Jurisdiction Determination Report
for the
Ashtabula III Wind Energy Center

Ashtabula Wind III, LLC
Barnes County, North Dakota

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ACRONYMS AND ABBREVIATIONS

1987 Manual	1987 USACE Wetland Delineation Manual
AOI	Area of Investigation
CWA	Clean Water Act
Project	Ashtabula Wind III Energy Center
Ashtabula Wind III	Ashtabula Wind III, LLC
EPA	Environmental Protection Agency
GIS	Geographic Information System
GPS	Global Positioning System
HDD	Horizontal Directional Drilling
ID	Identification Number
Great Plains Regional Supplement	Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region
JD	Jurisdictional Determination
MW	Megawatt
NWI	National Wetlands Inventory
NWP	Nationwide Permit
NRCS	Natural Resource Conservation Service
NextEra	NextEra Energy Resources, LLC
NAD	North American Datum
NDGS	North Dakota Geological Survey
OHWM	Ordinary High Water Mark
RPW	Relatively Permanent Water
RWD	Routine Wetland Delineation
Tetra Tech	Tetra Tech EC, Inc.
TNW	Traditional Navigable Water
UE	Underground Electrical
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UTM	Universal Trans Mercator
water of the U.S.	water of the United States
WAAS	Wide Area Augmentation System

1.0 INTRODUCTION

Ashtabula Wind III, LLC (Ashtabula Wind III), a wholly-owned subsidiary of NextEra Energy Resources, LLC (NextEra) proposes to construct a wind energy facility near the town of Wilton in Barnes County, North Dakota (Figure 1). Tetra Tech EC, Inc. (Tetra Tech) was retained by Ashtabula Wind III to perform routine wetland delineations (RWD) for the Ashtabula III Wind Energy Center (Project). The Project will consist of 43 GE 1.6 megawatt (MW) turbines with a nameplate generating capacity of approximately 69 MW. A total of 43 turbine locations were investigated by Tetra Tech during the RWD.

Facilities and activities planned for construction and operation of the Project include:

- 43 turbines;
- private turbine access roads;
- underground electrical (UE) collector lines;
- equipment laydown yard; and
- junction boxes.

This report provides a description of wetlands and surface water bodies identified within the Area of Investigation (AOI). Included is a description of the Project area, methods used to delineate wetlands, field survey results, and references used to support the conclusions. This report also provides information to determine jurisdiction of wetlands and waterbodies. Appendices include detailed aerial and topographic views, field data forms, United States Army Corp of Engineers (USACE) Jurisdictional Determination (JD) Forms, and site photographs.

1.1 Site Visit and Regulatory Framework

The purpose of the site visits was to determine if any jurisdictional wetland areas are located within the boundaries of the Project. Jurisdictional areas are those that meet the definition of waters of the United States in the USACE regulations referenced in 33 CFR 328.3(a) for the purposes of Section 404 of the Clean Water Act (CWA). These jurisdictional areas are jointly regulated by the USACE and the United States Environmental Protection Agency (USEPA). Several classes of water bodies are subject to federal jurisdiction under the CWA, including traditional navigable waters (TNWs); non-navigable tributaries of TNWs that are relatively permanent waters (RPWs); and wetlands that directly abut RPWs, as described by the USACE Regulatory Guidance Letter (RGL) 07-01 (2007).

In the absence of adjacent wetlands, lateral jurisdiction over nontidal waters extends to the ordinary high water mark (OHWM). The definition of the OHWM is "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3(e)).

In the Ashtabula Wind III Project, jurisdictional resources are protected by the USACE as well as the USFWS. If development is to occur, the USACE also determines the type of permit, if any, that may be required by the CWA. The Valley City Wetlands Management District of the U.S. Fish and Wildlife Service (USFWS) manages multiple wetland easements within or near the Project area. Wetlands in USFWS easements on private property are held in perpetual easement under USFWS jurisdiction. The easements afford protection to wetland basins, which provide important seasonal habitat to waterfowl and

shorebird species during the spring migration and nesting seasons. The easements do not allow the burning, leveling, filling, and/or draining of easement wetlands or established buffers without a permit from the USFWS. However, landowners are permitted to till and farm these areas when they are not wet. No permanent impacts on these basins are allowed from wind farm construction activities without a permit from USFWS. If impacts on USFWS easements wetlands occur, the landowner is responsible for ensuring that all impacts are mitigated and the wetland is restored to the pre-existing condition.

2.0 SITE DESCRIPTIONS AND LOCATION

The Project will be constructed in portions of eight sections of land in Grand Prairie Township, six sections of land in Ashtabula Township, and 12 sections of land in Baldwin Township, as shown in Figure 1 and as described in Table 1.

Table 1
Township, Range and Sections Within Project Area

Township	Range	Township Name	Sections
143N	57W	Baldwin	3, 4, 8, 9, 10, 14, 15, 16, 17, 22, 27, 34
142N	57W	Grand Prairie	3, 10, 15, 18, 19, 20, 21, 22
142N	58W	Ashtabula	13, 24, 25, 26, 35, 36

The Project is located in Barnes County in the Central Black Glaciated Planes, Western Lake Section of the Central Lowland Province of the Interior Plains. The nearly level to gently rolling till plains of this area include many poorly defined drainage channels. Steep slopes are adjacent to the major stream valleys. Elevation ranges from 1,000 feet in the east with a gradual slope to about 2,050 feet in the west (NRCS 2006).

The Project area is primarily rural agricultural land in private ownership. Roughly 75-percent of the land within the project is actively cultivated farm field, less than 20-percent of the remaining area is given over to livestock production, with the remainder interspersed with small scattered woodlots and wooded draws, narrow grassed or vegetated drainages, fallow areas, and homesteads. The majority of cultivated areas have drain tile systems installed to improve agricultural production. Receiving drainages have been contoured to accommodate drainage system flows and to facilitate agricultural equipment crossing. Contoured drainage areas typically have a mix of native and non-native grasses and forbs. Untilled/fallow fields have a mixture of grasses, volunteer corn and wheat plants, wild carrot and mustards. Roadside edges consist of mowed and unmowed native and non-native grasses. Similar vegetated buffers exist as narrow riparian strips along creeks and drainage ditches within the cultivated agricultural areas (NRCS 2006).

Industrial developments in the Project area are limited to overhead and/or underground transmission lines and communication towers. Several transportation corridors occur within the Project area, including state highways, county roads, and other primary and secondary roads. The roads within the Project area

include asphalt-paved county and township roads, gravel surfaced roads and two-track grassed farm access roads and trails.

3.0 METHODS

The jurisdictional areas within the AOI were identified using methods described in the 1987 USACE Wetland Delineation Manual (Environmental Laboratory, 1987) (1987 Manual) and supplemental delineation guidance by the USACE, contained in the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (USACE 2008) (Great Plains Regional Supplement). These methods incorporate a three-parameter approach using vegetation, soils, and hydrology to identify the presence of wetlands. Off-site desktop determination methods were initially used to identify potential locations of wetlands and waterbodies, and subsequently on-site delineation methods were used to verify wetland locations and to support jurisdictional determinations. Some data presented was collected in April of 2008 (prior to issuance of the Great Plains Regional Supplement) during the investigation of wetland resources along UE collector line routes identified during planning of the Ashtabula II Wind Project. Some UE collector line routes for the Ashtabula Wind III Project will follow these same routes delivering electricity back to the substation. Investigation of these areas utilized the 1987 Manual which was the applicable USACE guidance in use at that time.

USACE jurisdiction was evaluated using the methodologies cited in the USACE Jurisdictional Determination Form Instruction Guidebook, including the December 2, 2008 Corps/EPA revised Rapanos guidance (USACE/USEPA, 2007).

3.1 Desktop Review

Prior to the field reconnaissance, available information was reviewed to identify areas that may exhibit characteristics of jurisdictional areas. This review included analysis of aerial photographs, topographic map(s), National Wetland Inventory (NWI) data and soil survey data for Barnes County. The following sections discuss the data used in the desktop review in more detail.

3.1.1 Aerial Photograph Review

Potential jurisdictional areas were identified based on a review of aerial photography obtained from the United States Geological Survey (USGS). The Project layout, dated May 14, 2010, was overlain onto digital versions of aerial photographs using ESRI Geographic Information System (GIS) software (Figure 2).

3.1.2 Topographic/National Wetlands Inventory/National Hydrography Dataset Map Review

Project facilities, dated May 14, 2010, were overlain onto digital versions of USGS 7.5-minute topographic maps with perennial, intermittent, and ephemeral streams and drainages using GIS software and are shown on Figure 3. The NWI map for the Project area was obtained from the North Dakota Geological Survey (NDGS) Natural Resources GIS (2008). According to this map, jurisdictional areas are present within the Project area. Some farm or stock ponds are present within the Project area, but they generally support limited amounts of wetland vegetation. The NWI data are presented in Figure 3.

3.1.3 Soil Survey Review

Soil survey data for Barnes County were obtained from the Natural Resource Conservation Service (NRCS) website. These maps depict the distribution of soil series and mapping units. This information was used to study the distribution of hydric soils within the Project area. Soil, as it relates to wetland

delineations, must be a hydric soil for the area to qualify as a wetland in accordance with the 1987 Manual. The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA Soil Conservation Service 1994). Soil types that were identified as hydric soils in the Project area are presented in Table 2. The distribution of hydric soils within the Project area are shown in Figure 4.

Table 2
Hydric Soils Within Project Area

MUSYM	Soil Description	Hydric
66B	Balaton Loam, 3 to 6 percent slopes	Yes
14C	Barnes-Buse loams, 6 to 9 percent slopes	Yes
14D	Barnes-Buse loams, 9 to 15 percent slopes	Yes
17B	Barnes-Svea loams, 3 to 6 percent slopes	Yes
18	Bearden silty clay loam, 0 to 2 percent slopes	Yes
23F	Buse-Barnes loams, 15 to 35 percent slopes	Yes
27	Divide loam, 0 to 2 percent slopes	Yes
50	Hamerly-Tonka complex, 0 to 3 percent slopes	Yes
54	Lamoure silt loam, channeled, 0 to 2 percent slopes	Yes
3	Parnell silty clay loam, 0 to 1 percent slopes	Yes
G12A	Southam silty clay loam, 0 to 1 percent slopes	Yes
2	Tonka silt loam, 0 to 1 percent slopes	Yes
77	Vallers loam, saline, 0 to 1 percent slopes	Yes
71	Vallers-Parnell complex, 0 to 1 percent slopes	Yes

4.0 ON-SITE RECONNAISSANCE AND DELINEATION

Tetra Tech biologists performed RWDs on April 26 – May 1, 2010 and again on May 18 – 21, 2010 to determine the presence and potential impacts on jurisdictional areas. Point-specific field data on soils, vegetation, and hydrology were collected and documented where appropriate. Some data was collected in 2008 (prior to issuance of the Great Plains Regional Supplement) during the investigation of wetland resources along UE collector line routes identified during planning of the Ashtabula Wind II Project. Some UE collector line routes for the Ashtabula Wind III Project will follow these same routes delivering electricity back to the substation. Investigation of these areas utilized the 1987 Manual which was the applicable USACE guidance in use at that time. Wetland and RPW boundaries were marked at 50 to 75-foot intervals (depending on the line of sight) with pin flags that were numbered sequentially. The proposed facility layout, dated May 14, 2010 that was investigated was provided to Tetra Tech by NextEra. The following AOI for proposed Project facilities was used to determine potential impacts:

- Turbine Pads: 250-foot radius;
- Private Turbine Access Roads: 250-foot wide area (125 feet on either side of centerline); and
- UE Collector Lines: 250-foot wide area (125 feet on either side of centerline).

