that both the Nebraska and Iowa SHPOs, as well as, at minimum, the Winnebago and Omaha THPOs, be consulted before any fieldwork is initiated. This pre-fieldwork consultation is being specifically emphasized by BCA, due to the nature of the cultural resources and historic properties documented within the Project Area (Table 3 below) and the HILD and notable locations (Table 2 above). Such consultation should seek to define the nature and extent of any expected pedestrian field inventories and associated additional efforts, as well as to consider any potential mitigation measures.

Additionally, BCA recommends that, at minimum, the Winnebago and Omaha THPOs are invited to participate in any field investigations they are interested in, especially within and immediately adjacent to the town of Homer, Nebraska. At present, it is BCA's understanding that no direct effects are anticipated to occur to NRHP-listed structure sites such as the Swedish Evangelical Lutheran Salem Church (DX09-001) as the line would be meant to provide broadband service to the structure.

As currently proposed, neither a finding of *No Adverse Effect to Historic Properties* nor a finding of *No Historic Properties Affected* cannot be achieved. Therefore, BCA <u>does not</u> recommend this project proceed as it is currently planned until consultation has been completed with all involved consulting parties, including, but not limited to, the Nebraska SHPO, the Iowa SHPO, the Omaha THPO, the Winnebago THPO, as well as the BIA and USACE.

**Table 3.** Previously Recorded Cultural Resources within the Project Area.

	Table 5. Previously R	ecorded Cultural Resources within the	
			NRHP
SITS #	Affiliation	Description	Recommendation/NRHP
			Status
25DK1	Period Unknown	Cultural Material	Unevaluated
25DK14	St. Helena Phase	Cultural Material	Eligible
25DK15	Period Unknown	Cultural Material	Unevaluated
25DK16	Period Unknown	Human Remains	Unevaluated
25DK2	Period Unknown	Burial Mounds/Cemetery	Eligible
25DK22	Period Unknown	Cultural Material	Eligible
25DK4	Period Unknown	Cultural Material	Unevaluated
25DK5	Period	Ton-wa-ton-ga/Omaha Big	Eligible/Listed on the
	Unknown	Village (On the Register	NRHP
		<i>#73001058)</i>	
25DK501	Euro-American	Water Powered Flour Mill	Ineligible
25DK51	Euro-American	4 Structures, 2 Foundations, CM	Ineligible
		Scatter: Historic Artifacts, Faunal	
		Remains	
25DK7	Plains	Unknown	Unevaluated
	Woodland, St.		
	Helena Phase		
25DK8	Period Unknown	Cultural Material	Unevaluated
25DK9	St. Helena Phase	Unknown	Unevaluated
25TS10	Period Unknown	Bison Bone, Shell, FCR, Pottery	Unevaluated
25TS11	Period Unknown	Projectile Points, Awl, Flakes,	Unevaluated
		Bison Bone, Shell & Pottery, Bean	
		and Squash Seeds	
25TS14	Omaha	Village	Unevaluated
25TS2	Period Unknown	Depressions, 1 Pit, Small Burial	Unevaluated
25TS22	Education,	Cultural Material	Unevaluated
	Omaha,		
	Winnebago		
25TS33	Period Unknown	Cultural Material (Ineligible	Ineligible
		Determined by SHPO)	
25TS48	Period Unknown	Cultural Material (Ineligible	Ineligible
257540	Faure /Danah	Determined by SHPO)	La aliaible
25TS49	Farm/Ranch	Cultural Material (Ineligible	Ineligible
25TS6	Period Unknown	Determined by SHPO)  Burials	Unevaluated
25TS9	Woodland	Cultural Material	Unevaluated
	Historical	Cornelius O'Connor House (On	Eligible/Listed on the
DK00-001	nistorical	the Register #77000826)	NRHP
DK00-113	Historical	Ben Bonderson Farm ( <i>On the</i>	Eligible/Listed on the
DR00-113	instolical	Register #06000993)	NRHP
DX09-001	Historical	Swedish Evangelical Lutheran	Eligible/Listed on the
2	155511641	Salem Church ( <i>On the Register</i>	NRHP
		#83001088)	
	l		l

NOTE: Bolded sites are listed on the National Register of Historic Places (NRHP).

February 21, 2024

Ms. Sunshine Bear Tribal Historic Preservation Office Winnebago Tribe of Nebraska PO Box 687 Winnebago, NE 68071

Subject: Section 106 Finding of No Historic Properties Affected Submitted to the Winnebago Tribe of Nebraska Tribal Historic Preservation Office (THPO) for the Winnebago Tribe of Nebraska (Federal Grant #NT22TBC0290076) Broadband Fiber Project

Dear Ms. Bear,

The Winnebago Tribe of Nebraska (Grantee) was awarded funding for a proposed Broadband Connectivity Project (Project) under the U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) Tribal Broadband Connectivity Program (TBCP). The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

Portions of the fiber-optic alignment also extend to communities just outside of the reservation, including the northern portion of Emerson (the southern half of Emerson is within the reservation; Dakota, Dixon, and Thurston counties), Homer (Dakota County), and Wakefield (Dixon and Wayne counties). In addition, the fiber-optic alignment extends north to the Western Iowa Technical Community College in Sioux City, Iowa and a very small portion outside of the southern Winnebago Reservation boundary in Iowa (Woodbury County). Refer to the attached



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Figures for a depiction of the project location. The fiber-optic alignment includes two crossings under the Missouri River at approximately River Miles (RMs) 711.0 and 729.7. The southern crossing will connect those southern portions of the reservation on the Iowa side of the river.

The Project is expected to facilitate economic development and commercial activity, create remote employment and entrepreneurial opportunities, and increase availability of remote learning and telehealth services.

### 1. Description of the Undertaking

The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises (FTTP) system capable of 200 Mbps download speeds and 40 Mbps upload speeds. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way (ROW) and under the Missouri River in the project area. The buried fiber-optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. In addition, to facilitate operation and maintenance of the Fiber to the Home (FTTP) system, ancillary equipment would be installed along the alignment including optical line terminals (OLT), vaults, handholes, pedestals, markers, and network interface devices (NID).

Approximately 156 miles of the proposed installations would be performed using plowing or trenching construction techniques within existing road ROW. Plowed conduit would be installed using a track-type bulldozer equipped with a specialized single ripper that loosens the soil along the installation path. Conduit would be fed either from the plow bulldozer or from a separate truck-mounted reel through a plow chute attached to the ripper and laid directly at a nominal depth of approximately 36 to 48 inches, depending on permit requirements. A compaction machine would follow directly behind the plow bulldozer and restore the ground surface to its original contour. The installation path may be preripped by a second bulldozer, if necessary, to loosen the soil in areas where subsurface rock or other buried obstructions may be present. This second bulldozer may also, in some cases, be attached to the plow bulldozer to provide additional pulling power for the plowing operation. Ground disturbance associated with the plowed installation would be limited to an approximately 8-foot-wide corridor. In areas that are too narrow for plowing equipment to be used and where directional boring is not required to avoid surface disturbance, trenching construction techniques would be used for the conduit installations. Typically, a backhoe would be used to dig the required trench, although a compact excavator may be used in areas that are exceedingly narrow. The nominal trench depth would be the same as for plowed installations, but the disturbance width would be less.

Approximately 78 miles of the proposed installations would be performed using directional boring construction techniques. Directional boring is a method used to install utility lines under waterways and roads and in other areas where the avoidance of surface disturbance is desirable. Directional boring machines are horizontal drilling rigs with a steerable drill bit. In general, each



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bore begins with the creation of a pilot hole (entry pit), through which the drill bit is guided by the operator as it progresses along the desired boring path toward the exit pit. After the pilot hole has been bored, conduit is attached to the end of the drill string, and the conduit is pulled back through the bore.

In addition to shorter road and railroad boring installations, the proposed action includes horizontal drilling underneath the Missouri River from Nebraska to Iowa at RM 711.0 (with a bore length of approximately 5,240 feet) and RM 729.7 (with a bore length of approximately 1,670 feet). For this installation, a drilling rig would be stationed at a fixed point, or entry pit, where the operator installs a piloted drilling bit while adding segments of drill rod at predetermined depths horizontally across the river. At the surface level, a locator assists the rig operator by locating the position and the depth of the piloted drilling bit as it moves away from the drilling rig. While drilling, the rig operator would continuously inject an inert clay-based fluid that lubricates and stabilizes the bore hole. This process would continue until the piloted drilling bit reaches the exit pit on the other side of the river. The piloted drilling bit would then be removed, and stages of larger reamers and drill rod would be added and pulled toward the rig operator to enlarge the hole in preparation for pipe installation. This method allows for the continuous monitoring of the bore hole and maintains a pathway until the pipe package is ready for installation. Once the hole is large enough for the determined diameter of pipe(s), the pipe package would be connected to the drilling rods and pulled across the river toward the drilling rig operator. The pipe package would then be secured at both the entry and exit pits, and the annular space around the pipe package would be filled/grouted if required or determined necessary and the ground surface restored to its original contour.

Exploratory drill borings were completed on July 26, November 3, and November 7, 2023, to determine the soil structure of the proposed drill holes. The drilling method used was a hollow-stem from 0 to 15 feet then a rotary drill to 100 feet (termination). This method was used to determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

Attached please find both KMZ and a zipped folder with Shapefiles (projected in Coordinate System: NAD\_1983\_UTM\_Zone\_14N) of the proposed alignment as well as any staging/stockpile/laydown areas on both sides of the river. The Bureau of Indian Affairs (BIA) Great Plains Archeologist has surveyed these staging areas. These files also include known previously recorded resources and any previous archaeological surveys within 150 feet of the proposed centerline that was received as part of the file search. To aid in project understanding, a file outlining the proposed construction equipment and methods that are planned for the project is also attached. Please note, the Horizontal Bore/Pneumatic Drilling method will be limited to the borings under the Missouri River.



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### 2. Area of Potential Affect (APE)

The attached APE is the area within which an undertaking may affect a historic property, either directly or indirectly. The Area of Potential Effect is the maximum area of disturbance for the proposed project in Nebraska and Iowa.

#### 3. Efforts to Identify Historic Properties

A cultural resources literature review and intensive pedestrian survey was completed by Beaver Creek Archeology (BCA) for the Nebraska segment of the Winnebago Broadband project in Dakota, Dixon, Thurston, and Wayne Counties, Nebraska. See the attached cultural resources report based off the summary below.

The literature review covered the entirety of the proposed project area plus a one-mile buffer. The literature review revealed 201 previously documented cultural resources within a one-mile radius of the project area. Approximately 82 cultural resources were on file at the Nebraska SHPO, 81 through the Winnebago Tribal Historic Preservation Offices (THPO), and 38 were on file at the Iowa Office of State Archeology (OSA). Reach out to NTIA for copy of cultural resources report if you want to review. File was too large to send through TCNS.

The NTIA, in consultation with the Nebraska SHPO and Winnebago THPO, determined that certain locations in the inventory area must undergo intensive pedestrian survey. On December 19, 2023, BCA conducted the intensive pedestrian inventory, with Wade Burns serving as the Principal Investigator/Project Director and Clay Bruckner serving as Staff Archaeologist. Christopher Guevara served as a Tribal Cultural Specialist (TCS) from the Omaha Tribe of Nebraska and Iowa. The Winnebago Tribe was invited to participate in the project, but were unable to attend.

During the survey of these areas, no new or previously documented cultural resources were encountered. However, nine historic structures were observed and are recommended as "not eligible" for nomination to the National Register of Historic Places (NRHP). As a result, they were not formally documented, and no specific avoidance measures are recommended for these locations. See the attached cultural resources report for further information.

Within the remaining 1,985 acres of inventory area, which were not surveyed, there are 30 cultural resource sites which are on file at the Nebraska SHPO and are located within or near (within 100' of) the inventory area. The results include five NRHP listed sites, 20 sites recommended as eligible or unevaluated, and five sites recommended as ineligible for inclusion on the NRHP. The proposed broadband project is designed to provide service to three historic structures listed on the NRHP (Sites DK00001, DK00113, and DX09001). The proposed project is currently routed around Site DX04-003, an NRHP listed city park, as well. Installation of the fiber optic line is not expected to impact any of these properties and no specific avoidance measures are recommended for these sites.



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Due to the lack of recent previous archaeological survey in the remainder of the inventory area, along with the high probability for cultural resources and/or human remains, the NTIA requires that the Winnebago Tribe of Nebraska maintain the currently planned route and remain within existing ground disturbances when working within or near (within 100' of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites (see attached cultural resources report). Archaeological and tribal monitoring will occur when construction is occurring within and near to (within 100' of) each the sites in Table 4 of the cultural resources report. Reach out to NTIA for copy of cultural resources report if you want to review. File was too large to send through TCNS.

BCA also conducted a literature search (see attached BCA23-1058a South Sioux City Geotech Bore letter). The literature searches indicated 52 projects overlapped with the project area in Nebraska.

