

**WETLAND EVALUATION REPORT
FOR THE OLIVER III WIND ENERGY CENTER
MORTON 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
JD	Jurisdictional Determination (data form)
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
PY	polygon
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 Oliver III Wind Energy Center (Project), located in Morton 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, Jurisdictional Determination (JD) Forms (i.e., Field Data Evaluation Sheets), Wetland Determination Data Forms, and site photographs.

1.1 Project Location and Description

The Project Area consists of approximately 16,382 acres located within the northwestern portion of Morton County, North Dakota, approximately 18 miles west-northwest of Bismarck, North Dakota as shown on **Figure 1**. Construction will occur within portions of fourteen sections of land within the eastern portion of the Project Area consisting of privately owned cattle pastureland and agricultural cropland (**Table 1**). See section 2.1 for a description of the survey corridor.

Table 1: Project Area

County	Township	Range	Section(s)
Morton	T140N	R83W	3-4, 9-11, 13-16, and 22-26

The Project at completion will consist of 30 General Electric 1.6 megawatt (MW) turbines with a designed nameplate generating capacity totaling 48 MW. Facilities planned for construction and operation include:

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

In the summer of 2012, NextEra determined that a longer blade would be utilized for the proposed turbines. Due to the longer blade length, the proposed turbine layout needed to be modified to accommodate the new spacing requirements. The redesign resulted in most turbine locations shifting between 14 feet and 500 feet from their previous locations. While nearly all of these turbine shifts are located within the previously surveyed areas, some portions of the turbine laydown area did extend beyond the previously surveyed areas. In addition, these minor turbine shifts also slightly altered the locations of service roads and electrical collection lines.

1.2 Physical Setting and Hydrology

The Project is located in northwestern Morton County in the eastern portion of the Level IV Missouri Plateau Ecoregion (USGS 2006). The topography of the ecoregion was largely unaffected by glaciation and retains its original soils and complex stream drainage system. Native grasslands persist in areas of

steep or broken topography, but they have been largely replaced by spring wheat, alfalfa, and grazing land over most of the ecoregion (USGS 2006). Land elevations in Morton County range from 1,600 feet in the southeastern part to 2,460 feet in the western part (U.S. Department of Agriculture [USDA] Natural Resource Conservation Service [NRCS] 2002).

The climate of Morton County is semi-arid. The area is usually quite warm in the summer (the average daily maximum temperature in July is 85 degrees Fahrenheit) with frequent spells of hot weather and occasional cool days. It is cold in winter when arctic air frequently surges over the area (the average daily minimum temperature in January is 0 degrees Fahrenheit). The average annual total precipitation in the County is 17 inches. Of this about 14 inches, or 80 percent, usually falls in April through September (USDA NRCS 2002).

The Project is located in the Lower Heart and the Painted Woods-Square Butte watershed basins. The northeastern portion of the Project Area is located within the Painted Woods-Square Butte watershed and is drained by numerous unnamed intermittent tributaries of Square Butte Creek and Otter Creek. These creeks each flow generally east and drain to the Missouri River approximately eight miles east of the Project Area. The southwestern portion of the Project Area is located in the Lower Heart watershed and is drained by unnamed intermittent tributaries of Sweet Briar Creek and Crown Butte Creek. These creeks each flow generally south and east into the Heart River, and ultimately, to 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 (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.

The regulations define 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 ruling also requires that agencies not generally assert jurisdiction over the following features:

- Swales or erosional features (e.g. gullies, small washes characterized by low volume, infrequent or short duration of flow); and,

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.

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Guidance issued jointly by the EPA and USACE states that 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.

The regulations specify that tributaries to WOUS should be considered 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 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 all 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.

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

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).

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 email on November 28, 2011 that there are no wetland easements located within the Project Area.

2.0 AREA OF ANALYSIS AND IMPACT

2.1 Area of Analysis

The locations of proposed Project facilities (layout dated September 13, 2012 [turbines] and September 10, 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:

- 33 wind turbine locations (30 turbines plus 3 alternative locations) with a 250-foot radius buffer for a turbine pad;
- Approximately 10.5 miles of service roads with a 200-foot wide corridor (100 feet on either side of the centerline);
- Approximately 15 miles of electrical collection lines with a 100-foot wide corridor (50 feet on either side of the centerline); and,
- Approximately 10 acre substation and lay-down yard.

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	10 acres	
	10 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 micrositing field visit with NextEra Energy engineers to avoid and reduce impacts to wetlands and waters. The micrositing 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 Morton County Soil Survey.

3.2 Micrositing

The purpose of micrositing 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 USACE JD Form (Field Data Evaluation Sheet) was completed. Only wetlands determined to be jurisdictional based on the completed JD Form (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 JD Forms (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 forms 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

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

- 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 JD Form (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 JD Form (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.* (2006) and the Regional Supplement. Hydrology was assessed by evaluating each sample plot for field

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.

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 Morton County soil survey.

4.1.1 Topographic Maps

The Crown Butte (1972) and Crown Butte Northwest (1972) 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 2009). The NHD depicts numerous streams within the Project Area. Many of these are unnamed, but Crown Butte Creek is shown originating in the southeastern portion of the Project Area and flowing generally to the south and Otter Creek is shown originating in the east-central portion of the project area and flowing generally to the east. It appears that all NHD stream features depicted in the Project area are hydrologically connected to the Missouri River, a TNW. Perennial, intermittent, and ephemeral streams and drainages identified within the survey corridor were investigated 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 (2009). The NWI data indicated the presence of four freshwater emergent wetlands (PEMA and PEMCh) in the southeastern portion of the survey corridor. Approximately 80 additional NWI wetlands are present in the Project vicinity, outside of the survey corridor. NWI wetlands identified within the survey corridor were investigated during the wetland evaluation survey. The NWI data are presented on **Figure 2**.

4.1.5 Soil Survey

Soils data for Morton County were obtained from the USDA NRCS Morton County Soil Survey (2002) 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 58 percent of soils are classified as not hydric and 42 percent are classified as partially 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)
12C, 13D	Amor-Cabba loams	Not Hydric	85.28
73B	Williams-Reeder loams	Partially Hydric	53.61
71B	Williams-Bowbells loams	Partially Hydric	47.96
15D	Cabba-Chama-Sen silt loams	Not Hydric	26.32
30, 30B, 30C	Regent-Savage silty clay loams	Not Hydric	24.05
15F	Cabba-Chama-Arnegard complex	Not Hydric	22.10
15C	Chama-Cabba-Sen silt loams	Not Hydric	19.33
76C	Williams-Zahl loams	Not Hydric	18.31
27B	Grail-Belfield silty clay loams	Not Hydric	15.21
15B	Chama-Cabba silt loams	Not Hydric	14.35
19B	Farland silt loam	Not Hydric	9.69
54C	Vebar-Flasher complex	Not Hydric	8.37
20B	Shambo loam	Not Hydric	7.28
26	Grail silty clay loam	Not Hydric	6.92
17B	Sen-Chama silt loams	Not Hydric	6.81
10, 10B	Arnegard loam	Not Hydric	6.80
57D	Beisigl-Flasher loamy fine sands	Not Hydric	5.01
53B	Tally-Parshall fine sandy loams	Not Hydric	4.98
51F	Flasher-Vebar-Parshall complex	Not Hydric	4.89
52B	Vebar-Parshall fine sandy loams	Not Hydric	4.68
31C	Regent-Janesburg complex	Not Hydric	4.21
51D	Vebar-Flasher-Tally complex	Not Hydric	4.18
11B	Amor-Shambo loams	Not Hydric	4.15
23C	Morton-Cabba silt loams	Partially Hydric	4.12
76F	Zahl-Williams loams, dissected	Not Hydric	3.48
70	Bowbells loam	Partially Hydric	3.38
21B	Morton-Farland silt loams	Partially Hydric	2.42

Symbol	Soil Series	Hydric Class	Area (acres)
35D	Moreau-Wayden silty clays	Not Hydric	2.23
29B	Savage silty clay loam	Not Hydric	1.71
41B	Daglun-Rhoades complex	Partially Hydric	0.99
28B	Belfield-Daglun silt loams	Not Hydric	0.81
6	Heli silt loam	Partially Hydric	0.10
27	Belfield-Grail silty clay loams	Not Hydric	<0.01

4.2 Micrositing

Tetra Tech wetland biologist Kathy Bellrichard met with representatives of NextEra Energy and Swenson Hagen & Co. (NextEra Energy surveying contractor) to review the preliminary proposed turbine locations on September 2, 2009. The previously reviewed data including aerial photographs, NHD and NWI were utilized along with 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. Tetra Tech wetland biologist Kate Schindler revisited the site to assist with micrositing on August 21, 2012.