Generally, if a linear feature such as a drainage or grass swale was investigated, transects were placed perpendicular to the feature at the locations of potential impact from Project facilities. Sampling plots were placed along each transect. These plots were the points in the field at which wetland characteristics

were inspected in accordance with the 1987 Manual. Typically, Sample Plot "A" was oriented within the wetland area. This determination was based on local topography, presence of defined bed and bank, undercutting, sediment deposition, presence of standing or flowing water or wetland vegetation. If positive indicators of wetland vegetation, hydrology, and hydric soils as defined by the 1987 Manual were present in Plot "A," data were collected from additional sample plots to determine the transition from wetland to non-wetland habitats. The delineated boundary of each wetland was established at the location where at least one of the above three parameters failed to meet wetland criteria. Sample Plot "B" conversely, was oriented in upland areas.

At each sampling plot, information was collected on soil, vegetation, and hydrologic characteristics. Soils were characterized to a depth of 12 to 18 inches using a Munsell Soil Color Chart, visual observation and standard soil texturing methodology to identify hydric or non-hydric soil characteristics as defined in *Field Indicators of Hydric Soils in the United States, A Guide for Identifying and Delineating Hydric Soils, Version 6.0* (USDA, 2006). For each sample, a 12 to 18 inch deep (8 inch diameter) test pit was excavated and allowed to stand for a sufficient duration to allow the surficial ground water to stabilize. From each test pit, a 2 x 6 x 12 inch pedon was extracted from the observation pit wall, split in half, measured, compared to Munsell Soil Color Charts (Gretag/Macbeth. 2000), and photographed with scale. Soil logs and photographs were recorded on the USACE wetland data form. At potential wetland resource areas where standing water was present, and the mapped NRCS soil type was classified as a hydric soil, soil test pits were not dug. In these instances, the mapped soil classification was relied upon for the classification of soil conditions at the site.

Vegetation within each sample plot was characterized to determine dominance of either hydrophytic or non-hydrophytic vegetation. Dominance was estimated based on the percent aerial coverage within the sample plot using a five-foot radius for herbaceous vegetation and a 30-foot radius for trees and shrubs. Wetland indicator status for all plant species follows the United States Fish and Wildlife Service Region 3 *National List of Plant Species That Occur in Wetlands* (Reed 1988). Hydrology was assessed by evaluating each sample plot for field indicators of wetland hydrology such as inundation, depth to free water in soil pits, soil saturation, water marks, drift lines, oxidized root channels, drainage patterns, and topographic position.

Plot location data were collected using Trimble©, GeoXH™ Global Positioning System (GPS) surveying units equipped with Terra Sync, Version 3.10 software. The Trimble unit uses the Wide Area Augmentation System which is a system of satellites and ground stations that provide GPS signal corrections. The plot locations were collected in Universal Trans Mercator coordinates referenced to the North American Datum 1983 datum.

5.0 RESULTS

Due to the large Project area, the results of the RWDs are discussed by Township name and Section number. Site names for potential wetland crossing locations investigated during the April 2008 field reconnaissance for the Ashtabula Wind Energy Center are identified with a location identification number (ID) consisting of the Township Number, and the Section number in which the specific site is located, followed by a site number within that particular Section. These locations all occur within Range 57W so specific identification of the Range was not included in the ID number. Following this nomenclature system, a location with the ID of 142-15-1, for example, would be found in; Township 142N, Range 57W, Section 15, Location 1. Site names for potential wetland crossing locations investigated during the May 2010 field reconnaissance are identified with a location identification number (ID) consisting of the

Township Number, the Range Number and the Section number in which the specific site is located, followed by a site number within that particular Section. Following this nomenclature system, a location with the ID of 142-57-19-4, for example, would be found in Township 142N, Range 57W, Section 19, Location 4.

Appendix A includes copies of field data sheets and site photographs taken of the investigated wetland resource areas, wetland data plot soil pits, and soil pedons collected to document delineation activities. Aerial photographs and USGS 7.5 Minute topographic maps of each section also are presented in Appendix A. Appendix B includes copies of the USACE JD Forms for jurisdictional areas within the Project area. A summary of investigated areas is presented in Table 3. A summary of jurisdictional area impacts is presented in Table 4.

5.1 Site Vegetation

Vegetation within the Project area consists of traditional row crop or herbaceous species typical of fallow fields and pastures. Areas identified as non-wetland grass swales are commonly vegetated with a mix of native and non-native grasses and forbs and are generally mowed on an annual basis to limit invasion by shrubs and trees. Wetland areas are vegetated with a variety of wetland plants typical of the central North Dakota ecotone such as a variety of sedge, grass, forb, and shrub and tree species. Dominant vegetation identified at each plot is presented on the field data sheets in Appendix A.

5.2 Project Soils

During the review of the soil survey data, seven hydric soils were identified as occurring within the Project area. Hydric soils within the Project area are presented in Table 2. The distribution of hydric soils within the Project is depicted in Figure 4.

5.3 Site Hydrology

The drainage networks in North Dakota are well established, with low stream gradients, scattered areas of poor drainage and original wetlands remaining. The Project area has been subject to historic landform and hydrology modification. Modifications to site hydrology have been made to facilitate agricultural commodity production by altering the hydrologic regime by modification of natural drainage contours. Smaller drainages have been channelized and incised and generally have narrow riparian corridors consisting of native and non-native grasses and some shrubs and small trees. Areas of the site in agricultural production have been drained to facilitate production of row-crops. Many of the upper reaches of drainages have been converted to non-wetland grass swales to control erosion and improve removal of excess soil moisture.

The Project area is sited along a broad flat ridge top dividing two small watersheds. Each of the Sheyenne and Maple Rivers serve as the main-stem, receiving drainages for these two watersheds. The Sheyenne River drains southeast along the western edge of the Project area while the Maple River Drains southeast along the eastern portion of the project area. There are several unnamed seasonally and perennially-flowing tributaries of each river found throughout the Project area. There are no TNWs found within the Project area.

The Maple River is found in the eastern portion of the site and drains to the southeast to the Sheyenne River, which is found in the western portion of the site. The Sheyenne River drains to the southeast before flowing into the Red River of the North, a traditionally navigable waterway. The Red River of the North

then flows to the north where it flows out of the United States entering the Canadian Province of Manitoba.

5.4 Wetlands and Streams

During the desktop review, 104 areas that appeared to exhibit wetland characteristics or characteristics of a water of the U.S. were identified. These areas were subsequently investigated during the RWDs conducted on April 26-30, 2008 and May 18-21, 2010 and are summarized in Table 3 and shown in Figures 2, 3 and 4. Wetland and riparian communities found in the Project area include emergent and scrub-shrub wetlands. The RWDs confirmed 35 areas within the Project met the delineative criteria for a wetland and/or tributary stream. Positive indicators for all three wetland parameters or indications of an OHWM were not identified in the remaining 69 features investigated. Areas identified as non-wetland grass swales did not possess positive wetland indicators for vegetation, hydrology and/or soils or the characteristics of an RPW; therefore, they did not meet the definition of jurisdictional areas according to the 1987 Manual and Great Plains Regional Supplement or USACE Jurisdictional Determination Form Instructional Guidebook. Of the 35 areas which met the delineative criteria for a wetland, 12 possessed the necessary significant nexus to a TNW to classify them as a water of the U.S and therefore under the jurisdiction of the USACE. The types of USACE jurisdictional waters include: Three jurisdictional wetlands at the headwaters of an RPW with a significant nexus to either the Sheyenne or Maple River (one of which is under perpetual USFWS wetland easement); five jurisdictional RPWs with seasonal flow; two jurisdictional RPWs with seasonal flow and adjacent wetlands of which is under perpetual USFWS wetland easement); and two jurisdictional RPWs with perennial flow. Due to the absence of a connection or significant nexus to a water of the U.S., the 20 remaining wetland features were determined to be isolated and therefore are not considered USACE jurisdictional wetlands or waters of the U.S according to the current federal guidance. Twenty-five of these isolated wetlands are held under perpetual USFWS wetland easement, the remaining seven locations are simply isolated wetlands. A summary of the wetlands and other water of the U.S. investigated during the field effort is presented in Table 4. A summary of wetlands and waters of the U.S. under the jurisdiction of the USACE is presented in Table 5.

In the section that follows, Tetra Tech provides summaries of each wetland/water of the U.S. encountered during the surveys. Tetra Tech discusses observations of the three parameters that are used to identify wetlands/waterbodies as described in the USACE manual and regional supplement. If the wetland/water would be affected by the current layout, Tetra Tech calculated the assumed impacts and makes specific recommendations to avoid impacts on the feature. Avoidance strategies include: using HDD instead of open cut methods for installation of UE collector cabling, moving access roads to avoid impacts on resource areas and/or providing barricade fencing and signage to identify wetland resource areas that should be protected from impacts by construction activities.

For the purposes of calculating potential temporary and permanent impacts, Tetra Tech used the following assumptions:

1) Private Access roads will have a permanent as-built width of 32 feet. For calculation of temporary impacts from access road construction, Tetra Tech assumed that a 42-foot wide area (an additional five feet on each side of the permanent access road) would be disturbed during construction. The additional area would be restored following completion of construction activities resulting in a final as-built road width of 32 feet.

2) Impact calculations for UE collector line installations are presented based on disturbance of a three-foot wide trench for UE collector line installation. If placing equipment within wetlands is required, the equipment should be equipped with low-ground pressure tracks or should be placed on mats when working within wetlands or RPWs to limit the compaction of wetland soils. Tetra Tech has recommended that UE collector lines be relocated to avoid all impacts on wetland resources. If re-location is not feasible, then HDD methodologies should be employed to avoid all impacts on wetland and RPWs.