Based on current design, the Iowa literature (files) searches revealed there were no actual sites, with defined boundaries documented within 150 feet of the proposed project area within Iowa. However, Historic Indian Locations (HILD) within 150 feet of the project area are included in Table 1 below. Iowa sites with undefined boundaries near the project include 13WD184 and 13WD189. Based on the file search results, the undefined site locations are approximately 200 feet from the project's centerline. The Iowa SHPO has one Notable Location documented within 150 feet of the proposed Project Area. That location is XX7906: Lewis and Clark Camp, which is also listed as HILD 1106.

Table 1: Iowa SHPO Historic Indian Locations within 150 feet of the Project Area

HILD	Description		
7	Floyd's Bluff post, County Seat 1848-(13WD184)		
1053	1854 Battle		
10	Omaha Claim		
956	Winnebago Tribe of Nebraska Reservation Property, WinneVagas Casino		
957/958	Winnebago Tribe of Nebraska Property		
1106	Lewis and Clark Camp Lewis and Clark Expedition 17-20 Aug 1804  Also, has a Notable Location Number: XX7906: Lewis and Clark camp		
651	Omaha Tti-ttaga Ziga Village		

Exploratory drill borings were completed on July 26, November 3, and November 7, 2023, to determine the soil structure of the proposed drill holes. The drilling method used was a hollow-stem from 0 to 15 feet then a rotary drill to 100 feet (termination). This method was used to

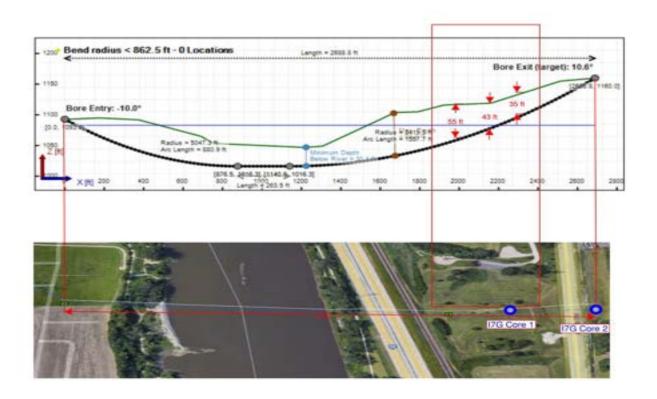


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determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

Based on the literature review, project plans, and consultation with the IA SHPO office for the exploratory bores identified above (IA SHPO number R&C 230897264), a geomorphological assessment was conducted for the planned horizontal boring with support from Impact7G, Inc. Two exploratory drill borings conducted on November 3, 2023, in South Sioux City, Iowa were also used to determine if the area had archeological potential and to ascertain the soil properties. See Exhibit 1 below for the locations and depths of these borings.

#### Exhibit 1



Core 1: East of S. Lewis Blvd – Fill over Loess There were no concerns from the Iowa SHPO Archeologist.

Core 2: West of S. Lewis Blvd – buried soil at 1.8 – 3.0 meters (5.9-9.84 feet) (Corrington Member)

The Iowa SHPO Archeologist stated this area could have historic properties.



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As a result, the boring profile was shifted to remain at depths in the area west of S. Lewis Blvd that would not disturb or impact any potential archaeological resources. Exhibit 2 below shows the planned bore path, entering on the Nebraska side and exiting on the Iowa side to the east of S. Lewis Blvd. The X-axis depicts length in feet and the Z-axis shows elevation in feet above mean sea level. The profile shows the bore path will stay relatively deep, with a depth in the area with potentially archaeological concern ranging from about 35 to 55 feet below ground surface. While the initial version shared with the Iowa SHPO Archeologist had different depths below ground surface shown due to calculations completed using the X-axis scale, these depths are still well below where the buried soil was identified during the geomorphological assessment. The Iowa SHPO agreed that if the drilling in the area west of S. Lewis Blvd is completed at such depths, no additional subsurface investigation was needed, and the project can proceed after formal Iowa SHPO Section 106 concurrence.

The buried soil with archeological potential will be avoided and no further action is recommended. Details and associated results for the geomorphological assessment are included in the attached report (Phase I Geomorphological Assessment with the Winnebago Tribe Broadband Project; Impact7G, Inc.; 2023). Reach out to NTIA for copy of geomorphological assessment report if you want to review. File was too large to send through TCNS.

Bore cross-section view

Bore Entry

Existing Grade

Bore Path

Bore Path

Exhibit 2

Consultation with your office and the Omaha THPO is currently underway and will continue throughout project construction. An Unanticipated Discovery plan is currently being developed if any resources are found during construction. No direct effects are anticipated to occur to NRHP-listed structure sites.

#### 4. Basis for Finding

Based on the previous coordination with your office and Iowa and Nebraska SHPOs and our ongoing consultation and efforts to identify historic properties, the NTIA has made a Section 106 finding of No Adverse Effect to Historic Properties. As mentioned, NTIA will require the proposed project construction remain within existing ground disturbances when working within



or near (within 100'of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites. Archaeological and tribal monitoring is also required when construction is occurring within and near to (within 100' of) each these sites (Table 4 of the cultural resources report). I respectfully request your response to this Section 106 Determination within 30 days of receipt.

If you have questions or need any additional information, please contact me at ifitzpatrick@ntia.gov or 202-834-3123. I look forward to your reply.

Sincerely,

Josh Fitzpatrick Fitzpatrick

Digitally signed by Josh

Date: 2024.02.21 17:09:18 -06'00'

Josh Fitzpatrick Environmental Program Officer National Telecommunications and Information Administration Department of Commerce

Attachments:

Figures
KMZ/SHP Files project alignment and staging areas
Construction Methods Guidance
APE Maps
Cultural Resources Literature Review and Intensive Pedestrian Survey
Impact 7G Geomorphological Investigation
Sioux City Geotech Bore Letter



March 22<sup>nd</sup>, 2024

Josh Fitzpatrick
Environmental Program Officer
National Telecommunications and Information Administration
Department of Commerce

Mr. Fitzpatrick,

Thank you for reaching out to the Tribal Historic Preservation Office of the Winnebago Tribe of Nebraska with this Section 106 correspondence regarding the Winnebago Broadband Fiber Project.

We have reviewed the above-referenced proposed undertaking known to us as, the "Winnebago Broadband Fiber Project" (Federal Grant #NT22TBC0290076) located within the exterior boundaries of the Winnebago Reservation; through multiple meetings, the Tribal Historic Preservation Officer concurs with Olsson and this project is in compliance with Section 106 of the National Historic Preservation Act. We are aware of areas within the APE of your project, through discussions with the Olsson team we have mitigated the areas, with both parties agreeing to avoid and the reroute of fiber lines in areas of cultural interest.

Although we are specifically aware of these archaeological and/or cultural sites or properties within the footprint of the project which are on the Winnebago Tribe's Historical Register, through mitigation we have chosen avoidance as the best route, we are fully aware and will encourage you to proceed with caution. There is so much history in this area not just with the Winnebago Tribe but for our relatives to the south, the Omaha Tribe of Nebraska who inhabited this area long before the Winnebago Tribe, that possible TCP's could be inadvertently discovered by way of your project. If inadvertent finds concerning cultural resources such as pottery, shards, historic/pre-historic artifacts, bone fragments/human remains occur during the process involved with this project, please stop all work immediately and contact the necessary agencies consulting and/or interested parties.

Page Sunshine Bear

3/22/2024

Sunshine Thomas-Bear
THPO/ NAGPRA Rep./Cultural Preservation Director/Angel De Cora Museum Director
THPO Office/Angel De Cora Museum
Little Priest Tribal College - Thunder Clan Building
601 E. College Road
Winnebago, NE 68071
(402) 922-2631 Cell

February 21, 2024

Mr. Jarell Grant Tribal Historic Preservation Office Omaha Tribe of Nebraska P.O. Box 368 Macy, NE 68039

Subject: Section 106 Finding of No Historic Properties Affected Submitted to the Omaha Tribe of Nebraska Tribal Historic Preservation Office (THPO) for the Winnebago Tribe of Nebraska (Federal Grant #NT22TBC0290076) Broadband Fiber Project

Dear Mr. Grant,

The Winnebago Tribe of Nebraska (Grantee) was awarded funding for a proposed Broadband Connectivity Project (Project) under the U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) Tribal Broadband Connectivity Program (TBCP). The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

Portions of the fiber-optic alignment also extend to communities just outside of the reservation, including the northern portion of Emerson (the southern half of Emerson is within the reservation; Dakota, Dixon, and Thurston counties), Homer (Dakota County), and Wakefield (Dixon and Wayne counties). In addition, the fiber-optic alignment extends north to the Western Iowa Technical Community College in Sioux City, Iowa and a very small portion outside of the southern Winnebago Reservation boundary in Iowa (Woodbury County). Refer to the attached Figures for a depiction of the project location. The fiber-optic alignment includes two crossings



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under the Missouri River at approximately River Miles (RMs) 711.0 and 729.7. The southern crossing will connect those southern portions of the reservation on the Iowa side of the river.

The Project is expected to facilitate economic development and commercial activity, create remote employment and entrepreneurial opportunities, and increase availability of remote learning and telehealth services.

### 1. Description of the Undertaking

The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises (FTTP) system capable of 200 Mbps download speeds and 40 Mbps upload speeds. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way (ROW) and under the Missouri River in the project area. The buried fiber-optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. In addition, to facilitate operation and maintenance of the Fiber to the Home (FTTP) system, ancillary equipment would be installed along the alignment including optical line terminals (OLT), vaults, handholes, pedestals, markers, and network interface devices (NID).

Approximately 156 miles of the proposed installations would be performed using plowing or trenching construction techniques within existing road ROW. Plowed conduit would be installed using a track-type bulldozer equipped with a specialized single ripper that loosens the soil along the installation path. Conduit would be fed either from the plow bulldozer or from a separate truck-mounted reel through a plow chute attached to the ripper and laid directly at a nominal depth of approximately 36 to 48 inches, depending on permit requirements. A compaction machine would follow directly behind the plow bulldozer and restore the ground surface to its original contour. The installation path may be preripped by a second bulldozer, if necessary, to loosen the soil in areas where subsurface rock or other buried obstructions may be present. This second bulldozer may also, in some cases, be attached to the plow bulldozer to provide additional pulling power for the plowing operation. Ground disturbance associated with the plowed installation would be limited to an approximately 8-foot-wide corridor. In areas that are too narrow for plowing equipment to be used and where directional boring is not required to avoid surface disturbance, trenching construction techniques would be used for the conduit installations. Typically, a backhoe would be used to dig the required trench, although a compact excavator may be used in areas that are exceedingly narrow. The nominal trench depth would be the same as for plowed installations, but the disturbance width would be less.

Approximately 78 miles of the proposed installations would be performed using directional boring construction techniques. Directional boring is a method used to install utility lines under waterways and roads and in other areas where the avoidance of surface disturbance is desirable. Directional boring machines are horizontal drilling rigs with a steerable drill bit. In general, each bore begins with the creation of a pilot hole (entry pit), through which the drill bit is guided by



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the operator as it progresses along the desired boring path toward the exit pit. After the pilot hole has been bored, conduit is attached to the end of the drill string, and the conduit is pulled back through the bore.

In addition to shorter road and railroad boring installations, the proposed action includes horizontal drilling underneath the Missouri River from Nebraska to Iowa at RM 711.0 (with a bore length of approximately 5,240 feet) and RM 729.7 (with a bore length of approximately 1,670 feet). For this installation, a drilling rig would be stationed at a fixed point, or entry pit, where the operator installs a piloted drilling bit while adding segments of drill rod at predetermined depths horizontally across the river. At the surface level, a locator assists the rig operator by locating the position and the depth of the piloted drilling bit as it moves away from the drilling rig. While drilling, the rig operator would continuously inject an inert clay-based fluid that lubricates and stabilizes the bore hole. This process would continue until the piloted drilling bit reaches the exit pit on the other side of the river. The piloted drilling bit would then be removed, and stages of larger reamers and drill rod would be added and pulled toward the rig operator to enlarge the hole in preparation for pipe installation. This method allows for the continuous monitoring of the bore hole and maintains a pathway until the pipe package is ready for installation. Once the hole is large enough for the determined diameter of pipe(s), the pipe package would be connected to the drilling rods and pulled across the river toward the drilling rig operator. The pipe package would then be secured at both the entry and exit pits, and the annular space around the pipe package would be filled/grouted if required or determined necessary and the ground surface restored to its original contour.

Exploratory drill borings were completed on July 26, November 3, and November 7, 2023, to determine the soil structure of the proposed drill holes. The drilling method used was a hollow-stem from 0 to 15 feet then a rotary drill to 100 feet (termination). This method was used to determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

Attached please find both KMZ and a zipped folder with Shapefiles (projected in Coordinate System: NAD\_1983\_UTM\_Zone\_14N) of the proposed alignment as well as any staging/stockpile/laydown areas on both sides of the river. The Bureau of Indian Affairs (BIA) Great Plains Archeologist has surveyed these staging areas. These files also include known previously recorded resources and any previous archaeological surveys within 150 feet of the proposed centerline that was received as part of the file search. To aid in project understanding, a file outlining the proposed construction equipment and methods that are planned for the project is also attached. Please note, the Horizontal Bore/Pneumatic Drilling method will be limited to the borings under the Missouri River.



