

**WETLAND EVALUATION REPORT
FOR THE WILTON IV WIND ENERGY CENTER
BURLEIGH COUNTY, NORTH DAKOTA**



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ACRONYMS AND ABBREVIATIONS

CWA	Clean Water Act
EPA	Environmental Protection Agency
GIS	Geographic Information System
GPS	global positioning system
MW	megawatt
NHD	National Hydrography Dataset
NRCS	Natural Resource Conservation Service
NRPW	non-relatively permanent water
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OHWM	ordinary high water mark
PCN	pre-construction notification
RPW	relatively permanent water
SSURGO	Soil Survey Geographic (database)
TNW	traditional navigable water
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOUS	waters of the United States

1.0 INTRODUCTION

NextEra Energy Resources, LLC (NextEra Energy) contracted with Tetra Tech, Inc., (Tetra Tech) to conduct a wetland evaluation survey of its proposed Wilton IV Wind Energy Center (Project), located in Burleigh County, North Dakota. This Wetland Evaluation Report provides a description of wetlands and other surface waterbodies identified within the survey corridor. The report includes a description of the Project Area, methods used to evaluate and delineate wetlands and waterbodies, survey results and conclusions, and references used to support the conclusions. Appendices include figures illustrating the Project and survey results, Field Data Evaluation Sheets, Wetland Determination Data Forms, and site photographs.

Portions of the Project were previously assessed by Tetra Tech as part of NextEra Energy's Baldwin Wind Energy Center and the methods, results and conclusions for these areas are summarized in the December 2009 report titled *Jurisdiction Determination Report for the Baldwin Wind Energy Center Project*.

1.1 Project Location and Description

The Project Area consists of approximately 15,752 acres located within the northwestern portion of Burleigh County, North Dakota, approximately 18 miles north-northeast of Bismarck, North Dakota as shown on **Figure 1**. The Project will be located in Crofte, Ghylin, and Ecklund Townships within privately owned cattle pastureland and agricultural cropland (**Table 1**). There are no turbines proposed within Ecklund Township. See Section 2.1 for a description of the survey corridor.

Table 1: Project Area

County	Township Name	Township	Range	Section(s)
Burleigh	Crofte	T141N	R79W	2-5, 8-13, 15
Burleigh	Ghylin	T142N	R78W	13, 16-18, 21-26, 35
Burleigh	Ecklund	T142N	R79W	13-17, 20, 21, 28, 29, 33

The Project at completion will consist of 58 General Electric 1.7 megawatt (MW) turbines with a designed nameplate generating capacity totaling approximately 99 MW. Facilities planned for construction and operation include:

- Turbines
- Turbine service roads;
- Underground electrical collection lines;
- Junction boxes;
- Substation; and
- Temporary lay-down yard.

1.2 Physical Setting and Hydrology

The Project Area is located within the Missouri Coteau Slope ecoregion. This region declines in elevation from the Missouri Coteau to the east to the Missouri River to the west. Unlike the Missouri Coteau to the west that has few streams, the Missouri Coteau Slope has a simple drainage system and fewer wetland depressions. Topography in the Missouri Coteau Slope region is generally level to gently rolling and is

well suited to crop production (Bryce et al. 1998). Land elevations in Burleigh County range from about 1,600 feet above mean sea level (msl) on the Missouri River flood plain to more than 2,000 feet above msl on exposed bedrock formations in the western, west-central, and southern parts of the county (USDA NRCS 1974).

The climate of the region is continental. The area is usually warm in the summer, while winters are long and cold with several mild periods where temperatures are above freezing. The average annual total precipitation in Burleigh County ranges from 15 inches in the southwest corner to 17 inches in the northeast. Of the total average annual precipitation, about 80 percent usually falls during the warm season from April through September (USDA NRCS 1974).

Those portions of the Project in eastern Crofte Township, southeastern Ecklund Township and southern Ghylin Township are located in the Apple Creek watershed basin and the remainder of the Project is located in the Painted Woods-Square Butte watershed basin. West Branch Apple Creek originates in the southeast portion of Ecklund Township and flows southeast toward Apple Creek. Apple Creek flows southwest into the Missouri River. The northern portions of Ecklund Township and Ghylin Township in the Painted Woods-Square Butte watershed are drained by unnamed creeks and intermittent streams that flow north toward Painted Woods Creek. Painted Woods Creek flows west into the Missouri River. The western portions of Crofte Township and Ecklund Township are drained by unnamed creeks and intermittent streams that flow generally west toward Burnt Creek. Burnt Creek flows south-southwest into the Missouri River.

1.3 Regulatory Framework

Tetra Tech completed a wetland evaluation field survey to determine if any jurisdictional wetlands or other waters of the United States (WOUS) exist within the survey corridor that may be regulated by the United States Army Corps of Engineers (USACE) Omaha District. Potential temporary and permanent impacts to these wetlands or WOUS during the construction of the Project facilities were examined.

Wetlands with “jurisdictional” status are WOUS as defined by Section 404 of the Clean Water Act (CWA). WOUS are regulated by the USACE and the U.S. Environmental Protection Agency (EPA). Several classes of waterbodies are subject to federal jurisdiction under the CWA, including: traditional navigable waters (TNWs); non-navigable tributaries of TNWs that are relatively permanent (RPWs); and wetlands that directly abut RPWs (EPA and USACE 2008)¹.

The EPA and the USACE are required to assert jurisdiction over other certain types of waters based on a fact-specific analysis as to whether they have a significant nexus with a TNW (USACE 2007). These types of waters include:

- Non-navigable tributaries that are relatively non-permanent (NRPW);
- Wetlands adjacent to NRPWs; and,
- Wetlands adjacent to, but not directly abutting, an RPW.

Section 404 of the CWA defines adjacent as “bordering, contiguous, or neighboring,” and state that wetlands separated from other WOUS by barriers such as natural river berms, man-made dikes and beach dunes may be considered adjacent wetlands. The 2008 guidance issued jointly by EPA and USACE also indicates that the agencies will not generally assert jurisdiction over the following features:

¹ Draft revised guidance regarding jurisdiction of waters under the CWA was issued by the USACE and EPA on June 27, 2011 (USACE and EPA 2011). The draft guidance provides clarification on waters not regulated by the CWA.

- Swales or erosional features (e.g. gullies, small washes characterized by low volume, infrequent or short duration of flow); and,
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The 2008 guidance also states that the agencies will apply the significant nexus standards as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters; and,
- Significant nexus includes consideration of hydrologic and ecological factors.

Section 404 further defines tributaries to WOUS as WOUS. In the absence of adjacent wetlands, lateral jurisdiction over non-tidal 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” (65 *Fed. Reg.* 12823, 2000).

Only the USACE can make a final determination on the jurisdiction of a wetland at a site. Therefore, jurisdictional determinations provided in this report are preliminary and are based on interpretation of the regulations and application of the above guidance following desk top review of relevant information and field inspection. If development is to occur, the USACE determines the type of permit, if any, that may be required under the CWA.

Certain developments in WOUS may be permitted by the USACE under a Nationwide Permit (NWP). NWPs that may apply to the Project include NWP 51 for Land-Based Renewable Energy Generation Facilities, NWP 12 for Utility Line Activities and NWP 14 for Linear Transportation Projects². To qualify for NWP authorization, the prospective permittee must comply with the general conditions identified within the relevant NWP (USACE 2012). The following summarizes thresholds for total impacts, pre-construction notification (PCN), and mitigation requirements under NWP 51, NWP 12 and NWP 14:

- The activity cannot result in impacts of greater than 0.5 acre in non-tidal WOUS including the loss of no more than 300 linear feet of stream bed. For impacts greater than 0.5 acre, application for an Individual Permit with the USACE must be submitted;
- A PCN is required for any impacts permitted under NWP 51,
- A PCN is required for impacts between 0.1 acre and 0.5 acre under NWP 12 and NWP 14;
- A PCN may be required for impacts less than 0.1 acre under NWP 12 and NWP 14 if certain other criteria are met;
- Mitigation is required for impacts that exceed 0.1 acre;

Impacts for linear projects, such as utilities and roads, are typically assessed at each crossing and are not cumulative across a project. However, individual channels of a braided stream, individual arms of a large irregular wetland or lake, a stream and its adjacent wetlands, etc. are not separate waterbodies and such crossings cannot be considered separately. For non-linear projects, impacts are assessed cumulatively across the total project.

² The North Dakota Regulatory Office of the USACE indicated in a telephone conversation that wetlands impacted by collection line or access road construction for a wind energy facility may be permitted under NWP 12 or NWP 14 rather than NWP 51 (Patsy Crook, personal communication, November 27, 2012).

The North Dakota State Water Commission permits the draining of water resources including ponds, sloughs, sheetwaters or any combination thereof, under North Dakota Century Code ch. 61-32. Draining a water body with a watershed greater than 80 acres (32.37 hectares) in size required a permit application to the state engineer.

The Lake Ilo National Wildlife Refuge of the U.S. Fish and Wildlife Service (USFWS) manages wetland easements on private lands west of the Missouri River in the state of North Dakota. The easements afford permanent protection to wetland basins that provide important seasonal habitat to waterfowl and shorebird species during the spring migration and nesting seasons. Tetra Tech requested review of the Project Area from the USFWS to identify any wetland easements within the Project Area. The USFWS responded via e-mail on August 17, 2011 that there are no wetland easements located within the Project Area. Additionally, the USFWS responded in a letter dated August 25, 2011 to the National Environmental Policy Act scoping for the Project that there are no USFWS property interests located in the Project Area.

2.0 AREA OF ANALYSIS AND IMPACT

2.1 Area of Analysis

The locations of proposed Project facilities (layout dated September 20, 2012 [turbines], October 12, 2012 [service roads, collection lines and substation]) were surveyed to determine the presence of potential jurisdictional wetlands or other WOUS following USACE definitions. Geographic Information System (GIS) files of the facility layout provided by NextEra Energy were used to define the survey corridor.

The survey corridor is defined as the area within the Project Area specifically evaluated for wetlands and WOUS for this wetland evaluation report and includes:

- 64 wind turbine locations (58 turbines plus 6 alternative locations) with a 250-foot radius buffer for a turbine pad;
- Approximately 22.2 miles of service roads with a 200-foot wide corridor (100 feet on either side of the centerline);
- Approximately 33.9 miles of electrical collection lines with a 100-foot wide corridor (50 feet on either side of the centerline); and,
- Approximately 21.2 acres for substation and lay-down yard.

Routine wetland delineations were conducted by Tetra Tech in September 2009 for the Baldwin Wind Energy Center (Tetra Tech 2009). This evaluation included assessment of Project facilities in Crofte and Ecklund Townships that were not developed as part of the Baldwin Wind Energy Center and have become a part of the Wilton IV Wind Energy Center. Field surveys were not conducted as part of this wetland evaluation survey for those portions of the survey corridor that were evaluated as part of the Baldwin Wind Energy Center as shown on **Figure 2**.

2.2 Area of Impact

For the purposes of this investigation, permanent impacts are considered to be the Project footprint during operation. Temporary impacts are considered to be those impacts that result during construction to accommodate equipment and temporary activities outside of the areas that will remain as the Project footprint during operation. **Table 2** outlines the temporary and permanent impacts anticipated for the Project.

After construction, the temporary construction areas adjacent to the turbine pads, service roads, collection lines and construction laydown area will be restored. The site will be graded to pre-construction contours, soil will be loosened if needed, and the site will be seeded.

Table 2: Project Impact Assumptions

Project Facility	Total Impacts	
	Permanent Impact	Temporary Impact
Turbines	0.5 acres	
	0.2 acres	0.3 acres
Service Roads	50-foot wide corridor	
	36-foot corridor	7-foot wide margin on either side of permanent impact area (14-foot wide area total)
Collection Lines	50-foot wide corridor	
	None	50-foot wide corridor
Substation and Laydown Area	21.2 acres	
	21.2 acres	None

3.0 METHODS

Tetra Tech used a tiered approach to evaluate wetlands and WOUS within the Project Area. Utilizing this approach, general wetland features were first identified during a desktop data review. The desktop data was used to guide a facility micro-siting field visit with NextEra Energy engineers to avoid and reduce impacts to wetlands and waters. The micro-siting visit was followed by a wetland evaluation field survey that included identification of jurisdictional and non-jurisdictional wetlands and non-wetland features (e.g. RPWs, NRPWs, drainage swales) within the survey corridor based on the preliminary Project layout (turbines, collection lines, service roads, and substation).

3.1 Desktop Data Review

Prior to and during the wetland evaluation survey, available information was reviewed to identify areas that may exhibit wetland and other surface water characteristics. These data layers were evaluated as a whole to make probable wetland and other waters determinations. This included review of aerial photographs, the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), the National Wetlands Inventory (NWI), the Soil Survey Geographic (SSURGO) database, and the Burleigh County Soil Survey.

3.2 Micro-siting

The purpose of micro-siting is to view the preliminary proposed locations of Project facilities and make adjustments as necessary to meet regulatory and set-back requirements. Aerial photographs and NHD and NWI data were utilized, along with limited field observations, to determine if jurisdictional wetlands or WOUS are located within the Project Area. Subsequently, recommendations were made in the field to modify the proposed layout for impact avoidance.

3.3 Wetland Evaluation Survey

The purpose of the wetland evaluation survey was to identify the presence and location of wetlands and other surface waters within the survey corridor and determine which, if any, may be subject to USACE jurisdiction. When a wetland or water feature was encountered in the survey corridor, a Field Data Evaluation Sheet was completed. Only wetlands determined to be jurisdictional based on the completed Field Data Evaluation Sheet were delineated in accordance with the three-parameter approach outlined in the 1987 Manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2010). Otherwise, only visual observations of hydrophytic vegetation and wetland hydrology indicators were used to identify potential (assumed) wetlands.

3.3.1 Jurisdictional Determinations

Tetra Tech completed Field Data Evaluation Sheets for each wetland and water feature identified during the wetland evaluation survey to assist in determining the jurisdictional status of field identified wetlands and waters. The data sheets were designed following USACE and EPA guidance (USACE 2007; USACE and EPA 2007). In order to evaluate the significant nexus of field identified NRPWs, drainage swales, ponds, and wetlands, the following questions were considered:

Does the tributary, in combination with its adjacent wetlands (if any):³

- Have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
- Provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Have the capacity to transfer nutrients and organic carbon that support downstream food webs?
- Have other relationships to the physical, chemical, or biological integrity of the TNW?

The wetland evaluation survey followed this guidance to determine hydrologic connectivity (i.e. nexus determinations) between WOUS and wetland areas. Assumptions made for the nexus determinations included:

- Named streams were considered to be RPWs (perennial or seasonal flow);
- The jurisdiction of unnamed RPWs and NRPWs was based on the completed Field Data Evaluation Sheet,
- Drainage swales and drainage ditches were generally considered non-jurisdictional; and,
- Wetlands were considered potentially jurisdictional or jurisdictional if they were adjacent to a potentially jurisdictional or jurisdictional RPW or NRPW as determined on the Field Data Evaluation Sheet.

3.3.2 Wetland Delineations

Tetra Tech biologists conducted wetland delineations in accordance with the three-parameter approach outlined in the 1987 Manual (Environmental Laboratory 1987) and the Great Plains Regional Supplement (USACE 2010) for wetlands determined to be potentially jurisdictional or jurisdictional based on the criteria described in Section 3.3.1.

Upon identifying a potentially jurisdictional or jurisdictional wetland, a transect was established perpendicular to the wetland being investigated nearest the location of potential impacts that would result from development of the Project. Sample plots were then placed along the transect. These plots were the points in the field at which wetland characteristics were studied in accordance with the 1987 Manual and Regional Supplement. Typically, sample plot “W” was oriented within the feature being investigated at the location determined to have the highest potential to exhibit wetland characteristics. This determination was based on local topography and the presence of wetland hydrology and wetland vegetation. If positive indicators of wetland vegetation, hydrology, and hydric soils were present at plot “W”, data was collected from additional sample plots placed to delineate the transition from wetland to non-wetland habitats. The boundary of each wetland delineated was determined as the location where at least one of the above three parameters failed to meet wetland criteria.

Vegetation within each sample plot was characterized to determine dominance of either hydrophytic or non-hydrophytic vegetation. Dominance was estimated based on the percent coverage within sample plots with a 5-foot radius for herbaceous vegetation and a 30-foot radius for trees and shrubs. Wetland indicator status for all plant species followed the USFWS Region 4 *National List of Plant Species that Occur in Wetlands* (Reed 1988). Soils at each sample plot were evaluated and determined to be hydric or not hydric according to the guidelines put forth in the USDA NRCS *Field Indicators of Hydric Soils in the U.S.*

³ These questions were answered using visual indications, as well as desk top sources, such as aerial photography and the NHD dataset. Limitations to the nexus determination include: (1) one-time evaluation of the area, which limits understanding of the hydrology of the potential tributary; and (2) limited areal extent of the evaluation, which limits investigation of downstream mechanics and potential for the waterbody to reach tributaries to TNWs.

(2006) and the Regional Supplement. Hydrology was assessed by evaluating each sample plot for field indicators of wetland hydrology such as inundation, soil saturation, water marks, drainage patterns, and topographic position as described in the Regional Supplement.

3.3.3 Digital Capture of Data

A GIS specialist designed a geodatabase specifically for the Project that was used to capture wetland and non-wetland feature location data in the field using Trimble Geographic Positioning System (GPS) technology, as well as to manage and display features for quality control and electronic deliverables. The geodatabase contains three types of feature classes for data capture: wetland points, wetland lines, and wetland polygons. Additional attribute data collected in the field included:

- Date feature was collected;
- Wetland specialist who evaluated and collected the feature;
- Feature type: seasonally flooded wetland (Type 1), shallow marsh wetland (Type 3), RPW, NRPW, drainage swale, pond, filled feature, etc.;
- Notes as to whether the feature extends beyond what was collected, in what direction and approximately how far;
- Other feature issues (e.g., impacts by landowner, road crossing, or other noted disturbances);
- Jurisdictional status;
- Recommendation for Project facilities (e.g., avoidance vs. no modification required); and
- Width and depth of the feature.