3) Crossings of all wetlands (jurisdictional and non-jurisdictional) and other waters of the U.S with UE collection lines should be accomplished by using HDD methodologies to install the UE collector lines beneath the resource. The HDD bore would initiate and terminate outside of the wetland/RPW boundary. During the HDD activities, appropriate stormwater protections will be implemented to protect the resource areas from potential migration of soils and drilling fluids.

4) Based on widths of the public roads in the Project area no improvement of public roads will be required.

Township 142 N, Range 57 W (Grand Prairie Township)

Section 3

Location 142-3-1

This location is classified as a seasonal RPW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by broad-leaf cattail (*Typha latifolia*), and reed canary grass. The soil at this location has been classified by the NRCS as Balaton loam, a hydric soil. This location is the planned crossing location for a UE collector line. Tetra Tech recommends that collector line be installed using HDD to completely avoid impacts on the RPW. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 78 sq. ft. of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 10

Location 142-10-10

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the US. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, broad-leaf cattail, curly dock (*Rumex crispus*), and common reed (*Phragmites australis*). The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 200 feet southeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource

be avoided by all construction activities. To aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 142-10-11

This location is classified as a seasonal RPW. The vegetation associated with this location is primarily herbaceous and is dominated by broad-leaf cattail, common reed, prairie cordgrass (*Spartina pectinata*) and swamp smartweed (*Polygonum hydropiperoides*). The soil at this location has been classified by the NRCS as Balaton loam, a hydric soil. This location is the planned crossing location for a UE collector line. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 81 sq. ft. of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed slightly to the south to avoid multiple crossings of this RPW. If complete avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 142-10-12

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, common reed, swamp smartweed, and broadleaf cattail. The soil at this location has been classified by the NRCS as Vallers Bouldery, a hydric soil. This location lies within the AOI, well north of the UE collector centerline. There is no physical crossing of the isolated wetland at this location. Tetra Tech assumes that proper environmental protection measures will be implemented to assure no migration of any facility construction fill be discharged into jurisdictional wetland.

Section 15

Location 142-57-15-2

This location is classified as a seasonal RPW. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass. The soil at this location has been classified by the NRCS as Vallers loam, a hydric soil. This location is the planned crossing location for a UE collector line. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 66 sq. ft. of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 142-57-15-3

This location is classified as a seasonal RPW. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass. The soil at this location has been classified by the NRCS as Vallers-Parnell complex, a hydric soil. This location is the planned crossing location for a UE collector line. Tetra Tech recommends that the UE collector line be installed using HDD methodology to completely avoid impacts on the RPW. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 174 sq. ft. of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 17

Location 142-57-17-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass water sedge (*Carex aquatilis*) and narrowleaf cattail (*Typha angustifolia*). The soil at this location has been classified by the NRCS as Vallers-Parnell complex, a hydric soil. This area lies outside the AOI and no physical crossing is planned with this location. Tetra Tech assumes that proper environmental protection measures will be implemented to assure no migration of any facility construction fill be discharged into isolated wetland.

Section 19

Location 142-57-19-1

This location is classified as a wetland at the headwaters of an unnamed tributary of the Sheyenne River, a USACE jurisdictional RPW. The Sheyenne River is identified as a blue line stream on the USGS topographic map. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge, and narrowleaf cattail. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. Installation of a buried UE collector line is planned at this location. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 1,533 sq. ft. of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 20

Location 142-57-20-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge and narrowleaf cattail. The soil at this location has been classified by the NRCS as Barnes-Svea complex, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 57 feet north of the wetland boundary at its closest point. Given the proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-57-20-2

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by water sedge and narrowleaf cattail. The soil at this location has been classified by the NRCS as Vallers-Parnell complex, a hydric soil. Installation of a buried UE collector line is planned at this location. Installation of the collector line by trench would result in 567 sq. ft. of temporary impacts. As currently designed, construction of the UE collector line would result in temporary impacts. Tetra Tech recommends relocating the centerline of the UE collector to the north by 25-30 feet, beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Section 21

Location 142-57-21-1

This location is classified as an isolated wetland, which is under perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. This seasonally farmed wetland lacks typical hydrophytic vegetation; the vegetation associated with this location is primarily herbaceous and is dominated by corn (*Zea mays*). The soil at this location has been classified by the NRCS as Hammerly-Tonka complex, a hydric soil. Installation of a buried UE collector line is planned at this location. Installation of the collector line by trench would result in 162 sq. ft. of temporary impacts. The UE Collector line must be relocated to avoid impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-57-21-2

This location is classified as a wetland at the headwaters of an unnamed tributary of the Maple River, a USACE jurisdictional RPW. The Maple River is identified as a blue line stream on the USGS topographic map. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, prairie cordgrass, and narrowleaf cattail. The soil at this location has been classified by the NRCS as Hammerly-Tonka complex, a hydric soil. Installation of a buried UE collector line is planned at this location. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 525 sq. ft. of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 142-57-21-3

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, narrowleaf cattail, and water sedge. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. Installation of a buried UE collector line is planned at this location. Installation of the collector line by trenching would result in 627 sq. ft. of temporary impacts. Tetra Tech recommends relocating the centerline of the UE collector line to the north by 35-40 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-57-21-4

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge, and needle spikerush (*Eleocharis acicularis*). The soil at this location has been classified by the NRCS as Barnes-Buse loam, a hydric soil. Installation of a UE collector is planned at this location. Installation of the collector line by trenching would result in 225 sq. ft. of temporary impacts. Tetra Tech recommends relocating the centerline of the UE collector line to the north by 20-25 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Township 142N, Range 58W (Ashtabula Township)

Section 24

Location 142-58-24-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge and duck-weed (*Lemna minor*). The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 11 feet north of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-58-24-2

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass, water sedge and duck-weed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 2 feet northwest of the wetland boundary at it closest point. A portion of this wetlands which lies outside of the AOI is in a USFWS wetland easement. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities, which may be accomplished by using a narrowed construction corridor or by shifting the centerline slightly to the northwest of this isolated wetland. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-58-24-4

This location is classified as a jurisdictional RPW with perennial flow. It is an unnamed tributary of the Sheyenne River. This location is identified as a blue line stream on the USGS topographic map. The hydrophytic vegetation associated with this location is primarily herbaceous, dominated by reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. Installation of a UE collector line is planned at this location. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 144 sq. ft. of the perennial RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 26

Location 142-58-26-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass, soybean (*Glycine max*), water-smartweed (*Polygonum amphibium*), and panic grass (*Panicum virgatum*). The soil at this location has been classified by the NRCS as Bearden silty clay loam, a hydric soil. This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the south side of 23rd St SE and this wetland occurs on the north side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 35

Location 142-58-35-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. This location is under active soybean production; however, hydrophytes observed in the data plot included narrowleaf cattail, reed canary grass and water sedge. The soil at this location has been classified by the NRCS as Bearden silty clay loam, a hydric soil. Installation of an access road is planned at this location. As presently designed the access road would result in 3,776 sq. ft. of permanent impacts and 1,180 sq. ft. of temporary impacts. Tetra Tech recommends that the access road to turbines Alt 3 and Alt 4 be moved to the south 20 feet to avoid these potential impacts on the isolated wetland. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 142-58-35-2

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. This location is under active soybean production; however, hydrophytes observed in the data plot included water sedge. The soil at this location has been classified by the NRCS as Tonka silt loam, a hydric soil. This location lies inside the 250-foot wide AOI for an access road, turbine and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 66 feet west of the wetland boundary at it closest point and the access road is approximately 29 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned access road and UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 142-58-35-3

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by water sedge. The soil at this location has been classified by the NRCS as Tonka silt loam, a hydric soil. Installation of an access road is planned at this location. As presently designed that access road would result in 3,968 sq. ft. of permanent impacts and 1,240 sq. ft. of temporary impacts. Tetra Tech recommends that the access road to turbines 27 and Alt 3 be moved to the south 65 feet to avoid any potential impacts on the isolated wetland. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Township 143N, Range 57W (Baldwin Township)

Section 15

Location 143-15-1

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass, and willow (*Salix spp.*). The soil at this location has been classified by the NRCS as Southam silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 153-15-2

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass, curly dock and Pennsylvania smartweed (*Polygonum pensylvanicum*). The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-15-3

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass, Pennsylvania smartweed. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This area lies within the AOI for a

UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-15-4

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The non-hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-15-6

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The non-hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 22

Location 143-22-8

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans and narrowleaf cattail. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-22-9

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans and narrowleaf cattail. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is

necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-22-10

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. Installation of a UE collector is planned at this locations. Installation of the collector line by trenching would result in 402 sq. ft. of temporary impacts. The UE Collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-22-11

This location is classified as an isolated wetland, in perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass and prairie cordgrass. The soil at this location has been classified by the NRCS as Southam silty clay loam, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 32 feet east of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 27

Location 143-27-1

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass and narrowleaf cattail. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 168 sq. ft. of temporary impacts. The UE Collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-1b

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by willow, common reed, reed canary grass and narrowleaf cattail. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-2

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-3

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 204 sq. ft. of temporary impacts. The UE collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-4

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-5

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Tonka silty clay loam, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-27-14

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Hammerly-Tonka complex, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFWS wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 34

Location 143-34-2

This location is classified as an isolated wetland with no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by broadleaf cattail, reed canary grass, common reed and curly dock. The soil at this location has been classified by the NRCS as Southam silty clay loam, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 87 feet northeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-34-3

This location is classified as an isolated wetland with no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by broadleaf cattail, common reed and curly dock. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 10 feet east of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade

fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-34-5

This location is classified as an isolated wetland with no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass and willow. The soil at this location has been classified by the NRCS as Parnell silty clay loam, a hydric soil Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 147 sq. ft. of temporary impacts. Tetra Tech recommends relocating the centerline of the UE collector line to the west 35-40 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Section 4

Location 143-57-4-2

This location is classified as an isolated deep water habitat. The isolated deep water habitat has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass and water sedge. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 96 feet northwest of the wetland boundary at it closest point and the access road is approximately 82 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned access road and UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-4-3

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge, narrowleaf cattail, and smooth brome. The soil at this location has been classified by the NRCS as Barnes-Buse loam, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 233 feet southeast of the wetland boundary at it closest point and the access road is approximately 70 feet southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or

signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-4-4

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, and swamp smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loam, a hydric soil. This location lies inside the 250-foot wide AOI for an access road, turbine and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 127 feet northwest of the wetland boundary at it closest point and the access road is approximately 260 feet northwest of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-4-5

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush and swamp smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loam, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 306 sq. ft. of temporary impacts.. Dude, this is "Assumes no impacts" in the spreadsheet. Tetra Tech recommends relocating the centerline of the UE collector line to the east 20-25 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-4-6

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush and narrowleaf cattail. The soil at this location has been classified by the NRCS as Buse-Barnes loams, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 210 sq. ft. of temporary impacts. Tetra Tech recommends relocating the centerline of the UE collector line to the west 110-115 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that

the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 9

Location 143-57-9-2

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush and water sedge. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 13 feet north of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-9-6

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 48 feet south-southeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-9-7

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush, water sedge and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 46 feet northwest of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities.