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#### 2. Area of Potential Affect (APE)

The attached APE is the area within which an undertaking may affect a historic property, either directly or indirectly. The Area of Potential Effect is the maximum area of disturbance for the proposed project in Nebraska and Iowa.

#### 3. Efforts to Identify Historic Properties

A cultural resources literature review and intensive pedestrian survey was completed by Beaver Creek Archeology (BCA) for the Nebraska segment of the Winnebago Broadband project in Dakota, Dixon, Thurston, and Wayne Counties, Nebraska. See the attached cultural resources report based off the summary below.

The literature review covered the entirety of the proposed project area plus a one-mile buffer. The literature review revealed 201 previously documented cultural resources within a one-mile radius of the project area. Approximately 82 cultural resources were on file at the Nebraska SHPO, 81 through the Winnebago Tribal Historic Preservation Offices (THPO), and 38 were on file at the Iowa Office of State Archeology (OSA). Reach out to NTIA for copy of cultural resources report if you want to review. File was too large to send through TCNS.

The NTIA, in consultation with the Nebraska SHPO and Winnebago THPO, determined that certain locations in the inventory area must undergo intensive pedestrian survey. On December 19, 2023, BCA conducted the intensive pedestrian inventory, with Wade Burns serving as the Principal Investigator/Project Director and Clay Bruckner serving as Staff Archaeologist. Christopher Guevara served as a Tribal Cultural Specialist (TCS) from the Omaha Tribe of Nebraska and Iowa. The Winnebago Tribe was invited to participate in the project, but were unable to attend.

During the survey of these areas, no new or previously documented cultural resources were encountered. However, nine historic structures were observed and are recommended as "not eligible" for nomination to the National Register of Historic Places (NRHP). As a result, they were not formally documented, and no specific avoidance measures are recommended for these locations. See the attached cultural resources report for further information.

Within the remaining 1,985 acres of inventory area, which were not surveyed, there are 30 cultural resource sites which are on file at the Nebraska SHPO and are located within or near (within 100' of) the inventory area. The results include five NRHP listed sites, 20 sites recommended as eligible or unevaluated, and five sites recommended as ineligible for inclusion on the NRHP. The proposed broadband project is designed to provide service to three historic structures listed on the NRHP (Sites DK00001, DK00113, and DX09001). The proposed project is currently routed around Site DX04-003, an NRHP listed city park, as well. Installation of the fiber optic line is not expected to impact any of these properties and no specific avoidance measures are recommended for these sites.



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Due to the lack of recent previous archaeological survey in the remainder of the inventory area, along with the high probability for cultural resources and/or human remains, the NTIA requires that the Winnebago Tribe of Nebraska maintain the currently planned route and remain within existing ground disturbances when working within or near (within 100' of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites (see attached cultural resources report). Archaeological and tribal monitoring will occur when construction is occurring within and near to (within 100' of) each the sites in Table 4 of the cultural resources report. Reach out to NTIA for copy of cultural resources report if you want to review. File was too large to send through TCNS.

BCA also conducted a literature search (see attached BCA23-1058a South Sioux City Geotech Bore letter). The literature searches indicated 52 projects overlapped with the project area in Nebraska.

Based on current design, the Iowa literature (files) searches revealed there were no actual sites, with defined boundaries documented within 150 feet of the proposed project area within Iowa. However, Historic Indian Locations (HILD) within 150 feet of the project area are included in Table 1 below. Iowa sites with undefined boundaries near the project include 13WD184 and 13WD189. Based on the file search results, the undefined site locations are approximately 200 feet from the project's centerline. The Iowa SHPO has one Notable Location documented within 150 feet of the proposed Project Area. That location is XX7906: Lewis and Clark Camp, which is also listed as HILD 1106.

Table 1: Iowa SHPO Historic Indian Locations within 150 feet of the Project Area

HILD	Description		
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957/958	Winnebago Tribe of Nebraska Property		
1106	Lewis and Clark Camp Lewis and Clark Expedition 17-20 Aug 1804  Also, has a Notable Location Number: XX7906: Lewis and Clark camp		
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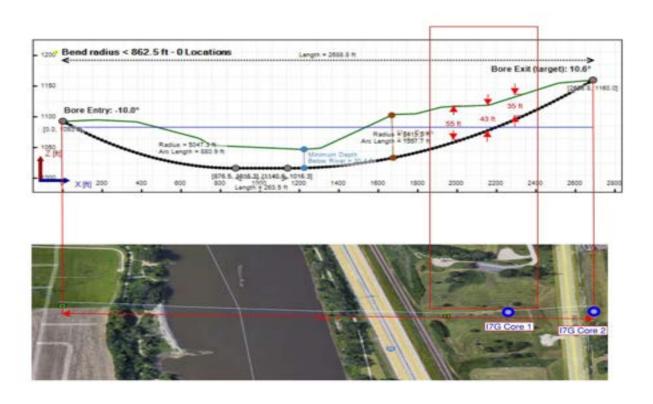


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determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

Based on the literature review, project plans, and consultation with the IA SHPO office for the exploratory bores identified above (IA SHPO number R&C 230897264), a geomorphological assessment was conducted for the planned horizontal boring with support from Impact7G, Inc. Two exploratory drill borings conducted on November 3, 2023, in South Sioux City, Iowa were also used to determine if the area had archeological potential and to ascertain the soil properties. See Exhibit 1 below for the locations and depths of these borings.

#### Exhibit 1



Core 1: East of S. Lewis Blvd – Fill over Loess There were no concerns from the Iowa SHPO Archeologist.

Core 2: West of S. Lewis Blvd – buried soil at 1.8 – 3.0 meters (5.9-9.84 feet) (Corrington Member)

The Iowa SHPO Archeologist stated this area could have historic properties.



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As a result, the boring profile was shifted to remain at depths in the area west of S. Lewis Blvd that would not disturb or impact any potential archaeological resources. Exhibit 2 below shows the planned bore path, entering on the Nebraska side and exiting on the Iowa side to the east of S. Lewis Blvd. The X-axis depicts length in feet and the Z-axis shows elevation in feet above mean sea level. The profile shows the bore path will stay relatively deep, with a depth in the area with potentially archaeological concern ranging from about 35 to 55 feet below ground surface. While the initial version shared with the Iowa SHPO Archeologist had different depths below ground surface shown due to calculations completed using the X-axis scale, these depths are still well below where the buried soil was identified during the geomorphological assessment. The Iowa SHPO agreed that if the drilling in the area west of S. Lewis Blvd is completed at such depths, no additional subsurface investigation was needed, and the project can proceed after formal Iowa SHPO Section 106 concurrence.

The buried soil with archeological potential will be avoided and no further action is recommended. Details and associated results for the geomorphological assessment are included in the attached report (Phase I Geomorphological Assessment with the Winnebago Tribe Broadband Project; Impact7G, Inc.; 2023). Reach out to NTIA for copy of geomorphological assessment report if you want to review. File was too large to send through TCNS.

Bore cross-section view

Bore Entry

Existing Grade

Bore Path

Bore Path

Exhibit 2

Consultation with your office and the Omaha THPO is currently underway and will continue throughout project construction. An Unanticipated Discovery plan is currently being developed if any resources are found during construction. No direct effects are anticipated to occur to NRHP-listed structure sites.

#### 4. Basis for Finding

Based on the previous coordination with your office, the Winnebago THPO, and Iowa and Nebraska SHPOs and our ongoing consultation and efforts to identify historic properties, the NTIA has made a Section 106 finding of No Adverse Effect to Historic Properties. As mentioned, NTIA will require the proposed project construction remain within existing ground



disturbances when working within or near (within 100'of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites. Archaeological and tribal monitoring is also required when construction is occurring within and near to (within 100' of) each these sites (Table 4 of the cultural resources report). I respectfully request your response to this Section 106 Determination within 30 days of receipt.

If you have questions or need any additional information, please contact me at jfitzpatrick@ntia.gov or 202-834-3123. I look forward to your reply.

Sincerely,

Josh Fitzpatrick Digitally signed by Josh Fitzpatrick Date: 2024.02.21 17:07:25 -06'00'

Josh Fitzpatrick
Environmental Program Officer
National Telecommunications and Information Administration
Department of Commerce

Attachments:

Figures
KMZ/SHP Files project alignment and staging areas
Construction Methods Guidance
APE Maps
Cultural Resources Literature Review and Intensive Pedestrian Survey
Impact 7G Geomorphological Investigation
Sioux City Geotech Bore Letter

From: Mark Parker <mark.parker@theomahatribe.com>

**Sent:** Tuesday, March 26, 2024 11:31 AM

**To:** Fitzpatrick, Joshua

Cc:Jarell Grant; Calvin Harlan; Joy Johnson; Sunshine Bear; Krista Schnepf; Deixler, JoshSubject:RE: Nebraska Broadband project going through the Winnebago tribal reservation

#### This Message Is From an External Sender

This message came from outside your organization. Please take care when clicking links or opening attachments. When in doubt, use the Report Phish button or contact IT to have the message analyzed.

Yes, the email will be our concurrence for this project. Thank you.

From: Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

Sent: Monday, March 25, 2024 5:55 PM

To: Mark Parker <mark.parker@theomahatribe.com>

**Cc:** Jarell Grant <jarell.grant@theomahatribe.com>; Calvin Harlan <calvin.harlan@theomahatribe.com>; Joy Johnson

<joy.johnson@winnebagotribe.com>; Sunshine Bear <sunshine.bear@winnebagotribe.com>; Krista Schnepf

<kschnepf@olsson.com>; Deixler, Josh <jdeixler@ntia.gov>

Subject: RE: Nebraska Broadband project going through the Winnebago tribal reservation

Thank you, Mr. Parker.

Is the email below considered the Omaha THPO's Section 106 concurrence for the Winnebago Tribal Broadband Connectivity Project? We can certainly add the Omaha THPO office into the inadvertent discovery plan and work with your office for construction monitoring as this project builds out.

I have copied Sunshine Bear from the Winnebago THPO office and Joy Johnson as well for visibility.

Thank you!

Josh Fitzpatrick

**Environmental Program Officer** 

National Telecommunications and Information Administration

Office of Internet Connectivity and Growth

Email: <a href="mailto:ifitzpatrick@ntia.gov">ifitzpatrick@ntia.gov</a>

Phone: 202.834.3123

From: Mark Parker <mark.parker@theomahatribe.com>

Sent: Monday, March 25, 2024 2:07 PM

To: Fitzpatrick, Joshua < ifitzpatrick@ntia.gov>

Cc: Jarell Grant < jarell.grant@theomahatribe.com >; Calvin Harlan < calvin.harlan@theomahatribe.com >

Subject: Nebraska Broadband project going through the Winnebago tribal reservation

Good afternoon,

I have reviewed the information regarding the broadband project that is planned to run through the Winnebago reservation and local areas. The methods of construction may be minimal disturbance, the areas in which it takes place is still a concern for the Omaha tribe. We feel that is in all parties best interest that we be involved in this project moving forward. Omaha ancestors either inhabited or hunted all the areas indicated in your maps and have unmarked family burials within them. As for the planned line itself, the disturbance may still uncover a lead to a discovery. We would ask also that in your discovery plan you would add the Omaha Tribe as well. I hope this email got to you in a timely manner and look forward to hearing from you.

Regards,

Mark Parker THPO Cultural Resource Lead The Omaha Tribe of Nebraska (402) 837-5391 ext. 433

### NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED BROADBAND PROJECT NOTIFICATION INFORMATION

Date: 02/23/2024

WINNEBAGO TRIBE OF NEBRASKA JOY JOHNSON 1401 CONSTITUTION AVE. WASHINGTON, DC 20230

#### Dear Applicant:

The National Telecommunications and Information Administration (NTIA) is using a modified version of the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS) as a means of expediting its Broadband grant programs. This notice is to inform you that the following authorized parties were sent information about the application that you submitted to NTIA through TCNS. The information was forwarded to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the notification that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs) who have set their geographic preferences on TCNS. For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Consistent with the FCC's rules as set forth in the NPA, NTIA requires that all Tribal Nations and NHOs listed below are afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below.

We note that the review period for all parties begins upon receipt of a full project submittal and notifications that do not provide this serve as information only. If, upon receipt, the Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures. In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from NTIA. NTIA will follow procedures consistent with those set forth in the FCC's Second Report and Order released on March 30, 2018 (FCC 18-30).

1. FCC Compliance Officer - Susie Fox - Spirit Lake Nation - (PO Box: 359) - Fort Totten, ND - sfox@spiritlakenation.com - 701-766-4031 - electronic mail

Details: The Spirit Lake Nation requirement for consultation is digitally through our departmental website. Our website is http://cms.spiritlakeconsulting.com

We do not accept mailed paper or emailed digital submissions of project material. To speed up our response time and to be in compliance with our environmental practices we do not accept paper submissions. All proposed projects must be processed through our website. Multiple people in our department need access to the project files and department notes to be able to do their work on the project. For organization, documentation, and financial regulation, all Section 106 project compliance work is archived in our system.

Just as the majority of State Historic Preservation Offices elect to have companies submit their proposed project directly to their office in the format they require, as a sovereign nation, we have the right to ask for the same courtesy.