The geodatabase was loaded on a Trimble GeoXT handheld GPS unit, which has an accuracy of one meter or less, and ran both ESRI's ArcPad 7 and Trimble GPS Correct Software Packages.

After the field data were post-processed, the biologists who captured the field data conducted a quality control review of the geodatabase to ensure the features collected correspond with field observations. Hydrologic features collected during the wetland evaluation survey were then assigned a feature identification number (ID) consisting of a label identifying it as a polygon (PY) or polyline (L) feature followed by a site number.

4.0 RESULTS

4.1 Desktop Data Review

The following sections describe the data sources reviewed prior to conducting Project micro-siting and utilized during the wetland evaluation survey. These data sources include topographic maps, recent aerial photography, NHD, NWI, SSURGO, and the Burleigh County soil survey.

4.1.1 Topographic Maps

The Baldwin (1979) Regan Southeast (1975) and Wing Southwest (1975) 7.5 Minute USGS Topographic Quadrangles were downloaded from the USGS Topographic Map website. Perennial, intermittent, and ephemeral streams that could possibly be affected by the project were identified and investigated during the wetland evaluation survey. The topographic map data are presented on **Figure 1**.

4.1.2 Aerial Photographs

Recent aerial photography for the Project Area was obtained from the USDA (2010). The reviewed 2010 aerial photography showed the Project Area to be agricultural with a mix of cultivated fields and grasslands (pasture, hay or Conservation Reserve Program lands). The region appears to have a moderately well-established drainage system with numerous streams and intermittent drainages, and relatively few apparent isolated wetlands. Most potential wetland areas identified during review of the aerial photography coincided with NWI and NHD data features (see sections 4.1.3 and 4.1.4 below). Potential wetlands identified during review of the aerial photography within the survey corridor were investigated during the wetland evaluation survey. Reviewed aerial photography is presented on **Figure 2**.

4.1.3 National Hydrography Dataset

The NHD was downloaded from the USGS NHD website (USGS 2011). There are numerous unnamed streams depicted in the Project vicinity in the NHD. The Project is located within two watersheds; the Apple Creek watershed and the Painted Woods-Square Butte watershed. It appears that all NHD stream features depicted within the Project vicinity are hydrologically connected to the Missouri River. Perennial, intermittent, and ephemeral streams and drainages identified within the survey corridor were investigated for the presence of wetlands and non-wetland WOUS during the wetland evaluation survey. The NHD data are presented on **Figure 2**.

4.1.4 National Wetlands Inventory

The NWI data for the Project Area was downloaded from the USFWS NWI website (2011). The NWI data indicated the presence of 20 freshwater emergent wetlands (PEMA and PEMC) in the survey corridor, all within Ecklund and Ghylin townships. Approximately 160 additional NWI wetlands are present within 0.25 mile of the survey corridor. NWI wetlands identified within the survey corridor were field-verified during the wetland evaluation survey. The NWI data are presented on **Figure 2**.

4.1.5 Soil Survey

Soils data for Burleigh County were obtained from the USDA NRCS Burleigh County Soil Survey (1974) and the NRCS SSURGO database. This information was used to study the distribution of hydric soils

within the Project Area. According to reviewed data, there are 33 soil series represented within the survey corridor. Soil, as it relates to wetland delineations, must be classified as a hydric soil for the area to qualify as a wetland in accordance with the 1987 Manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2010). Hydric soils are defined as soils that are formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions. In the SSURGO dataset, soils may be classified as not hydric (all series components rated as not hydric), partially hydric (at least one component rated as hydric and at least one component rated as not hydric) or all hydric (all series components rated as hydric). In the survey corridor, approximately 61 percent of soils are classified as not hydric, 39 percent are classified as partially hydric and less than 1 percent are classified as all hydric. The following table summarizes the type and extent of soils found in the survey corridor and the distribution of hydric soils within the Project area is depicted on **Figure 3**.

Table 3: Soil Series in the Survey Corridor

Symbol	Soil Series	Hydric Class	Area (acres)
WsA, WsB, WsC, WsD	Williams loam	Partially Hydric	570.98
AgA, AgB	Arnegard and Grassna silt loams	Not Hydric	113.34
SnB, SnC	Sen silt loam	Not Hydric	78.18
WzE	Williams-Zahl loams	Partially Hydric	52.18
WeE	Werner-Morton-Sen complex	Not Hydric	44.53
FmE	Flasher-Vebar complex	Not Hydric	30.95
VbB, VbC	Vebar fine sandy loam	Not Hydric	28.86
FrF	Flasher-Vebar-Rock outcrop complex	Not Hydric	24.81
RwA	Roseglen-Tansem silt loams	Not Hydric	14.03
RhB	Regent-Grail silty clay loams	Not Hydric	6.78
GlA, GlB	Grail silt loam	Not Hydric	6.61
LeA	Lehr loam	Not Hydric	2.57
Tp	Tonka and Parnell soils	All Hydric	2.07
WIC	Werner-Sen loams	Not hydric	0.60
GrA	Grail silty clay loam	Not Hydric	0.19

4.2 Micrositing

A Tetra Tech wetland biologist met with representatives of NextEra Energy to review the preliminary proposed Project facilities' locations on September 13-14, 2011. The previously reviewed data including aerial photographs, NHD and NWI were utilized in addition to previous survey information and limited field observations to determine if jurisdictional wetlands or WOUS were located within the Project Area and recommendations were made in the field to modify the proposed layout of Project facilities to avoid impacts to wetland and waters features. The Project was microsited a second time after the layout was revised. A Tetra Tech wetland biologist revisited the site to assist with micrositing on August 22, 2012.

4.3 Wetland Evaluation Survey

A wetland evaluation survey for the Project was conducted from August 17, 2011 through August 19, 2011. Additional surveys were conducted on October 4-5, 2011 and September 19-20, 2012 to evaluate modifications to Project facility locations.

Vegetation, soils and hydrology information collected during the wetland evaluation survey for delineated wetlands is summarized below. Field data sheets and photographic documentation are included as **Appendix B** and are organized by feature ID. Note that Wetland Determination Data Forms documenting hydrology, vegetation, and soils were not completed for wetlands that were determined to be isolated and non-jurisdictional according to the completed Field Data Evaluation Sheet. **Figure 2** depicts the wetland and non-wetland water features identified during the wetland evaluation survey as well as the Project facility layout, NHD data, and NWI data. A summary of wetland and non-wetland water features including feature ID, feature type, jurisdictional opinion, and potential impacts is presented in **Table 4**.

Wetland and WOUS features identified as part of the 2009 Baldwin Wind Energy Center survey (Tetra Tech 2009) that fall within the Wilton IV survey corridor are considered as part of the assessment in this report and are also included in **Table 4**.

4.3.1 Vegetation Evaluation

The vegetation encountered in the survey corridor outside of cultivated areas consisted primarily of upland native and non-native pasture and prairie species. Areas identified as non-wetland drainage features were commonly vegetated with a mix of native and non-native grasses and forbs. Wetlands were typically vegetated with a variety of wetland plants typical of the central North Dakota ecotone and comprised of a variety of sedge, grass, forb, shrub, and tree species. The most common wetland species identified were sedges (*Carex* spp.), cattails (*Typha* spp.), and various wetland grasses and forbs. Dominant vegetation identified at each delineation plot is presented on the wetland determination data forms in **Appendix B**.

4.3.2 Soils Evaluation

Soils were evaluated at six wetland delineation locations during the wetland evaluation survey. Mapped soil series at these locations according to the Burleigh County Soil Survey and NRCS SSURGO dataset included: Arnegard and Grassna silt loams, Grail silty clay loam, Sen silt loam, and Tonka and Parnell soils. Except for the Tonka and Parnell soils, these are classified as not hydric. Observed soils were generally consistent with soil series descriptions for the mapped soils with soils being more gleyed and with redox features in some cases at delineation locations in soils categorized as not hydric.

The most common hydric soil indicators observed at soil test plot locations included the following indicators: depleted below dark surface, loamy mucky mineral, and redox depressions. A complete description of the hydric soil types identified and the hydric soil indicators observed at delineation plots are presented on the wetland determination data forms in **Appendix B**. **Figure 3** depicts hydric soil classifications in the Project vicinity based on SSURGO.

4.3.3 Hydrologic Evaluation

No TNWs were identified within the survey corridor. The nearest TNW is the Missouri River located approximately eight miles west of the Project. Drainage in the Project Area is well developed with

numerous drainage swales and intermittent streams, and few isolated wetlands or ponds. All drainages appear to be hydrologically connected to the Missouri River. The hydrology within the Project Area was observed to have been modified with some intermittent streams and drainage swales being dammed to create livestock ponds.

The most common hydrology indicators observed at test plot locations included the surface water and saturation primary indicators and the drainage patterns and FAC-neutral test secondary indicators. A complete description of the hydrology observations and hydrology indicators observed at delineation plots are presented on the wetland determination data forms in **Appendix B**.

4.3.4 Wetlands and Waters

During the wetland evaluation survey, Tetra Tech identified 22 hydrologic features within the survey corridor. Specifically, this included twelve seasonally flooded wetlands, one shallow open water wetland and 9 drainage swales. Of these 22 hydrologic features, 14 were determined to be non-jurisdictional isolated wetlands, drainages, or ponds based on the nexus determinations completed. The shallow open water wetland and seven of the seasonally flooded wetlands (highlighted yellow in **Table 4**) were determined to potentially be USACE jurisdictional waters. All wetland and waters features identified in the survey corridor during the wetland evaluation survey are summarized in **Table 4** and shown on **Figure 2**.

4.3.5 Data and Area of Impact Analysis

The wetland and waters features identified in the survey corridor were categorized into:

- (1) jurisdictional areas and potentially jurisdictional areas, which are assumed jurisdictional WOUS based on the nexus determination completed during the wetland evaluation survey, but may or may not be determined to be jurisdictional by the USACE; and
- (2) assumed isolated, non-jurisdictional waters.

All potentially jurisdictional wetland and water features within the survey corridor were further evaluated to determine if construction impacts will fall under USACE Nationwide Permit thresholds. Temporary and permanent impact areas were established for the Project as described in **Table 2**. Wetland and non-wetland WOUS features identified in the survey corridor that were not intersected by proposed Project facility impact areas were assumed to have no impacts.

Table 4: Hydrologic Features Summary and Potential Impacts

Feature ID	Figure 2 Map Book Page	Feature Type	Jurisdiction ^a	Facility Type	Potential Area of Impact (acre) ^b		
					Permanent	Temporary	Total
W-27	B08	Shallow Open Water Wetland	USACE Wetland	Collection line between Turbine 31 and platted 145 th St NE	0.000	0.398	0.398
W-21	A08, A09	Seasonally Flooded Wetland	USACE Wetland	Collection line between Turbine 31 and Turbines 32 and 33 along platted 145 th St NE ~0.2 mile south of platted 279 th Ave NE	0.000	0.359	0.359
W-26	E03	Seasonally Flooded Wetland	Potential USACE Wetland	Collection line ~0.55 mile east of platted 66 th St NE and ~0.5 mile north of platted 227 th Ave NE	0.000	0.262	0.262
W-17	A05	Seasonally Flooded Wetland	USACE Wetland	Collection line along platted 279 th Ave NE ~0.25 miles west of platted 106 th St NE	0.000	0.241	0.241
W-19	A04	Seasonally Flooded Wetland	USACE Wetland	Collection line north of platted 279 th Ave NE ~0.1 mile west of 80 th St NE	0.000	0.077	0.077
W-15	A06	Seasonally Flooded Wetland	None	Collection line along platted 279 th Ave NE ~430 feet west of platted 119 th St NE	0.000	0.010	0.010
W-16	A06	Seasonally Flooded Wetland	None	Collection line along platted 279 th Ave NE ~370 feet east of platted 106 th St NE	0.000	<0.001	0.000
W-05	A09	Seasonally Flooded Wetland	USACE Wetland	Turbine 36, and service road and collection line between Turbine 36 and Turbine 35	0.000	0.000	0.000
W-10	A10	Seasonally Flooded Wetland	None	Service road and collection line between Turbine 47 and Turbine 48	0.000	0.000	0.000
W-14	A10	Seasonally Flooded Wetland	None	Turbine 47, and service road and collection line between Turbine 47 and Turbine 48	0.000	0.000	0.000
W-18	A05	Seasonally Flooded Wetland	USACE Wetland	Collection line along platted 279 th Ave NE ~0.25 miles west of platted 106 th St NE	0.000	0.000	0.000
W-22	B10	Seasonally Flooded Wetland	USACE Wetland	Turbine 45	0.000	0.000	0.000
W-23	B11	Seasonally Flooded Wetland	None	Collection line and service road between Turbine Alt 6 and Turbine 55	0.000	0.000	0.000
DS-01	C11	Drainage Swale	None	Service road and collection line between 266 th St NE and Turbine 58	n/a	n/a	n/a

Feature ID	Figure 2 Map Book Page	Feature Type	Jurisdiction ^a	Facility Type	Potential Area of Impact (acre) ^b		
					Permanent	Temporary	Total
DS-02	C10	Drainage Swale	None	Turbine 43, and collection line between Turbine 43 and Turbine 44	n/a	n/a	n/a
DS-04	D10	Drainage Swale	None	Service road and collection line between Turbine 40 and Turbine 41	n/a	n/a	n/a
DS-05	A08	Drainage Swale	None	Service road and collection line along platted 279th Ave NE ~0.45 mile west of platted 145th St NE	n/a	n/a	n/a
DS-06	F03	Drainage Swale	None	Turbine Alt 1	n/a	n/a	n/a
DS-08	B02	Drainage Swale	None	Collection line along 52nd St NE ~0.4 mile south of 266th Ave N	n/a	n/a	n/a
DS-09	C02	Drainage Swale	None	Collection line along 52nd St NE ~0.3 mile north of 253rd Ave NE	n/a	n/a	n/a
DS-10	F03	Drainage Swale	None	Collection line along 227th Ave NE ~0.35 mile west of 80th St NE	n/a	n/a	n/a
DS-11	C02	Drainage Swale	None	Collection line along platted 52 nd St NE ~400 feet south of 253 rd Ave NE	n/a	n/a	n/a
Potential Project impacts for non-jurisdictional hydrologic features					0.000	0.010	0.010
Potential Project impacts for jurisdictional hydrologic features					0.000	1.337	1.337
Potential total Project impacts					0.000	1.347	1.347

Notes:

- a Jurisdictional status of features were based on nexus determination completed during the wetland evaluation survey, but would require final decision of significant nexus from USACE.
- b Impacts were not calculated for drainage swales or drainage ditches as these features are not generally considered USACE jurisdictional and impacts to these features do not require notification to the USACE.

5.0 CONCLUSIONS

During this investigation, Tetra Tech identified five potential USACE jurisdictional wetlands (W-17, W-19, W-21, W-26, and W-27) and two probable non-jurisdictional wetlands (W-15 and W-16) that may be impacted by development of the Project. These features are identified in **Table 4** and depicted on **Figure 2**.

No permanent impacts to wetlands or WOUS are anticipated as a result of this Project. A total of approximately 1.337 acres of temporary wetland impacts are estimated in jurisdictional wetlands, and 0.010 acres of temporary wetland impacts are currently estimated in non-jurisdictional wetlands. All of these temporary surface impacts would result from collection line installation by trenching methods. However, these impacts may be avoided completely during construction by utilizing horizontal directional drilling for collection line installation.

The USACE regulates the discharge of dredged or fill material into WOUS under Section 404 of the CWA. As currently designed, impacts from any single crossing would be less than 0.5 acre and may be authorized under NWP 12. Impacts at a single crossing greater than 0.1 acre (W-17, W-21, W-26, and W-27) would require a PCN to the USACE. Impacts at a single crossing less than 0.1 acre (W-19, W-15 and W-16) may be authorized under NWP 12 without submitting a PCN to the USACE. However, the USACE encourages notification of wetland impacts under 0.1 acre so that an Approved Jurisdictional Determination may be completed and to ensure the NWP is applied correctly. Impacts to wetlands recommended as non-jurisdictional (W-15 and W-16) may not require permitting; however only the USACE can make the final determination on the jurisdiction of a wetland. If impacts are anticipated for potential non-jurisdictional wetlands an Approved Jurisdictional Determination should be requested from the USACE.

6.0 REFERENCES

- Bryce, Sandra. James M. Omernik, David E. Pater, Michael Ulmer, Jerome Schaar, Jerry Freeouf, Rex Johnson, Pat Kuck, and Sandra H. Azevedo. 1998. *Ecoregions of North Dakota and South Dakota*. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/index.htm>. Accessed August 2011.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station. Available online at <http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf>.
- EPA (Environmental Protection Agency) and USACE (U.S. Army Corps of Engineers). 2008. "Revised Guidance on Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*." December 2. Available online at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/cwa_juris_2dec08.pdf.
- "Final Notice of Issuance and Modification of Nationwide Permits, Final Notice," 65 Federal Register 47 (March 9, 2000), pp. 12823.
- Reed, Porter B. Jr. 1988. National List of Plant Species That Occur in Wetlands: National Summary. U.S. Fish and Wildlife Service Biological Report 88(24). 244 pp.
- Tetra Tech. 2009. *Jurisdiction Determination Report for the Baldwin Wind Energy Center Project*. December.
- USACE. 2007. RGL 07-01 "Practices for Documenting Jurisdiction under Section 9 & 10 of the Rivers & Harbors Act (RHA) of 1899 and Section 404 of the Clean Water Act (CWA)." June 5. Available online at <http://www.usace.army.mil/cecw/pages/rglsindx.aspx>.
- USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region*. ERDC/EL TR-10-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- USACE. 2012. "2012 Nationwide Permits, Conditions, District Engineer's Decision, Further Information, and Definitions (with corrections)" Available online at http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP2012_corrections_21-sep-2012.pdf.
- USACE and EPA (U.S. Environmental Protection Agency). 2007. USACE Jurisdictional Determination Form Instructional Guidebook. May 12.
- USACE and EPA. 2011. Draft Guidance on Identifying Waters Protected by the Clean Water Act. Available online at: http://water.epa.gov/lawsregs/guidance/wetlands/upload/wous_guidance_4-2011.pdf.
- USDA NRCS, 1974, Soil Survey of Burleigh County, North Dakota.