To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-9-8

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, hard-stem bulrush, water sedge and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 31 feet north-northeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-9-15

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, narrowleaf cattail, and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the east side of 123rd Ave SE and this wetland occurs on the west side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-9-16

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by hard-stem bulrush, narrowleaf cattail, water sedge and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the east side of 123rd Ave SE and this wetland occurs on the west side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 10

Location 143-57-10-2

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by soybeans. The soil at this location has been classified by the NRCS as Barnes-Buse loam, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 300 sq. ft. of temporary impacts. The UE Collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 14

Location 143-57-14-1

This location is classified as a jurisdictional RPW with perennial flow. It is an unnamed tributary of the Maple River. This location is identified as a blue line stream on the USGS topographic map. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass and narrowleaf cattail. The soil at this location has been classified by the NRCS as Lamoure silt loam, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and no temporary or permanent impacts on the perennial RPW at this location are currently planned. The access road is approximately 13 feet south of the RPW boundary at it closest point. Given this proximity to the location of the planned access road, Tetra Tech recommends that the RPW be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the RPW boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-14-2

This location is classified as a jurisdictional RPW with seasonal flow and is an unnamed tributary of Maple River. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail and reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 93 sq. ft. of temporary impacts. Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW and adjacent wetlands. Installation via HDD methodology is not a Section 404 regulated activity and successful under-boring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the adjacent wetland.

Location 143-57-14-3

This location failed the hydrophytic test for wetland vegetation and is a non-wetland according the current USACE guidance. The location is currently in a perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by soy bean. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This area lies within the

AOI for a UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 15

Location 143-57-15-1

This location is classified as a jurisdictional RPW with seasonal flow and adjacent wetlands and is an unnamed tributary of Maple River. The adjacent wetland is also under perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, reed canary grass and water sedge. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. Installation of a UE collector line is planned at this location and would temporarily affect 231 sq. ft. The UE Collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-3

This location is classified as a wetland at the headwaters of an unnamed tributary of the Maple River, a USACE jurisdictional RPW. The Maple River is identified as a blue line stream on the USGS topographic map. This wetland is also under perpetual USFWS wetland easement. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. Installation of a buried UE collector line is planned at this location and would temporarily affect 1,146 sq. ft. The UE Collector line must be relocated to avoid all impacts on this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-4

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by soy bean. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This area lies within the AOI for an access road and UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-5

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated

by soy bean. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-6

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by water sedge, narrowleaf cattail and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This area lies within the AOI for a UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-7

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, narrowleaf cattail and water smartweed. The soil at this location has been classified by the NRCS as Hamerly-Tonka complex, a hydric soil. This area lies within the AOI for an access road and UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Location 143-57-15-8

This location is classified as an isolated wetland, with a perpetual USFWS wetland easement. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The vegetation associated with this location is primarily herbaceous and is dominated by wheat (*Triticum x aestivum*), narrowleaf cattail and water smartweed. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This area lies within the AOI for an access road and UE collector line. Complete avoidance of the USFW wetland is necessary. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel. Tetra Tech assumes that proper environmental protection measures will be implemented to ensure that there are no impacts on the wetland resource due to construction activities.

Section 16

Location 143-57-16-1

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge and hardstem bulrush. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 75 feet north of the wetland boundary at it closest point and the access road is approximately 208 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-16-3

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, water smartweed and hardstem bulrush. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 115 feet south-southeast of the wetland boundary at it closest point and the access road is approximately 223 feet south-southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-16-5

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail and reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 76 feet south-southeast of the wetland boundary at it closest point and the access road is approximately 56 feet south-southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-16-6

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by water smartweed, water sedge, hardstem bulrush and reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 92 feet north of the wetland boundary at it closest point and the access road is approximately 222 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-16-7

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail and reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 20 feet north of the wetland boundary at it closest point and the access road is approximately 31 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-16-8

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail, water smartweed and reed canary grass. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 18 feet north of the wetland boundary at it closest point and the access road is approximately 28 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Section 17

Location 143-57-17-1

This location is classified as a jurisdictional RPW with seasonal flow and adjacent wetlands and is an unnamed tributary of Sheyenne River. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by narrowleaf cattail. The soil at this location has been classified by the NRCS as Lamoure silt loam, a hydric soil. Installation of a UE collector line is planned at this location. As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 318 sq. ft. of the seasonal RPW and adjacent wetlands. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via HDD methodology to avoid impacts on the RPW and adjacent wetlands. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the adjacent wetland.

Location 143-57-17-4

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by water sedge, water smartweed and spiny cocklebur (*Xanthium spinosum*). The soil at this location has been classified by the NRCS as Barnes-Svea loams, a hydric soil. This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts on the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 32 feet north-northwest of the wetland boundary at it closest point and the access road is approximately 54 feet north-northwest of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

Location 143-57-17-6

This location is classified as an isolated wetland. The isolated wetland has no discrete or confined connection to a water of the U.S. This wetland lacks a significant nexus to a TNW. The hydrophytic vegetation associated with this location is primarily herbaceous and is dominated by reed canary grass, water sedge, water smartweed and hardstem bulrush. The soil at this location has been classified by the NRCS as Barnes-Buse loams, a hydric soil. Installation of a UE collector line is planned at this location. Installation of the collector line by trenching would result in 246 sq. ft. of temporary impacts Tetra Tech recommends relocating the centerline of the UE collector line to the south 170-180 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts on this isolated wetland. If relocating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts on the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. To avoid use of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.

6.0 CONCLUSIONS

Tetra Tech identified 70 wetland and waterbody resources in the Project area. Twelve locations are USACE jurisdictional wetlands or other waters of the U.S. that would be crossed where proposed Project facilities or activities (turbines, road construction or installation of UE collector lines) are currently planned. The majority of locations identified as USACE jurisdictional wetlands are situated adjacent to drainages or streams.

Twenty-five locations were identified that are currently held in wetland easements by the USFWS. Due to the requirements of the easement agreements these wetland must be avoided and no impacts are allowed to occur within the boundaries of areas identified as USFWS easement wetlands in Table 4.

As currently designed, the site layout will result in an estimated total of 10172 sq. ft. (0.18 acre) of permanent impacts and 7,744 sq. ft. (0.15 acres) of temporary impacts on all wetlands and other waters within the AOI. The construction of the proposed site layout would result in 4,296 sq. ft. (0.064 acre) of temporary impacts on USACE jurisdictional areas resulting from open-cut trench installation of UE collector line within these areas. The 7,744 sq. ft. (0.18 acre) of permanent impacts all occur from the construction of two private access roads through non-jurisdictional isolated wetlands. No permanent impacts on USACE jurisdictional areas would result from the construction of the site layout as currently planned.

Tetra Tech recommends avoidance measures to eliminate potential impacts on wetlands and RPWs in the Project. These recommendations include underboring UE collector lines beneath wetland areas, thereby eliminating temporary or permanent impacts from open-cut installation of UE collector lines within jurisdictional areas, avoidance of wetlands by shifting facility locations to nearby non-wetland areas of the AOI and the use of barricade fencing and/or signage to identify wetlands and RPWs to construction personnel thereby reducing the potential for inadvertent impacts by construction activities or personnel. This includes avoidance of two non-jurisdictional isolated wetlands (142-58-35-1 and 142-58-35-3). Implementation of the recommendations will eliminate all wetland impacts associated with the current site layout which could result from construction of this facility. Recommendations for eliminating these impacts on isolated wetlands are presented in the discussion of each resource area presented in Section 5.4 above and the Avoidance/Minimization column of Table 4.

If Tetra Tech's recommendations are implemented by the Project, there would be no impacts from construction on federally jurisdictional waters within the Project area. Based on the current federal guidance, notification of the proposed Project to the USACE-Omaha District is not required.

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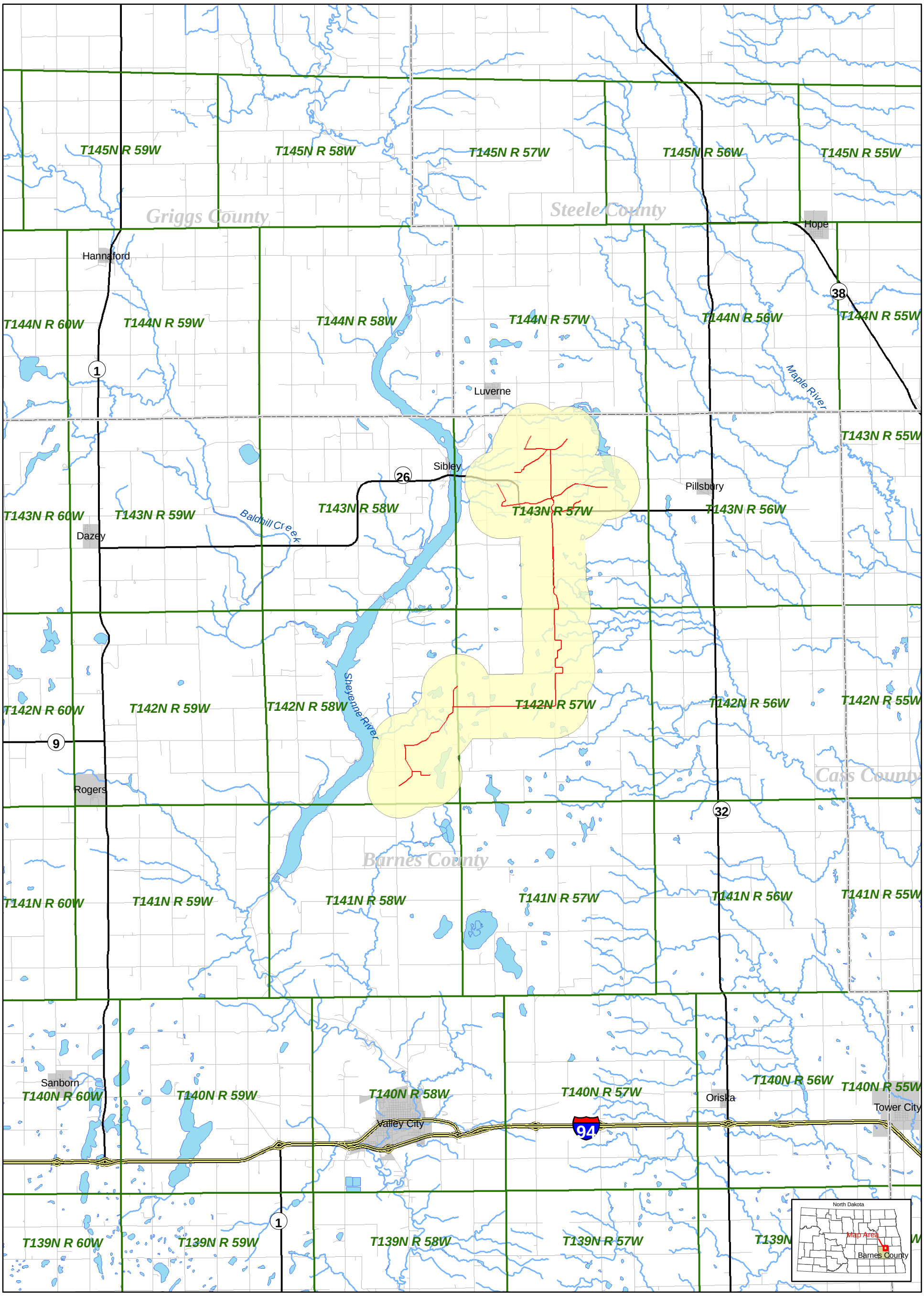

