

**WETLAND EVALUATION REPORT
FOR THE OLIVER III WIND ENERGY CENTER
MORTON COUNTY, NORTH DAKOTA**



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ACRONYMS AND ABBREVIATIONS

CRP	Conservation Reserve Program
CWA	Clean Water Act
EPA	Environmental Protection Agency
GE	General Electric
GIS	Geographic Information System
GPS	global positioning system
HDD	horizontal directional drilling
ID	identification
JD	Jurisdictional Determination (data form)
L	line
MW	megawatt
NHD	National Hydrography Dataset
NRCS	Natural Resource Conservation Service
NRPW	non-relatively permanent water
NWI	National Wetlands Inventory
NWP	nationwide permit
O&M	operations and maintenance
OHWM	ordinary high water mark
PCN	pre-construction notification
PT	point
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 EC, 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 surface water bodies 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 references used to support the conclusions. Appendices include figures illustrating the Project and survey results, field data forms (Jurisdictional Determination (JD) Forms [Field Data Evaluation Sheets], and 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**. The Project will be constructed in portions of fourteen sections of land within the eastern portion of the Project Area that are occupied by privately owned cattle pastureland and agricultural cropland (**Table 1**).

Table 1: Project Area

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

The Project at completion will consist of 30 General Electric (GE) 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 and access roads;
- Underground electrical collection lines;
- Junction boxes;
- Substation; and
- Temporary lay-down yard.

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. 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. 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 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 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, which both 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, which flow generally south and east into the Heart River, and ultimately, the Missouri River.

1.3 Regulatory Framework

Tetra Tech completed a wetland evaluation 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). These types of wetlands are regulated by the USACE and the U.S. Environmental Protection Agency (EPA). Several classes of water bodies are subject to federal jurisdiction under the CWA, including: traditional navigable waters (TNWs); non-navigable tributaries of TNWs that are relatively permanent (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,
- 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

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

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 also determines the type of permit, if any, that may be required under the CWA.

The Lake Ilo National Wildlife Refuge of the U.S. Fish and Wildlife Service (USFWS) manages wetland easements west of the Missouri River in the state of North Dakota. Wetlands within USFWS easements on private property are held in perpetual easement under USFWS jurisdiction. The easements afford protection to wetland basins that provide important seasonal habitat to waterfowl and shorebird species during the spring migration and nesting seasons. The easements do not allow the burning, leveling, filling, and/or draining of easement wetlands or established buffers without a permit from the USFWS. However, landowners are permitted to till and farm these areas when they are not wet. No permanent impacts to these basins are allowed from wind farm construction activities. If impacts to USFWS easement wetlands occur, the landowner is responsible for ensuring that all impacts are mitigated and the wetland is restored to the preexisting conditions. Tetra Tech requested review of the Project Area from the USFWS to identify any wetland easements within the Project Area. The USFWS responded via e-mail on 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 2, 2011 [turbines], and November 20, 2011 [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 specifically evaluated for wetlands and WOUS for this wetland evaluation report and includes:

- 34 wind turbine locations (30 turbines plus 4 alternative locations) with a 250-foot radius buffer for a turbine pad;
- Approximately 10.7 miles of access and service roads with a 200-foot wide corridor (100 feet on either side of the centerline);
- Approximately 14.3 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 if needed.

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 wetland 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 followed by a wetland evaluation survey including identification of jurisdictional and non-jurisdictional wetlands as well as non-wetland WOUS 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 is reviewed to identify areas that may exhibit characteristics of jurisdictional and other WOUS. These data layers are evaluated as a whole to make probable wetland and other waters determinations. This includes review of aerial photographs, the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), the National Wetlands Inventory (NWI), and the Morton County Soil Survey.

3.2 Micrositing

The purpose of micrositing is to view the preliminary proposed project facilities' locations and make adjustments as necessary to meet regulatory and set-back requirements. This includes evaluations for possible impacts to jurisdictional wetlands and other WOUS. The reviewed data including aerial photographs, NHD and NWI are utilized along with limited field observations to determine if jurisdictional wetlands or WOUS are located within the Project Area and recommendations are made in the field to modify the proposed layout of Project facilities to avoid impacts to wetland and waters features prior to the completion of the wetland evaluation survey.

3.3 Wetland Evaluation Survey

The purpose of the wetland evaluation surveys is to identify the presence and location of wetlands and WOUS within the survey corridor, and determine which, if any, may be subject to USACE jurisdiction. When a wetland or water feature is encountered in the survey corridor, a USACE JD Form (Field Data Evaluation Sheet) is completed. Based on NextEra Energy's commitment to avoid wetland impacts, only wetlands and waters determined to be jurisdictional based on the completed JD Form (Field Data Evaluation Sheet) are delineated in accordance with the three-parameter approach outlined in the 1987 Manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2010). If visual indications consisting of hydrophytic vegetation and hydrology are observed in the field, the areas are identified as potential (or assumed) wetlands based on these indicators only.

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):²

- 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);
- Features in the NHD dataset that were field confirmed³ to be present were considered to be RPWs, NRPWs, or drainage swales;
- Field identified RPWs, NRPWs, or drainage swales that were not indicated in the NHD dataset were considered isolated or jurisdictional based on the JD Form (Field Data Evaluation Sheet) completed; 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.