USDA NRCS, 2006. Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 6.0, G.W. Hurt, L.M. Vasilas (eds.) USDA in cooperation with the National Technical Committee for Hydric Soils, Fort Worth, TX. ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v6_01.pdf.

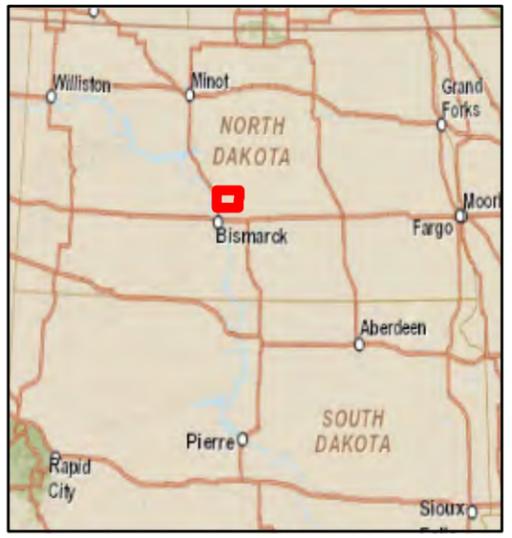
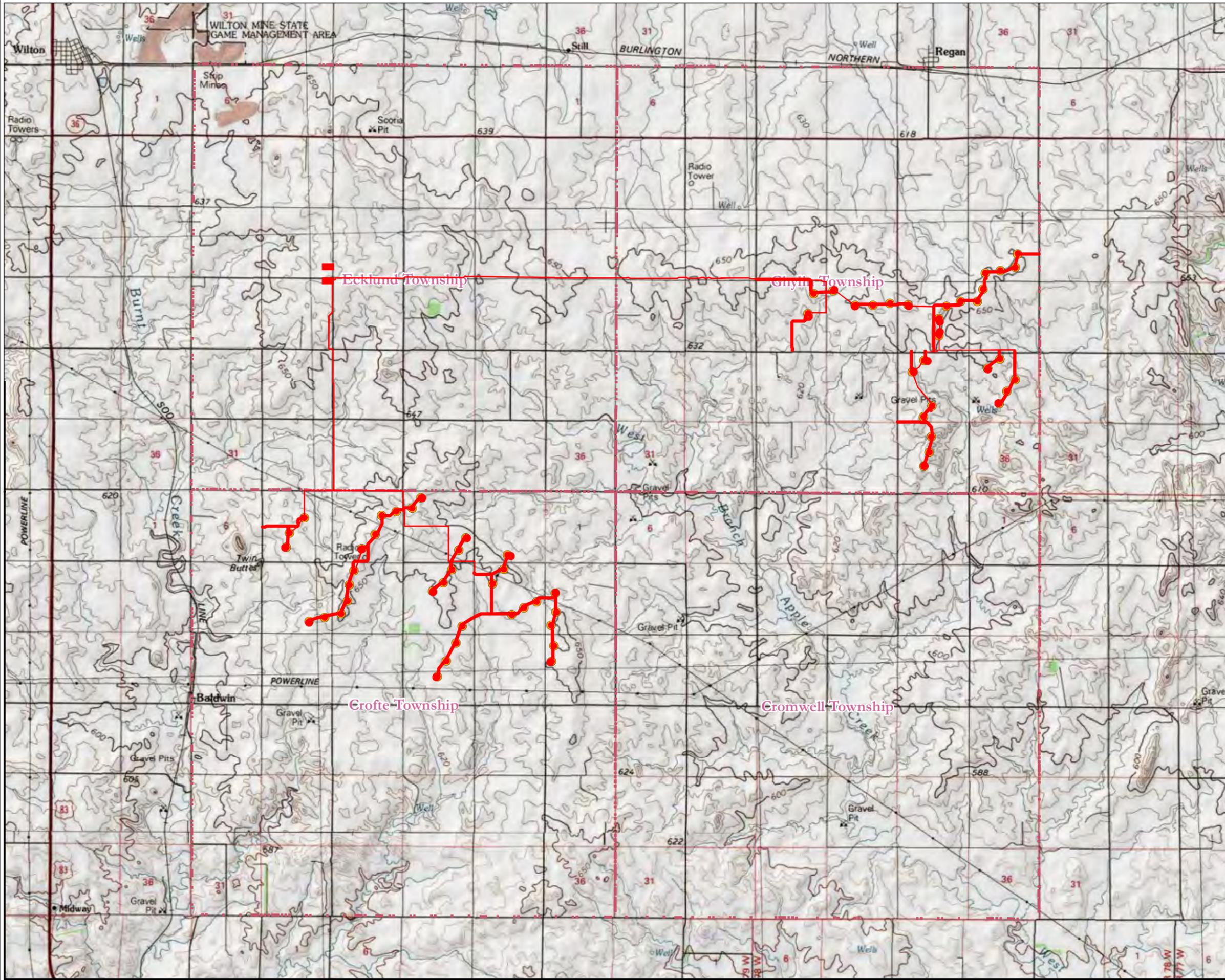
USDA FSA (Farm Service Agency) Aerial Photography Field Office (APFO). National Agriculture Imagery Program (NAIP). Aerial Photography 2010 NC.

USFWS NWI (National Wetlands Inventory). Data downloaded from <http://www.fws.gov/wetlands/> August 2011.

USGS (United States Geological Survey). 7.5-minute Topographic Quadrangle U.S. Geological Survey, Washington, D.C.
1975. Regan Southeast, North Dakota
1975. Wing Southwest, North Dakota
1979. Baldwin, North Dakota

USGS. National Hydrography Dataset (NHD) High resolution dataset for the Missouri-Oahe Subregion (1013). Data downloaded from: <http://nhd.usgs.gov/data.html> August 2011.

APPENDIX A – FIGURES



- Facility Layout 9/20/2012**
- Proposed Turbine Location
 - Survey Corridor
 - Township

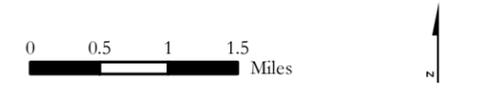
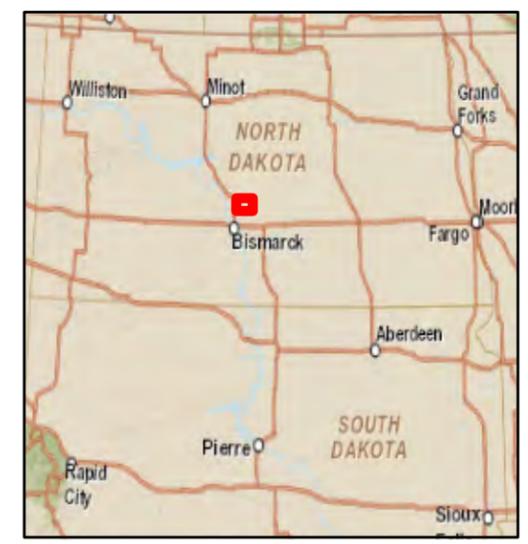
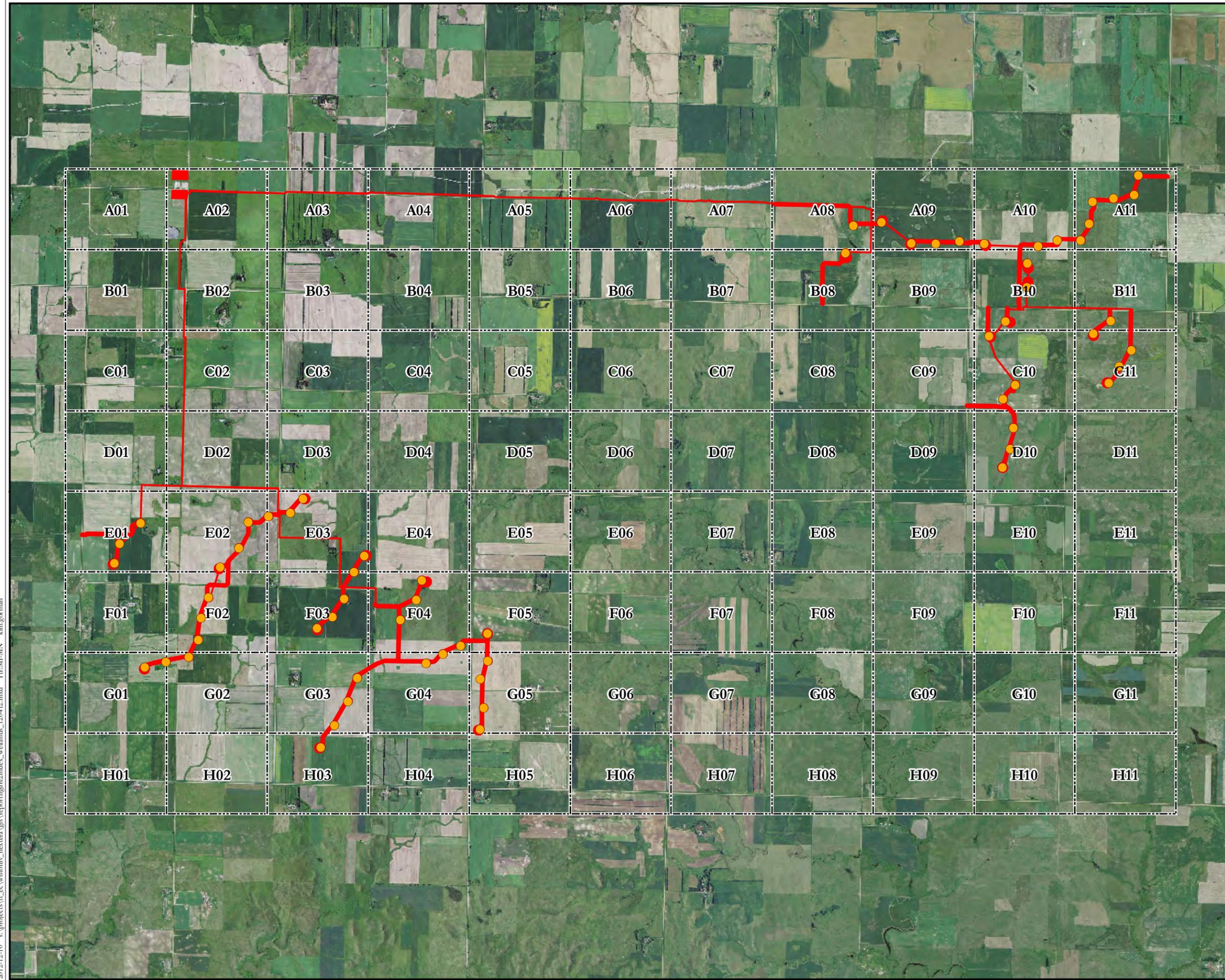


Figure 1
 Project Location
 Wilton IV Wind Energy Center
 Burleigh County, North Dakota

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Source: USGS 100K Topographic Maps (Bismarck and McClusky) and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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- Facility Layout 9/20/2012**
- Proposed Turbine Location
 - Survey Corridor
 - Map Index

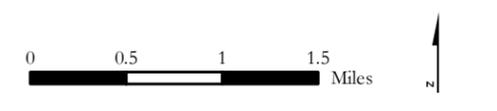


Figure 2
Map Book Index
Wilton IV Wind Energy Center
Burleigh County, North Dakota



Source: 2010 NADP Aerial Photograph - Burleigh County and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



A02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
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 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
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 - Surveyed Wetland/Water Feature
 - Non-Jurisdictional
 - Potentially Jurisdictional
 - Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - NHD - High Res Subregion 1013
 - National Wetland Inventory
 - Road

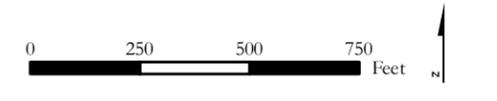


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



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Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



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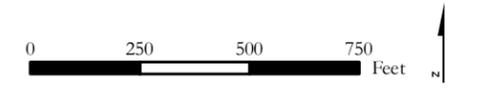


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota

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Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



A04

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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

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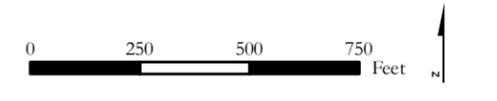


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



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Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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A05

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Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



Source: 2010 N.A.P. Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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A06

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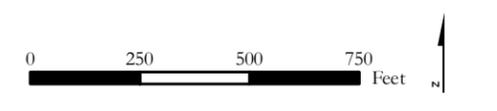


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▨ Proposed Substation Location

Surveyed Wetland/Water Feature

- ~ Non-Jurisdictional
- ~ Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
- ~ Potentially Jurisdictional
- ~ Jurisdictional

Survey Corridor

- Portion of Survey Corridor Previously Surveyed as Baldwin
- - - NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

0 250 500 750 Feet

Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota

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Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, NIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
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- Surveyed Wetland/Water Feature
- ▨ Non-Jurisdictional
- ▨ Potentially Jurisdictional
- ▨ Jurisdictional
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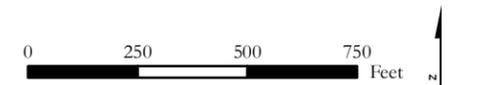


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota

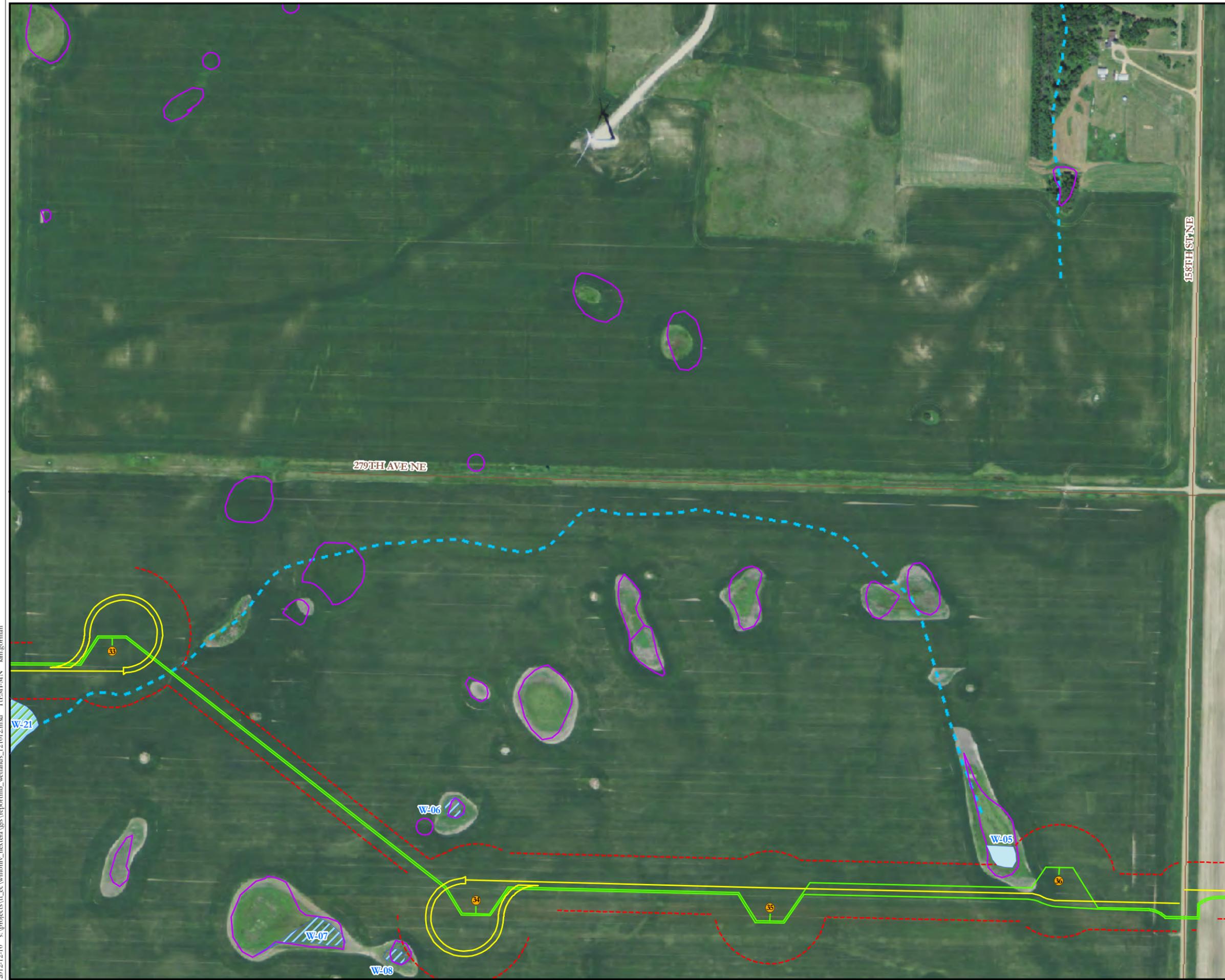


2012-12-10 s:\projects\it_ec\wilroniv_nextera\gis\report\mb_wetlands_121012.mxd TITEM1-MN kim.gorman

Source: 2010 NAD Aerial Photographs - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