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TETRA TECH NEXTera ENERGY

Data Source

Facilities:

-AshtabulaIII_CollectionLines_20100514

Base Data:

-North Dakota Data Hub

Facility Layout
1 Mile Buffer
State Highway
Interstate
Road
Lake/Pond
River/Stream
County
Municipality

June 28, 2010

Ashtabula III
Wind Energy Center

Barnes County, North Dakota

Figure 1

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1:60,000

TETRA TECH

NEXTera ENERGY RESOURCES

Crossings

- Crossing Location
- Non-Jurisdictional Isolated Wetland
- USACE Jurisdictional
- USACE/USFWS Jurisdictional
- USFWS Easement

Facilities

- Turbine
- Collector
- Service Road
- Substation
- Area of Investigation

Base Data

- County
- Township
- Section
- Road
- River/Stream
- Lake/Pond
- USFWS Wetland Easement
- USFWS Easement
- USFWS Waterfowl Production Area

June 28, 2010

Ashtabula III Wind Energy Center

Barnes County, North Dakota

Project Aerial Photograph

Figure 2

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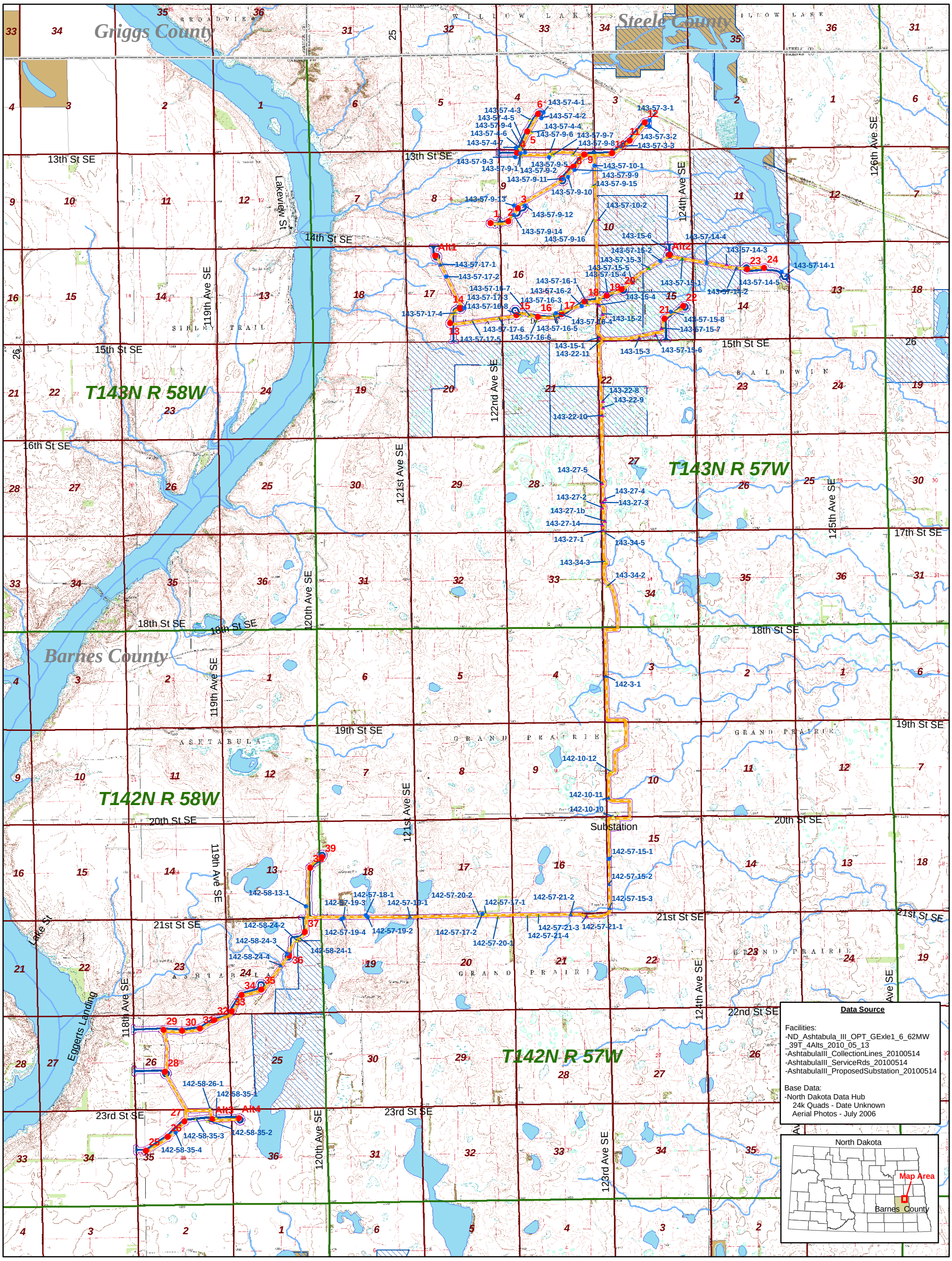

Data Source

Facilities:
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-AshtabulaIII_CollectionLines_20100514
-AshtabulaIII_ServiceRds_20100514
-AshtabulaIII_ProposedSubstation_20100514

Base Data:
-North Dakota Data Hub
24k Quads - Date Unknown
Aerial Photos - July 2006

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0 1,500 3,000 4,500 6,000 Feet

0 0.25 0.5 0.75 1 Miles

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TETRA TECH

NEXTera ENERGY RESOURCES

Crossings

- Crossing Location
- Non-Jurisdictional Isolated Wetland
- USACE Jurisdictional
- USACE/USFWS Jurisdictional
- USFWS Easement

Facilities

- Turbine
- Collector
- Service Road
- Substation
- Area of Investigation

Base Data

- County
- Township
- Section
- Road
- River/Stream
- Lake/Pond
- USFWS Wetland Easement
- USFWS Easement
- USFWS Waterfowl Production Area

June 28, 2010

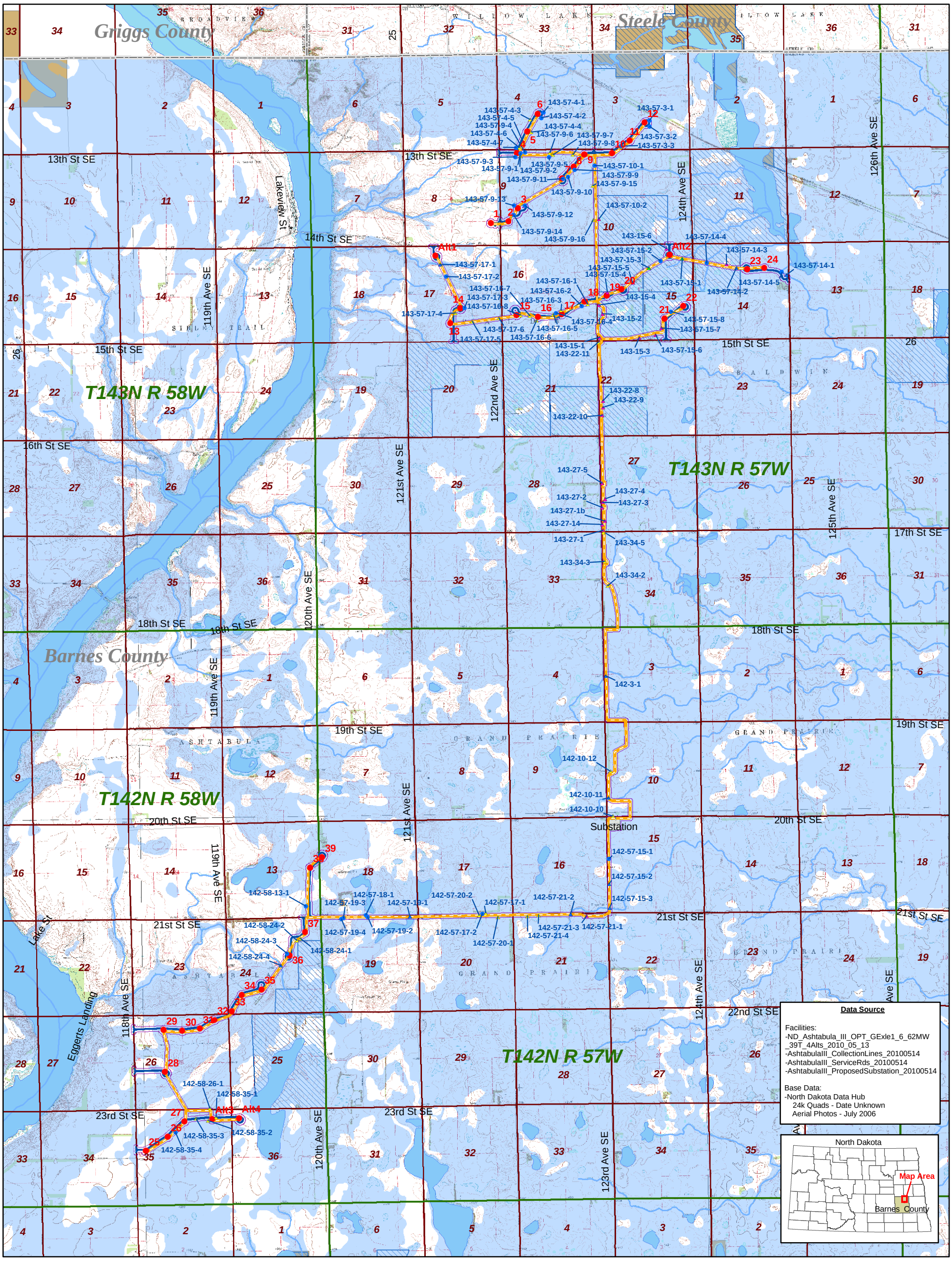
Ashtabula III
Wind Energy Center

Barnes County, North Dakota

Project USGS 7.5 Minute
Topographic with NWI Map

Figure 3

J:\TT\Projects\AshtabulaIII\ArcMap\Collinsville_060810\Fig2_Aerial - J.F.