We require that you submit Form 620 or 621, complete with all of its attachments to our website.

It would expedite the process of getting your project into compliance if you would wait and submit your proposed project to our department when Form 620/621 and all of its attachments are ready - particularly the complete cultural resource report. We waste quite a bit of time contacting companies and searching for the Form 620/621 if the proposed project is submitted to us with only a dot on the map.

If you have any questions or need more information please contact FCC specialist Susie Fox at sfox@gondtc.com and 701-230-2133, or THPO Erich Longie, PHD at thpo@gondtc.com and 701-766-4032.

2. THPO - Merle Marks - Crow Creek Sioux Tribe - (PO Box: 286) - Ft Thompson, SD - cchistory@midstatesd.net - 605-245-2221 - electronic mail

Details: The Crow Creek Sioux Tribe has no interest in collocation projects.

The

Crow Creek Sioux Tribe requests the following states be removed from our geographic areas of interest, Arkansas , Virginia , South Carolina , Ohio , North Carolina , Michigan, Illinois

- 3. Cultural Resources Consultant Brian Molyneaux Lower Brule Sioux Tribe 187 Oyate Circle Lower Brule, SD lowerbrulecro@gmail.com 605-473-8000 electronic mail
- 4. Tribal Historic Preservation Benjamin Young Rosebud Sioux Tribe .(PO Box: 750) Rosebud, SD benjamin1011young@gmail.com 605-747-4255 electronic mail and regular mail

  Details: Please send an archaeological survey or site inventory/map for the area within 1 mile of the APR for Pre-construction, collocation projects, and PTC Poles. The request gives the tribe an opportunity to comment on past projects that are now proposed as collocation projects. The Rosebud Sioux Tribe requests the legal description of the proposed site(township, range, section and topo map name). The RST requests a chronology if sites are within the 1-mile radius of the APE. The RST requests info of the Native American tribes identified having traditional use within the 1-mile radius of the APE. Ethnographic reports for the RST are requested. The RST may request a site visit for areas of significance to the tribe's history. PLEASE SEND ONLY HARD COPIES OF REPORTS BY MAIL. DO NOT EMAIL REPORTS. The Rosebud Sioux Tribe THPO at PO Box 809, Rosebud, S.D. 57570. ATTN: Ben Young and/or Bernadette Emery. Please include the TCNS number on all correspondence. Any questions call or email: Ben Young-Primary at benjamin1011young@gmail.com, 6057474255. Secondary-Bernadette Emery at bernadette.emery@rst-nsn.gov, 6057474255.
- 5. THPO/Director Colton Archambeau Yankton Sioux Tribe 800 Main Street SW (PO Box: 1153) Wagner, SD yst.thpo@gmail.com 605-384-3641 (ext: 1033) electronic mail
- 6. TCNS Compliance Reviewer Alicia Cloud Sisseton-Wahpeton Oyate of the Lake Traverse Reservation (PO Box: 907) Sisseton, SD SWO\_TCNS@swo-nsn.gov; virginia.m.w.oboyle@gmail.com 605-698-3584 electronic mail

Details: The Sisseton Wahpeton Oyate Nation requirement for consultation is digitally through our departmental website. Our website is http://sisseton.heritageconsultation.com

We do not accept mailed paper or emailed digital submissions of project material. To speed up our response time and to be in compliance with our environmental practices, we do not accept paper submissions. All proposed projects must be processed through our website. Multiple people in our department need access to the project files and department notes to be able to do their work on the project. For organization, documentation, and financial regulation, all Section 106 project compliance work is archived in our system.

Just as the majority of State Historic Preservation Offices electto have companies submit their proposed project directly to their office in the format they require, as a sovereign nation, we have the right to ask for the same courtesy.

We require that you submit Form 620 or 621, complete with all of its attachments to our website.

It would expedite the process of getting your project into compliance if you would wait and submit your proposed project to our department when Form 620/621 and all of its attachments are ready - particularly the complete cultural resource report. We waste quite a bit of time contacting companies and searching for the Form 620/621 if the proposed project is submitted to us with only a dot on the map.

If you have any questions or need more information please contact FCC specialist Alicia Cloud at SWO\_TCNS@swo-nsn.gov and 605-698-8306, or THPO Dianne Desrosiers at dianned@swo-nsn.gov and 605-698-8225.

7. THPO Assistant - Sara Childers - Flandreau Santee Sioux Tribe - 603 W. Broad Avenue (PO Box: 283) - Flandreau, SD - sara.childers@fsst.org - 605-864-1236 - electronic mail

Details: All correspondence must be done by email. We will no longer except anything by U.S. mail service.

8. THPO - Jon Eagle - Standing Rock Sioux Tribal Council - (PO Box: D) - Fort Yates, ND - j.eagle@standingrock.org - 701-854-8645 - regular mail

If the applicant/tower builder receives no response from the Standing Rock Sioux Tribal Council within 30 days after notification through TCNS, the Standing Rock Sioux Tribal Council has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder, however, must immediately notify the Standing Rock Sioux Tribal Council in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

- 9. THPO Stacy Settje Ponca Tribe of Nebraska 2523 Woodbine St (PO Box: PO box 288) Niobrara, NE ssettje@poncatribe-ne.org 402-857-3519 electronic mail
- 10. THPO Jarell Grant Omaha Tribe of Nebraska (PO Box: 368) Macy, NE jarell.grant@theomahatribe.com; mark.parker@theomahatribe.com 402-837-5391 (ext: 434) electronic mail Details: Please note we have updated procedures. Please email us at Omahatribefcctcns@outlook.com
- 11. Tribal Historic Preservation Office Misty Flowers Santee Sioux Nation of Nebraska 425 Frazier Ave N Ste 2 Niobrara, NE ssn.thpo@gmail.com 402-857-2302 electronic mail
- 12. CPD/THPO Sunshine Thomas-Bear Winnebago Tribe of Nebraska P.O. Box 687 Winnebago, NE thpo@winnebagotribe.com 402-878-3313 electronic mail
- 13. Historic Preservation Officer Matt Reed Pawnee Nation of Oklahoma PO Box 470 657 Harrison Street(PO Box: 470) Pawnee, OK jreed@pawneenation.org; jreed@pawneenation.org 918-762-2180 (ext: 220) electronic mail
- 14. THPO Amanda Hill Kiowa Indian Tribe THPO (PO Box: 369) Carnegie, OK thpo@kiowatribe.org; ahill@kiowatribe.org 580-654-2300 electronic mail

15. THPO - Lance Foster - Iowa Tribe of Kansas & Nebraska - 3345 B. Thrasher Rd. - White Cloud, KS - lfoster@iowas.org - 785-595-3258 (ext: 104) - electronic mail Details: We do not need to review collocations on buildings without any ground disturbance.

If the applicant/tower builder receives no response from the Iowa Tribe of Kansas & Nebraska within 30 days after notification through TCNS, the Iowa Tribe of Kansas & Nebraska has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder, however, must immediately notify the Iowa Tribe of Kansas & Nebraska in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

16. Deputy Tribal Historic Preservation Officer - Tara Mitchell - Prairie Band Potawatomi Nation - Government Center 16281 Q Road - Mayetta, KS - taramitchell@pbpnation.org - 785-966-4016 - electronic mail

If the applicant/tower builder receives no response from the Prairie Band Potawatomi Nation within 30 days after notification through TCNS, the Prairie Band Potawatomi Nation has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder, however, must immediately notify the Prairie Band Potawatomi Nation in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

- 17. TCNS Administrator kennis wheeler Kaw Nation 222 E. Grand Suite 313 Ponca City, OK Kenny.rksllc@gmail.com; Kenny.rksllc@gmail.com 405-443-7531 electronic mail
- 18. Tribal Historic Preservation Officer Elsie Whitehorn Otoe-Missouria Tribe of Indians 8151 Highway 177 Red Rock, OK tcns@omtribe.org; ewhitehorn@omtribe.org 580-723-4434 (ext: 202) electronic mail
- 19. THPO Liana Hesler Ponca Tribe of Indians of Oklahoma 121 White Eagle Drive Ponca City, OK liana.hesler@ponca-nsn.gov; shesler.thpo@gmail.com 580-382-6633 electronic mail and regular mail
- 20. TCNS Director Iowa Tribe Iowa Tribe of Oklahoma 222 E. Grand Suite 313 Ponca City, OK iowatribetcns@gmail.com; iowatribetcns@gmail.com 405-443-7531 electronic mail
- 21. Chief of Staff Audrey Lee Sac and Fox Nation 920883 S. Hwy 99, Building A Stroud, OK cos@sacandfoxnation-nsn.gov; sacandfoxtcns@gmail.com 918-968-3526 (ext: 1072) electronic mail and regular mail
- 22. THPO Aaron Brien Crow Tribe (PO Box: 159) Crow Agency, MT aaron.brien@crow-nsn.gov; john.birdinground@crow-nsn.gov 406-839-3817 electronic mail
- 23. Tribal Historic Preservation Officer Dyan Youpee Fort Peck Tribes Cultural Resources Department (PO Box: 1027) Poplar, MT tcnsinfo@fortpecktribes.net; tcnsinfo@fortpecktribes.net 406-768-2382 electronic mail and regular mail

Details: To ensure the Fort Peck Tribal Historic Preservation Officer and staff to review within a timely manner, please email:

#### TCNSinfo@fortpecktribes.net

with attached adequate mapping, TOPO map, archaeological/ethnographic report, R.O.W., road access, file searches, and other related material for the proposed site(s). Preferably NO animals, vehicles, or persons in the pictures. The better the quality of the aerial, landscape view, the greater chance of visibility to create a concurrence.

Failure to email TCNS projects to Fort Peck's TCNS staff @ TCNSinfo@fortpecktribes.net will be dismissed. Larger files and/or multiple projects can be mailed to Tribal Historic Preservation Office, Fort Peck Tribes, P.O. Box 1027, Poplar MT 59255. The Fort Peck T.H.P.O. cannot account for any information emailed or mailed to other than addressed above.

Requested on-site visitations will result in a \$400.00 fee. These fees are to be paid directly to the Traditional Cultural Specialist (T.C.S.), as will be invoiced by the Tribal Historic Preservation Office. All TCNS towers residing within the Fort Peck Indian Reservation will be required to have an on-site fee with a T.C.S. Should there be cultural resources near impact, or needing mitigation, additional costs may be charged for construction monitoring. Please allow the Fort Peck Tribes TCNS staff a minimum of 30 days (upon received by office) to respond by review. If there are further questions from the Fort Peck T.H.P.O., your contact information provided will beused for communication.

For off-reservation on-site requests; Fort Peck Tribes will parallel on-reservation procedures.

Reviews that continuously lack the proper information or adequate aerials, photos of the project area, will be sent a request fora T.C.S. to do the area recording for the Fort Peck Tribes T.H.P.O. standards.

To avoid delay, please provide this information as soon as possible. Applications will NOT be processed if the aforementioned requests are not met. We MUST have an email copy of this information to review each proposed site.

24. THPO - Josh Mann - Eastern Shoshone Tribe - (PO Box: 538) - Fort Washakie, WY - jmann@easternshoshone.org; sdurgin@easternshoshone.org - 307-335-2081 - electronic mail

Details: Thank you for the recent submittal regarding your TCNS project. Based on the location of your proposed project, the Eastern Shoshone Tribe does have an

interest in this project as required by the mandatesexpressed in 36 CFR 800, EO 13175, and the FCC Programmatic Agreement as Traditionally Associated

Peoples (TAPs) and a sovereign nation legal responsibility for heritage preservation on ancestral homelands. Please utilize our ESTHPO website for online

submittals. Our website address is: http://www.esthpo.com. Please navigate to our Services page. On the services page there will be a Submittal button

under the Section 106 Consultation literature. The submittal button will navigate you to the upload page where can submit relevant project files for our consultation review.

Your submission should include:

Appropriate SHPO determination or response letter Cultural Resource Report and or Archaeological Survey Report Photographic project site documentation Topographic or Quadrangle Maps Site Plans/Construction Drawings FCC Forms 620 and 621 Lat/Long Coordinates for the proposed project. Project Coordinator Contact Information

Our 30-day review period will commence once all project details havebeen submitted into our online database. If you have any questions, please feel free to

contact the Eastern Shoshone THPO: Joshua Mann, jmann@easternshoshone.org or by phone at: (307) 335-2081 or Shaylynn Durgin,

sdurgin@easternshoshone.org or by phoneat: (307) 335-2081. Thank you for consulting with the Eastern Shoshone Tribe.

The ancestors of the Eastern Shoshone Tribe lived a long and storied history across several states on their westward journey from the Western area to present-day Wyoming. This journey, confirmed by tribal oral history, ethnographies, and archaeological evidence, took place over multiple generations and through the present-day states of North Dakota,

South Dakota, Nebraska, Kansas, Colorado, Wyoming, Montana, Idaho, Washington, Oregon, California, Utah, Nevada, Arizona, NewMexico and Texas. Significant historical resources throughout this region include major sacred sites including burial sites, occupation areas, medicinal plant and resource collection areas, and other significant traditional cultural properties (TCPs). Therefore, based on the location of your proposed project, the Eastern Shoshone Tribe does have an interest in this proposed project and are requesting to be consulted on this proposed project as required bythe mandates expressed in 36 CFR 800, EO 13175, and the FCC National Programmatic Agreement as traditionally associated peoples (TAPs) and a sovereign nation with legal responsibility for heritage preservation on ancestral homelands.