A09

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
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 - ▨ Potentially Jurisdictional
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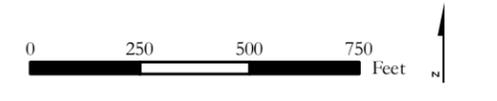


Figure 2
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Wilton IV Wind Energy Center
Burleigh County, North Dakota



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Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

A10

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C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
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F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

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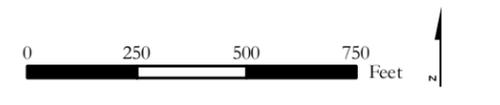
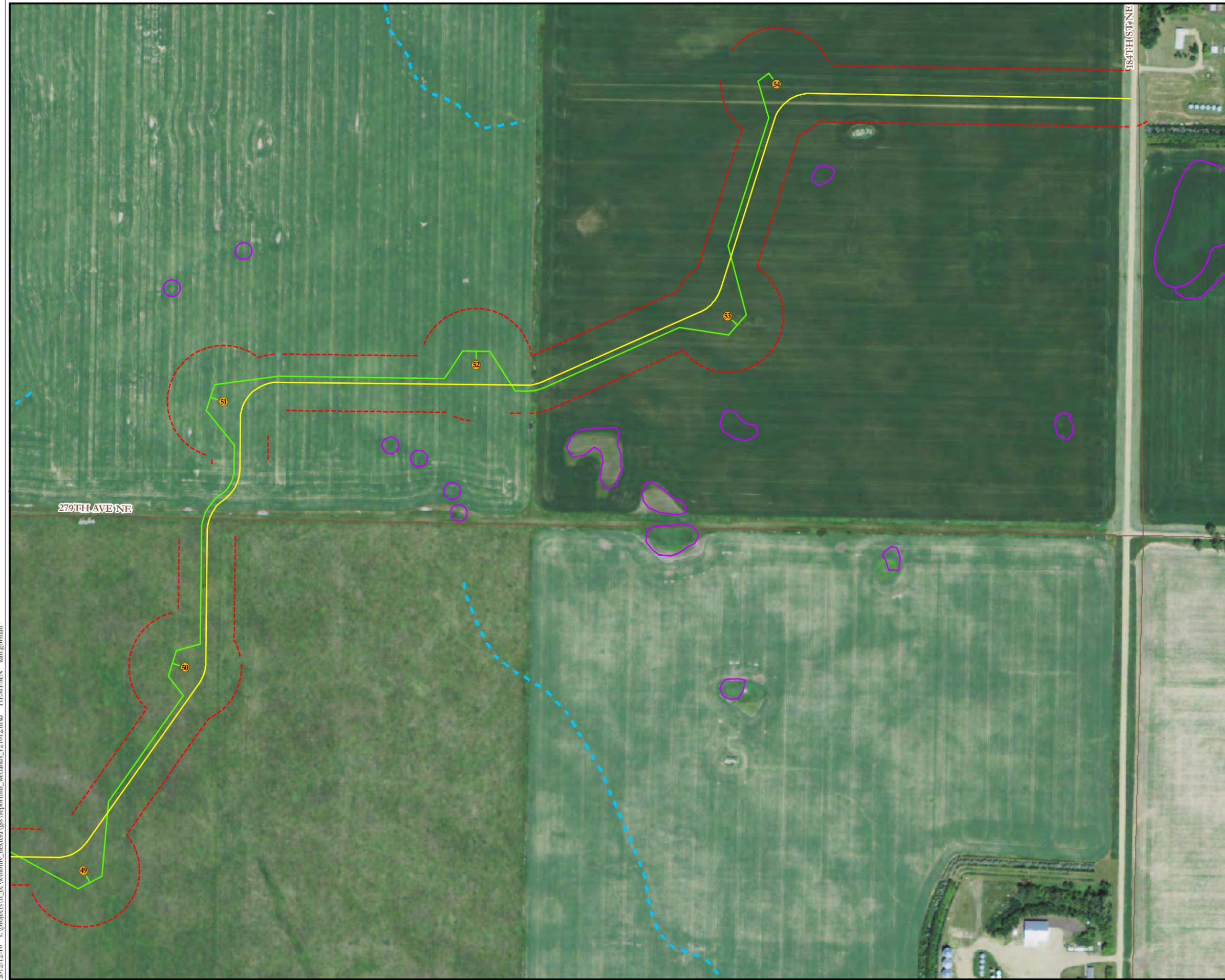


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Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTRM-LMN kim.gorman

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A11

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
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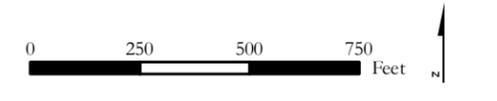


Figure 2
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Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTRML:MN kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



B02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
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 - ▨ National Wetland Inventory
 - Road

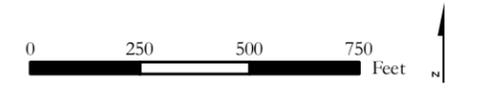


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Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTRM-MN kim.gorman

Source: 2010 NAIP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

B08

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
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Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▭ Proposed Substation Location

Surveyed Wetland/Water Feature

- ~ Non-Jurisdictional
- ~ Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
- ~ Potentially Jurisdictional
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2012-12-10 s:\projects\tr.ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTRML:MN kim.gorman



B09

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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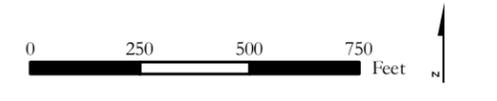


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B10

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Facility Layout 9/20/2012

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Surveyed Wetland/Water Feature

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Survey Corridor

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0 250 500 750 Feet

Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
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2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEML:MN kim.gorman

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B11

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C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
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Facility Layout 9/20/2012

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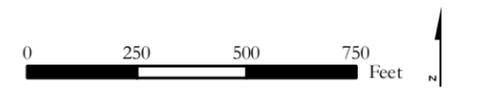


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2012-12-10 s:\projects\tr_ec\wilmoniv_nextera_gis\report\trmh_wetlands_121012.mxd TTEM:MN kim.gorman

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A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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C09

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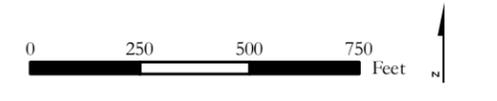


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C10

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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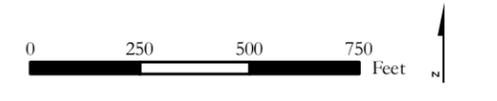


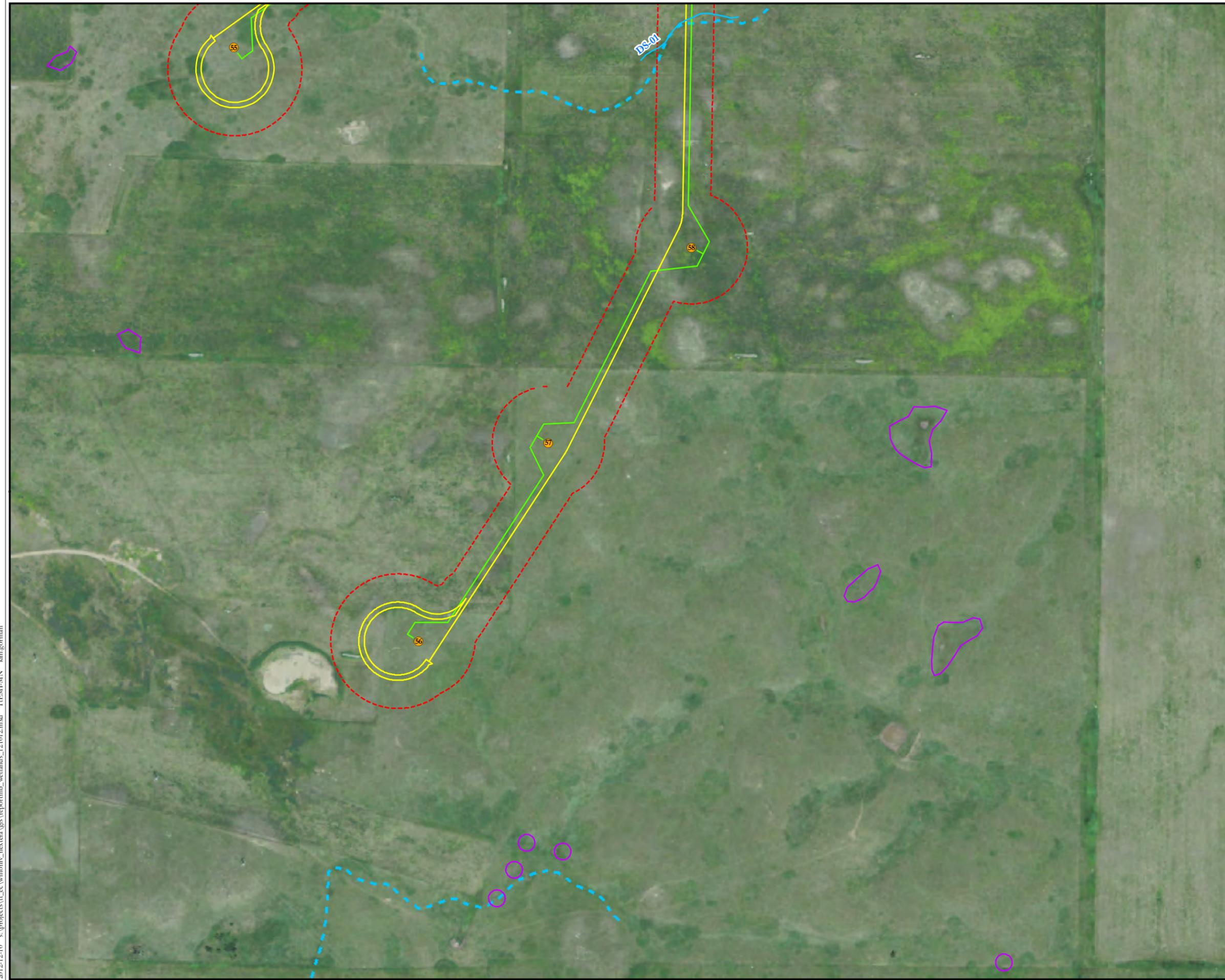
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C11

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
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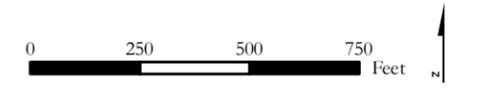


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Wilton IV Wind Energy Center
Burleigh County, North Dakota



Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

D01

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

● Proposed Turbine Location

Facility Layout 10/12/2012

— Proposed Service Road

— Proposed Collection Line

▨ Proposed Substation Location

Surveyed Wetland/Water Feature

~ Non-Jurisdictional

Surveyed Wetland/Water Feature

▨ Non-Jurisdictional

▨ Potentially Jurisdictional

▨ Jurisdictional

○ Survey Corridor

○ Portion of Survey Corridor Previously Surveyed as Baldwin

— NHD - High Res Subregion 1013

○ National Wetland Inventory

— Road



Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEML-MN kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

D02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
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- Surveyed Wetland/Water Feature
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- ▨ Potentially Jurisdictional
- ▨ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

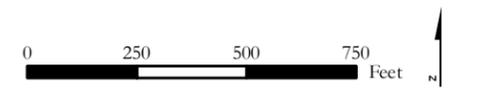


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEM:MN kim.gorman

Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

D03

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
 - ~ Surveyed Wetland/Water Feature
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - - - NHD - High Res Subregion 1013
 - National Wetland Inventory
 - Road

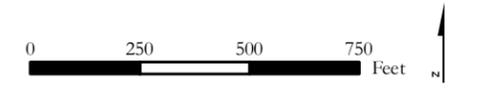


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera_gis\report\tr_wetlands_121012.mxd TTH:MN kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

D10

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
- Potentially Jurisdictional
- Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

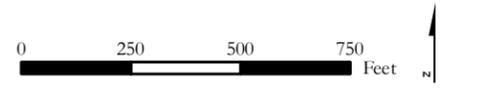
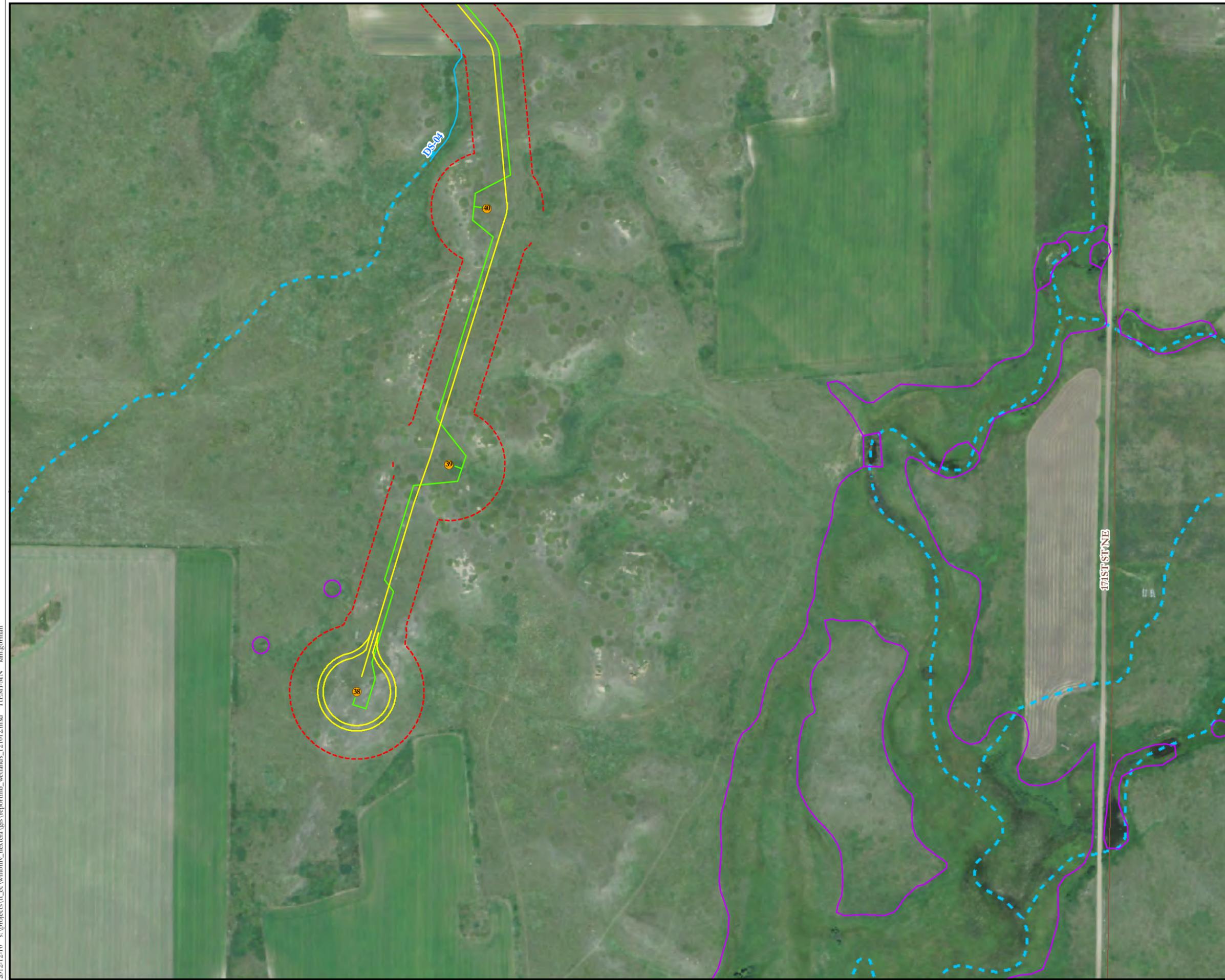


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



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Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

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E01

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
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G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
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 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
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 - ~ Surveyed Wetland/Water Feature
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 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
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 - National Wetland Inventory
 - Road

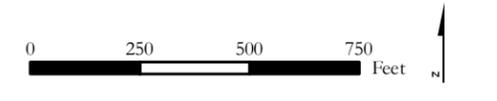


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota

Source: 2010 NAIP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

E02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
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- Surveyed Wetland/Water Feature
- ▨ Non-Jurisdictional
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- ▨ Jurisdictional
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- NHD - High Res Subregion 1013
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- Road



Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



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Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

E03

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

● Proposed Turbine Location

Facility Layout 10/12/2012

— Proposed Service Road

— Proposed Collection Line

▨ Proposed Substation Location

— Surveyed Wetland/Water Feature

— Non-Jurisdictional

— Surveyed Wetland/Water Feature

— Non-Jurisdictional

— Potentially Jurisdictional

— Jurisdictional

— Survey Corridor

— Portion of Survey Corridor
Previously Surveyed as Baldwin

— NHD - High Res Subregion 1013

— National Wetland Inventory

— Road



Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota

2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd T:\EML\MN kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

E04

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
 - ~ Surveyed Wetland/Water Feature
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - - - NHD - High Res Subregion 1013
 - National Wetland Inventory
 - Road



Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota





F02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
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 - ▨ Potentially Jurisdictional
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- Survey Corridor
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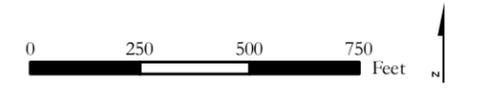


Figure 2
Wetland Evaluation Results
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Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEM:MN kim.gorman

Source: 2010 NAIP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

F03

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
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Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\trmb_wetlands_121012.mxd TRMB-MN kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

F04

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
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 - ▨ Proposed Substation Location
- Surveied Wetland/Water Feature
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 - ▨ Surveied Wetland/Water Feature
 - ▨ Non-Jurisdictional
 - ▨ Potentially Jurisdictional
 - ▨ Jurisdictional
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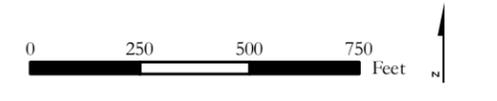