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TETRA TECH

NEXTera ENERGY RESOURCES

Crossings

- Crossing Location
- Non-Jurisdictional Isolated Wetland
- USACE Jurisdictional
- USACE/USFWS Jurisdictional
- USFWS Easement

Facilities

- Turbine
- Collector
- Service Road
- Substation
- Area of Investigation

Base Data

- County
- Township
- Section
- Road
- River/Stream
- Lake/Pond
- USFWS Wetland Easement
- USFWS Easement
- USFWS Waterfowl Production Area
- Hydric Soil

June 28, 2010

Ashtabula III
Wind Energy Center

Barnes County, North Dakota

Hydric Soil Map

Figure 4

Table 3
Ashtabula III Wind Energy Center
Summary of Investigated Areas

Location ID	Facility Type	Jurisdictional Determination			Area Description
		Jurisdictional (Y/N)	WofUS Type	Jurisdictional Agency	
142-3-1	UE Collector	Y	RPW	USACE	Unnamed Tributary of Maple River with seasonal flow.
142-10-10	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-10-11	UE Collector	Y	RPW	USACE	Unnamed Tributary of Maple River with seasonal flow.
142-10-12	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-57-15-1	UE Collector	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
142-57-15-2	UE Collector	Y	RPW	USACE	Unnamed Tributary of Maple River with seasonal flow.
142-57-15-3	UE Collector	Y	RPW	USACE	Unnamed Tributary of Maple River with seasonal flow.
142-57-17-1	Outside AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-57-17-2	Within AOI	N	NA	Non-Jurisdictional	Farmed swale.
142-57-18-1	Within AOI	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
142-57-19-1	UE Collector	Y	Wetland	USACE	Herbaceous wetland with a hydrologic connection to an Unnamed Tributary of Sheyenne River.
142-57-19-2	UE Collector	N	NA	Non-Jurisdictional	Farmed swale.
142-57-19-3	UE Collector	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
142-57-19-4	Within AOI	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
142-57-20-1	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-57-20-2	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-57-21-1	UE Collector	Y	Wetland	USFWS	USFWS Wetland Easement, seasonally-farmed wetland, complete avoidance required.
142-57-21-2	UE Collector	Y	Wetland	USACE	Linear herbaceous wetland with a hydrologic connection to an Unnamed Tributary of Maple River.
142-57-21-3	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-57-21-4	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-58-13-1	Within AOI	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
142-58-24-1	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-58-24-2	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-58-24-3	Access Road	N	NA	Non-Jurisdictional	Farmed swale.
142-58-24-4	UE Collector	Y	RPW	USACE	Unnamed Tributary of Sheyenne River with perennial flow
142-58-26-1	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
142-58-35-1	Access Road	N	Wetland	Non-Jurisdictional	Isolated, seasonally farmed wetland.
142-58-35-2	Within AOI	N	Wetland	Non-Jurisdictional	Isolated, seasonally farmed wetland.
142-58-35-3	Access Road	N	Wetland	Non-Jurisdictional	Isolated, seasonally farmed wetland.
142-58-35-4	UE Collector	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-15-1	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-15-2	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-15-3	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-15-4	Within AOI	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-15-6	Within AOI	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-22-8	Within AOI	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-22-9	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-22-10	UE Collector	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-22-11	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-27-1	UE Collector	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-27-1b	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-27-2	Within AOI	Y	Farmed Depression	USFWS	USFWS Wetland Easement, complete avoidance required.
143-27-3	UE Collector	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-27-4	Within AOI	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-27-5	Within AOI	Y	Farmed Depression	USFWS	USFWS Wetland Easement, complete avoidance required.

Table 3 Ashtabula III Wind Energy Center Summary of Investigated Areas					
Location ID	Facility Type	Jurisdictional Determination			Area Description
		Jurisdictional (Y/N)	WofUS Type	Jurisdictional Agency	
143-27-14	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-34-2	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-34-3	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-34-5	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-3-1	Access Road	N	NA	Non-Jurisdictional	Farmed swale.
143-57-3-2	Within AOI	N	NA	Non-Jurisdictional	Farmed swale.
143-57-3-3	Access Road and UE Collector	N	NA	Non-Jurisdictional	Farmed swale.
143-57-4-1	Within AOI	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-4-2	Within AOI	N	NA	Non-Jurisdictional	Deep water aquatic habitat.
143-57-4-3	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-4-4	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-4-5	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-4-6	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-4-7	Within AOI	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-9-1	Within AOI	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-9-2	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-9-3	Within AOI	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-9-4	Within AOI	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-9-5	Within AOI	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-57-9-6	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-9-7	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-9-8	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-9-9	Within AOI	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-57-9-10	Within AOI	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-57-9-11	Access Road and UE Collector	N	NA	Non-Jurisdictional	Grasslands on top of hill.
143-57-9-12	Access Road	N	NA	Non-Jurisdictional	Rock pile.
143-57-9-13	Within AOI	N	NA	Non-Jurisdictional	Rock pile.
143-57-9-14	Access Road and UE Collector	N	NA	Non-Jurisdictional	Rock pile.
143-57-9-15	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-9-16	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-10-1	UE Collector	N	NA	Non-Jurisdictional	Farmed swale.
143-57-10-2	UE Collector	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-57-14-1	Within AOI	Y	RPW	USACE	Unnamed Tributary of Maple River with perennial flow.
143-57-14-2	UE Collector	Y	RPW	USACE	Unnamed Tributary of Maple River with seasonal flow.
143-57-14-3	Within AOI	Y	Farmed Depression	USFWS	Non-wetland according to USACE guidance. USFWS Wetland Easement, complete avoidance required.
143-57-14-4	UE Collector	N	NA	Non-Jurisdictional	Epehemeral drainage. Appears as a blue line stream on the USGS topographic map.
143-57-14-5	Within AOI	N	NA	Non-Jurisdictional	Non-wetland vegetated swale.
143-57-15-1	UE Collector	Y	RPW	USACE/ USFWS	Unnamed Tributary of Maple River with seasonal flow and adjacent wetlands. USFWS Wetland Easement, complete avoidance required.
143-57-15-2	UE Collector	N	NA	Non-Jurisdictional	Farmed swale.
143-57-15-3	UE Collector	Y	Wetland	USACE/ USFWS	Herbaceous wetland at head waters of a Unnamed Tributary of Maple River with seasonal flow. USFWS Wetland Easement, complete avoidance required.
143-57-15-4	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-57-15-5	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-57-15-6	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-57-15-7	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.

Table 3
Ashtabula III Wind Energy Center
Summary of Investigated Areas

Location ID	Facility Type	Jurisdictional Determination			Area Description
		Jurisdictional (Y/N)	WofUS Type	Jurisdictional Agency	
143-57-15-8	Within AOI	Y	Wetland	USFWS	USFWS Wetland Easement, complete avoidance required.
143-57-16-1	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-16-2	Within AOI	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-57-16-3	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-16-4	Within AOI	N	NA	Non-Jurisdictional	Nothing evident, farmed and effectively drained.
143-57-16-5	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-16-6	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-16-7	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-16-8	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-17-1	UE Collector	Y	RPW	USACE	Unnamed Tributary of Sheyenne River with seasonal flow and adjacent wetlands
143-57-17-2	UE Collector	N	NA	Non-Jurisdictional	Cattle pasture.
143-57-17-3	Within AOI	N	NA	Non-Jurisdictional	Rock pile.
143-57-17-4	Within AOI	N	Wetland	Non-Jurisdictional	Isolated wetland.
143-57-17-5	UE Collector	N	NA	Non-Jurisdictional	Farmed swale.
143-57-17-6	UE Collector	N	Wetland	Non-Jurisdictional	Isolated wetland.

AOI = Area of Investigation
RPW = Relatively Permanent Water
UE= Underground Electric
USGS = United States Geological Survey
WofUS= waters of the United States

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-3-1	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	26 ft	UE Collector	78	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 78 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.145695	-97.896438	583670.21	5221945.60	0.47	Data Form, Photographs, Rapanos Form
142-10-10	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	3128 sq ft	Within AOI	Assumes No Impacts		NA	This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the south side of 20th St SE and the isolated wetland occurs on the north side of the road, no physical crossing is planned at this location and no impacts are expected to result from construction activities.	47.124387	-97.895292	583790.61	5219578.91	0.01	Data Form, Photographs, Rapanos Form
142-10-11	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	27 ft	UE Collector	81	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 81 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.127139	-97.896247	583713.85	5219883.68	0.69	Data Form, Photographs, Rapanos Form
142-10-12	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	3746 sq ft	Within AOI	Assumes No Impacts		NA	This location lies within the AOI. There is no physical crossing at this location. Tetra Tech assumes that proper environmental protection measures will be implemented to assure no migration of any facility construction fill be discharged into jurisdictional wetland.	47.131183	-97.895690	583749.69	5220333.71	0.04	Data Form, Photographs, Rapanos Form
142-57-15-2	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	22 ft	UE Collector	66	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 66 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.114062	-97.896332	583727.90	5218430.46	0.04	Rapanos Form, Photographs
142-57-15-3	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	58 ft	UE Collector	174	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 174 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.110423	-97.896315	583734.88	5218026.10	0.84	Rapanos Form, Photographs