4.3 Wetland Evaluation Survey

A wetland evaluation survey for the Project was conducted from October 14, 2009 through October 17, 2009. Additional surveys were conducted on August 20, 2011, October 5, 2011, October 13, 2011, and September 18, 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 forms 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 JD Form (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**.

4.3.1 Vegetation Evaluation

The vegetation encountered in the Project Area outside of cultivated areas consisted 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 a variety of sedge, grass, forb, shrub, and tree species. The most common wetland species identified were sedges (*Carex* spp.), rushes (*Juncus* spp.), cattails (*Typha angustifolia*), and various wetland forbs. Dominant vegetation identified at each delineation plot is presented on the field data forms in **Appendix B**.

4.3.2 Soils Evaluation

No potentially jurisdictional wetlands were identified within the survey corridor, so no soils were observed as part of the evaluation survey. See **Figure 3** for a map of soil units present in the Project vicinity based on the SSURGO database.

4.3.3 Hydrologic Evaluation

No TNWs were identified within the survey corridor. The nearest TNW is the Missouri River located approximately eight miles east of the Project. Drainage patterns within the Project Area are well developed with numerous drainage swales and intermittent streams and few isolated wetlands or ponds. All drainages within the Project Area appear to be hydrologically connected to the Missouri River. Modifications to the hydrology have occurred in portions of the Project Area. Some intermittent streams and drainage swales were observed to have been dammed to create livestock ponds. Primary and secondary wetland hydrologic indicators observed were recorded at wetland delineation plots and are presented in the wetland determination data forms in **Appendix B**.

4.3.4 Wetlands and Waters

During the wetland evaluation survey, Tetra Tech identified 29 hydrologic features. Specifically, this included 7 seasonally flooded wetlands, 16 drainage swales, 3 drainage ditches, 1 excavated farm pond, and 2 intermittent streams. Of these 29 hydrologic features, 27 were determined to be non-jurisdictional isolated wetlands, drainages, or ponds based on the nexus determinations completed. The two intermittent stream features (highlighted yellow in **Table 4**) were determined to potentially be USACE jurisdictional waters. All wetland and waters features identified 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, c, d}		
					Permanent	Temporary	Total
PY-8	E03	Seasonally Flooded Wetland	None	Service road and collection along platted 34th Street ~0.2 mile west of 31st Avenue	0.000	0.010	0.010
PY-13	C02	Intermittent Stream, NRPW	Potential USACE NRPW	Collection along CR-83 south of CR-140	0.000	0.042	0.042
PY-47	D02	Seasonally Flooded Wetland	None	Collection line between CR-83 and Turbine 19	0.000	0.042	0.042
PY-1	D03	Drainage Swale	None	East of service road between Turbine 11 and Turbine 12	n/a	n/a	n/a
PY-2	F04	Seasonally Flooded Wetland	None	Turbine 3	0.000	0.000	0.000
PY-3	E04	Pond	None	North of service road along platted 34th Street ~0.3 miles east of 31st Avenue	0.000	0.000	0.000
PY-6	E03	Seasonally Flooded Wetland	None	South of service road along platted 34th Street ~0.15 mile west of 31st Avenue	0.000	0.000	0.000
PY-7	E03	Seasonally Flooded Wetland	None	South of service road along platted 34th Street ~0.25 mile west of 31st Avenue	0.000	0.000	0.000
PY-14	C02	Intermittent Stream	Potential USACE NRPW	Collection line along CR-83 south of CR-140	0.000	0.000	0.000
PY-15	E03	Drainage Swale	None	Service road and collection line between Turbine 9 and Turbine 13	n/a	n/a	n/a
PY-16	E04	Drainage Swale	None	Service road and collection line between Turbine 5 and Turbine Alt 1	n/a	n/a	n/a
PY-17	E03	Drainage Swale	None	Service road and collection line along platted 34th Street ~0.35 mile east of 32nd Avenue	n/a	n/a	n/a
PY-22	D03	Drainage Swale	None	Turbine 7	n/a	n/a	n/a
PY-23	D03	Drainage Swale	None	Collection line north of Turbine 13	n/a	n/a	n/a
PY-24	C02, D02	Drainage Swale	None	Turbine 15	n/a	n/a	n/a
PY-25	C02	Drainage Swale	None	Collection line along CR-83 ~0.4 mile south of CR-140	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, c, d}		
					Permanent	Temporary	Total
PY-26	D02	Drainage Ditch	None	Service road and collection line between CR-83 and Turbine 19	n/a	n/a	n/a
PY-27	B03	Drainage Ditch	None	Service road and collection line between Turbine 21 and Turbine 22	n/a	n/a	n/a
PY-28	B03	Drainage Ditch	None	Service road and collection line between Turbine 21 and Turbine 22	n/a	n/a	n/a
PY-29	B01	Drainage Swale	None	Collection line between Turbine 29 and 31 st Street	n/a	n/a	n/a
PY-30	A02	Drainage Swale	None	Service road and collection line between Turbine 25 and Turbine Alt 3	n/a	n/a	n/a
PY-31	A02	Drainage Swale	None	Turbine Alt 3	n/a	n/a	n/a
PY-48	D02	Seasonally Flooded Wetland	None	Southeast of service road between Turbine 18 and Turbine 19	0.000	0.000	0.000
PY-49	A02	Seasonally Flooded Wetland	None	East of service road between Turbine 25 and Turbine Alt 3	0.000	0.000	0.000
PY-51	D03	Drainage Swale	None	Service Road and collection line between Turbine 10 and Turbine 11	n/a	n/a	n/a
L-2	A02	Drainage Swale	None	Service road and collection line between Turbine 25 and Turbine 26	n/a	n/a	n/a
L-3	A02	Drainage Swale	None	Service road and collection line between Turbine 25 and Turbine 26	n/a	n/a	n/a
L-9	E04	Drainage Swale	None	Service road along 31st Avenue ~0.65 mile north of 34th Street	n/a	n/a	n/a
L-10	D03	Drainage Swale	None	Turbine 7	n/a	n/a	n/a
Potential Project impacts for non-jurisdictional hydrologic features					0.000	0.052	0.052
Potential Project impacts for jurisdictional hydrologic features					0.000	0.042	0.042
Potential total Project impacts					0.000	0.094	0.094

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 Temporary impacts assumed to be 0.5 acres for turbines, 50 feet for service roads, and 50 feet for collection lines. Of these temporary impacts, 0.2 acres will be permanent for turbines, and 26 feet will be permanent for service roads. The entire substation (10 acres) will be a permanent impact.
- c Impact calculations are rounded to three significant digits.
- d 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 one potential USACE jurisdictional intermittent stream feature (PY-13) and two probable non-jurisdictional wetlands (PY-8 and PY-47) 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 0.042 acres of temporary wetland impacts are estimated in jurisdictional wetlands, and 0.052 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 with projected wetland impacts of less than 0.1 acre resulting from collection line installation at each crossing, the Project as proposed may be authorized under NWP 12 (USACE 2012) 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.

6.0 REFERENCES

- 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>.
- “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.
- USACE (U.S. Army Corps of Engineers). 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. 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/cecw/pages/cwa_guide.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, 2002, Soil Survey of Morton County, North Dakota. Available online at: <http://soildatamart.nrcs.usda.gov/manuscripts/ND059/0/ND059.pdf>.
- 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 NRCS. Soil Survey Geographic Database for Morton County, North Dakota. Available online at <http://soildatamart.nrcs.usda.gov>. Accessed 2009.
- USDA FSA (Farm Service Agency) Aerial Photography Field Office (APFO). National Agriculture Imagery Program (NAIP). Aerial Photography 2010 NC.