Figure 2
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Burleigh County, North Dakota

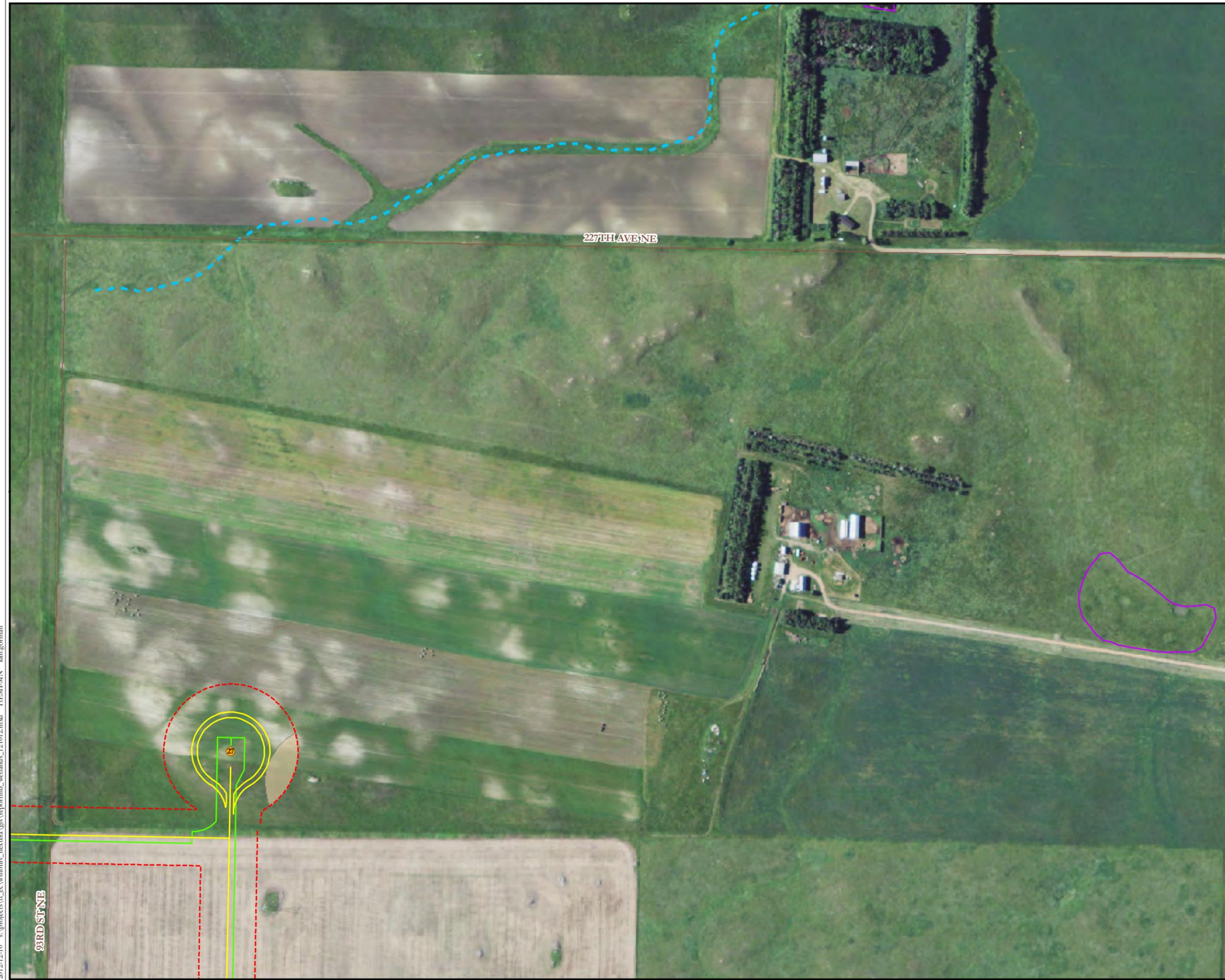


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Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

F05

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



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 - ~ Jurisdictional
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 - Road

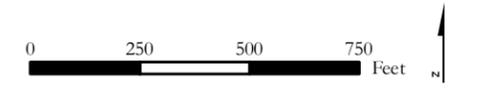


Figure 2
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2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEM:MN kim.gorman

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G01

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

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 - ~ Surveyed Wetland/Water Feature
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - - - NHD - High Res Subregion 1013
 - ⊕ National Wetland Inventory
 - Road

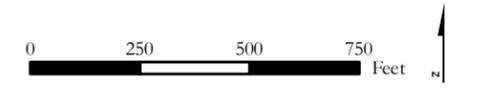


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEM:MN kim.gorman

Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\tr_wetlands_121012.mxd TTEM:MN kim.gorman



G02

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
 - ▨ Potentially Jurisdictional
 - ▨ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
 - Road

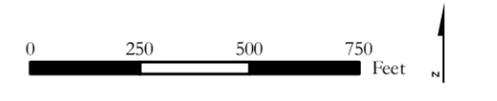


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



Source: 2010 N.AIP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



G03

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
 - ▨ Potentially Jurisdictional
 - ▨ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

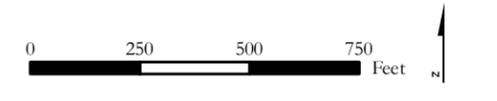


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEM:MN kim.gorman

Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11



- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
 - ~ Surveyed Wetland/Water Feature
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - - - NHD - High Res Subregion 1013
 - National Wetland Inventory
 - Road

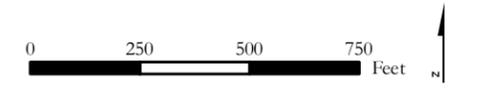


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TTEML:MN kim.gorman

Source: 2010 N.A.P. Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USCS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

G05

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

Facility Layout 9/20/2012

- Proposed Turbine Location

Facility Layout 10/12/2012

- Proposed Service Road
- Proposed Collection Line
- ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
- Surveyed Wetland/Water Feature
- Non-Jurisdictional
- Potentially Jurisdictional
- Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

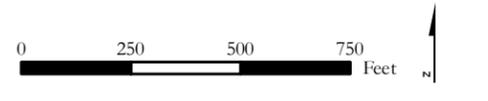
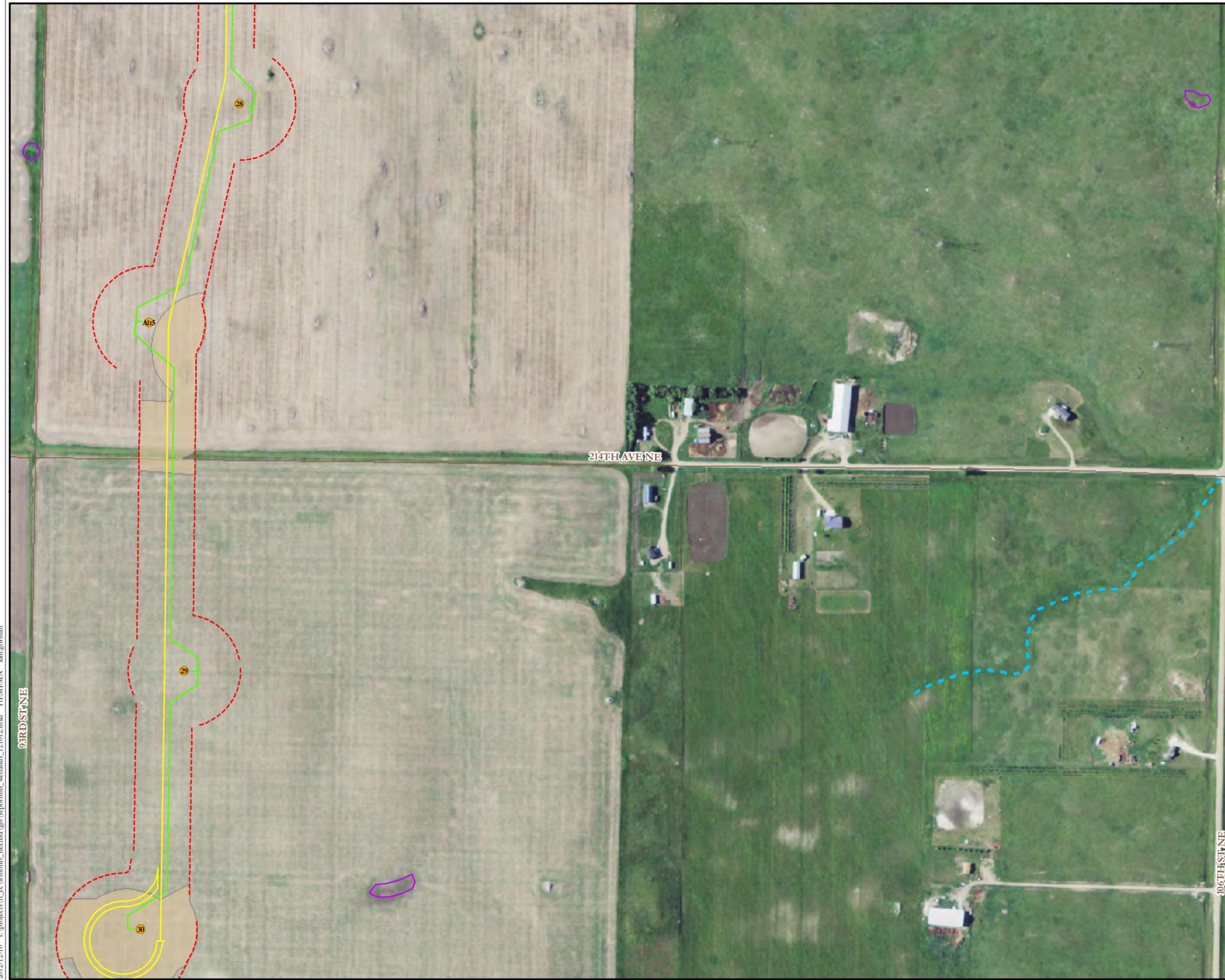


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TITEM1-MN kim.gorman

Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



H03

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
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 - ▨ Potentially Jurisdictional
 - ▨ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
- NHD - High Res Subregion 1013
- National Wetland Inventory
- Road

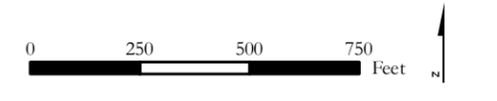


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr.ec\wilmoniv_nextera\gis\report\mb_wetlands_121012.mxd TETRA TECH kim.gorman

Source: 2010 NAD Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, HIGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



H05

A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11
C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11
D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11
E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11
F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11
G01	G02	G03	G04	G05	G06	G07	G08	G09	G10	G11
H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11

- Facility Layout 9/20/2012**
- Proposed Turbine Location
- Facility Layout 10/12/2012**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation Location
- Surveyed Wetland/Water Feature
- ~ Non-Jurisdictional
 - ~ Surveyed Wetland/Water Feature
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
- Survey Corridor
- Portion of Survey Corridor Previously Surveyed as Baldwin
 - NHD - High Res Subregion 1013
 - ~ National Wetland Inventory
 - Road

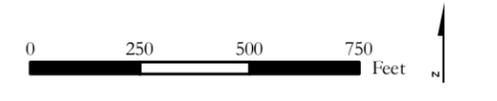
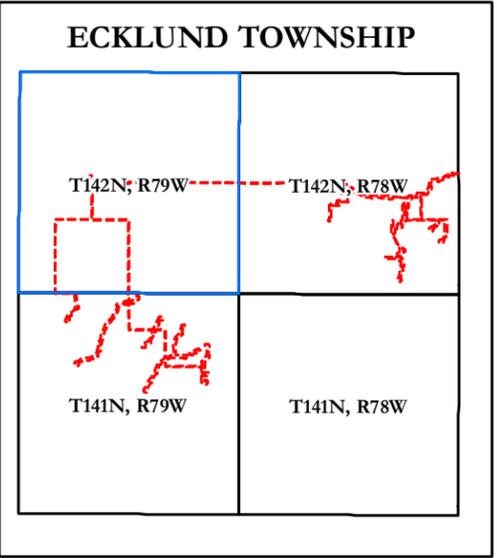
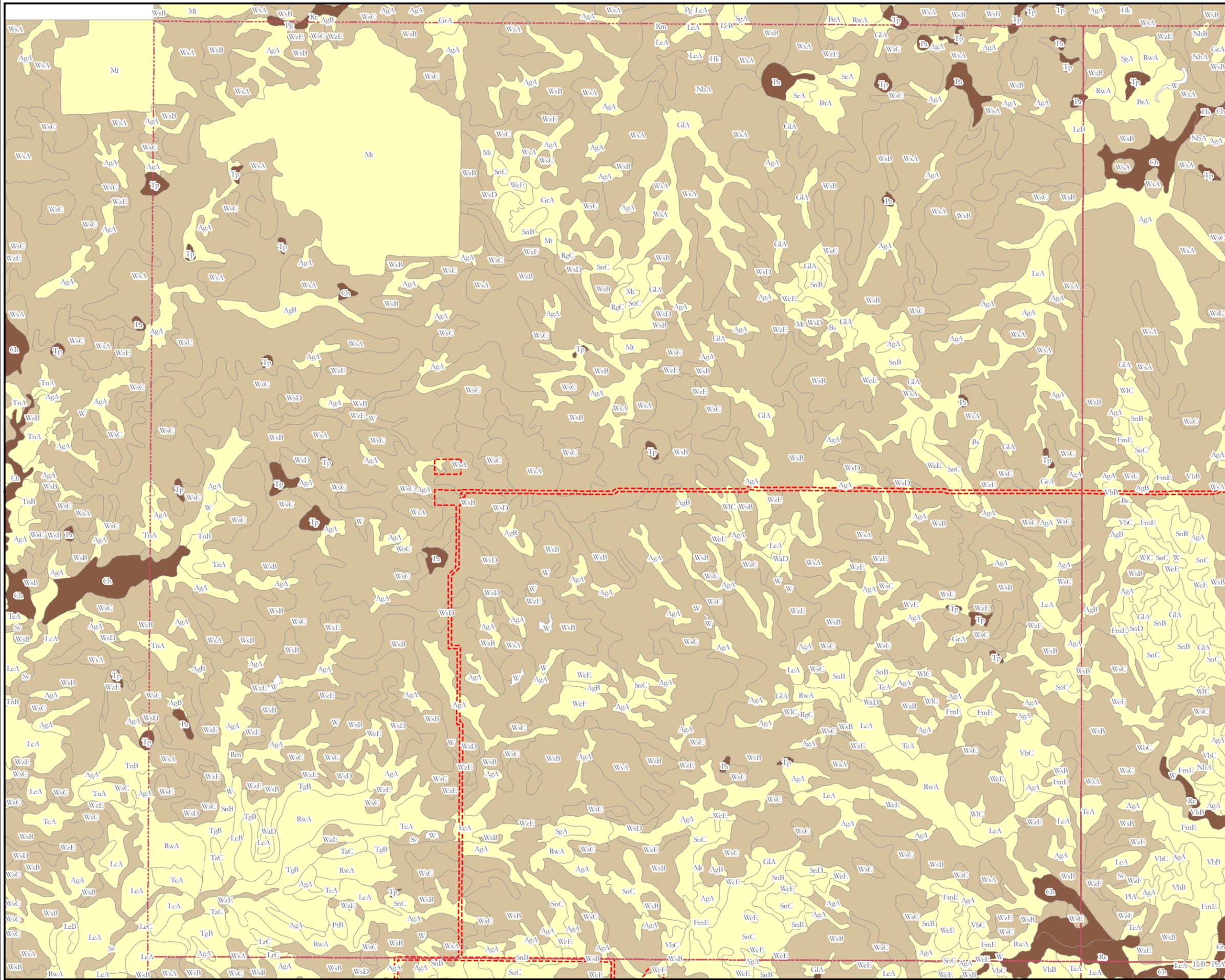


Figure 2
Wetland Evaluation Results
Wilton IV Wind Energy Center
Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmoniv_nextera_gis\report\mb_wetlands_121012.mxd TTEM:ANN kim.gorman

Source: 2010 NADP Aerial Photography - Burleigh County, USFWS National Wetlands Inventory, USGS NHD High Resolution Subregion 1013, DIGGER Roads, Tetra Tech wetland survey data collected through 9/20/2012, and Project data provided by NextEra Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