25. THPO - Benjamin Ridgley - Northern Arapaho - 1010 Railroad Ave (PO Box: 67) - St. Stephens, WY - archtech.nathpo@gmail.com; pejuta.villa@northernarapaho.com - 307-856-1628 - electronic mail Details: PLEASE SEND AN ARCHAEOLOGICAL SURVEY OR SITE INVENTORY/MAP FOR THE AREA WITHIN 1 MILE OF THE APE FOR PRE-CONSTRUCTION, COLLOCATION PROJECTS AND PTC POLES. The request gives the tribe an opportunity to comment on past projects that are now proposed as collocation projects.

Email reports to: archtech.nathpo@gmail.com

Please include the TCNS number on all correspondence, reports, maps.

ANY QUESTIONS CALL OR EMAIL:

Benjamin Ridgley 3078561628 benjamin.ridgley@northernarapaho.com

Crystal C'Bearing crystal.cbearing@northernarapaho.com

26. THPO - Cheyanne St. John - Lower Sioux Indian Community of Minnesota - 39527 Res. Highway 1 (PO Box: 308) - Morton, MN - lowersiouxthpo@lowersioux.com - 507-697-6321 - regular mail

Details: 1. Please submit a brief project summary LETTER (1-2 pgs. of project detail, coordinates, location) to initiate consultation with Lower Sioux Indian Community, Tribal Historic Preservation Office, via US mail only.

- 2. Please confirm projects are within Lower Sioux Indian Community's identified areas of interest.
- 3. The Lower Sioux Indian Community in the State of Minnesota will respond to directly to applicant if additional forms, project information or report/findings are requested. (Do not send unless REQUESTED)
- 27. THPO Noah White Prairie Island Indian Community 5636 Sturgeon Lake Road Welch, MN celltower@piic.org 651-385-4175 electronic mail

If the applicant/tower builder receives no response from the Prairie Island Indian Community within 30 days after notification through TCNS, the Prairie Island Indian Community has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder, however, must immediately notify the Prairie Island Indian Community in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

28. THPO - Lawrence Plucinski - Bad River Band of Lake Superior Tribe of Chippewa Indians - (PO Box: 39) - Odanah, WI - thpo@badriver-nsn.gov; deputyTHPO@badriver-nsn.gov - 715-682-7123 - electronic mail

If the applicant/tower builder receives no response from the Bad River Band of Lake Superior Tribe of Chippewa Indians within 30 days after notification through TCNS, the Bad River Band of Lake Superior Tribe of Chippewa Indians has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder,

however, must immediately notify the Bad River Band of Lake Superior Tribe of Chippewa Indians in the event archaeological properties or human remains are discovered during construction, consistent with Section IX of the Nationwide Programmatic Agreement and applicable law.

29. Tribal Historic Preservation Officer - William Quackenbush - Ho-Chunk Nation - (PO Box: 667) - Black River Falls, WI - bill.quackenbush@ho-chunk.com - 715-284-7181 (ext: 1121) - electronic mail

30. THPO - Marvin DeFoe - Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin - 88455 Pike Road, HWY 13 - Bayfield, WI - Marvin.DeFoe@redcliff-nsn.gov; Edwina.Buffalo-Reyes@redcliff-nsn.gov - 715-779-3700 (ext: 4242) - electronic mail

Details: Boozhoo, we do not have the Red Cliff Portal site online anymore and apologize for the inconvenience.

If you have a project that has already been paid for or would like to voluntarily pay for, please email documents for project review to THPO@redcliff-nsn.gov. This address is only to be used by Consultants who are voluntarily paying for projects.

If you have any questions, please contact Marvin Defoe, THPO Manager at (715) 779-3700 Ext. 4244 or Edwina Buffalo-Reyes, THPO Assistant at (715) 779-3700Ext. 4243.

31. THPO Dept - Rhonda Hayworth - Ottawa Tribe of Oklahoma - (PO Box: 110) - Miami, OK - ottawatcns.oto@gmail.com - 918-540-1536 - electronic mail

32. THPO - Sarah Thompson - Lac du Flambeau Band of Lake Superior Chippewa Indians - Tribal Historic Preservation Office (PO Box: 67) - Lac du Flambeau, WI - ldfthpo@ldftribe.com - 715-588-2139 - electronic mail Details: Effective Immediately:

Please send all submissions through email until further notice. Effective 3/23/2020

Please email all submissions to ldfthpo@ldftribe.com

Thank you

33. FCC Specialist - Gary LaFranier - Northern Cheyenne Tribe - (PO Box: 128) - Lame Deer, MT - gary.lafranier@cheyennenation.com - 406-477-8114 - electronic mail

Details: The Northern Cheyenne Tribe requirement for consultation is digitally through our departmental website. Our website is http://cms.cheyennenation.com

We do not accept mailed paper or emailed digital submissions of project material. To speed up our response time and to be in compliance with our environmental practices we do not accept paper submissions. All proposed projects must be processed through our website. Multiple people in our department need access to the project files and department notes to be able to do their work on the project. For organization, documentation, and financial regulation, all Section 106 project compliance work.

Just as the majority of State Historic Preservation Offices elect to have companies submit their proposed project directly to them in the format they require, as a sovereign nation, we have the right to ask for the same courtesy.

We require that you submit Form 620 or 621, complete with all of its attachments to our website.

It would expedite the process of getting your project into compliance if you would wait and submit your proposed project to our department when Form 620/621 and all of its attachments are ready - particularly the complete cultural resource report. We waste quite a bit of time contacting companies and searching for the Form 620/621 if the proposed project is submitted to us with only a dot on the map.

If you have any questions or need more information please contact FCC specialist Gary LaFranier at gary.lafranier@cheyennenation.com and 406-477-8114, or THPO Teanna Limpy at teanna.limpy@cheyennenation.com and 406-477-4839.

The information you provided was also forwarded to the additional Tribes and NHOs listed below. These Tribes and NHOs have NOT set their geographic preferences on TCNS, and therefore they are currently receiving tower notifications for the entire United States.

The information you provided was also forwarded to the following SHPOs in the state in which you propose to construct and neighboring states. The information was provided to these SHPOs as a courtesy for their information and planning.

34. Chief of Staff, Deputy SHPO - Theodore Hild - Illinois Historic Preservation Agency - 1 Old State Capitol Plaza - Springfield, IL - ted\_hild@ihpa.state.il.us - - electronic mail

35. SHPO - Dru Buntin - Acting Director, State Department of Natural Resources - (PO Box: 176) - Jefferson City, MO - MOSection106@dnr.mo.gov - 573-751-4732 - electronic mail

36. Deputy SHPO - David Kelly - Division of State Parks Director - (PO Box: 176) - Jefferson City, MO - MOSection106@dnr.mo.gov - 573-751-9392 - electronic mail

37. Deputy SHPO - Toni Prawl - State Historic Preservation Office (Missouri) - (PO Box: 176) - Jefferson City, MO - MOSection106@dnr.mo.gov - 573-751-7858 - electronic mail

38. SHPO Staff Member - John Swigart - Nebraska State Historical Society - 1500 R Street - Lincoln, NE - hn.hp@nebraska.gov - 402-416-0666 - electronic mail

TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. A particular Tribal Nation or SHPO may also set forth policies or procedures within its details box that exclude from review certain facilities (for example, a statement that it does not review collocations with no ground disturbance or that indicates that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the NTIA cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. The following information relating to the proposed project was forwarded to the person(s) listed above.

Notification Received: 02/14/2024

Notification ID: 276634 Project Number: 112822

Applicant: Winnebago Tribe of Nebraska

Applicant Contact: Joy Johnson

Project Type(s): Other (details in attachments)

Region(s) affected (State, County): IOWA, WOODBURY NEBRASKA, DAKOTA NEBRASKA, DIXON

### NEBRASKA, THURSTON NEBRASKA, WAYNE

Address or Geographical Location Description: Winnebago Tribe of Nebraska

If you have any questions or comments regarding the content of this notice, please contact NTIA at: TCNS@ntia.gov.



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### **Tower Construction Notification**

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FCC Site Map

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### **Tower Construction Notification Notification Replies**

Notifications Home
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There are 6 replies for Notification ID 276634:

#### **Reply Information**

Reply Posted: March 5, 2024 We have no interest in this site. However, if the Applicant discovers archaeological remains or resources during construction, the Applicant should immediately stop construction and notify the appropriate Federal Agency and the Tribe.

THPO Merle Marks,

Crow Creek Sioux Tribe

Reply Posted: March 4, 2024 We have an interest in this site and would like the applicant to contact us.

Sara Childers 605-370-2422

From:

From:

THPO Assistant Sara Childers, Flandreau Santee Sioux Tribe

Please email all information to sara.childers@fsst-nsn.gov

Reply Posted:

February 23, 2024

We have an interest in this site and would like the applicant to contact us.

Susie Fox 701-230-2133

From:

FCC Compliance Officer Susie Fox, Spirit Lake Nation

Please consider this our formal letter of interest in your proposed project. The Spirit Lake Nation requirement for consultation is digitally through our departmental website. Our website is http://cms.spiritlakeconsulting.com We do not accept mailed paper or emailed digital submissions of project material. To speed up our response time and to be in compliance with our environmental practices we do not accept paper submissions. All proposed projects must be processed through our website. Multiple people in our department need access to the project files and department notes to be able to do their work on the project. For organization, documentation, and financial regulation, all Section 106 project compliance work is archived in our system. Just as the majority of State Historic Preservation Offices elect to have companies submit their proposed project directly to their office in the format they require, as a sovereign nation, we have the right to ask for the same courtesy. We require that you submit Form 620 or 621, complete with all of its attachments to our website. It will save time if you wait and submit your proposed project to our department when Form 620/621 and all of its attachments are ready, particularly the complete cultural resource report. We waste quite a bit of time contacting companies and searching for the Form 620/621 if the proposed project is submitted to us with only a dot on a map. It would expedite the process of getting your project into compliance if you would consider submitting a complete files search to us. The SHPO has records of all known sites in the area of your proposed undertaking  $\square$  even the unevaluated, undetermined, and recommended ineligible sites. Nearly every single Native cultural resource that is identified by archaeologists is recorded as unevaluated and needing further evaluation. Without this complete list, nearly all Native sites are missed. With the complete SHPO file search, we can expedite your project by streamlining the evaluation process of the state □s site database and our tribal site register. The Spirit Lake Nation has a long and rich history in the area including oral histories going back millennia. Under 36 CFR 800 .4 we have the right to evaluate federal undertakings with the potential to effect cultural resources. Our unique knowledge of sites and their potential significance under the National and Tribal Register make it essential for us to evaluate all sites within the area of potential

effect. This is the very reason why we  $\square$  the Tribes  $\square$  are involved. The history, language, or religion of our people, the significance or sacredness of a place to us, our important people associated with these places, and our ongoing traditional uses of a location. If youhave any questions or need more information please contact FCC Compliance Susie Fox at sfox@gondtc.com and 701-230-2133, or THPO Kenneth Graywater Jr. (KJ) at thpo@gondtc.com and 701-766-4032. Thank you for  $\square$ ensuring tribal cultural properties and other sacred sites of a historic nature are protected in a manner respectful of tribal sovereignty and consistent with the obligations of the Commission under the NHPA $\square$  (WT Docket No. 03-128 2004:38).

Reply Posted: February 23, 2024 We have no interest in this site. However, if the Applicant discovers archaeological remains or resources during construction, the Applicant should immediately stop construction and notify the appropriate Federal Agency and the Tribe.

From: FCC Specialist Gary LaFranier, Northern Cheyenne Tribe

Reply Posted: February 21, 2024

From: THPO Benjamin Ridgley, Northern Arapaho The Northern Arapaho THPO has reviewed your Consultation Request under the National Environmental Protection Act & National Historic Preservation Act, Section 106 process, regarding the proposed project & offers the following response: No Historic Properties in the Direct or Visual APE Our office has come to this determination by drawing conclusions from the report, ethnography, previous survey search from SHPO and maps depicting province of sites in regards to Direct and Visual APE. There are no cultural resources and no eligible historic properties within the APE. Currently, there are no properties of religious and cultural significance to the Northern Arapaho within the area of potential effect. However, if traditional cultural properties, rockfeatures, or human remains are found during excavation with any new ground disturbance, we request to be contacted and a report provided.