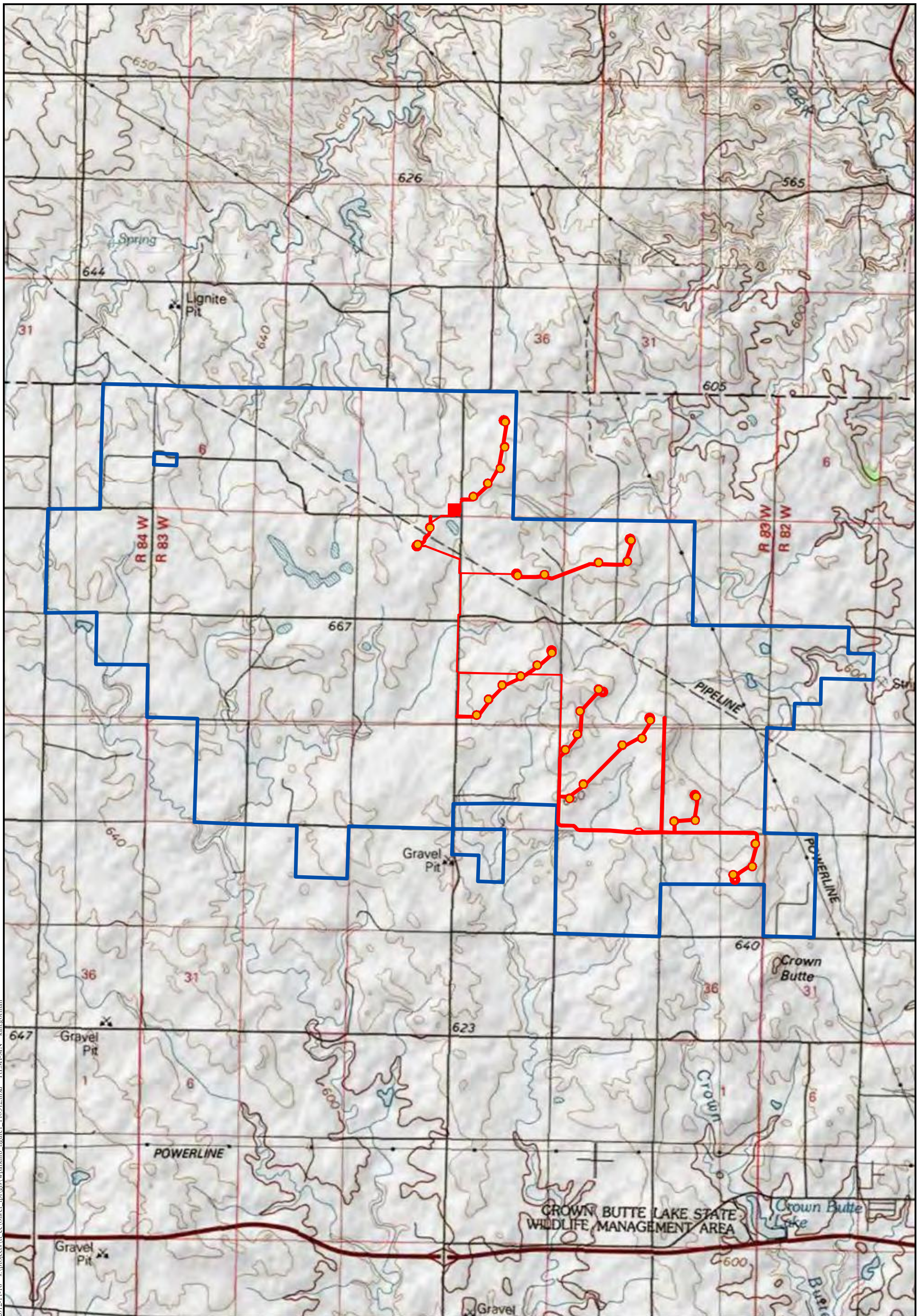
USFWS NWI (National Wetlands Inventory). Data downloaded from <http://www.fws.gov/wetlands/> October 2009.

USGS (United States Geological Survey). 1972. 7.5-minute Topographic Quadrangle for Crown Butte and Crown Butte NW, North Dakota. U.S. Geological Survey, Washington, D.C. Source.

USGS. 2006. Ecoregions of North Dakota and South Dakota. USGS Northern Prairie Wildlife Research Center. Jamestown ND. Available online at:
<http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/43a.htm>.

USGS. 2009. National Hydrography Dataset (NHD) Data downloaded from:
<http://nhd.usgs.gov/data.html> October 2009. High resolution dataset for the Lower Heart Subbasin (10130203). NHD High Resolution dataset for the painted Woods-Square Butte Subbasin (10130103).

APPENDIX A – FIGURES



2012-11-16 s:\projects\oliver_iii\wpa\wpa\figure_1\10512.mxd TITEMI-MN kmzerman

Source: ArcGIS Map Service - USA Topos and Project data provided by NextEra Energy 9/13/2012 (turbines), 9/6/2011 (project area) and 10/5/2012 (service roads, collection and substation).



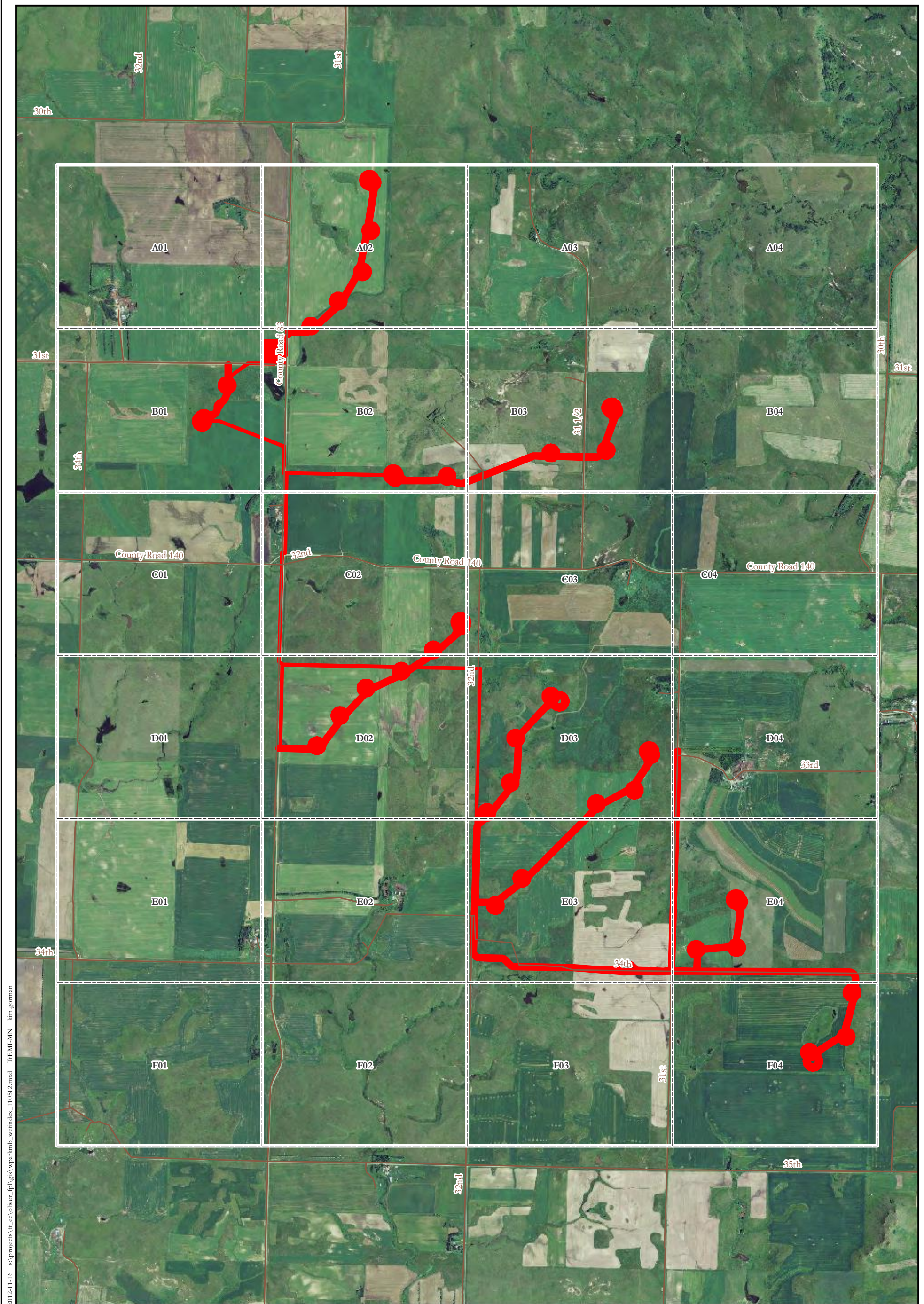
Facility Layout 9/13/2012

- Proposed Turbine Location
- Survey Corridor
- Project Area



Figure 1
Project Area
Oliver III Wind Energy Center
Morton County, North Dakota





2012-11-16 s:\projects\l_e\voliver_fpl\gis\workspace\weindex_110512.mxd THEM.MN kim.gorman

Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection and substation).