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-57-17-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	0 sq ft	Outside AOI	Assumes No Impacts		NA	This location lies outside the AOI. There is no physical crossing at this location. Tetra Tech assumes that proper environmental protection measures will be implemented to assure no migration of any facility construction fill be discharged into isolated wetland.	47.109909	-97.923890	581643.59	5217939.82	0.01	Data Form, Photographs, Rapanos Form
142-57-19-1	Wetland at headwaters of an Unnamed Tributary of Sheyenne River	Herbaceous Wetland	Wetland	511	UE Collector	1,533	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 1,533 square feet (sq. ft.) of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland.	47.109548	-97.940770	580363.50	5217882.13	0.54	Data Form, Photographs, Rapanos Form
142-57-20-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	5404 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 57 feet north of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.109260	-97.921173	581850.76	5217870.51	0.02	Data Form, Photographs, Rapanos Form
142-57-20-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	189	UE Collector	567	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the north 25-30 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.109577	-97.925370	581531.86	5217901.35	0.02	Data Form, Photographs, Rapanos Form
142-57-21-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	54	UE Collector	162	0	USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.109228	-97.901473	583345.45	5217887.75	0.02	Data Form, Photographs, Rapanos Form

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Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-57-21-2	Linear wetland at headwaters of an Unnamed Tributary of Maple River	Herbaceous Wetland	Wetland	525 sq ft	UE Collector	525	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 525 square feet (sq. ft.) of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland.	47.109580	-97.904987	583078.30	5217923.16	0.35	Data Form, Photographs, Rapanos Form
142-57-21-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	224	UE Collector	672	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the north 35-40 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.109434	-97.912142	582535.67	5217899.35	0.07	Data Form, Photographs, Rapanos Form
142-57-21-4	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	75	UE Collector	225	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the north 20-25 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.109329	-97.914623	582347.55	5217885.06	0.01	Data Form, Photographs, Rapanos Form
142-58-24-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	9590 sf	Within AOI	0	0	NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 11 feet north of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.106392	-97.965173	578516.73	5217506.66	0.01	Data Form, Photographs, Rapanos Form

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Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-58-24-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	12457 sf	Within AOI	0	0	NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 2 feet northwest of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.106120	-97.965963	578457.19	5217475.70	0.01	Data Form, Photographs, Rapanos Form
142-58-24-4	Unnamed Tributary of Sheyenne River	Stream	RPW- Perennial	48 ft	UE Collector	144	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 144 square feet (sq. ft.) of the perennial RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.102342	-97.969603	578186.50	5217052.20	5.33	Rapanos Form, Photographs
142-58-26-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	0 sq ft	Within AOI	Assumes No Impacts		NA	This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the south side of 23rd St SE and this wetland occurs on the north side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities.	47.080778	-97.985813	576987.62	5214639.74	0.01	Data Form, Photographs, Rapanos Form
142-58-35-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	118 ln ft	Access Road	1,180	**3,776**	NA	Tetra Tech recommends that the access road to turbines Alt 3 and Alt 4 be moved to the south 20 feet to avoid any potential impacts to the isolated wetland.	47.079412	-97.984426	577094.88	5214489.32	0.07	Data Form, Photographs, Rapanos Form
142-58-35-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	30830 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road, turbine and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 66 feet west of the wetland boundary at it closest point and the access road is approximately 29 feet north of the wetland boundary at it's closest point. Given this proximity to the location of the planned access road and UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.078898	-97.986158	576964.07	5214430.46	0.05	Data Form, Photographs, Rapanos Form
142-58-35-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	124 ln ft	Access Road	1,240	**3,968**	NA	Tetra Tech recommends that the access road to turbines 27 and Alt 3 be moved to the south 65 feet to avoid any potential impacts to the isolated wetland.	47.079228	-97.988875	576757.40	5214464.47	0.51	Data Form, Photographs, Rapanos Form
143-15-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	32578 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.197151	-97.896754	583538.65	5227634.83	0.01	Data Form, Photographs, Rapanos Form
143-15-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	21686 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.200732	-97.895999	583529.79	5228032.33	0.02	Data Form, Photographs, Rapanos Form
143-15-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	20770 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.197038	-97.887935	584234.99	5227656.38	0.04	Data Form, Photographs, Rapanos Form

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Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-15-4	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	5412 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.202083	-97.896829	583550.58	5228211.85	0.01	Data Form, Photographs, Rapanos Form
143-15-6	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	2931 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.210541	-97.881564	584670.81	5229167.03	0.01	Data Form, Photographs, Rapanos Form
143-22-8	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	36 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.187510	-97.896201	583647.07	5226580.94	0.01	Data Form, Photographs, Rapanos Form
143-22-9	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	948 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.186519	-97.896199	583648.81	5226479.51	0.01	Data Form, Photographs, Rapanos Form
143-22-10	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	134	UE Collector	402	0	USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.185346	-97.896441	583633.99	5226350.39	0.02	Data Form, Photographs, Rapanos Form
143-22-11	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	11581 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 32 feet east of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.196404	-97.897086	583541.55	5227580.10	0.02	Data Form, Photographs, Rapanos Form
143-27-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	56	UE Collector	168	0	USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.167853	-97.896564	583680.56	5224525.82	0.03	Data Form, Photographs, Rapanos Form
143-27-1b	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	22658 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.169246	-97.896151	583720.75	5224549.80	0.05	Data Form, Photographs, Rapanos Form
143-27-2	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	5881 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.171318	-97.896712	583609.04	5224784.06	0.01	Data Form, Photographs, Rapanos Form
143-27-3	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	68	UE Collector	204	0	USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.172116	-97.896574	583610.80	5224869.17	0.01	Data Form, Photographs, Rapanos Form
143-27-4	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	663 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.172578	-97.896069	583659.39	5224932.22	0.01	Data Form, Photographs, Rapanos Form
143-27-5	USFWS Farmed Wetland	Isolated Farmed Depression	Non-Wetland	6048 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.174991	-97.896644	583633.99	5225186.22	0.01	Data Form, Photographs, Rapanos Form
143-27-14	USFWS Farmed Wetland	Isolated Herbaceous Wetland	Isolated Wetland	5238 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.168722	-97.896735	583614.30	5224504.99	0.01	Rapanos Form

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						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-34-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	7176 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 87 feet northeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.159381	-97.895737	583701.90	5223467.25	0.08	Data Form, Photographs, Rapanos Form
143-34-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	17720 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 10 feet east of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.163097	-97.896357	583649.05	5223879.50	0.01	Data Form, Photographs, Rapanos Form
143-34-5	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	49	UE Collector	147	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the west 35-40 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.167458	-97.896573	583625.86	5224363.90	0.01	Data Form, Photographs, Rapanos Form
143-57-4-2	Deep Water Habitat	Deep Water Habitat	Other Isolated Water	11972 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a access road and a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 96 feet northwest of the wetland boundary at it closest point and the access road is approximately 82 feet north of the wetland boundary at it's closest point. Given this proximity to the location of the planned access road and UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.230669	-97.909067	582580.82	5231375.21	0.04	Data Form, Photographs, Rapanos Form

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						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-4-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	1855 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a access road and a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 233 feet southeast of the wetland boundary at it closest point and the access road is approximately 70 feet southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.230460	-97.911606	582388.92	5231349.27	0.01	Data Form, Photographs, Rapanos Form
143-57-4-4	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	2059 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road, turbine and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 127 feet northwest of the wetland boundary at it closest point and the access road is approximately 260 feet northwest of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.228535	-97.911358	582410.70	5231135.59	0.01	Data Form, Photographs, Rapanos Form
143-57-4-5	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	102	UE Collector	306	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the east 20-25 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.226979	-97.913166	582276.22	5230960.85	0.01	Data Form, Photographs, Rapanos Form
143-57-4-6	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	70	UE Collector	210	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the west 110-115 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.226200	-97.913997	582214.52	5230873.35	0.01	Data Form, Photographs, Rapanos Form

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						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-9-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	7760 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 13 feet north of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.224918	-97.913830	582229.17	5230731.03	0.01	Data Form, Photographs, Rapanos Form
143-57-9-6	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	6813 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 48 feet south-southeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.225348	-97.907251	582726.57	5230785.81	0.01	Data Form, Photographs, Rapanos Form
143-57-9-7	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	18806 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 46 feet northwest of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.225036	-97.906554	582779.81	5230751.93	0.01	Data Form, Photographs, Rapanos Form
143-57-9-8	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	20382 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for a UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 31 feet north-northeast of the wetland boundary at it closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.225016	-97.902111	583116.20	5230754.35	0.01	Data Form, Photographs, Rapanos Form
143-57-9-15	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	704 sq ft	Within AOI	Assumes No Impacts		NA	This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the east side of 123rd Ave SE and this wetland occurs on the west side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities.	47.220238	-97.897785	583451.17	5230227.98	0.01	Data Form, Photographs, Rapanos Form

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-9-16	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	9626 sq ft	Within AOI	Assumes No Impacts		NA	This location lies within the 250-foot wide AOI for an UE collector line. Because the UE collection will be installed on the east side of 123rd Ave SE and this wetland occurs on the west side of the road, no physical crossing of this wetland will occur and no impacts are expected to result from construction activities.	47.215057	-97.897796	583458.45	5229652.23	0.01	Data Form, Photographs, Rapanos Form
143-57-10-2	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	100	UE Collector	300	0	USFWS	USFWS wetland easement, complete avoidance is required. The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.215142	-97.896571	583551.10	5229663.00	0.01	Data Form, Photographs, Rapanos Form
143-57-14-1	Unnamed Tributary of Maple River	Stream	RPW- Perennial	25 ft	Within AOI	Assumes No Impacts		USACE	This location lies inside the 250-foot wide AOI for an access road and no temporary or permanent impacts to the perennial RPW at this location are currently planned. The centerline of the access road is approximately 13 feet south of the RPW boundary at it closest point. Given this proximity to the location of the planned access road, Tetra Tech recommends that the RPW be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the RPW boundary and protect it from inadvertent impacts by construction personnel.	47.206281	-97.854897	586721.08	5228723.75	5.97	Rapanos Form, Photographs
143-57-14-2	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	31 ft	UE Collector	93	0	USACE	Tetra Tech recommends that collector line be installed using HDD to completely avoid impacts to the RPW.	47.207424	-97.866104	585870.47	5228838.32	0.23	Rapanos Form, Photographs
143-57-14-3	USFWS Farmed Wetland	Farmed Depression	Non-Wetland	2328 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.207987	-97.868228	585708.73	5228898.59	0.00	Data Form, Photographs, Rapanos Form
143-57-15-1	Unnamed Tributary of Maple River	Intermittent Stream w/ adjacent wetland	RPW - Seasonal w/ Adjacent Wetland	77 sq ft	UE Collector	231	0	USACE/ USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.208983	-97.878108	584958.97	5228998.53	0.47	Data Form, Photographs, Rapanos Form
143-57-15-3	Wetland at headwaters of an Unnamed Tributary of Maple River	Herbaceous Wetland	Wetland	1152 sq ft	UE Collector	1,146	0	USACE/ USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.207637	-97.885527	584399.23	5228840.81	0.24	Data Form, Photographs, Rapanos Form
143-57-15-4	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	5642 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.204020	-97.894878	583696.76	5228428.85	0.00	Data Form, Photographs, Rapanos Form
143-57-15-5	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	1213 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.205257	-97.890104	584056.36	5228571.42	0.01	Data Form, Photographs, Rapanos Form
143-57-15-6	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	13840 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.197425	-97.884295	584508.77	5227707.33	0.01	Data Form, Photographs, Rapanos Form
143-57-15-7	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	9718 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.198441	-97.882985	584606.40	5227821.63	0.05	Data Form, Photographs, Rapanos Form
143-57-15-8	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	6474 sq ft	Within AOI	Assumes No Impacts		USFWS	USFWS wetland easement, complete avoidance is required.	47.200944	-97.880787	584768.88	5228102.21	0.01	Data Form, Photographs, Rapanos Form