Reply Posted: February 21, 2024

From: THPO Sarah E Thompson, Lac du Flambeau Band of Lake Superior Chippewa Indians Please forward the following information: a short summary of all proposed activity within the project area, Legal Description of the Area of Potential Effects, Topo maps identifying the proposed area, and copies of any studies that have already been conducted regarding cultural resources and archeology in their full format, including reports on archeological and cultural sites identified. Should you have any questions, please feel free to contact me at 715-588-2139 or ldfthpo@ldftribe.com Please send requested information to: Sarah E. Thompson, THPO Lac du Flambeau Band of Lake Superior Chippewa Indians THPO P.O. Box 67 (Postal) 418 Little Pines (FedEx Mailing Address) Lac du Flambeau, WI 54538 Or ldfthpo@ldftribe.com

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TTY: 1-717-338-2824 - Required Browser Plug-ins

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**From:** Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

**Sent:** Tuesday, March 19, 2024 7:43 AM

**To:** Sunshine Bear; Joy Johnson; Krista Schnepf

**Subject:** FW: Winnebago Tribe of Nebraska Broadband Project: TCNS LDF Response

Follow Up Flag: Follow up Flag Status: Flagged

### This Message Is From an External Sender

This message came from outside your organization. Please take care when clicking links or opening attachments. When in doubt, use the Report Phish button or contact IT to have the message analyzed.

Per below, no concern from the Lac du Flambeau THPO. I believe that closes the loop on all outside tribal coordination.

Sunshine,

Please let me know if you concur with the Section 106 finding I sent you as well. I have not heard back from Jarell Grant yet either.

Thank you,

Josh Fitzpatrick
Environmental Program Officer
National Telecommunications and Information Administration
Office of Internet Connectivity and Growth

Email: jfitzpatrick@ntia.gov

Phone: 202.834.3123

From: ldfthpo <ldfthpo@ldftribe.com>
Sent: Tuesday, March 19, 2024 7:17 AM
To: Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

Subject: RE: Winnebago Tribe of Nebraska Broadband Project: TCNS LDF Response

This project is out of our current area of interest.

Sarah E. Thompson THPO



From: Fitzpatrick, Joshua < <a href="mailto:fitzpatrick@ntia.gov">fitzpatrick@ntia.gov</a>>

Sent: Friday, March 15, 2024 2:36 PM To: ldfthpo <ldfthpo@ldftribe.com>

**Cc:** Sunshine Bear <<u>sunshine.bear@winnebagotribe.com</u>>; Joy Johnson <<u>joy.johnson@winnebagotribe.com</u>>; Krista

Schnepf < kschnepf@olsson.com >

Subject: Winnebago Tribe of Nebraska Broadband Project: TCNS LDF Response

Hi Ms. Thompson:

I left a voicemail, but wanted to follow up with an email. Per below, you had commented on the Winnebago Tribe of Nebraska's proposed broadband project in TCNS. Are you wanting to see more information on this project? I believe the TCNS submittal has the information you had requested so I am just checking. I have copied the Winnebago THPO and management for visibility as well. Please let me know your thoughts.

Please forward the following information: a short summary of all proposed activity within the project area, Legal Description of the Area of Potential Effects, Topo maps identifying the proposed area, and copies of any studies that have already been conducted regarding cultural resources and archeology in their full format, including reports on archeological and cultural sites identified. Should you have any questions, please feel free to contact me at 715-588-2139 or ldfthpo@ldftribe.com Please send requested information to: Sarah E. Thompson, THPO Lac du Flambeau Band of Lake Superior Chippewa Indians THPO P.O. Box 67 (Postal) 418 Little Pines (FedEx Mailing Address) Lac du Flambeau, WI 54538 Or ldfthpo@ldftribe.com

Thank you,

Josh Fitzpatrick Environmental Program Officer National Telecommunications and Information Administration Office of Internet Connectivity and Growth

Email: jfitzpatrick@ntia.gov Phone: 202.834.3123

## Spirit Lake Tribe Tribal Historic Preservation Office PO Box 359 Fort Totten, ND 58335

To: JOSH FITZPATRICK

Date: MARCH 21, 2024

**Project:** WINNEBAGO TRIBE OF NEBRASKA

**TCNS**: 276634

FINDING OF NO EFFECT – While there are cultural resources in the vicinity of the proposed undertaking - no cultural resources should be adversely affected by your proposed undertaking. If cultural materials are discovered during construction please notify the Tribal Historic Preservation Office.

Under the authority of Section 1N06 of the National Historic Preservation Act of 1966 and in accordance with 36CFR800.2A4, after reviewing the materials you gave us for the project, the Spirit Lake Tribal Historic Preservation Department finds there should be no effect by the proposed undertaking on cultural resources.

The proposed undertaking is near known and documented cultural resources. Many of these resources are Native American sites. The vicinity of the project is significant to the Mini Wakan Oyate – Spirit Lake Tribe (People of Spirit Waters). For millennia, the Mini Wakan Oyate have cekiya (prayed), gathered phezuta (medicines), and eti (camped) the surrounding vicinity. Since the area around the project was HEAVILY utilized in prehistoric times, it is particularly important for the construction to remain in the areas designated in the archaeological survey. No further cultural resource work is necessary for this project as long as the areas outlined are adhered to. If additional work is necessary outside the areas designated, please notify our department and we can make the necessary arrangements.

Please be aware though, because cultural inventories are done at different times of the year and under different circumstances there can be variations in the effectiveness of pedestrian surveys. At times, certain resources are not visible. For instance, medicinal plants, some very significant to the ongoing traditions and lifeway of the Spirit Lake people, may only be seen in the spring or summer of the year. Other times, the grass is too deep for certain features or artifacts to be located through pedestrian surveys. With this in mind, we recommend that cultural resources not be forgotten with this letter of finding of no properties affected. If resources are located during construction please halt activity and notify our office.



# Spirit Lake Tribe Tribal Historic Preservation Office PO Box 359 Fort Totten, ND 58335

Thank you for consulting with the Tribal Historic Preservation Office. If you have any questions please feel free to contact me at 701.381-2009, or <a href="mailto:Thpo@gondtc.com">Thpo@gondtc.com</a>

Kenneth Graywater Jr., Director SPIRIT LAKE TRIBE Tribal Historic Preservation Office



**From:** Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

**Sent:** Friday, April 5, 2024 11:40 AM

**To:** Krista Schnepf **Subject:** FW: 276634

**Importance:** High

Follow Up Flag: Follow up Flag Status: Flagged

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Hey Krista,

Here is one more response from the Northern Cheyenne THPO office of No effect for the Winnebago project.

Please reference in the EA and attach in appendix.

Thank you,

Josh Fitzpatrick Environmental Program Officer National Telecommunications and Information Administration Office of Internet Connectivity and Growth

Email: jfitzpatrick@ntia.gov

Phone: 202.834.3123

From: gary.lafranier@cheyennenation.com <gary.lafranier@cheyennenation.com>

Sent: Friday, April 5, 2024 10:52 AM

To: Fitzpatrick, Joshua < jfitzpatrick@ntia.gov>

Subject: 276634 Importance: High

Good Morning,

276634 will have a determination of No Effect. Project may proceed as planned

Thank You,

Gary La Franier
FCC/ Section 106 Coordinator
(406) 477-8114

Lame Deer, MT. 59043

From: Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>
Sent: Wednesday, April 24, 2024 6:28 PM

To: Krista Schnepf

**Subject:** Fwd: Reply to Proposed Tower Structure (Notification ID: 276634) - Email ID #8808900

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From: towernotifyinfo@fcc.gov <towernotifyinfo@fcc.gov>

**Sent:** Wednesday, April 24, 2024 8:26:06 AM **To:** Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

 $\textbf{Cc:} \ tcns.fccarchive @ fcc.gov < tcns.fccarchive @ fcc.gov >; \ taramitchell @ pbpnation.org < taramitchell @ pbpnation.org >; \\$ 

raphaelwahwassuck@pbpnation.org <raphaelwahwassuck@pbpnation.org>

Subject: Reply to Proposed Tower Structure (Notification ID: 276634) - Email ID #8808900

Dear Director, Grants Management and Complian Jennifer Duane Ms,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from Deputy Tribal Historic Preservation Officer Tara Mitchell of the Prairie Band Potawatomi Nation in reference to Notification ID #276634:

Based on your description we are unaware of any potential resources or sites affected in this area. This is not to say that such a site may not exist, just that this office does not have any available information on the area(s) at this time. We request to receive communication regarding the proposed project. If human remains or archaeological materials are exposed as a result of project activities then work must halt and the Tribe must be included in any further discussion regarding the treatment and disposition of the findings prior to their removal. Tara Mitchell, Deputy Tribal Historic Preservation Officer, will be the primary contact. Her contact information is 785-966-3984 or email TaraMitchell@pbpnation.org.

For your convenience, the information you submitted for this notification is detailed below.

**Application Details** 

-----

Notification ID: 276634 Project Number: 112822

Applicant: Winnebago Tribe of Nebraska

Applicant Contact: Joy Johnson

Project Type(s):

Other (details in attachments)

Region(s) affected by the proposed broadband project:

IOWA, WOODBURY
NEBRASKA, DAKOTA
NEBRASKA, DIXON
NEBRASKA, THURSTON
NEBRASKA, WAYNE

Address or Geographical Location Description: Winnebago Tribe of Nebraska

From: Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>
Sent: Wednesday, April 24, 2024 6:27 PM

To: Krista Schnepf

**Subject:** Fwd: Reply to Proposed Tower Structure (Notification ID: 276634) - Email ID #8790861

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From: towernotifyinfo@fcc.gov <towernotifyinfo@fcc.gov>

**Sent:** Wednesday, April 24, 2024 8:24:41 AM **To:** Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>

 $\textbf{Cc:} \ tcns.fccarchive @ fcc.gov < tcns.fccarchive @ fcc.gov>; \ archtech.nathpo @ gmail.com < archtech.nathpo @ gmail.com>; \ archtech.nathpo @ gmail.com < archtech.nathpo @ gmail.com>; \ archtech.nathpo @ gmail.com < archtech.nathpo @ gmail.com>; \ archtech.nathpo @ gmail.com < archtech.nathpo @ gma$ 

pejuta.villa@northernarapaho.com <pejuta.villa@northernarapaho.com>

Subject: Reply to Proposed Tower Structure (Notification ID: 276634) - Email ID #8790861

Dear Director, Grants Management and Complian Jennifer Duane Ms,

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this email is to inform you that an authorized user of the TCNS has replied to a proposed tower construction notification that you had submitted through the TCNS.

The following message has been sent to you from THPO Benjamin Ridgley of the Northern Arapaho in reference to Notification ID #276634:

The Northern Arapaho THPO has reviewed your Consultation Request under the National Environmental Protection Act & National Historic Preservation Act, Section 106 process, regarding the proposed project & offers the following response:

No Historic Properties in the Direct or Visual APE

Our office has come to this determination by drawing conclusions from the report, ethnography, previous survey search from SHPO and maps depicting province of sites in regards to Direct and Visual APE. There are no cultural resources and no eligible historic properties within the APE. Currently, there are no properties of religious and cultural significance to the Northern Arapaho within the area of potential effect. However, if traditional cultural properties, rock features, or human remains are found during excavation with any new ground disturbance, we request to be contacted and a report provided.

For your convenience, the information you submitted for this notification is detailed below.

#### **Application Details**

-----

Notification ID: 276634 Project Number: 112822

Applicant: Winnebago Tribe of Nebraska

Applicant Contact: Joy Johnson

Project Type(s):

Other (details in attachments)

Region(s) affected by the proposed broadband project:

IOWA, WOODBURY NEBRASKA, DAKOTA NEBRASKA, DIXON NEBRASKA, THURSTON NEBRASKA, WAYNE

Address or Geographical Location Description: Winnebago Tribe of Nebraska



February 21, 2024

Betty Gillespie Deputy State Historic Preservation Officer History Nebraska State Historic Preservation Office 1500 R Street Lincoln, NE 68508

Subject: Section 106 Finding of No Historic Properties Affected Submitted to the Nebraska State Historic Preservation Office (SHPO) for the Winnebago Tribe of Nebraska (Federal Grant #NT22TBC0290076) Broadband Fiber Project

Dear Ms. Gillespie,

The Winnebago Tribe of Nebraska (Grantee) was awarded funding for a proposed Broadband Connectivity Project (Project) under the U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) Tribal Broadband Connectivity Program (TBCP). The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

Portions of the fiber-optic alignment also extend to communities just outside of the reservation, including the northern portion of Emerson (the southern half of Emerson is within the reservation; Dakota, Dixon, and Thurston counties), Homer (Dakota County), and Wakefield (Dixon and Wayne counties). In addition, the fiber-optic alignment extends north to the Western Iowa Technical Community College in Sioux City, Iowa and a very small portion outside of the southern Winnebago Reservation boundary in Iowa (Woodbury County). Refer to the attached Figures 2A-2F and 2K-2L for a depiction of the project location as it relates to SHPO jurisdiction



Washington, DC 20230

off the Reservation. The fiber-optic alignment includes two crossings under the Missouri River at approximately River Miles (RMs) 711.0 and 729.7. The southern crossing will connect those southern portions of the reservation on the Iowa side of the river.

The Project is expected to facilitate economic development and commercial activity, create remote employment and entrepreneurial opportunities, and increase availability of remote learning and telehealth services.