- Survey Corridor
- Road
- Map Book Grid

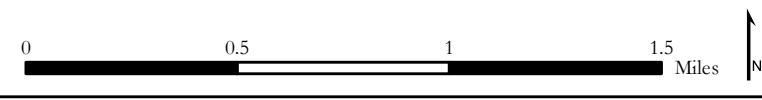


Figure 2
Map Book Index
Oliver III Wind Energy Center
Morton County, North Dakota





A01	A02	A03	A04	A02
B01	B02	B03	B04	
C01	C02	C03	C04	
D01	D02	D03	D04	
E01	E02	E03	E04	
F01	F02	F03	F04	

- Facility Layout 9/13/2012
- Proposed Turbine Location
- Facility Layout 10/5/2012
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 - Proposed Substation
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 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - ~ Jurisdictional
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 - ~ National Wetland Inventory
 - Roads

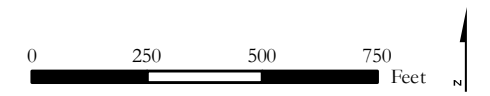


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr.ec\oliver_3p\gis\workspace\wedand_112712.mxd TETRAMN kim.soriman

Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, USGS NHD Subregion 1013, NWI, Tetra Tech field survey data collected through 9/18/2012 (wetlands), and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection, and substation).



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D01	D02	D03	D04	
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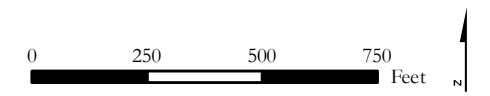


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr.ec\oliver_fpl\gis\workspace\wedand_112712.mxd TETRA TECH kim.scorman

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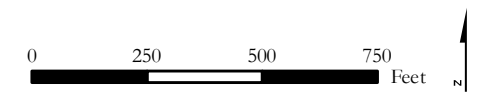


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, USGS NHD Subregion 1013, NWI, Tetra Tech field survey data collected through 9/18/2012 (wetlands), and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection, and substation).



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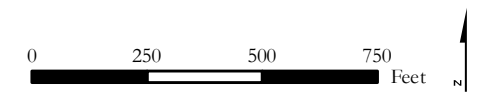


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, USGS NHD Subregion 1013, NWI, Tetra Tech field survey data collected through 9/18/2012 (wetlands), and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection, and substation).



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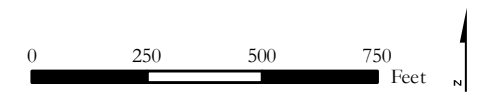


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr.ec\oliver_fpl\gis\workspace\workspace_112712.mxd THERMAN kim.soriman

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Facility Layout 9/13/2012

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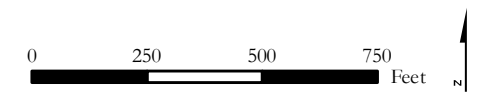
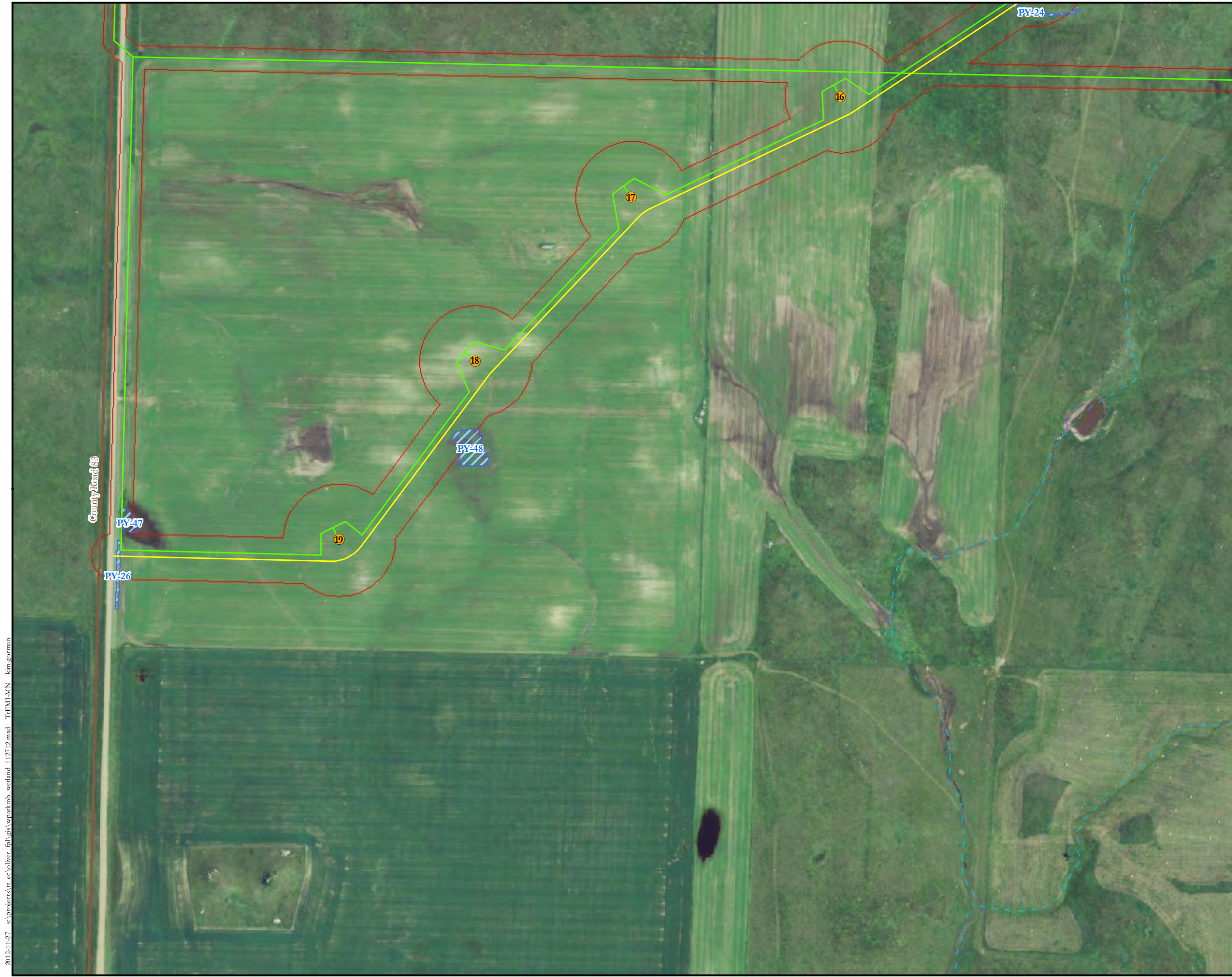


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



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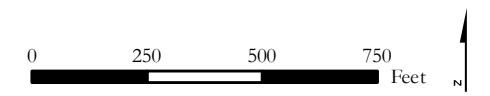


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Oliver III Wind Energy Center
Morton County, North Dakota



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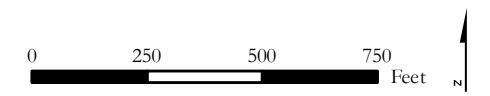


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\it.ec\oliver_fpl\gis\workspace\wedand_112712.mxd TETRA TECH kim.scorman

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F01	F02	F03	F04

E03

Facility Layout 9/13/2012

● Proposed Turbine Location

— Proposed Service Road

— Proposed Collection Line

⋮ Proposed Substation

○ Survey Corridor

Surveyed Wetland and Water Feature

~ Non-Jurisdictional

~ Jurisdictional

~ Non-Jurisdictional

~ Potentially Jurisdictional

~ Jurisdictional

- - - NHD High Resolution Subregion 1013

~ National Wetland Inventory

— Roads

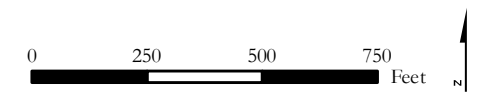


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr_e\oliver_3\oliver_3\wparkemb_wedind_112712.mxd TETRAMAN kim.gorman

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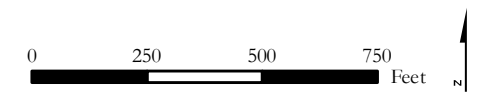


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr.ec\oliver_3p\gis\workspace\wedand_112712.mxd TETRA TECH kim.scorman

Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, USGS NHD Subregion 1013, NWI, Tetra Tech field survey data collected through 9/18/2012 (wetlands), and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection, and substation).