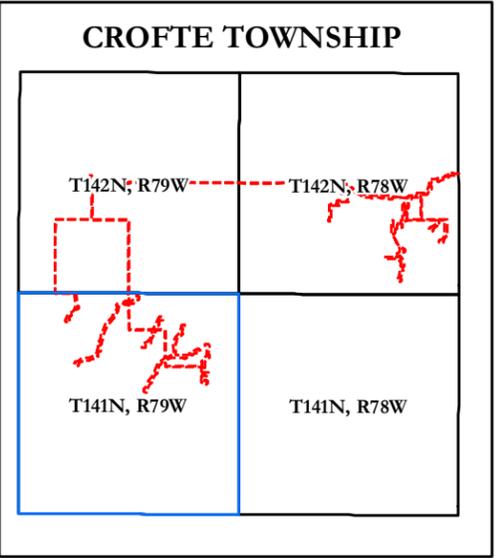
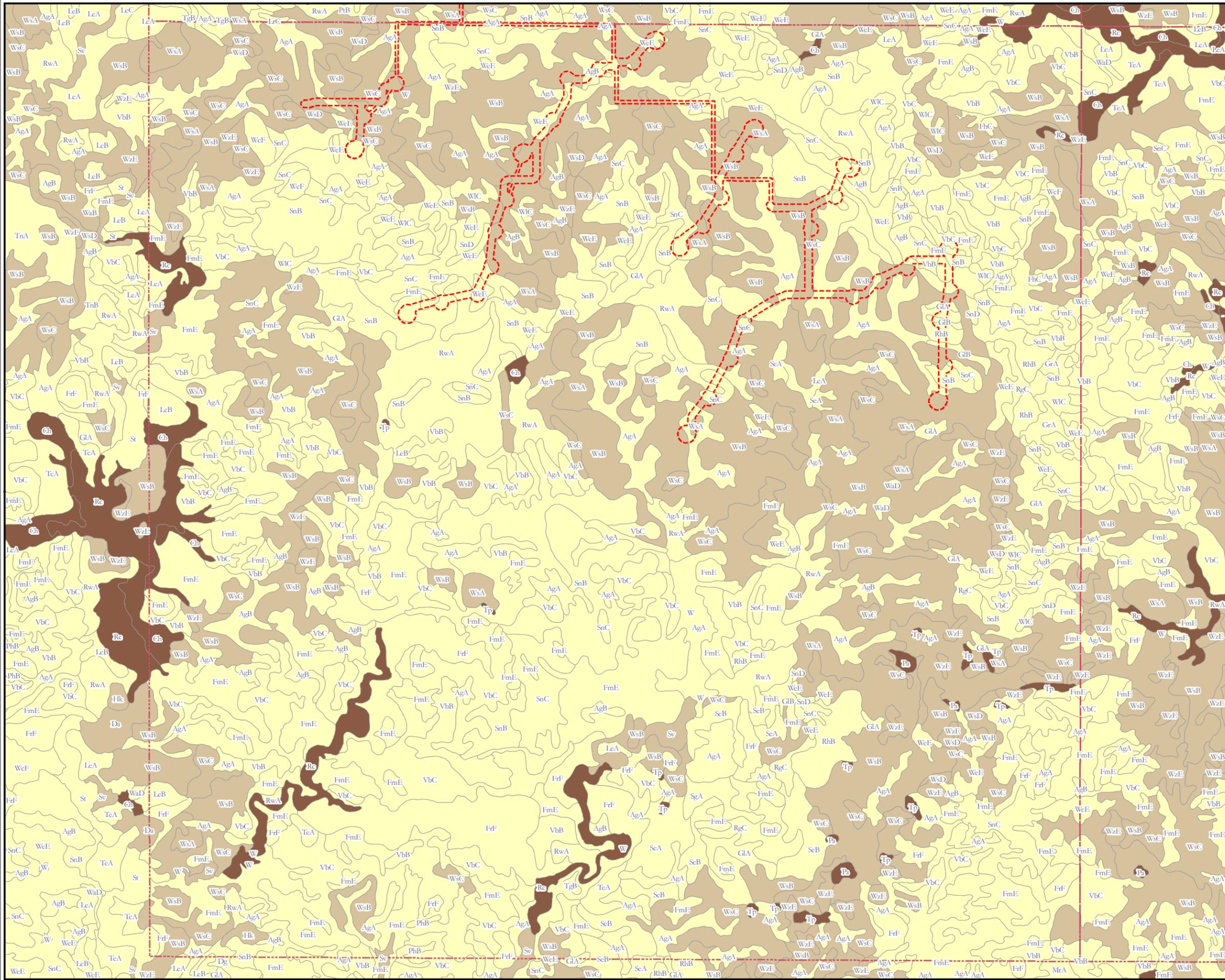
- SSURGO Soils - Hydric Classification
- All hydric
 - Partially hydric
 - Not hydric
 - Survey Corridor
 - Township



Figure 3
 SSURGO Soils
 Wilton IV Wind Energy Center
 Burleigh County, North Dakota

2012-12-10 s:\projects\tr_ec\wilmon_iv\moniv_nextera_igs_report\figure3_wildlands_120412.mxd T:\EM1\MN kim.gorman

Source: USDA Soil Survey Geographic (SSURGO) database, PLS Township boundar, and Project data provided by Nextera Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



- SSURGO Soils - Hydric Classification
- All hydric
 - Partially hydric
 - Not hydric
 - Survey Corridor
 - Township

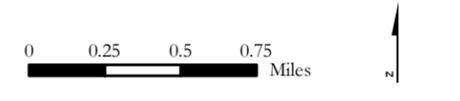
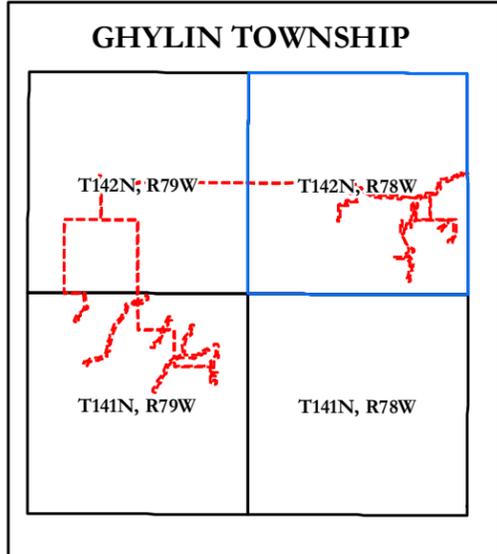
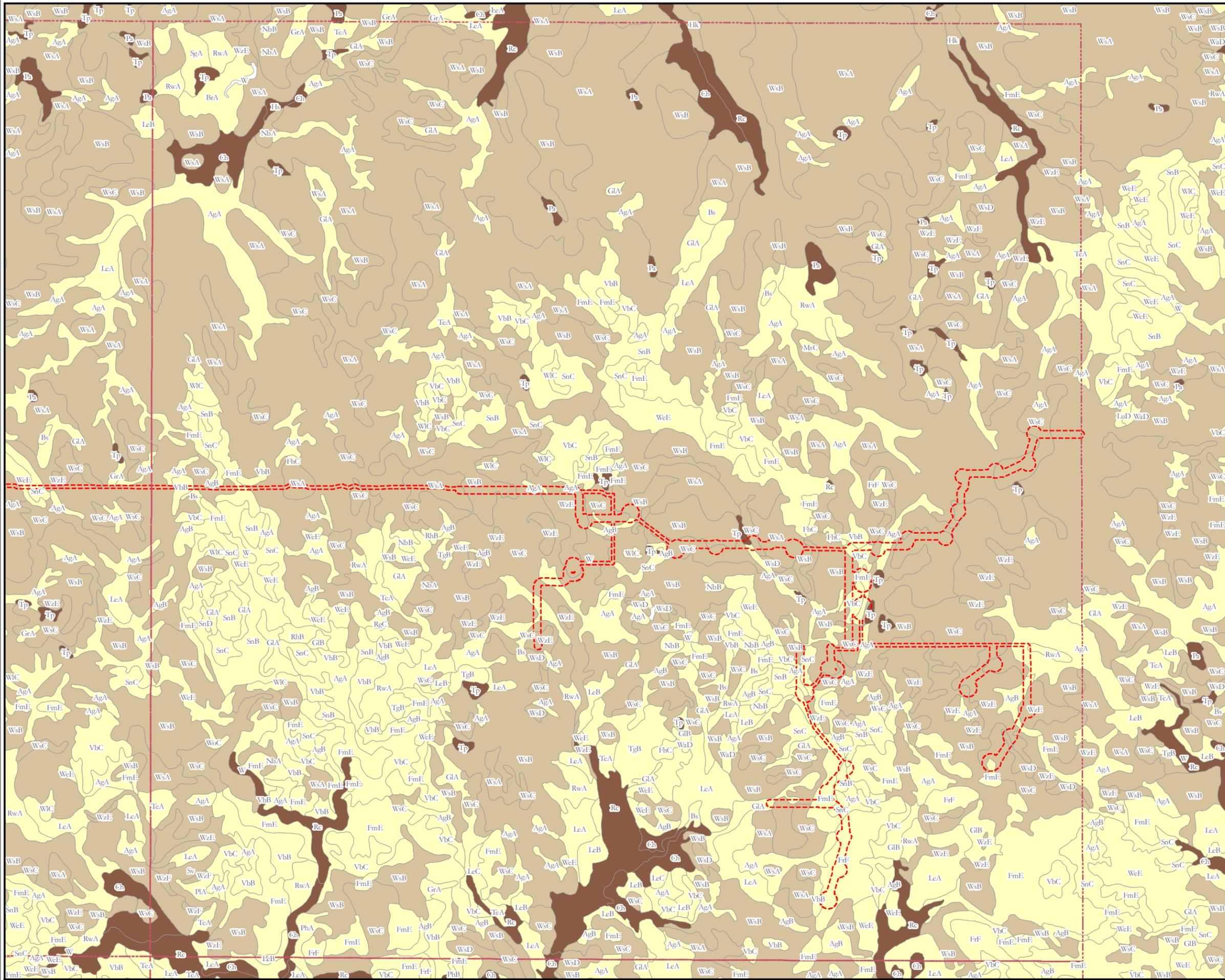


Figure 3
 SSURGO Soils
 Wilton IV Wind Energy Center
 Burleigh County, North Dakota



2012-12-10 s:\projects\trac\wilmoniv\nextera\gis\report\figure3_wetlands_120412.mxd T:\EM1\MN kim.gorman

Source: USDA Soil Survey Geographic (SSURGO) database, PLS Township boundar, and Project data provided by Nextera Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).



- SSURGO Soils - Hydric Classification**
- All hydric
 - Partially hydric
 - Not hydric
 - Survey Corridor
 - Township

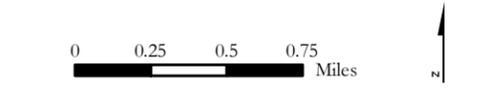


Figure 3
 SSURGO Soils
 Wilton IV Wind Energy Center
 Burleigh County, North Dakota



2012-12-10 s:\projects\tr_ec\wilmon_iv\moniv_nextera_igs_report\figure3_wetlands_120412.mxd TRIEM1.MN kim.gorman

Source: USDA Soil Survey Geographic (SSURGO) database, PLS Township bounday, and Project data provided by Nextera Energy 9/20/2012 (turbines) and 10/12/2012 (roads and collection).

APPENDIX B – SUPPORTING FIELD DOCUMENTATION

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

Page 1 of 2

DS-01

Feature #

Trimble Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB, KPG

TT Team ID: 1
Date/Time of Evaluation: 8/17/11 9:32
Jurisdictional status: N

Feature Name: Drainage swale

No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) Tributary to East Branch Apple Creek
Water body Type (stream/ditch/culvert/swale/wash) swale
Width (with respect to top of bank) no bank
Depth (with respect to top of bank) _____
Flow rate (dry/stagnant/low/moderate/high) none
Flow direction E
Substrate (mud/silt/gravel/cobble/boulders/bedrock) vegetated
Bank vegetation (upland/wetland cover type) upland

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

DS-01
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
16	W	"drainage swale"
17	E	

Notes:

[Faint handwritten notes and scribbles]

TT EMI QC Check: KB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: West	Feature ID	DS-01	Date 8/17/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	

02 / 03
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-01 / DS-02
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: 02

TT Team ID: 1
Date/Time of Evaluation: 3:00 PM
Jurisdictional status: W.P.
No. of Features Present: 2

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) Tributary to West Branch Apple Creek
Water body Type (stream/ditch/culvert/swale/wash) SWALE
Width (with respect to top of bank) 25 FT WIDE - no bank
Depth (with respect to top of bank) 1.5 FT - no bank
Flow rate (dry/stagnant/low/moderate/high) DRY
Flow direction south
Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILTY LOAM - vegetated
Bank vegetation (upland/wetland cover type) UPLAND

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled-in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: SMALL ISOLATED WETLAND IN SWALE

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
18	W	ISOLATED WETLAND
19	S	SWALE

Notes:

[Faint handwritten notes, possibly describing wetland characteristics or survey details.]

TT EMI QC Check: ICB

TT EC QC Check: _____

**WILTON IV
WETLAND FIELD DATA EVALUATION SHEET**

DS-02

33

Trimble Feature # _____

Page 1 of 2

Feature # _____

Location: Wilton IV
 County: Burleigh
 Assessors Names: KPG CM
 Feature Name: Swale

TT Team ID: 1
 Date/Time of Evaluation: 10/5/11 1025
 Jurisdictional status: N
 No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- | | | |
|--|---|--|
| 1. Is this a Traditional Navigable Waters (TNW)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland adjacent to a TNW? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 2. Is this a Tributary to a TNW | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is this a Relatively Permanent Waters (RPW) (Perennial Flow) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts a RPWs with perennial flow | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a RPW (Seasonal Flow – greater than 3 months) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts or is adjacent to a RPW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Does a significant nexus exist? (adjacent only, provide details below) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Non-RPW (Flow – less than 3 months)
[including ephemeral waters (i.e. swales, gully or small wash)] | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Does a significant nexus exist? (Provide details below) | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland adjacent to Non-RPW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Does a significant nexus exist? (Provide details below) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- | | | |
|---|---|--|
| a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
Explain _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| d. have other relationships to the physical, chemical, or biological integrity of the TNW?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK (Tributary)
 Water body Type (stream/ditch/culvert/swale/wash) SWALE
 Width (with respect to top of bank) 10 - no bank
 Depth (with respect to top of bank) 1-3 - no bank
 Flow rate (dry/stagnant/low/moderate/high) DRY
 Flow direction # South
 Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT/LOAM/CLAY - vegetated
 Bank vegetation (upland/wetland cover type) UPLAND/CROPLAND

- Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

**WILTON IV
WETLAND FIELD DATA EVALUATION SHEET**

DS-02

Trimble Feature # _____

Page 2 of 2

33 _____
Feature #

Pond or Open Waters:

Is this feature a farm pond? Yes No

Was this feature dug out to collect surface runoff? Yes No

Was this feature dug from a linear feature such as a stream? Yes No

Was the stream filled in the process? Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
588	S	facing swale in sunflower field
589	W	facing across swale

Notes:

Add to Feature 3 (DS-02)

(continued)

TT EMI QC Check: KB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: South	Feature ID	DS-02	Date 8/17/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

Trimble Feature # 6

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

DS-04
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: drainage swale

TT Team ID: 1
Date/Time of Evaluation: 8/17/11 1750
Jurisdictional status: N
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) Tributary to West Branch Apple Creek
Water body Type (stream/ditch/culvert/swale/wash) swale
Width (with respect to top of bank) no bank
Depth (with respect to top of bank) no bank
Flow rate (dry/stagnant/low/moderate/high) none
Flow direction South
Substrate (mud/silt/gravel/cobble/boulders/bedrock) vegetated
Bank vegetation (upland/wetland cover type) Upland

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

6
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

DS-04
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
<u>22</u>	<u>S</u>	<u>Swale</u>

Notes:

[Faint handwritten notes, possibly describing the swale or wetland conditions]

TT EMI QC Check: LCB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: South	Feature ID	DS-04	Date 8/17/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

8
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

DS-05
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: drainage swale

TT Team ID: 1
Date/Time of Evaluation: 8/18/11 1157
Jurisdictional status: W
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) Tributary to West Branch Apple Creek
Water body Type (stream/ditch/culvert/swale/wash) Swale
Width (with respect to top of bank) no bank
Depth (with respect to top of bank) no bank
Flow rate (dry/stagnant/low/moderate/high) dry
Flow direction South
Substrate (mud/silt/gravel/cobble/boulders/bedrock) vegetated
Bank vegetation (upland/wetland cover type) upland
Tributary is: Natural Artificial (man made). Explain _____
 Manipulated Explain _____

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
25	SE	swale
26	NW	" "

Notes:

[Faint handwritten notes, possibly describing field observations or survey details.]