#### 1. Description of the Undertaking

The proposed action involves the construction of a multi-conduit, underground Fiber to the Premises (FTTP) system capable of 200 Mbps download speeds and 40 Mbps upload speeds. In total, approximately 235 miles of new fiber-optic cable would be buried within protective conduit along existing road right-of-way (ROW) and under the Missouri River in the project area. The buried fiber-optic line installation, which consists of the telecommunications cable and its protective conduit, would be performed using plowing and trenching construction techniques along roadways, and a directional boring machine would be used to install line under waterway, road, and railroad crossings. In addition, to facilitate operation and maintenance of the Fiber to the Home (FTTP) system, ancillary equipment would be installed along the alignment including optical line terminals (OLT), vaults, handholes, pedestals, markers, and network interface devices (NID).

Approximately 156 miles of the proposed installations would be performed using plowing or trenching construction techniques within existing road ROW. Plowed conduit would be installed using a track-type bulldozer equipped with a specialized single ripper that loosens the soil along the installation path. Conduit would be fed either from the plow bulldozer or from a separate truck-mounted reel through a plow chute attached to the ripper and laid directly at a nominal depth of approximately 36 to 48 inches, depending on permit requirements. A compaction machine would follow directly behind the plow bulldozer and restore the ground surface to its original contour. The installation path may be preripped by a second bulldozer, if necessary, to loosen the soil in areas where subsurface rock or other buried obstructions may be present. This second bulldozer may also, in some cases, be attached to the plow bulldozer to provide additional pulling power for the plowing operation. Ground disturbance associated with the plowed installation would be limited to an approximately 8-foot-wide corridor. In areas that are too narrow for plowing equipment to be used and where directional boring is not required to avoid surface disturbance, trenching construction techniques would be used for the conduit installations. Typically, a backhoe would be used to dig the required trench, although a compact excavator may be used in areas that are exceedingly narrow. The nominal trench depth would be the same as for plowed installations.

Approximately 78 miles of the proposed installations would be performed using directional boring construction techniques. Directional boring is a method used to install utility lines under waterways and roads and in other areas where the avoidance of surface disturbance is desirable. Directional boring machines are horizontal drilling rigs with a steerable drill bit. In general, each



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bore begins with the creation of a pilot hole (entry pit), through which the drill bit is guided by the operator as it progresses along the desired boring path toward the exit pit. After the pilot hole has been bored, conduit is attached to the end of the drill string, and the conduit is pulled back through the bore.

In addition to shorter road and railroad boring installations, the proposed action includes horizontal drilling underneath the Missouri River from Nebraska to Iowa at RM 711.0 (with a bore length of approximately 5,240 feet) and RM 729.7 (with a bore length of approximately 1,670 feet). For this installation, a drilling rig would be stationed at a fixed point, or entry pit, where the operator installs a piloted drilling bit while adding segments of drill rod at predetermined depths horizontally across the river. At the surface level, a locator assists the rig operator by locating the position and the depth of the piloted drilling bit as it moves away from the drilling rig. While drilling, the rig operator would continuously inject an inert clay-based fluid that lubricates and stabilizes the bore hole. This process would continue until the piloted drilling bit reaches the exit pit on the other side of the river. The piloted drilling bit would then be removed, and stages of larger reamers and drill rod would be added and pulled toward the rig operator to enlarge the hole in preparation for pipe installation. This method allows for the continuous monitoring of the bore hole and maintains a pathway until the pipe package is ready for installation. Once the hole is large enough for the determined diameter of pipe(s), the pipe package would be connected to the drilling rods and pulled across the river toward the drilling rig operator. The pipe package would then be secured at both the entry and exit pits, and the annular space around the pipe package would be filled/grouted if required or determined necessary and the ground surface restored to its original contour.

Exploratory drill borings were completed on July 26, November 3, and November 7, 2023, to determine the soil structure of the proposed drill holes. The drilling method used was a hollow-stem from 0 to 15 feet then a rotary drill to 100 feet (termination). This method was used to determine the stratigraphy of the soils to be certain that the borings under the river will hold. The general stratigraphy of the boring holes consisted of native sand and clay and imported clay fill material.

Attached please find both KMZ and a zipped folder with Shapefiles (projected in Coordinate System: NAD\_1983\_UTM\_Zone\_14N) of the proposed alignment as well as any staging/stockpile/laydown areas on both sides of the river. The Bureau of Indian Affairs (BIA) Great Plains Archeologist has surveyed these staging areas. These files also include known previously recorded resources and any previous archaeological surveys within 150 feet of the proposed centerline that was received as part of the file search. To aid in project understanding, a file outlining the proposed construction equipment and methods that are planned for the project is also attached. Please note, the Horizontal Bore/Pneumatic Drilling method will be limited to the borings under the Missouri River.

#### 2. Area of Potential Affect (APE)



Washington, DC 20230

The attached APE is the area within which an undertaking may affect a historic property, either directly or indirectly. The Area of Potential Effect is the maximum area of disturbance for the proposed project in Nebraska. The APE consists of a 15' buffer measured from either side of the Project centerline, as defined by the NTIA in consultation with the Nebraska SHPO.

#### 3. Efforts to Identify Historic Properties

A cultural resources literature review and intensive pedestrian survey was completed by Beaver Creek Archeology (BCA) for the Nebraska segment of the Winnebago Broadband project in Dakota, Dixon, Thurston, and Wayne Counties, Nebraska. See the attached cultural resources report based off the summary below.

The literature review covered the entirety of the proposed project area plus a one-mile buffer. The literature review revealed 201 previously documented cultural resources within a one-mile radius of the project area. Approximately 82 cultural resources were on file at the Nebraska SHPO, 81 through the Winnebago Tribal Historic Preservation Offices (THPO), and 38 were on file at the Iowa Office of State Archeology (OSA). See the attached cultural resources report for further information.

The NTIA, in consultation with the Nebraska SHPO, determined that certain locations in the inventory area must undergo intensive pedestrian survey. On December 19, 2023, BCA conducted the intensive pedestrian inventory, with Wade Burns serving as the Principal Investigator/Project Director and Clay Bruckner serving as Staff Archaeologist. Christopher Guevara served as a Tribal Cultural Specialist (TCS) from the Omaha Tribe of Nebraska and Iowa. The Winnebago Tribe was invited to participate in the project, but was unable to attend.

During the survey of these areas, no new or previously documented cultural resources were encountered. However, nine historic structures were observed and are recommended as "not eligible" for nomination to the National Register of Historic Places (NRHP). As a result, they were not formally documented, and no specific avoidance measures are recommended for these locations. See the attached cultural resources report for further information.

Within the remaining 1,985 acres of inventory area, which were not surveyed, there are 30 cultural resource sites which are on file at the Nebraska SHPO and are located within or near (within 100' of) the inventory area. The results include five NRHP listed sites, 20 sites recommended as eligible or unevaluated, and five sites recommended as ineligible for inclusion on the NRHP. The proposed broadband project is designed to provide service to three historic structures listed on the NRHP (Sites DK00001, DK00113, and DX09001). The proposed project is currently routed around Site DX04-003, an NRHP listed city park, as well. Installation of the fiber optic line is not expected to impact any of these properties and no specific avoidance measures are recommended for these sites.

Due to the lack of recent previous archaeological survey in the remainder of the inventory area, along with the high probability for cultural resources and/or human remains, the NTIA requires



that the Winnebago Tribe of Nebraska maintain the currently planned route and remain within existing ground disturbances when working within or near (within 100' of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites (see attached cultural resources report). Archaeological and tribal monitoring will occur when construction is occurring within and near to (within 100' of) each the sites in Table 4 of the cultural resources report (see attached cultural resources report).

Consultation with the Winnebago and Omaha THPOs is currently underway and will continue throughout project construction. An Unanticipated Discovery plan is currently being developed if any resources are found during construction.

#### 4. **Basis for Finding**

Based on the previous coordination with the Nebraska SHPO and our ongoing consultation and efforts to identify historic properties, the NTIA has made a Section 106 finding of No Adverse Effect to Historic Properties. As mentioned, NTIA will require the proposed project construction remain within existing ground disturbances when working within or near (within 100'of) the remaining 20 previously documented NRHP listed, eligible, or unevaluated cultural resource sites. Archaeological and tribal monitoring is also required when construction is occurring within and near to (within 100' of) each of these sites (Table 4 of the cultural resources report). The APE was determined by the NTIA in consultation with the Nebraska SHPO and Winnebago Tribe of Nebraska, but if SHPO prefers changes or adjustments to the APE area please alert the NTIA Environmental Program Officer. I respectfully request your response to this Section 106 Determination within 30 days of receipt.

If you have questions or need any additional information, please contact me at ifitzpatrick@ntia.gov or 202-834-3123. I look forward to your reply.

Sincerely,

Josh Fitzpatrick Digitally signed by Josh Fitzpatrick Date: 2024.02.21 11:33:54 -06'00'

Josh Fitzpatrick **Environmental Program Officer** National Telecommunications and Information Administration Department of Commerce

Attachments:

KMZ/SHP Files project alignment and staging areas

Construction Methods Guidance

APE Map

Cultural Resources Literature Review and Intensive Pedestrian Survey



Preserving the past. Building the future.

March 14, 2024

Josh Fitzpatrick
Environmental Program Officer
National Telecommunications and Information Administration
Department of Commerce
VIA EMAIL

RE: HP# 2311-033-01; Winnebago Broadbank Line, Section 106 Finding, Dakota, Dixon, and Thurston Counties, NE, Grant #NT22TBC0290076

Dear Josh Fitzpatrick,

Thank you for submitting the above-referenced project changes for review and comment by the Nebraska State Historic Preservation Office (NeSHPO). Our comment on this project and its potential to affect historic properties is required by Section 106 of the National Historic Preservation Act of 1966, as amended, and implementing regulations 36 CFR Part 800.

Based on the additional information provided, the proposed undertaking is unlikely to adversely affect any cultural resources listed on the National Register of Historic Places or eligible for such a listing. Therefore, the NeSHPO concurs with the determination that **No Adverse Effect to Historic Properties** is appropriate for this undertaking, and the project can proceed as planned so long as the following conditions are met:

- Proposed project construction needs to remain within existing ground disturbances when working within or near (within 100' of) the documented NRHP listed, eligible, or unevaluated cultural resource sites.
- Archeological and tribal monitoring is required when construction is occurring within and near to (within 100' of) each of the sites identified in Table 4 of the survey report.

These conditions were expressed in the request letter but are being provided in this letter to ensure all parties are aware of these conditions.

Please retain this correspondence and your documented finding in order to show compliance with Section 106 of the National Historic Preservation Act, as amended. If you have any questions, please contact me at betty.gillespie@nebraska.gov or 402-805-7392.

Sincerely,

Betty Gillespie

Interim Deputy SHPO

Section 106 Review & Compliance Coordinator

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From: Branden Scott < <a href="mailto:branden.scott@iowa.gov">branden Scott < <a href="mailto:branden.scott@iowa.gov">branden.scott@iowa.gov</a>>
Sent: Wednesday, February 7, 2024 7:32 AM

To: jfitzpatrick@ntia.gov

**Cc:** <u>sunshine.bear@winnebagotribe.com</u>; Krista Schnepf < <u>kschnepf@olsson.com</u>>;

shpo106@iowaeda.com

Subject: R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband

Fiber Project

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#### Mr. Fitzpatrick:

We have received your submittal for the above referenced federal undertaking. We provide the following response in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations 36 CFR 800.

Regarding this project, please see the following comments:

R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber Project - The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools,

medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

As it concerns the small section of the undertaking in Woodbury County, lowa at Sioux City, we concur with the federal agency and/or their designated representative (No Historic Properties Affected - No Effect). All other areas of this undertaking occur outside of Iowa or Section 106 consultation will be completed by the Winnebago Tribe of Nebraska.

You will not receive a hard copy of this email. It is the submitter's responsibility to maintain the official file of record. If you have any questions or comments, please feel free to contact our office.

With kind regards,
Branden K. Scott
Archaeologist, State Historic Preservation Office
<a href="mailto:branden.scott@iowaeda.com">branden.scott@iowaeda.com</a> | 515.348.6291 | culture.iowaeda.com/shpo

Iowa Economic Development Authority

April 19, 2024

State Historica Preservation Officer State Historical Society of Iowa 600 E Locust Street Des Moines, IA 50319

Subject: R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber Project

Dear Mr. Scott:

This email serves as an update and a follow-up to your email on February 7, 2024, providing concurrence with NTIA's finding of No Historic Properties Affected - No Effect for the referenced project.

Since then, the horizontal drilling approach for the South Sioux City bore location has been further evaluated based on calculations from geotechnical data. This evaluation indicates there is the **potential** for fracturing during the horizontal drilling process due to high pressures. To address this potential concern **if it occurs** during horizontal drilling, one vertical boring using a 6-inch outer diameter core would be installed to reduce the pressures and prevent or minimize fracturing. This boring would be advanced to the depth of the horizontal boring (approximately 50 feet below ground surface) using a mud rotary drill rig (or similar). A casing or conduit would be temporarily installed in the boring to reduce the pressures in the horizontal boring. When complete, the boring would be properly abandoned.