A01	A02	A03	A04	F04
B01	B02	B03	B04	
C01	C02	C03	C04	
D01	D02	D03	D04	
E01	E02	E03	E04	
F01	F02	F03	F04	

Facility Layout 9/13/2012

- Proposed Turbine Location
- Proposed Service Road
- Proposed Collection Line
- ▤ Proposed Substation
- Survey Corridor
- Surveyed Wetland and Water Feature
- Non-Jurisdictional
- Jurisdictional
- ▤ Non-Jurisdictional
- ▤ Potentially Jurisdictional
- ▤ Jurisdictional
- - - NHD High Resolution Subregion 1013
- National Wetland Inventory
- Roads

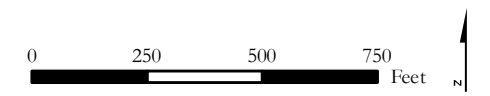
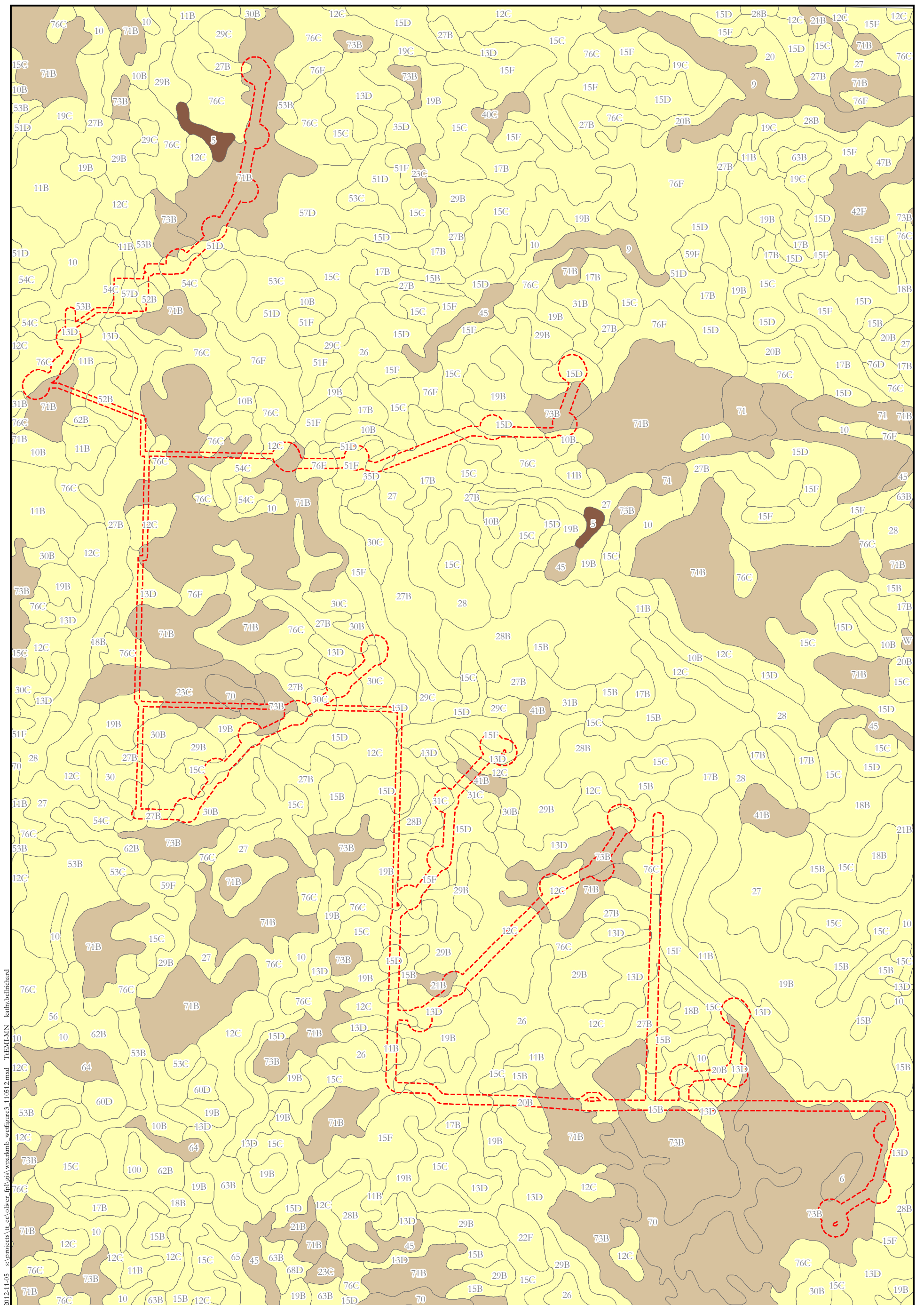


Figure 2
Wetland Evaluation Results
Oliver III Wind Energy Center
Morton County, North Dakota



2012-11-27 s:\projects\tr.ec\oliver_3p\gis\workspace\wedand_112712.mxd TETRA TECH kim.scorman

Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, USGS NHD Subregion 1013, NWI, Tetra Tech field survey data collected through 9/18/2012 (wetlands), and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection, and substation).



2012-11-05 s:\projects\oliver\figs\wra\mb_wefigures3_110512.mxd THEM:MN kath.heldrichard

Source: USDA Soil Survey Geographic (SSURGO) database (Morton County) and Project layout data provided by NextEra Energy 9/13/2012 (turbines) and 10/5/2012 (service roads, collection and substation).

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

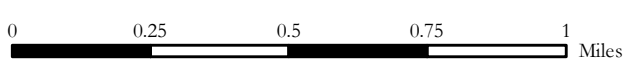


Figure 3
SSURGO Soils
Oliver III Wind Energy Center
Morton County, North Dakota



APPENDIX B – SUPPORTING FIELD DOCUMENTATION

PY-1

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

Segment: East of T14
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/19/07 1130

Assessors Names: KG + ACB
Feature Name: Swale

TT Team ID: KP6
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 a RPWs (no indicates adjacent) 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?

- 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) Isolated

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

Width (with respect to top of bank) 10'

Depth (with respect to top of bank) 1'

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

Flow direction South

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

Bank vegetation (upland/wetland cover type) See Back

Tributary is: Natural Artificial (man made). Manipulated

Explain _____

Explain _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature Name: Drainage Swale
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: Red Canyon + Smooth Brome
Wooded wetland

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
<u>2 to</u>	<u>NW</u>	<u>Wooded Drainage Swale</u>

Some type of Chamy
NO willow

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northwest	Feature ID	PY-1	Date 10/14/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PY-2

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

TTEMI QC Check: DBK
TTECI QC Check: _____

Page 1 of 2

Segment: Between turbine 2+3

County: Morton

Mile Marker: _____

Date/Time of Evaluation: 10/15/09

Landowner Name: _____

Assessors Names: KPG & CG

TT Team ID: KPG

Feature Name: Isolated wetland (NWJ)

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 a RPWs (no indicates adjacent) 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?

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)
 Manipulated

Explain _____

Explain _____

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**
Page 2 of 2

TTEMI QC Check: _____
TTECI QC Check: _____

Feature Name: Isolated wetland
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: outer edge Cinguifol, Dock, Foxtail, Corn Stubble,
Inner edge = Mud plain, Common Rush (?), Sun grass (?) or Barn yard (not right color)

Other Features: Amaranthus spp., Smartweed, Cattails

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

Photo log #:	Orientation:	Brief Description:
7	NE	looking toward NW wetland

Corn stubble - outer layer
 0-12" 10YR 2-1 Clayey loam No Reduction or Matrix
 12"-24"
 loam - No matrix by color changes

Inner layer (wetland)

0- ~~3~~6" ~~changes loam - No matrix~~
 6-30" - matrix loamy clay
 30" - color change
 46° 54' 56.500" 101° 5' 54.307"
 46° 54' 58.60" 101° 5' 54.73"

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northeast	Feature ID	PY-2	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PY-3

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Page 1 of 2

TTEMI QC Check: JPK
TTECI QC Check: _____

Feature 4

Segment: Between turbine 146, No. 34th Mile Marker: _____
County: Mocton Date/Time of Evaluation: 10/15/09 1127
Landowner Name: _____

Assessors Names: KPG + CB TT Team ID: KPG
Feature Name: NWI wetland - farm Pond 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 a RPWs (no indicates adjacent) 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?