TT EMI QC Check: LCB

TT EC QC Check: _____

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
 Page 1 of 2

DS-05

29

Trimble Feature # _____

Feature # _____

Location: Wilton IV
 County: Burleigh
 Assessors Names: KPG CM
 Feature Name: SWALE

TT Team ID: 1
 Date/Time of Evaluation: 10/14/11 4:00PM
 Jurisdictional status: NO
 No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- | | | |
|--|---|--|
| 1. Is this a Traditional Navigable Waters (TNW)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland adjacent to a TNW? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 2. Is this a Tributary to a TNW | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Relatively Permanent Waters (RPW) (Perennial Flow) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts a RPWs with perennial flow | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a RPW (Seasonal Flow – greater than 3 months) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts or is adjacent to a RPW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Does a significant nexus exist? (adjacent only, provide details below) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Non-RPW (Flow – less than 3 months) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| [including ephemeral waters (i.e. swales, gully or small wash)] | | |
| Does a significant nexus exist? (Provide details below) | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland adjacent to Non-RPW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Does a significant nexus exist? (Provide details below) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- | | | |
|---|---|--|
| a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
Explain _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| d. have other relationships to the physical, chemical, or biological integrity of the TNW?
Explain _____ | <input checked="" type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK
 Water body Type (stream/ditch/culvert/swale/wash) SWALE
 Width (with respect to top of bank) 10 - no bank
 Depth (with respect to top of bank) 2 - no bank
 Flow rate (dry/stagnant/low/moderate/high) DRY
 Flow direction -
 Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT/LOAM/CLAY - vegetated
 Bank vegetation (upland/wetland cover type) UPLAND

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
 Page 2 of 2

DS-05
 29 _____
 Feature #

Trimble Feature # _____

Pond or Open Waters:

- Is this feature a farm pond? Yes No
- Was this feature dug out to collect surface runoff? Yes No
- Was this feature dug from a linear feature such as a stream? Yes No
- Was the stream filled in the process? Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
579	NW	SWALE

Notes:

Add to feature 8 (DS-05)

TT EMI QC Check: KB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northwest	Feature ID	DS-05	Date 8/18/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

ZE

Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

DS-06

22

Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KPG CM
Feature Name: DRAINAGE SWALE

TT Team ID: 1
Date/Time of Evaluation: 10/4/11 10:15
Jurisdictional status: NO
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) Tributary to Burnt Creek

Water body Type (stream/ditch/culvert/swale/wash) swale

Width (with respect to top of bank) no bank

Depth (with respect to top of bank) no bank

Flow rate (dry/stagnant/low/moderate/high) dry

Flow direction SE

Substrate (mud/silt/gravel/cobble/boulders/bedrock) vegetated

Bank vegetation (upland/wetland cover type) Upland-crops

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: West	Feature ID	DS-06	Date 10/3/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

DS-08

Assessors Names: KS & CP
County:
Feature Name: 008

Date/Time of Evaluation: 9/19/12 2:10 PM
TT Team ID:
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)?
Is this a Wetland adjacent to a TNW?
Is this a Tributary to a TNW
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)
Is this a Wetland that abuts a RPWs with perennial flow
Is this a RPW (Seasonal Flow - greater than 3 months)
Is this a Wetland that abuts a RPWs (no indicates adjacent)
Does a significant nexus exist? (adjacent only, provide details below)
Is this a Non-RPW (Flow - less than 3 months)
Does a significant nexus exist? (Provide details below)
Is this a Wetland adjacent to Non-RPW
Does a significant nexus exist? (Provide details below)
Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Streams:

Name (or tributary to)
Water body Type (stream/ditch/culvert/swale/wash)
Width (with respect to top of bank)
Depth (with respect to top of bank)
Flow rate (dry/stagnant/low/moderate/high)
Flow direction
Substrate (mud/silt/gravel/cobble/boulders/bedrock)
Bank vegetation (upland/wetland cover type)
Tributary is: Natural, Artificial (man made), Manipulated

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northwest	Feature ID	DS-08	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

DS-09

Assessors Names: KS & CP
County:
Feature Name: 009

Date/Time of Evaluation: 9/19/12 2:20 PM
TT Team ID:
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)?
Is this a Wetland adjacent to a TNW?
Is this a Tributary to a TNW
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)
Is this a Wetland that abuts a RPWs with perennial flow
Is this a RPW (Seasonal Flow - greater than 3 months)
Is this a Wetland that abuts a RPWs (no indicates adjacent)
Does a significant nexus exist? (adjacent only, provide details below)
Is this a Non-RPW (Flow - less than 3 months)
Does a significant nexus exist? (Provide details below)
Is this a Wetland adjacent to Non-RPW
Does a significant nexus exist? (Provide details below)
Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Streams:

Name (or tributary to)
Water body Type (stream/ditch/culvert/swale/wash)
Width (with respect to top of bank)
Depth (with respect to top of bank)
Flow rate (dry/stagnant/low/moderate/high)
Flow direction
Substrate (mud/silt/gravel/cobble/boulders/bedrock)
Bank vegetation (upland/wetland cover type)
Tributary is: Natural, Artificial (man made), Manipulated

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET Page 2 of 2

DS-09

Pond or Open Waters:

Feature Name:

Is this feature a farm pond?

Yes No checkboxes

Was this feature dug out to collect surface runoff?

Yes No checkboxes

Was this feature dug from a linear feature such as a stream?

Yes No checkboxes

Was the stream filled in the process?

Yes No checkboxes

If this feature is not a farm pond, describe under comments.

Comments:

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments:

Other Features:

- Sinkhole
Drainage Basins/Areas
Floodplains
Depressions
Gravel Pits/Mined Areas
Other

Table with columns: Photo log #, Orientation, Description. Contains handwritten entries for photo logs 1182 and 1183.

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Southeast	Feature ID	DS-09	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

DS-10

Assessors Names: KS & CP
County:
Feature Name: 006

Date/Time of Evaluation: 9/19/12
TT Team ID: KS & CP
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)?
Is this a Wetland adjacent to a TNW?
Is this a Tributary to a TNW
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)
Is this a Wetland that abuts a RPWs with perennial flow
Is this a RPW (Seasonal Flow - greater than 3 months)
Is this a Wetland that abuts a RPWs (no indicates adjacent)
Does a significant nexus exist? (adjacent only, provide details below)
Is this a Non-RPW (Flow - less than 3 months)
Does a significant nexus exist? (Provide details below)
Is this a Wetland adjacent to Non-RPW
Does a significant nexus exist? (Provide details below)
Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Streams:

Name (or tributary to)
Water body Type (stream/ditch/culvert/swale/wash)
Width (with respect to top of bank)
Depth (with respect to top of bank)
Flow rate (dry/stagnant/low/moderate/high)
Flow direction
Substrate (mud/silt/gravel/cobble/boulders/bedrock)
Bank vegetation (upland/wetland cover type)
Tributary is: Natural, Artificial (man made), Manipulated

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: West	Feature ID	DS-10	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

DS-11

Assessors Names: KS & CP
County:
Feature Name: OIO

Date/Time of Evaluation: 9/19/12 2:30 PM
TT Team ID:
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)?
Is this a Wetland adjacent to a TNW?
Is this a Tributary to a TNW
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)
Is this a Wetland that abuts a RPWs with perennial flow
Is this a RPW (Seasonal Flow - greater than 3 months)
Is this a Wetland that abuts a RPWs (no indicates adjacent)
Does a significant nexus exist? (adjacent only, provide details below)
Is this a Non-RPW (Flow - less than 3 months)
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below)
Is this a Wetland adjacent to Non-RPW
Does a significant nexus exist? (Provide details below)
Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Streams:

Name (or tributary to)
Water body Type (stream/ditch/culvert/swale/wash)
Width (with respect to top of bank)
Depth (with respect to top of bank)
Flow rate (dry/stagnant/low/moderate/high)
Flow direction
Substrate (mud/silt/gravel/cobble/boulders/bedrock)
Bank vegetation (upland/wetland cover type)
Tributary is: Natural, Artificial (man made), Manipulated

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Southeast	Feature ID	DS-11	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

9/10
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-65
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: wetland on UHD

TT Team ID: 1
Date/Time of Evaluation: 8/18/11 1447
Jurisdictional status: P
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: seasonal wetland on UHD line

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
29	N	WETLAND W/ SUNFLOWERS + EXISTING TURBINES
30	N	↓ IN BACKGROUND
31	N	

Notes:

Wetland on flowline - no swale/stream observed.
Surrounding area cropped (sunflowers)

TT EMI QC Check: ICB

TT EC QC Check: _____

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WILTON IV City/County: BURLEIGH CO Sampling Date: 8/18/2011
 Applicant/Owner: _____ State: MN Sampling Point: AWW 10-W
 Investigator(s): KPG KAB Section, Township, Range: T142N R78W S22
 Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 1-2
 Subregion (LRR): F Lat: 383089.9 Long: 5218383.3 Datum: _____
 Soil Map Unit Name: TONKA + DARNELL SOILS NWI classification: PMEL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>265</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.94</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = _____	UPL species <u>0</u>	x 5 = _____	Column Totals: <u>90</u> (A)	<u>265</u> (B)	Prevalence Index = B/A = <u>2.94</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>75</u>	x 2 = <u>150</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>0</u>	x 4 = _____																			
UPL species <u>0</u>	x 5 = _____																			
Column Totals: <u>90</u> (A)	<u>265</u> (B)																			
Prevalence Index = B/A = <u>2.94</u>																				
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover																				
Herb Stratum (Plot size: _____) 1. <u>Echinochloa crusgalli</u> <u>75</u> <u>Y</u> <u>FACW</u> 2. <u>Beckmannia syzigachne</u> <u>10</u> <u>N</u> <u>OBL</u> 3. <u>Ambrosia psilostachya</u> <u>5</u> <u>N</u> <u>FAC</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover																				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover																				
% Bare Ground in Herb Stratum _____																				

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 10-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					LOAM	
4-14	10YR 2/1	85	7.5YR 2.5/3	15	C	M	SILTY LOAM	
14-30	2.5Y 3/1	95	7.5YR 4/4	5	C	PL	SILTY CLAY LOAM	
30+	2.5Y 4/1	95	7.5YR 4/4	5	C	PL	CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- 5 cm Mucky Peat or Peat (S3) (LRR F)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WILTON IV City/County: BURLINGHAM CO Sampling Date: 8/18/2011
 Applicant/Owner: _____ State: MN Sampling Point: 440 10-U
 Investigator(s): KPK KAS Section, Township, Range: T142N R78W S22
 Landform (hillslope, terrace, etc.): PLAIN Local relief (concave, convex, none): NONE Slope (%): 0
 Subregion (LRR): F Lat: 383033.7 Long: 5218342.0 Datum: _____
 Soil Map Unit Name: ARNEGATED + GRASSNA SILT LOAM NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>2</u> x 5 = <u>10</u> Column Totals: <u>3</u> (A) <u>14</u> (B) Prevalence Index = B/A = <u>4.6</u>
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: _____) 1. <u>SETARIA VIRIDIS</u> <u>50</u> <u>Y</u> <u>UPL</u> 2. <u>POTENTILLA MONSPELIENSIS</u> <u>30</u> <u>Y</u> <u>UPL</u> 3. <u>MEDICAGO LUPULINA</u> <u>10</u> <u>N</u> <u>FACU</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				

Remarks: _____

SOIL

Sampling Point: 10-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					LOAM	20% ROOTS
4-10	10YR 2/1	90	7.5YR 2.5/3.5		C	PL	SILT LOAM	10% ROOTS
10+	10YR 2/1	100					SILT LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> (LRR H outside of MLRA 72 & 73)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> (where tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> (where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: North	Feature ID	W-05	Date 8/18/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

15-16
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-10/W-11
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: isolated wetlands

TT Team ID: 1
Date/Time of Evaluation: 8/19/11
Jurisdictional status: N
No. of Features Present: 2

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural Artificial (man made). Explain _____
 Manipulated Explain _____

15/10
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-10/W-11
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: 2 small depressions with potential wetland type vegetation partially filled with rocks from nearby field

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
40	S	Wetland 15 (10 in foreground)
41	NE	Feature 15
42	S	Feature 16

Notes:

TT EMI QC Check: KB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: South	Feature ID	W-10 and W-11	Date 8/19/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

19
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-14
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: isolated wetland

TT Team ID: 1
Date/Time of Evaluation: 8/19/11 1015
Jurisdictional status: N
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

19
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-14
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: isolated, very small wetland in pasture

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
<u>45</u>	<u>N</u>	<u>wetland</u>

Notes:

TT EMI QC Check: ICB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: North	Feature ID	W-14	Date 8/19/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

20
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-15
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: isolated wetland

TT Team ID: 1
Date/Time of Evaluation: 8/19/11 1320
Jurisdictional status: N
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) _____
Water body Type (stream/ditch/culvert/swale/wash) _____
Width (with respect to top of bank) _____
Depth (with respect to top of bank) _____
Flow rate (dry/stagnant/low/moderate/high) _____
Flow direction _____
Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____
Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

20
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-15
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: isolated wetland in crop field (wheat)

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
46	N	wetland w/ turbine
47	N	wetland
48	NNE	wetland

Notes:

TT EMI QC Check: KB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northeast	Feature ID	W-15	Date 8/19/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

21
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-16
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KAB KPG
Feature Name: isolated wetland

TT Team ID: 1
Date/Time of Evaluation: 8/19/11 1331
Jurisdictional status: U
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

21
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-16
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: isolated wetland in pasture

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
49	NE	wetland w/ turbine
50	E	wetland w/ turbines
51	E	" "

Notes:

TT EMI QC Check: LCB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northeast	Feature ID	W-16	Date 8/19/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

W-17 | W-18

Trimble Feature #

Page 1 of 2

52 24 | 25
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KPG CM

TT Team ID: 1
Date/Time of Evaluation: 10/4/11 1:00PM
Jurisdictional status: YES

Feature Name: SEASONALLY FLOODED WETLAND No. of Features Present: 2

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK (Tributary)
Water body Type (stream/ditch/culvert/swale/wash) DRAINAGE SWALE w/ WETLAND
Width (with respect to top of bank) 20± - NO BANK
Depth (with respect to top of bank) 2-5 - NO BANK
Flow rate (dry/stagnant/low/moderate/high) DRY
Flow direction -
Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT/LOAM/CLAY - vegetated
Bank vegetation (upland/wetland cover type) UPLAND

- Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
 Page 2 of 2

W-17 | W-18

24/25

Feature #

Trimble Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: NWI MAPPED WETLAND ON NHD FLOWLINE,
SEASONALLY FLOODED WETLAND

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
572	E	Drainage
573	W	Drainage
574	N	NWI
575	S	NWI

Notes:

24 WETLAND ON NORTH SIDE OF ROAD
 25 " ON SOUTH "
 (no culvert identified/found)

TT EMI QC Check: ICB

TT EC QC Check: _____

W-17 | W-18

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 24W/25W
 Investigator(s): KPG CM Section, Township, Range: T142N R79W S13
 Landform (hillslope, terrace, etc.): WETLAND IN SWALE Local relief (concave, convex, none): CONCAVE Slope (%): 5-10
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: GRAIL SILTY CLAY LOAM NWI classification: FRESHWATER EMERGENT WETLAND
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ Remarks: _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
--	---

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Polygonum pennsylvanicum</u>	10	X	FACW+	
2. <u>Lycopus</u>				
3. <u>Juncus spp. (no fertile spikes)</u>	20	X	?	
4. <u>Carex flava</u>	70	X	OBL	
5. <u>Humone canadensis</u>			FACW	
6. _____				
7. _____				
8. _____				
Total Cover: _____				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>80</u> (A)	<u>90</u> (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes No _____

of identifiable dominant species

SOIL

Sampling Point: 24W/25W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	2.5Y 2.5/1	100					SILTY CLAY LOAM, 20%. 2-4mm	ROOTS (PEAT)
4-32+	2.5Y 2.5/1	100					SILTY CLAY	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input checked="" type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Local Soil Survey Data (D8)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? Yes No Depth (inches): _____ (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 240/250
 Investigator(s): KPG CM Section, Township, Range: T142N R79W S13
 Landform (hillslope, terrace, etc.): SWALE Local relief (concave, convex, none): CONCAVE Slope (%): 0-5
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: GRAN SILTY CLAY LOAM NWI classification: FRESHWATER EMERGENT
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>75</u> x 3 = <u>225</u>
5. _____	_____	_____	_____	FACU species <u>10</u> x 4 = <u>40</u>
Total Cover: _____				UPL species <u>5</u> x 5 = <u>25</u>
				Column Totals: <u>90</u> (A) <u>290</u> (B)
				Prevalence Index = B/A = <u>3.2</u>
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Rudbeckia hirta</u>	_____	_____	<u>FACU</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Bromus kalmii</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Melilotus alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Helianthus</u>	_____	_____	_____	____ Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Rumex crispus</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC+</u>	
6. <u>Ambrosia ludoviciana</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
7. <u>Rosa arkansa</u>	_____	_____	<u>NI</u>	
8. _____	_____	_____	_____	
Total Cover: <u>90</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____				

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-30	10YR 2/1	100					SILTY LOAM	
30-36+	10YR 2/1	100					SILTY CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Local Soil Survey Data (D8)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: East	Feature ID	W-17	Date 10/4/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: South	Feature ID	W-18	Date 10/4/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

w-19/w-20
26/27/28
Feature #

Trimble Feature #

Page 1 of 2

Location: Wilton IV
County: Burleigh
Assessors Names: KPG CM
Feature Name: WETLAND IN SWALE

TT Team ID: 1
Date/Time of Evaluation: 10/4/11
Jurisdictional status: YES
No. of Features Present: 3

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? [] Yes [x] No
Is this a Wetland adjacent to a TNW? [] Yes [x] No
2. Is this a Tributary to a TNW [] Yes [x] No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) [] Yes [x] No
Is this a Wetland that abuts a RPWs with perennial flow [] Yes [x] No
Is this a RPW (Seasonal Flow - greater than 3 months) [x] Yes [] No
Is this a Wetland that abuts or is adjacent to a RPW [x] Yes [] No
Does a significant nexus exist? (adjacent only, provide details below) [x] Yes [] No
Is this a Non-RPW (Flow - less than 3 months) [] Yes [x] No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) [] Yes [x] No
Is this a Wetland adjacent to Non-RPW [] Yes [x] No
Does a significant nexus exist? (Provide details below) [] Yes [x] No
3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) [] Yes [x] No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? [x] Yes [] No
Explain
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? [] Yes [x] No
Explain
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? [x] Yes [] No
Explain
d. have other relationships to the physical, chemical, or biological integrity of the TNW? [x] Yes [] No
Explain

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK
Water body Type (stream/ditch/culvert/swale/wash) SWALE
Width (with respect to top of bank) 10-20 - no bank
Depth (with respect to top of bank) 2-4 - no bank
Flow rate (dry/stagnant/low/moderate/high) STAGNANT
Flow direction SE
Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD/SILT
Bank vegetation (upland/wetland cover type) UPLAND

- Tributary is: [x] Natural
[] Artificial (man made). Explain
[] Manipulated Explain

**WILTON IV
WETLAND FIELD DATA EVALUATION SHEET**

W-19/W-20

Trimble Feature # _____

Page 2 of 2

26/27/28

Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: SEASONALLY FLOODED WETLAND @ NHS FLOWLINE

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
	SW	of N side of culvert
577	N	along flow line
578	S	along flow line

Notes:

26 WETLAND ON N SIDE OF ROAD

27 " SOUTH "

28 CULVERT

TT EMI QC Check: LCB

TT EC QC Check: _____

W-19|W-20

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: ZUW127W
 Investigator(s): KPG CM Section, Township, Range: T142U R79W S15 + 22
 Landform (hillslope, terrace, etc.): SWALE Local relief (concave, convex, none): CONCAVE Slope (%): 10-20
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: ARNAGARD + GRASSANA SILT LOAM NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>Salix</u>	<u>5</u>	<u>X</u>	<u>OBL</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Bromus inermis?</u>	<u>70-80</u>	<u>X</u>	<u>NI</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Rumex crispus</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	
3. <u>Polygonum pennsylvanicum</u>	<u>5</u>	<u>X</u>	<u>FACW+</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				
Remarks:				