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-16-1	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	10942 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 75 feet north of the wetland boundary at it closest point and the access road is approximately 208 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.202249	-97.899314	583363.61	5228227.30	0.01	Data Form, Photographs, Rapanos Form
143-57-16-3	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	7308 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 115 feet south-southeast of the wetland boundary at it closest point and the access road is approximately 223 feet south-southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.201369	-97.905266	582914.17	5228123.16	0.03	Data Form, Photographs, Rapanos Form
143-57-16-5	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	9979 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 76 feet south-southeast of the wetland boundary at it closest point and the access road is approximately 56 feet south-southeast of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.200744	-97.906998	582783.99	5228051.91	0.02	Data Form, Photographs, Rapanos Form
143-57-16-6	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	14612 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 92 feet north of the wetland boundary at it closest point and the access road is approximately 222 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.199847	-97.910754	582500.89	5227948.18	0.01	Data Form, Photographs, Rapanos Form

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-16-7	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	12135 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 20 feet north of the wetland boundary at it closest point and the access road is approximately 31 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.200597	-97.912248	582386.61	5228029.98	0.01	Data Form, Photographs, Rapanos Form
143-57-16-8	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	18762 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 18 feet north of the wetland boundary at it closest point and the access road is approximately 28 feet north of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.200715	-97.914308	582230.40	5228040.94	0.01	Data Form, Photographs, Rapanos Form
143-57-17-1	Unnamed Tributary of Sheyenne River	Intermittent Stream w/ adjacent wetland	RPW - Seasonal w/ Adjacent Wetland	106 ft	UE Collector	318	0	USACE	As currently designed, construction of the UE collector line by open-cut methods would temporarily disturb 318 square feet (sq. ft.) of the seasonal RPW and adjacent wetlands. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW and adjacent wetlands. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the adjacent wetland.	47.208570	-97.932004	580878.14	5228895.38	0.46	Data Form, Photographs, Rapanos Form
143-57-17-4	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	19038 sq ft	Within AOI	Assumes No Impacts		NA	This location lies inside the 250-foot wide AOI for an access road and UE collector line and no temporary or permanent impacts to the isolated wetland resource at this location are currently planned. The centerline of the collector line is approximately 32 feet north-northwest of the wetland boundary at it closest point and the access road is approximately 54 feet north-northwest of the wetland boundary at its closest point. Given this proximity to the location of the planned UE collector line installation, Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.201170	-97.928778	581133.70	5228076.34	0.01	Data Form, Photographs, Rapanos Form

Table 4
Ashtabula Wind III Wind Energy Center
Investigated Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-17-6	Wetland	Isolated Herbaceous Wetland	Isolated Wetland	82	UE Collector	246	0	NA	Tetra Tech recommends relocating the centerline of the UE collector line to the south 170-180 feet to be installed beyond the limits of the isolated wetland to adjacent upland areas of the AOI to avoid impacts to this isolated wetland. If re-locating the UE collector line is not feasible, then the UE collector line should be installed by HDD methodology to avoid impacts to the wetland resource. Tetra Tech recommends that the wetland resource be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the wetland boundary and protect it from inadvertent impacts by construction personnel.	47.200317	-97.919120	581866.50	5227991.57	0.01	Data Form, Photographs, Rapanos Form
Total Impacts				**Square Feet**		**10,172**	**7,744**								
				Acres		**0.23**	**0.18**								

[1] There are no major rivers or TNWs found within the Project area. The Maple River is found in the eastern portion of the site and drains to the southeast to the Sheyenne River, which is found in the western portion of the site. The Sheyenne River drains to the southeast before flowing into the Red River of the North, a traditionally navigable waterway. The Red River of the North then flows to the north where it flows out of the United States entering the Canadian Province of Manitoba.

AOI = Area of Investigation
HDD = Horizontal Directional Drilling
RPW = Relative Permanent Water
USACE = United States Army Corps of Engineers
USFWS= United States Fish and Wildlife Service

Table 5
Ashtabula III Wind Energy Center
Jurisdictional Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-3-1	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	26 ft	UE Collector	78	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 78 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.145695	-97.896438	583670.21	5221945.60	0.47	Data Form, Photographs, Rapanos Form
142-10-11	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	27 ft	UE Collector	81	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 81 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.127139	-97.896247	583713.85	5219883.68	0.69	Data Form, Photographs, Rapanos Form
142-57-15-2	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	22 ft	UE Collector	66	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 66 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.114062	-97.896332	583727.90	5218430.46	0.04	Rapanos Form, Photographs
142-57-15-3	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	58 ft	UE Collector	174	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 174 square feet (sq. ft.) of the seasonal RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.110423	-97.896315	583734.88	5218026.10	0.84	Rapanos Form, Photographs

Table 5
Ashtabula III Wind Energy Center
Jurisdictional Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
142-57-19-1	Wetland at headwaters of an Unnamed Tributary of Sheyenne River	Herbaceous Wetland	Wetland	1530 sq ft	UE Collector	1,533	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 174 square feet (sq. ft.) of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland.	47.109548	-97.940770	580363.50	5217882.13	0.54	Data Form, Photographs, Rapanos Form
142-57-21-2	Linear wetland at headwaters of an Unnamed Tributary of Maple River	Herbaceous Wetland	Wetland	525 sq ft	UE Collector	525	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 174 square feet (sq. ft.) of this wetland. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the wetland. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the wetland.	47.109580	-97.904987	583078.30	5217923.16	0.35	Data Form, Photographs, Rapanos Form
142-58-24-4	Unnamed Tributary of Sheyenne River	Stream	RPW- Perennial	48 ft	UE Collector	144	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 66 square feet (sq. ft.) of the perennial RPW. Tetra Tech recommends that the UE collector line be re-routed to avoid this RPW. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the RPW.	47.102342	-97.969603	578186.50	5217052.20	5.33	Rapanos Form, Photographs
143-57-14-1	Unnamed Tributary of Maple River	Stream	RPW- Perennial	0 ft	Within AOI	Assumes No Impacts		USACE	This location lies inside the 250-foot wide AOI for an access road and no temporary or permanent impacts to the perennial RPW at this location are currently planned. The centerline of the access road is approximately 13 feet south of the RPW boundary at it closest point. Given this proximity to the location of the planned access road, Tetra Tech recommends that the RPW be avoided by all construction activities. In order aid in avoidance of this area by construction personnel, barricade fencing and/or signage should be used to demarcate the RPW boundary and protect it from inadvertent impacts by construction personnel.	47.206281	-97.854897	586721.08	5228723.75	5.97	Rapanos Form, Photographs
143-57-14-2	Unnamed Tributary of Maple River	Intermittent Stream	RPW- Seasonal	31 ft	UE Collector	Assumes No Impacts		USACE	Tetra Tech recommends that collector line be installed using HDD to completely avoid impacts to the RPW.	47.207424	-97.866104	585870.47	5228838.32	0.23	Rapanos Form, Photographs
143-57-15-1	Unnamed Tributary of Maple River	Intermittent Stream w/ adjacent wetland	RPW - Seasonal w/ Adjacent Wetland	77 sq ft	UE Collector	231	0	USACE/ USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.208983	-97.878108	584958.97	5228998.53	0.47	Data Form, Photographs, Rapanos Form

Table 5
Ashtabula III Wind Energy Center
Jurisdictional Area Impact Summary

Location ID	Water Body Name [1]	Habitat Type	Rapanos Determination [1]	Delineated Area or Width	Facility Type	Wetland Impacts		Jurisdiction	Avoidance/ Minimization	Latitude/Longitude (WGS 84)		UTM Coordinates (Zone 14N, NAD 83)		Drainage Area of Crossing (Sq. Miles)	Documentation
						Estimated Temporary Impacts (sq ft)	Estimated Permanent Impacts (sq ft)			Latitude (N)	Longitude (W)	Easting	Northing		
143-57-15-3	Wetland at headwaters of an Unnamed Tributary of Maple River	Herbaceous Wetland	Wetland	1152 sq ft	UE Collector	1,146	0	USACE/ USFWS	The UE Collector line must be relocated to avoid all impacts to this USFWS easement wetland. If the UE collector line cannot be relocated then installation of the UE collector line using HDD is recommended.	47.207637	-97.885527	584399.23	5228840.81	0.24	Data Form, Photographs, Rapanos Form
143-57-17-1	Unnamed Tributary of Sheyenne River	Intermittent Stream w/ adjacent wetland	RPW - Seasonal w/ Adjacent Wetland	106 ft	UE Collector	318	0	USACE	As currently designed, construction of the UE collector line by open cut methods would temporarily disturb 318 square feet (sq. ft.) of the seasonal RPW and adjacent wetlands. Tetra Tech recommends that the UE collector line be re-routed to avoid this wetland. If avoidance is not possible Tetra Tech recommends that the UE collector be installed via horizontal directional drilling (HDD) methodology to avoid impacts to the RPW and adjacent wetlands. Installation via HDD methodology is not a Section 404 regulated activity and successful underboring would eliminate any potential impacts from the installation of UE collector lines at this location provided the boring initiated and terminated outside of the delineated boundaries of the adjacent wetland.	47.208570	-97.932004	580878.14	5228895.38	0.46	Data Form, Photographs, Rapanos Form
				Square Feet		**4,296**	**0**								
Total Impacts				**Acres**		**0.10**	**0.00**								

[1] There are no major rivers or TNWs found within the Project area. The Maple River is found in the eastern portion of the site and drains to the southeast to the Sheyenne River, which is found in the western portion of the site. The Sheyenne River drains to the southeast before flowing into the Red River of the North, a traditionally navigable waterway. The Red River of the North then flows to the north where it flows out of the United States entering the Canadian Province of Manitoba.

AOI = Area of Investigation
HDD = Horizontal Directional Drilling
RPW = Relative Permanent Water
USACE = United States Army Corps of Engineers
USFWS= United States Fish and Wildlife Service