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). Manipulated
- Explain _____
- Explain _____

#4

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Feature Name: Isolated wetland
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 ~ maybe

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: NO Plants - just mud

Other Features:

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

Photo log #:	Orientation:	Brief Description:
89	N	N toward berm area from road

looks like they bermed the drainage swale to create
 the wetland
 no flow across road, H₂O stopped with berm
 NE of feature # 5 - due to beaming

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: North	Feature ID	PY-3	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

PY-6

Feature #8

Segment: West of Turbin 6 on Collection Road Mile Marker: _____
County: Morton Date/Time of Evaluation: 10/15/09 1320
Landowner Name: _____

Assessors Names: KPG + C6 TT Team ID: KPG
Feature Name: Isolated Wetland 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 a RPWs (no indicates adjacent) 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?

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 _____

8

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature # 8

Feature Name: Isolated wetland
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: wheat stubble

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions Very Slight

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
13	South	South toward Wetland Area

only a slight depression noted - wheat stubble present
- runs just south of the road but doesn't quite connect to Feature # 9 because of a hill

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: South	Feature ID	PY-6	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PY-7

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Feature # 9

Segment: West of turbine 6 along collection rd Mile Marker: _____
County: Morton Date/Time of Evaluation: 10/15/09 1325
Landowner Name: _____

Assessors Names: KAG+CB TT Team ID: KAG
Feature Name: Isolated wetland 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)? 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 a RPWs (no indicates adjacent) 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?

- 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 _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature Name: Isolated wetland
Pond or Open Waters:

Feature # 9

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: Wheat Stubble

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions yes

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
<u>14</u>	<u>S</u>	<u>South from Access Rd to wetland</u>

See Feature #8

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: South	Feature ID	PY-7	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

94-8

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Page 1 of 2

TTEMI QC Check: PJK
TTECI QC Check: _____

Feature # 10

Segment: West of turntable Along Collection Rd Mile Marker: _____
County: Morton Date/Time of Evaluation: 10/15/09 1330
Landowner Name: _____

Assessors Names: KP6 + C6 TT Team ID: PV6
Feature Name: Isolated wetland 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 a RPWs (no indicates adjacent) 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?

- 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 _____

OLIVER III
 WETLAND EVALUATION
 FIELD DATA EVALUATION SHEET
 Page 2 of 2

Feature # 10

Feature Name: Isolated wetland
 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: mostly Fox tail, Smart's Brume & Some type of Sedge

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

Floodplains _____

Depressions yes

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
15	N	N from Access Road toward Wetland

Appears that it might be hayed - north of
 Feature # 9.

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: North	Feature ID	PY-8	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

PY-13 + PY-14

Segment: COLLECTION, T-LINE N OF SUBSTATION

Mile Marker: _____

County: MORTON

Date/Time of Evaluation: 10/16/09

Landowner Name: _____

Assessors Names: KELG + LG

TT Team ID: _____

Feature Name: FNT STREAM

No. of Features Present: 1 CONTINUES ON BOTH SIDES

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

OF 120 AD

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 a RPWs (no indicates adjacent) 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?

a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?

Explain REDUCE FLOODING + NUTRIENTS FROM ADJACENT AS USE TO SWEETBRINE CREEK Yes 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 _____ Yes No

c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?

Explain NUTRIENT AS USE Yes No

d. have other relationships to the physical, chemical, or biological integrity of the TNW?

Explain VEG REDUCES POLLUTANTS, CONNECTED TO SWEETBRINE CREEK Yes No

Streams:

Name (or tributary to) TRIB TO SWEETBRINE CREEK

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

Width (with respect to top of bank) 35'

Depth (with respect to top of bank) 2-3' DEFINED BED + BANK

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

Flow direction WEST

Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD/SILT

Bank vegetation (upland/wetland cover type) _____

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
 Page 2 of 2

TTEMI QC Check: _____
 TTECI QC Check: _____

Feature Name: _____

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: CATTAILS, CORDGRASS, POCK, LOTONWOOD, SOLIDAGO, MONARDA

Other Features:

Sinkhole _____

Drainage Basins/Areas _____

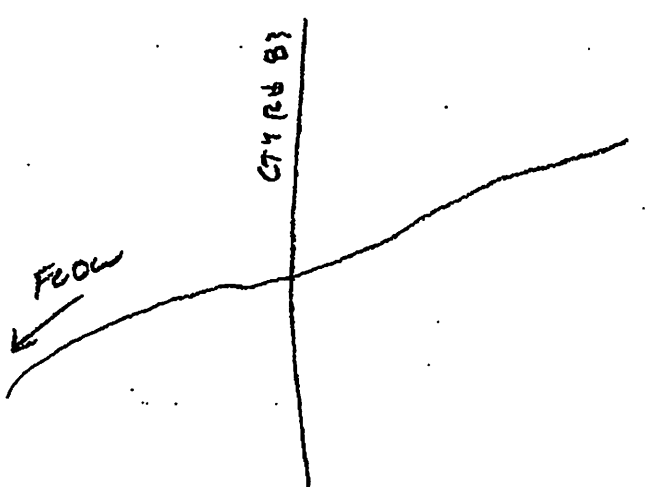
Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other LULWORT FEAT #24

Photo log #:	Orientation:	Brief Description:
35	W	WET FROM ROAD TO FEATURE
36	E	EXIT FROM ROAD TO FEATURE



Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	PY-13	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	PY-14	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

94-15

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Page 1 of 2

TTEMI QC Check: DSK
TTECI QC Check: _____

Segment: Road + Collection between T11 + T16 Mile Marker: 14
County: Morton Date/Time of Evaluation: 10/15/09 1100
Landowner Name: _____

Assessors Names: K.P.G. + C.G. TT Team ID: K.P.G.
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):

- 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 a RPWs (no indicates adjacent) 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?

- 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) Isolated
Water body Type (stream/ditch/culvert/swale/wash) Drainage Swale
Width (with respect to top of bank) 10'
Depth (with respect to top of bank) 1' 0
Flow rate (dry/stagnant/low/moderate/high) Dry
Flow direction _____
Substrate (mud/silt/gravel/cobble/boulders/bedrock) Silt
Bank vegetation (upland/wetland cover type) See Back

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northwest	Feature ID	PY-15	Date 10/14/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

P4-16

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

TTEMI QC Check: OK
TTECI QC Check: _____

Feature # 7

Segment: Between Turans St & 6
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/15/09 1230

Assessors Names: KPG+CG
Feature Name: Drainage Swale

TT Team ID: KPG
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 a RPWs (no indicates adjacent) 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?

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) Isolated
Water body Type (stream/ditch/culvert/swale/wash) Drainage Swale
Width (with respect to top of bank) 10'
Depth (with respect to top of bank) 1' 0
Flow rate (dry/stagnant/low/moderate/high) Dry
Flow direction South
Substrate (mud/silt/gravel/cobble/boulders/bedrock) Silt
Bank vegetation (upland/wetland cover type) See Book

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature # 7

Feature Name: Drainage Swale
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: Wheat Stubble

Other Features:

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

Photo log #:	Orientation:	Brief Description:
11	SE	SE toward Drainage Swale

Drainage Swale that is cropped
Probable flow to Feature 4

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Southeast	Feature ID	PY-16	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

PY-17

Segment: S OF 34th + WEST OF 32nd
County: NORTON
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/15/09

Assessors Names: KPG + CG
Feature Name: DRAINAGE SWALE

TT Team ID: KPG
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 a RPWs (no indicates adjacent) 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?

- 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) DRAIN SWALE

Width (with respect to top of bank) 20'

Depth (with respect to top of bank) 0' NO BED OR BANK

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

Flow direction WEST + SOUTH

Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD + SILT

Bank vegetation (upland/wetland cover type) SMOOTH BROME + ALPHELOPHIA

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

LIVESTOCK

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature Name: _____

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	NW	SWTLE
17	S	SWTLE

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northwest	Feature ID	PY-17	Date 10/15/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

PK-22

Segment: Near Turbin 8
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/16/09

Assessors Names: KPG + CB
Feature Name: Drainage Swale

TT Team ID: KPG + CB
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)? 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 a RPWs (no indicates adjacent) 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?