W-19/W-20

SOIL

Sampling Point: Z6W/27W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	5y 3/1	80	grey 4/10y	20			SILTY CLAY LOAM	
8-	5y 2.5/1	95	10y 2/10	5			LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input checked="" type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> High Plains Depressions (F16)	
(MLRA 72 & 73 of LRR H)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Local Soil Survey Data (D8)
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No _____ Depth (inches): 0

Water Table Present? Yes No Depth (inches): 8

Saturation Present? Yes No _____ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-19/W-20

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 200/270
 Investigator(s): KPG CM Section, Township, Range: T142N R79W S15+22
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): NONE Slope (%): 0-5
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: ARNAGARD + GRASSINA SILT LOAM NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

VEGETATION

<u>Tree Stratum</u> (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	Prevalence Index worksheet:
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				
1. <u>Bromus inermis</u>	<u>70</u>	<u>X</u>	<u>NI/UPL</u>	Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Asclepius speciosa</u>	<u>5</u>	<u>X</u>	<u>FAC</u>	
3. <u>Solidago missouriensis</u>	<u>5</u>	<u>X</u>	<u>NI/UPL</u>	
4. <u>Cirsium arvense</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	
5. <u>Rosa arkansana</u>	<u>5</u>	<u>X</u>	<u>NI</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				
				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____				

W-19/W-20

SOIL

Sampling Point: Z60/270

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					SILTY LOAM	
10-16	10YR 2/1	100					SILTY CLAY LOAM	
16-20	10YR 3/2	100					SILTY CLAY LOAM	
20-28+	10YR 3/2	100					" , COMMON 2-5mm SUBR to SUBA GRAVEL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (LRR H outside MLRA 72 & 73) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) | |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | <input type="checkbox"/> (MLRA 72 & 73 of LRR H) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Local Soil Survey Data (D8) |

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____
 Water Table Present? Yes _____ No _____ Depth (inches): _____
 Saturation Present? Yes _____ No _____ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: North	Feature ID	W-19	Date 10/4/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

W-21

30

Trimble Feature #

Page 1 of 2

Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KPG CM
Feature Name: SWALE/WETLAND

TT Team ID: 1
Date/Time of Evaluation: 10/4/11
Jurisdictional status: YES
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK (Tributary)
Water body Type (stream/ditch/culvert/swale/wash) SWALE
Width (with respect to top of bank) 10-40 - no bank
Depth (with respect to top of bank) 2-4 - no bank
Flow rate (dry/stagnant/low/moderate/high) STAGNANT
Flow direction #1 SW
Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT/LOAM/CLAY - vegetated
Bank vegetation (upland/wetland cover type) UPLAND/CROPLAND

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

**WILTON IV
WETLAND FIELD DATA EVALUATION SHEET**

W-21

Trimble Feature # _____

Page 2 of 2

300

Feature # _____

Pond or Open Waters:

Is this feature a farm pond? Yes No

Was this feature dug out to collect surface runoff? Yes No

Was this feature dug from a linear feature such as a stream? Yes No

Was the stream filled in the process? Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: SEASONALLY FLOODED WETLAND ON
NHD FLOWLINE

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
585	E	along drainage
586	E	

Notes:

[Faint handwritten notes and sketches, including a small diagram of a drainage path.]

TT EMI QC Check: LCB

TT EC QC Check: _____

W-21

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 30 W
 Investigator(s): KPG CM Section, Township, Range: T142N R78W S21E22
 Landform (hillslope, terrace, etc.): SWALE Local relief (concave, convex, none): CONCAVE Slope (%): 10-20
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: ARNEGARD + GRASSANA SILT LOAM NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>50</u> x 1 = <u>50</u>
3. _____	_____	_____	_____	FACW species <u>15</u> x 2 = <u>30</u>
4. _____	_____	_____	_____	FAC species <u>10</u> x 3 = <u>30</u>
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
				Column Totals: <u>75</u> (A) <u>110</u> (B)
				Prevalence Index = B/A = <u>1.5</u>
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Typha angustifolia</u>	<u>50</u>		<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Artemisia biennis</u>	<u>5</u>		<u>FACW</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Epilobium angustifolium</u>	<u>10</u>		<u>FAC</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Echinochloa cruz-galli</u>	<u>10</u>		<u>FACW</u>	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Chenopodium album</u>			<u>FAC-</u>	
6. <u>Rumex crispus</u>			<u>FAC</u>	
7. <u>Cirsium arvense</u>			<u>FACU</u>	
8. <u>Plantago major</u>			<u>FAC+</u>	
Total Cover: <u>75</u>				
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____				

SOIL

Sampling Point: 30W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	GLEY 2S/N 90		10YR 3/6	10	C	PL	SILTY CLAY LOAM	
6-17	GLEY 2S/N 85		10YR 3/6	5	C	PL	"	
			GLEY 14/10/10	10				

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Red Parent Material (TF2)
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input checked="" type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Local Soil Survey Data (D8)
Field Observations:	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

W-21

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 300
 Investigator(s): KPG CM Section, Township, Range: T142N R78W S21+22
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5-10
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: ARNEGARD + GRASSANA SILT LOAM NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>Cultivated wheat</u>	

VEGETATION

<u>Tree Stratum</u> (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				
1. <u>Wheat</u>	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Cirsium arvense</u>	_____	_____	<u>FACU</u>	
3. <u>Medicago sativa</u>	_____	_____	<u>NI</u>	
4. <u>Chenopodium album</u>	_____	_____	<u>FAC-</u>	
5. <u>Setaria viridis</u>	_____	_____	<u>NI</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

SOIL

Sampling Point: 300

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100					SILT LOAM	
8-20	10YR 3/2	100					SILT CLAY LOAM	
20-28	10YR 3/2	100					" FEW 3-8mm SUBS TO SUBA GRAVEL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Local Soil Survey Data (D8)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: East	Feature ID	W-21	Date 10/4/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

W-22

Trimble Feature # _____

Page 1 of 2

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Feature # _____

Location: Wilton IV
 County: Burleigh
 Assessors Names: KPG CM
 Feature Name: SWALE/WETLAND

TT Team ID: 1
 Date/Time of Evaluation: 10/4/11
 Jurisdictional status: YES
 No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- | | | |
|--|---|--|
| 1. Is this a Traditional Navigable Waters (TNW)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland adjacent to a TNW? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 2. Is this a Tributary to a TNW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Relatively Permanent Waters (RPW) (Perennial Flow) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts a RPWs with perennial flow | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a RPW (Seasonal Flow – greater than 3 months) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Wetland that abuts or is adjacent to a RPW | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Does a significant nexus exist? (adjacent only, provide details below) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is this a Non-RPW (Flow – less than 3 months) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| [including ephemeral waters (i.e. swales, gully or small wash)] | | |
| Does a significant nexus exist? (Provide details below) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is this a Wetland adjacent to Non-RPW | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Does a significant nexus exist? (Provide details below) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- | | | |
|--|---|--|
| a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Explain _____ | | |
| b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Explain _____ | | |
| c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Explain _____ | | |
| d. have other relationships to the physical, chemical, or biological integrity of the TNW? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Explain _____ | | |

Streams:

Name (or tributary to) WEST BRANCH APPLE CREEK (Tributary)
 Water body Type (stream/ditch/culvert/swale/wash) SWALE/WETLAND
 Width (with respect to top of bank) 10-15 - no bank
 Depth (with respect to top of bank) 2-3 - no bank
 Flow rate (dry/stagnant/low/moderate/high) DRY
 Flow direction to South
 Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT/LOAM/CLAY - vegetated
 Bank vegetation (upland/wetland cover type) UPLAND

- Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
 Page 2 of 2

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31

Trimble Feature #

Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: SEASONALLY FLOODED NW1 WETLAND
ON NHD FLOWLINE

Other Features:

- Sinkhole _____
- Drainage Basins/Areas _____
- Floodplains _____
- Depressions _____
- Gravel Pits/Mined Areas _____
- Other _____

Photo log #:	Orientation:	Brief Description:
587	E	from wetland margin facing east

Notes:

(Faint handwritten notes)

TT EMI QC Check: ICB

TT EC QC Check: _____

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

W-22

Assessors Names: County: Feature Name:

Date/Time of Evaluation: TT Team ID: No. of Features Present:

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)? Is this a Wetland adjacent to a TNW? Is this a Tributary to a TNW... Does a significant nexus exist? (adjacent only, provide details below) Is this a Non-RPW (Flow - less than 3 months) [including ephemeral waters (i.e. swales, gully or small wash)] Does a significant nexus exist? (Provide details below) Is this a Wetland adjacent to Non-RPW Does a significant nexus exist? (Provide details below) Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Explain b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Explain c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Explain d. have other relationships to the physical, chemical, or biological integrity of the TNW? Explain

Streams:

Name (or tributary to) Water body Type (stream/ditch/culvert/swale/wash) Width (with respect to top of bank) Depth (with respect to top of bank) Flow rate (dry/stagnant/low/moderate/high) Flow direction Substrate (mud/silt/gravel/cobble/boulders/bedrock) Bank vegetation (upland/wetland cover type) Tributary is: Natural Artificial (man made). Manipulated Explain Explain

W-22

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11

Applicant/Owner: Next Era Energy State: ND Sampling Point: 31W

Investigator(s): KPG CM Section, Township, Range: T142N R78W S23

Landform (hillslope, terrace, etc.): SWALE Local relief (concave, convex, none): CONCAVE Slope (%): 10

Subregion (LRR): F Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: TONKA + PARNELL SOILS NWI classification: FRESHWATER EMERGENT WETLAND

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> (A/B)
4. _____	_____	_____	_____	Total Cover: _____	
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____ x 1 = _____	
3. _____	_____	_____	_____	FACW species <u>30</u> x 2 = <u>60</u>	
4. _____	_____	_____	_____	FAC species <u>10</u> x 3 = <u>30</u>	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
Total Cover: _____				UPL species _____ x 5 = _____	
Herb Stratum				Column Totals:	<u>40</u> (A) <u>90</u> (B)
1. <u>Polygonum pennsylvanicum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Prevalence Index = B/A = <u>2.25</u>	
2. <u>Carex</u>	<u>20</u>	<input checked="" type="checkbox"/>			
3. <u>Bromus</u>	<u>10</u>				
4. <u>Rumex crispus</u>	<u>10</u>		<u>FAC</u>		
5. <u>Andropogon smithii</u>			<u>NI</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: _____				Hydrophytic Vegetation Indicators:	
Woody Vine Stratum				<input type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.	
2. _____	_____	_____	_____		
Total Cover: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
% Bare Ground in Herb Stratum _____					
Remarks:					

10 at Hotel

SOIL

Sampling Point: 31W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	2.5Y 3/1	100					SILTY CLAY LOAM	
4-24	2.5Y 3/1	85	10YR 3/6	15	C	PL	"	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Dark Surface (S7) (LRR G) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> (LRR H outside MLRA 72 & 73) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input checked="" type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) | |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | <input type="checkbox"/> (MLRA 72 & 73 of LRR H) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Thin Muck Surface (C7) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F) |
| <input type="checkbox"/> Iron Deposits (B5) | | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Local Soil Survey Data (D8) |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

W-22

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Wilton IV City/County: Burleigh Sampling Date: 10/4/11
 Applicant/Owner: Next Era Energy State: ND Sampling Point: 310
 Investigator(s): KPG CM Section, Township, Range: T142N R78W S23
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): NONE Slope (%): 10-15
 Subregion (LRR): F Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: TONKA + PARNELL SOILS NWI classification: FRESHWATER EMERGENT WETLAND

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

VEGETATION

<u>Tree Stratum</u> (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators:
1. <u>Bromus</u>	80	X		___ Dominance Test is >50%
2. <u>Cirsium arvense</u>			FACU	___ Prevalence Index is ≤3.0 ¹
3. <u>Andropogon smithii</u>	10	X		___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Rumex crispus</u>				___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Asclepius speciosa</u>			FACU	
6. _____				
7. _____				
8. _____				
Total Cover: _____				
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____				

SOIL

Sampling Point: 310

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					LOAM	
4-11	10YR 2/1	100					SILT LOAM	
11-20+	10YR 4/2	100					SILT CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> F </u>
--	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Frost-Heave Hummocks (C11) (LRR F) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Local Soil Survey Data (D8)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u> X </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: East	Feature ID	W-22	Date 10/4/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: North	Feature ID	W-22	Date 9/20/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET

W-23

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Trimble Feature #

Page 1 of 2

Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: KPG CM
Feature Name: Prairie Pothole

TT Team ID: 1
Date/Time of Evaluation: 10/5/11 1000
Jurisdictional status: NO
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
Is this a Wetland that abuts a RPWs with perennial flow Yes No
Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
Is this a Wetland that abuts or is adjacent to a RPW Yes No
Does a significant nexus exist? (adjacent only, provide details below) Yes No
Is this a Non-RPW (Flow – less than 3 months) Yes No
[including ephemeral waters (i.e. swales, gully or small wash)]
Does a significant nexus exist? (Provide details below) Yes No
Is this a Wetland adjacent to Non-RPW Yes No
Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

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Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-23

Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: prairie pothole

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
267	W	Prairie pothole, sent from phone

Notes:

TT EMI QC Check: ICB

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: North	Feature ID	W-23	Date 10/5/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Carol Mears	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

W-26

Assessors Names: KS & CR
County:
Feature Name: 007

Date/Time of Evaluation:
TT Team ID: 9/19/12 12:16PM
No. of Features Present: 1

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- Is this a Traditional Navigable Waters (TNW)?
Is this a Wetland adjacent to a TNW?
Is this a Tributary to a TNW
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)
Is this a Wetland that abuts a RPWs with perennial flow
Is this a RPW (Seasonal Flow - greater than 3 months)
Is this a Wetland that abuts a RPWs (no indicates adjacent)
Does a significant nexus exist? (adjacent only, provide details below)
Is this a Non-RPW (Flow - less than 3 months)
Does a significant nexus exist? (Provide details below)
Is this a Wetland adjacent to Non-RPW
Does a significant nexus exist? (Provide details below)
Is this an Isolated Waters (i.e. isolated wetlands, ditches)

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?
d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Streams:

Name (or tributary to)
Water body Type (stream/ditch/culvert/swale/wash)
Width (with respect to top of bank)
Depth (with respect to top of bank)
Flow rate (dry/stagnant/low/moderate/high)
Flow direction
Substrate (mud/silt/gravel/cobble/boulders/bedrock)
Bank vegetation (upland/wetland cover type)
Tributary is: Natural, Artificial (man made), Manipulated

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET Page 2 of 2

W-26

Pond or Open Waters:

Feature Name:

Is this feature a farm pond? [] Yes [] No

Was this feature dug out to collect surface runoff? [] Yes [] No

Was this feature dug from a linear feature such as a stream? [] Yes [] No

Was the stream filled in the process? [] Yes [] No

If this feature is not a farm pond, describe under comments.

Comments:

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments:

Other Features:

Sinkhole

Drainage Basins/Areas

Floodplains

Depressions

Gravel Pits/Mined Areas

Other

Table with 4 columns: Photo log #, Orientation, Description, and empty cells. Handwritten entries include 1178 NE Feature north of fence and 1179 S Feature south of fence.

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northeast	Feature ID	W-26	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

011,012
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 1 of 2

W-27
Feature #

Location: Wilton IV
County: Burleigh
Assessors Names: ~~RPGCM~~ KS+CP
Feature Name:

TT Team ID: 1
Date/Time of Evaluation: 9/19/12 4:30 pm
Jurisdictional status:
No. of Features Present: 2

Waters of the U.S. (indicate presence of waters of the U.S. within the project footprint):

- 1. Is this a Traditional Navigable Waters (TNW)? Yes No
 Is this a Wetland adjacent to a TNW? Yes No
- 2. Is this a Tributary to a TNW Yes No
 Is this a Relatively Permanent Waters (RPW) (Perennial Flow) Yes No
 Is this a Wetland that abuts a RPWs with perennial flow Yes No
 Is this a RPW (Seasonal Flow – greater than 3 months) Yes No
 Is this a Wetland that abuts or is adjacent to a RPW Yes No
 Does a significant nexus exist? (adjacent only, provide details below) Yes No
 Is this a Non-RPW (Flow – less than 3 months) Yes No
 [including ephemeral waters (i.e. swales, gully or small wash)]
 Does a significant nexus exist? (Provide details below) Yes No
 Is this a Wetland adjacent to Non-RPW Yes No
 Does a significant nexus exist? (Provide details below) Yes No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches) Yes No

Significant Nexus Determination:

Does the tributary, in combination with its adjacent wetlands (if any), perform any of the following functions?

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW? Yes No
 Explain _____
- b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW? Yes No
 Explain _____
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No
 Explain _____
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
 Explain _____

Streams:

Name (or tributary to) _____

Water body Type (stream/ditch/culvert/swale/wash) _____

Width (with respect to top of bank) _____

Depth (with respect to top of bank) _____

Flow rate (dry/stagnant/low/moderate/high) _____

Flow direction _____

Substrate (mud/silt/gravel/cobble/boulders/bedrock) _____

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural
 Artificial (man made). Explain _____
 Manipulated Explain _____

011, 012
Trimble Feature #

WILTON IV
WETLAND FIELD DATA EVALUATION SHEET
Page 2 of 2

W-27
Feature #

Pond or Open Waters:

Is this feature a farm pond?

Yes No

Was this feature dug out to collect surface runoff?

Yes No

Was this feature dug from a linear feature such as a stream?

Yes No

Was the stream filled in the process?

Yes No

If this feature is not a farm pond, describe under comments.

Comments: _____

Wetlands:

Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
1185	W	open wetland at south end (011)
1186	NW	open water (012)

Notes:

TT EMI QC Check: _____

TT EC QC Check: _____

Wilton IV Wind Energy Center



TETRA TECH PROJECT NO. 103IP1913 Direction: Northwest	Feature ID	W-27	Date 9/19/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	