If needed, the vertical boring would be east of the railroad tracks and west of the previous core (I7G Core 1) completed for the geomorphological assessment in November 2023. In addition, the vertical boring location would be along the previously provided horizontal boring path, within the 25-foot buffer of the Area of Potential Affect (APE), and within 270 feet of I7G Core 1. The I7G Core 1 contained colluvium over Corrington in recovered cores. The Corrington Member occurred in the core from about 160 centimeters (5.25 feet) to about 3 meters (9.84 feet), and the lithology of this additional boring is expected to be similar. See attached figures showing the horizontal boring/fiber path, previous geomorphological assessment core locations, and projected area for the location of the potential vertical boring.

Based on this additional information to allow for this contingency, NTIA's determination of No Historic Properties Affected - No Effect remains unchanged. Your feedback on this update and your concurrence with the associated determination is requested.

Please let me know of any questions or if a call would be helpful to discuss.



Washington, DC 20230

Sincerely,

Josh Digitally signed by Josh Fitzpatrick

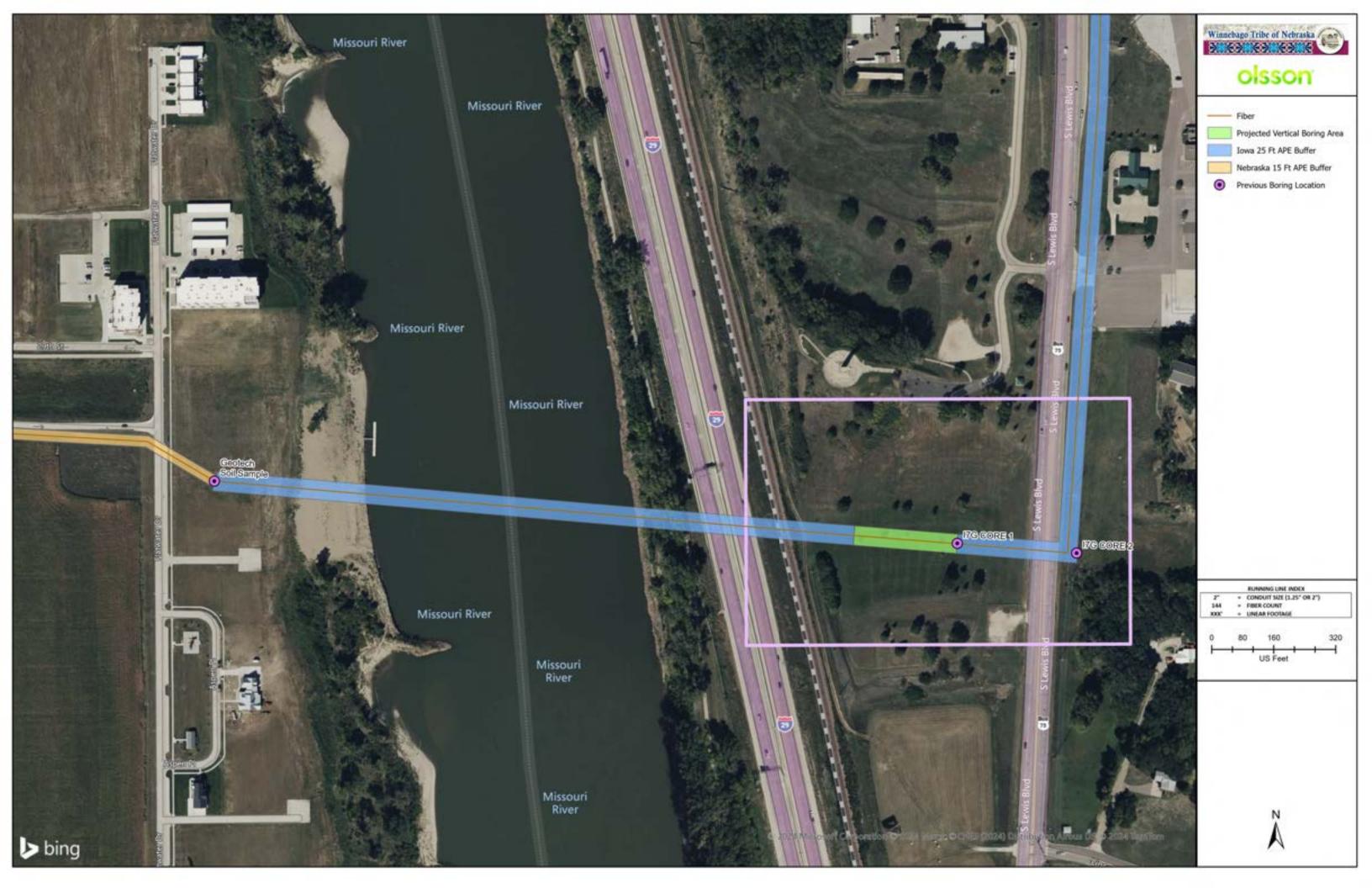
Date: 2024.04.19

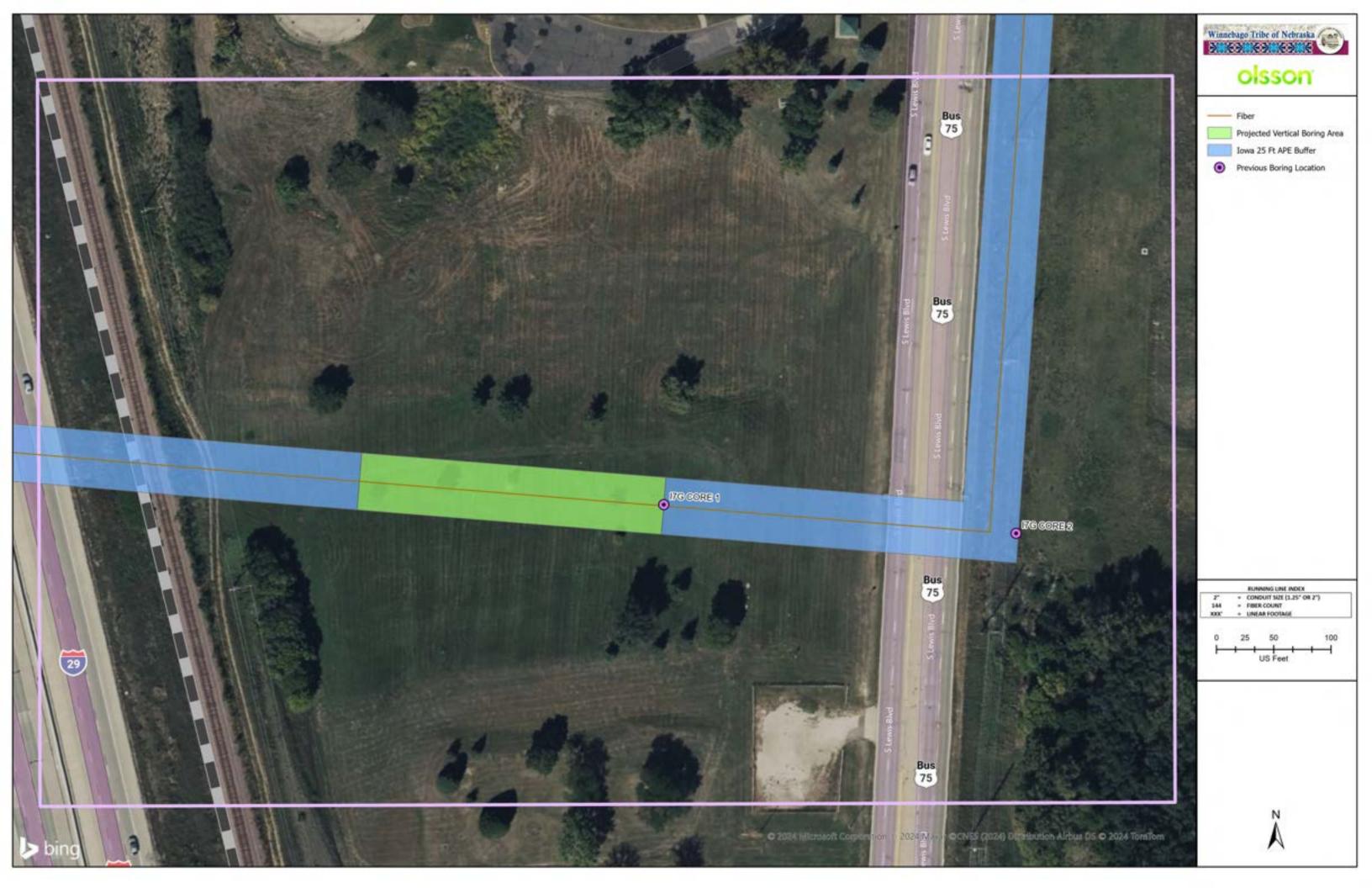
14:57:31 -05'00'

Josh Fitzpatrick Environmental Program Officer National Telecommunications and Information Administration Department of Commerce

#### **Attachments:**

Horizontal boring/fiber path, previous geomorphological assessment core locations Projected area for the location of the potential vertical boring.





From: branden.scott@email.iowaeda.com
Sent: Monday, April 22, 2024 12:37 PM

**To:** jfitzpatrick@ntia.gov

Cc: Krista Schnepf; sunshine.bear@winnebagotribe.com; shpo106@iowaeda.com

Subject: R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber

**Project** 

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#### Mr. Fitzpatrick:

We have received your submittal for the above referenced federal undertaking. We provide the following response in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations 36 CFR 800.

Regarding this project, please see the following comments:

R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber Project - The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

Project Update 4/22/24 submittal: Please see the attached proposed amendment to the Winnebago Tribal Broadband project. To address fracturing potential concern if it occurs during horizontal drilling, one vertical boring using a 6-inch outer diameter core would be installed to reduce the pressures and prevent or minimize fracturing.

The Impact7G Core #1 demonstrated intact soils associated with the Corrington Member of the DeForest Formation; an alluvial package that has potential for deeply buried archaeological sites. The Corrington Member deposit is buried below late Holocene alluvium. Our understanding of the scope of work change is that you will need to:

A) Access the location by driving across the surface. Given the soil of interest is deeply buried, significant archaeological resources are unlikely to be affected by this activity.

- B) Drill a vertical hole to the depth of the horizontal boring that is 6" in diameter. In our opinion, a 6" hole at this location is unlikely to affect historic integrity of unidentified archaeological sites that might exist within the soil. If activities require a larger than 6" excavation area (such as a receiving pit), then we would recommend Phase I archaeological investigations prior to drilling work.
- C) Should archaeological deposits be uncovered during the activities, however, we request that consultation be reopened to evaluate any effects to historic properties.

Concur with the federal agency and/or their designated representative (No Historic Properties Affected - No Effect).

You will not receive a hard copy of this email. It is the submitter's responsibility to maintain the official file of record. If you have any questions or comments, please feel free to contact our office.

With kind regards,
Branden K. Scott
Archaeologist, State Historic Preservation Office
branden.scott@iowaeda.com | 515.348.6291 | culture.iowaeda.com/shpo

Iowa Economic Development Authority

----- Original Message -----

From: Branden Scott [branden.scott@iowa.gov]

Sent: 2/7/2024 7:31 AM To: jfitzpatrick@ntia.gov

Cc: sunshine.bear@winnebagotribe.com; kschnepf@olsson.com; shpo106@iowaeda.com

Subject: R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber Project

Mr. Fitzpatrick:

We have received your submittal for the above referenced federal undertaking. We provide the following response in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations 36 CFR 800.

Regarding this project, please see the following comments:

R&C 230897264 - 00050141 - COM - Woodbury - Winnebago Tribe of Nebraska Broadband Fiber Project - The purpose of the Project is to deploy a broadband infrastructure network on the Winnebago Reservation and in the adjacent communities of Emerson, Homer, and Wakefield, Nebraska to connect unserved/underserved tribal households, businesses, and community anchor institutions (i.e., schools, medical facilities) to reliable and affordable high-speed Internet. The Project would provide qualified broadband service with a minimum speed of 200/40 megabits per second (Mbps) to approximately 600 unserved Native American households, 40 unserved Native American and/or tribal businesses, and 16 tribal anchor institutions. In addition, the Project includes a rate stabilization program designed to provide up to a maximum payment on broadband household monthly bills to alleviate the burden felt most heavily by those in poverty and to prevent disconnection of service.

The fiber-optic installation alignment is generally located on the Winnebago Tribe of Nebraska Reservation, which spans approximately 120,000 acres and is situated primarily in a rural area in the northern half of Thurston County in northeast Nebraska, 20 miles south of Sioux City, Iowa, and 80 miles north of Omaha, Nebraska. U.S. highways 75 and 77 join in the east-central area of the reservation, near the community of Winnebago. A small portion of the reservation is located directly east of the Iowa-side of the Missouri River west of Interstate 29 in Woodbury County.

As it concerns the small section of the undertaking in Woodbury County, lowa at Sioux City, we concur with the federal

agency and/or their designated representative (No Historic Properties Affected - No Effect). All other areas of this undertaking occur outside of Iowa or Section 106 consultation will be completed by the Winnebago Tribe of Nebraska.

You will not receive a hard copy of this email. It is the submitter's responsibility to maintain the official file of record. If you have any questions or comments, please feel free to contact our office.

With kind regards,
Branden K. Scott
Archaeologist, State Historic Preservation Office
branden.scott@iowaeda.com | 515.348.6291 | culture.iowaeda.com/shpo

Iowa Economic Development Authority