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

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

c. have the capacity to transfer nutrients and organic carbon that support downstream food webs? Yes No

d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No

Streams:

Name (or tributary to) Need to check

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

Width (with respect to top of bank) 15'

Depth (with respect to top of bank) 1' 0" DB

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

Flow direction South

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

Bank vegetation (upland/wetland cover type) Cropped wheat field + Panic grass

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

Feature Name: Drainage Swale
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?
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:

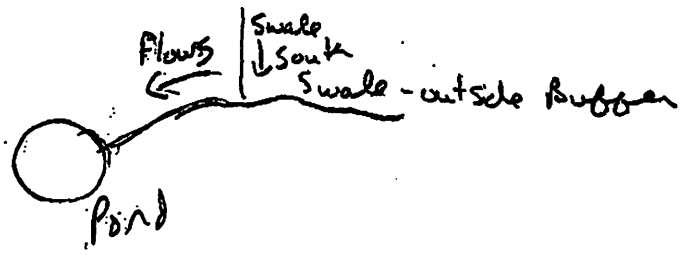
Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
30	SW	toward Drainage Swale

Drainage Swale that connects to another
Drainage Swale to the South - the Southern
Drainage Swale is outside the Buffer



Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Southwest	Feature ID	PY-22	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Collection west of Terbin 14 Mile Marker: _____
County: Morton Date/Time of Evaluation: 10/16/09 1150

Landowner Name: _____

Assessors Names: KPG+CG TT Team ID: KPG

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):

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 a RPWs (no indicates adjacent) 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?

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) Drainage Swale

Width (with respect to top of bank) 20'

Depth (with respect to top of bank) 3' - deep but dry

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

Flow direction west

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

Bank vegetation (upland/wetland cover type) Heavily Grazed Pasture See Back

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature Name: Drainage Swale
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:
31	SW	toward Pasture
32	WS	toward Drainage Swale

Pasture on East side - Smooth Brome
West side - None Pasture - Smooth Brome

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northeast	Feature ID	PY-23	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

04-24

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: NE of T18
County: Muscon
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/16/09 1220

Assessors Names: KPG+LG TT Team ID: KPG
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):

- 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 a RPWs (no indicates adjacent) 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?

- 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) Drainage Swale

Width (with respect to top of bank) 10'

Depth (with respect to top of bank) 1' NO DEPTHED AND FLOWING

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

Flow direction _____

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

Bank vegetation (upland/wetland cover type) Smooth Brome

- Tributary is: Natural but Farmed + Pastured
- Artificial (man made). Explain _____
- Manipulated Explain _____

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**
Page 2 of 2

Feature Name: Drainage Swale
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?
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>33</u>	<u>SW</u>	<u>toward farm Drainage Swale</u>
<u>34</u>	<u>NE</u>	<u>toward Pasture Drainage Swale</u>

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northeast	Feature ID	PY-24	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

Segment: Just N of Substation

Mile Marker: _____

County: Morton

Date/Time of Evaluation: 10/16/09 1310

Landowner Name: _____

Assessors Names: KPG + CG TT Team ID: KPG

Feature Name: Culvert (25) + Drainage Swale No. of Features Present: 2

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 a RPWs (no indicates adjacent) 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?

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) Drainage Swale + Culvert

Width (with respect to top of bank) 10'

Depth (with respect to top of bank) 1'

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

Flow direction West

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

Bank vegetation (upland/wetland cover type) _____

Tributary is: Natural but Pasture

Artificial (man made). Explain _____

Manipulated Explain _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
 Page 2 of 2

Feature Name: Culvert (25) + Drainage Swale (26)
 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:

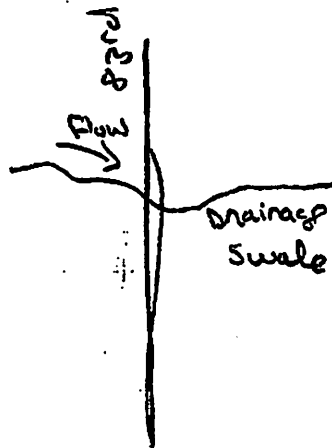
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
38		looking at culvert
39	E	East toward Drainage Swale



Pasture (heavily grazed)
 on Both sides of the
 Road - Some type of grass
 Culvert is partially filled
 in w/potential to
 Back up toward Sub Station
 Smooth Barrow Along Road
 sides

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	PY-25	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

24-26

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Page 1 of 2

TTEMI QC Check: MSK
TTECI QC Check: _____

Segment: Near Substation - toward Mile Marker: _____
County: Morton Date/Time of Evaluation: 11/16/09 1330

Landowner Name: _____
Assessors Names: KPG+CB TT Team ID: KPG
Feature Name: Drainage Ditch 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 a RPWs (no indicates adjacent) 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?

- 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) Drainage Ditch
Width (with respect to top of bank) 15'
Depth (with respect to top of bank) 3-4'
Flow rate (dry/stagnant/low/moderate/high) Dry
Flow direction _____
Substrate (mud/silt/gravel/cobble/boulders/bedrock) Silt
Bank vegetation (upland/wetland cover type) Smooth Brome

Tributary is: Natural Artificial (man made). Explain along P3rd - Roadway
 Manipulated Explain _____

OLIVER III
 WETLAND EVALUATION
 FIELD DATA EVALUATION SHEET
 Page 2 of 2

Feature Name: Drainage Ditch
 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?
 Was the stream filled in the process? Yes No

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

Comments: _____

Wetlands:

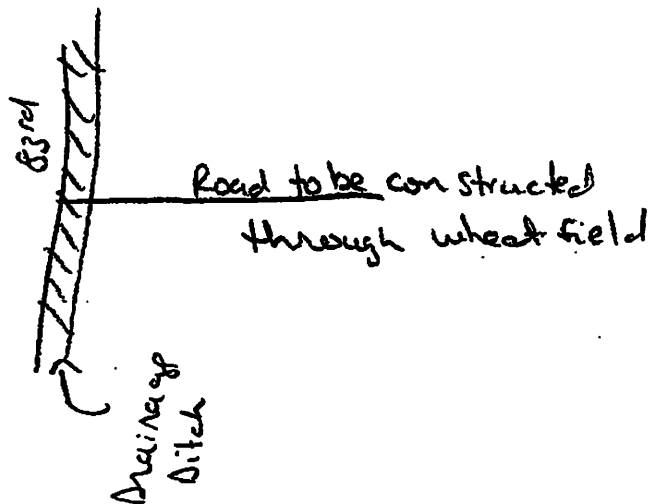
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
4D	W.	west toward 83rd Ave



Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	PY-26	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

PY-27

Segment: BETWEEN T 23 + T 24
County: MORTON
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/16/09

Assessors Names: KPG + CG
Feature Name: MANAGED DITCH

TT Team ID: KPG
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)? 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 a RPWs (no indicates adjacent) 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?

- 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) MANAGED DITCH - ROADSIDE

Width (with respect to top of bank) 20'

Depth (with respect to top of bank) 0-2

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

Flow direction SOUTH

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

Bank vegetation (upland/wetland cover type) PRUNES

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

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**
Page 2 of 2

Feature Name: _____

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 _____

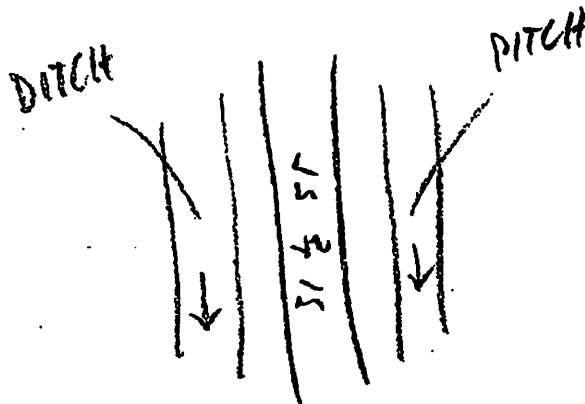
Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other _____

Photo log #:	Orientation:	Brief Description:
41	S-SE	TOWARD DRAINAGE DITCH EAST SIDE
42	S	TOWARD DRAINAGE DITCH WEST SIDE



Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: South	Feature ID	PY-27	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

P4 - 28

Segment: BETWEEN T23 + T24
County: MORTON
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/16/09

Assessors Names: KPLG + LG
Feature Name: DRAINAGE DITCH

TT Team ID: KPLG
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)? 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 a RPWs (no indicates adjacent) 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?

- 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) DRAINAGE DITCH - ROADSIDE

Width (with respect to top of bank) 20'

Depth (with respect to top of bank) 0-2'

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

Flow direction SOUTH

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

Bank vegetation (upland/wetland cover type) BLOWN

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: South	Feature ID	PY-28	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PK-29

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

TTEMI QC Check: PK
TTECI QC Check: _____

Segment: NE OF TURBINE 32
County: MORTON
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/16/09

Assessors Names: KRB + CG
Feature Name: DRY WASH SWALE

TT Team ID: KPLW
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 a RPWs (no indicates adjacent) 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?

- 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) DRY WASH SWALE

Width (with respect to top of bank) 15-30

Depth (with respect to top of bank) 0-1

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

Flow direction EST

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

Bank vegetation (upland/wetland cover type) BROME, NITEMERIA (PRUNICE), SOL IXTUS, ROSES

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
 Page 2 of 2

Feature Name: _____

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:
47	S	UP DRAIN SWALE
48	E	POWDER WETLAND

SMALL SWALE THAT DRAINS MILL TO
 WETLANDS ALONG ROAD
 (ISOLATED)

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	PY-29	Date 10/16/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

94-30

Segment: North of 28
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/17/09 10:10

Assessors Names: KP6 & GG
Feature Name: Drainage Swale

TT Team ID: KP6
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 a RPWs (no indicates adjacent) 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?

- 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) Drainage Swale
Width (with respect to top of bank) 10'
Depth (with respect to top of bank) 1/2'
Flow rate (dry/stagnant/low/moderate/high) dry
Flow direction west
Substrate (mud/silt/gravel/cobble/boulders/bedrock) silt
Bank vegetation (upland/wetland cover type) Cropped - wheat

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	PY-30	Date 10/17/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PY-31

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: turbine 27 Buffer
County: Mocho
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/17/09 10:20

Assessors Names: KPG + CG
Feature Name: Drainage Swale

TT Team ID: KPG
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 a RPWs (no indicates adjacent) 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?

- 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) Drainage Swale

Width (with respect to top of bank) 10'

Depth (with respect to top of bank) 1/4 - 1/2'

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

Flow direction west

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

Bank vegetation (upland/wetland cover type) cropped - wheat

Tributary is: Natural but farmed

Artificial (man made). Explain _____

Manipulated Explain _____

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	PY-31	Date 10/17/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

PY-47

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

TTEMI QC Check: KB
TTECI QC Check: _____

Segment: Access road to T-19
County: Morden
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 8/20/11 907

Assessors Names: KAB KPG
Feature Name: 74

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)? 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 a RPWs (no indicates adjacent) 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?

- 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 _____

PY-47

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

TTEMI QC Check: 143
TTECI QC Check: _____

Feature Name: _____
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 farmed wetland
in wheat

Other Features:

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

Photo log #:	Orientation:	Brief Description:
52	E	wetland

Not apparent during Fall 2010 survey

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	PY-47	Date 8/20/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

P4-48

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Turbine 18

County: Morton

Landowner Name: _____

Mile Marker: _____

Date/Time of Evaluation: 8/10/11 925

Assessors Names: KAB KPG

TT Team ID: 1

Feature Name: 25

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 a RPWs (no indicates adjacent) 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)] Yes No

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?

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 _____

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Northeast	Feature ID	PY-48	Date 8/20/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

PY-49

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 1 of 2

TTEMI QC Check: 013
TTECI QC Check: _____

Segment: Road from T-Alt 4 to T-25
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 8-20-11 1052

Assessors Names: CAB KPG
Feature Name: 78

TT Team ID: 1
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)? 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 a RPWs (no indicates adjacent) 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?

- 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) 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 west

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

Bank vegetation (upland/wetland cover type) wetland

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

Py-49

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
Page 2 of 2

Feature Name: _____
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: wetland at upper end of swale in crops (wheat)

Other Features:

Sinkhole

Drainage Basins/Areas

Floodplains

Depressions

Gravel Pits/Mined Areas

Other

Photo log #:	Orientation:	Brief Description:
56	E	wetland

Wider more wetland characteristic portion of Py-30

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	PY-49	Date 8/20/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

Assessors Names: KS: CP County: Morton Feature Name: CDH

Date/Time of Evaluation: 9/18/12 1415 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... 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 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... 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 (farmed) [] Artificial (man made). Explain [] Manipulated Explain used as road

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Southeast	Feature ID	PY-51	Date 9/18/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
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Segment: N of T29
County: Maxon
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 10/17/09 930

Assessors Names: KPG + CG
Feature Name: Drainage Swale

TT Team ID: KPG
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 a RPWs (no indicates adjacent) Yes No
- Does a significant nexus exist? (adjacent only, provide details below) Yes No
- Is this a Non-RPW (Flow - less than 3 months) (including ephemeral waters (i.e. swales, gully or small wash)) Yes No
- 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

2

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) Drainage Swale

Width (with respect to top of bank) 6'

Depth (with respect to top of bank) 1/2'

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

Flow direction west

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

Bank vegetation (upland/wetland cover type) Cropped - wheat

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	L-2	Date 10/17/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

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OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Between turbine 28 + 29
County: Morhan

Mile Marker: _____
Date/Time of Evaluation: 10/17/09 1000

Landowner Name: _____
Assessors Names: KP6 + C6
Feature Name: Drainage Swale

TT Team ID: KP6
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 a RPWs (no indicates adjacent) 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?

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) Drainage Swale

Width (with respect to top of bank) 6

Depth (with respect to top of bank) 1/4 - 1/2'

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

Flow direction West

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

Bank vegetation (upland/wetland cover type) Cropland - wheat

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET
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TTEMI QC Check: _____
TTECI QC Check: _____

Feature Name: Drainage Swale
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:

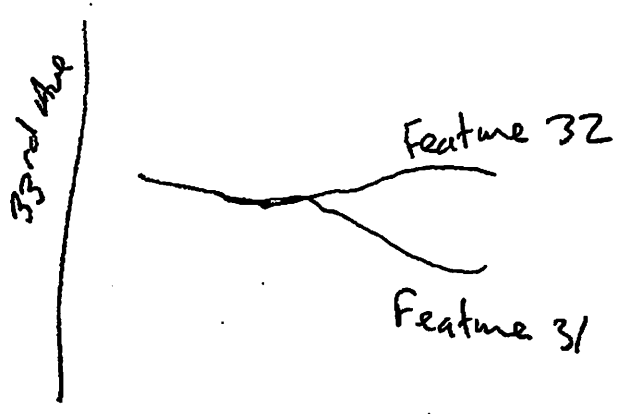
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
5989	W	westward drainage swale



Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: West	Feature ID	L-3	Date 10/17/09
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Charlene Gruber	

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OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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TTEMI QC Check: LCB
TTECI QC Check: _____

Segment: 31st Ave
County: Morton
Landowner Name: _____

Mile Marker: _____
Date/Time of Evaluation: 8-20-11 1155

Assessors Names: KAB KPG
Feature Name: BD 79

TT Team ID: 1
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 a RPWs (no indicates adjacent) 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?

- 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) 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 east

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

Bank vegetation (upland/wetland cover type) upland

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: East	Feature ID	L-9	Date 8/20/11
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kathy Bellrichard	

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JURISDICTIONAL DETERMINATION FIELD DATA EVALUATION SHEET

Assessors Names: KS, CP
County: Morton
Feature Name: 006

Date/Time of Evaluation: 9/19/12 3:00 PM
TT Team ID: KS & CP
No. of Features Present: 1

Oliver

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 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) Drainage Swale
Width (with respect to top of bank) 10'
Depth (with respect to top of bank) 1'
Flow rate (dry/stagnant/low/moderate/high) Dry
Flow direction SW
Substrate (mud/silt/gravel/cobble/boulders/bedrock) Silt
Bank vegetation (upland/wetland cover type) Crops

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

Oliver III Wind Energy Center



TETRA TECH PROJECT NO. 103I0979 Direction: Southwest	Feature ID	L-10	Date 9/18/12
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kate Schindler	