² 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 our understanding of the hydrology of the potential tributary; and (2) limited areal extent of the evaluation, which limits our investigation of downstream mechanics and potential for the water body to reach tributaries to TNWs.

³ Not all features depicted in the NHD dataset were confirmed in the field. If an NHD feature is depicted in the survey corridor and no corresponding field evaluation feature is present, this indicates the wetland evaluation survey did not confirm the presence of a wetland or water features at that specific location.

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 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 WOUS feature location data in the field using Trimble GPS technology, as well as to manage and display features for quality control and electronic deliverables. The geodatabase prepared by the GIS specialist contains three types of feature classes for data capture: wetland points, wetland lines, and wetland polygons. Additional attribute data collected in the field at the time the feature was collected 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), relatively permanent water (RPW), non-relatively permanent water (NRPW), drainage swale, pond, filled feature, etc.;
- Notes if the feature extends beyond what was collected, in what direction and approximately how far;
- Other feature issues (i.e. impacts by landowner, road crossing, or other noted disturbances);
- Jurisdictional status;
- Recommendation for Project facilities (no modification or avoidance); 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), polyline (L), or point (PT) feature followed by a site number.

4.0 RESULTS

4.1 Desktop Data Review

The following sections describe the data sources reviewed prior to, and utilized as part of, conducting Project micro-siting and 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 [CRP]). 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 4.1.2 and 4.1.3 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 Project Area is located in two watersheds. The southwestern portion of the Project Area is located in the Lower Heart watershed and the northeastern portion is located in the Painted Woods-Square Butte watershed. There are numerous streams shown in the Project Area in the NHD. 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 Soil Survey Geographic (SSURGO) Database. This information was used to study the distribution of hydric soils within the Project Area. According to reviewed data, there are 31 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 73 percent of soils are classified as not hydric and 27 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	93.82
71B	Williams-Bowbells loams	Partially Hydric	55.81
73B	Williams-Reeder loams	Partially Hydric	54.00
15D	Cabba-Chama-Sen silt loams	Not Hydric	26.23
30, 30B, 30C	Regent-Savage silty clay loams	Not Hydric	25.86
15F	Cabba-Chama-Arnegard complex	Not Hydric	21.45
15C	Chama-Cabba-Sen silt loams	Not Hydric	21.37
76C	Williams-Zahl loams	Not Hydric	18.47
27B	Grail-Belfield silty clay loams	Not Hydric	15.32
15B	Chama-Cabba silt loams	Not Hydric	14.52
54C	Vebar-Flasher complex	Not Hydric	12.12
19B	Farland silt loam	Not Hydric	8.76
20B	Shambo loam	Not Hydric	8.06
26	Grail silty clay loam	Not Hydric	6.92
17B	Sen-Chama silt loams	Not Hydric	6.81
11B	Amor-Shambo loams	Not Hydric	5.83
53B	Tally-Parshall fine sandy loams	Not Hydric	5.30
10, 10B	Arnegard loam	Not Hydric	5.14
57D	Beisigl-Flasher loamy fine sands	Not Hydric	5.01
51D	Vebar-Flasher-Tally complex	Not Hydric	4.72
51F	Flasher-Vebar-Parshall complex	Not Hydric	4.71
52B	Vebar-Parshall fine sandy loams	Not Hydric	4.68
23C	Morton-Cabba silt loams	Partially Hydric	4.12
31C	Regent-Janesburg complex	Not Hydric	3.70
76F	Zahl-Williams loams, dissected	Not Hydric	3.69
70	Bowbells loam	Partially Hydric	2.79
21B	Morton-Farland silt loams	Partially Hydric	2.64

Symbol	Soil Series	Hydric Class	Area (acres)
35D	Moreau-Wayden silty clays	Not Hydric	2.24
29B	Savage silty clay loam	Not Hydric	1.31
28B	Belfield-Daglum silt loams	Not Hydric	0.52
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.

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, and October 13, 2011 to evaluate modifications to Project facility locations. The latest Project facility layout, dated November 20, 2011, was reviewed and all facilities are located within the previously surveyed corridor; no additional survey was necessary.

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 of 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

Only one potentially jurisdictional wetland was identified for which soils data was collected as part of the delineation. Soils at this location were classified as Bowbells loam (0 to 3 percent slopes) and were

consistent with the soil series description from the Morton County Soil Survey (USDA NRCS 2002) and NRCS SSURGO Dataset (USDA NRCS 2009).

Hydric soil indicators observed at the soil test plot location included thick dark surface and redox dark surface. A complete description of the hydric soil types identified and the hydric soil indicators observed at the delineation plots are presented in the wetland determination data forms in **Appendix B**. See **Figure 3** for a map of soil units present in the Project vicinity based on SSURGO.

4.3.3 Hydrologic Evaluation

No TNWs were identified within the survey corridor. The nearest TNW is the Missouri River located approximately eight miles east of the Project. Drainage in the Project Aarea is 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 27 hydrologic features. Specifically, this included 7 seasonally flooded wetlands, 14 drainage swales, 3 drainage ditches, 1 excavated farm pond, and 2 intermittent streams. Of these 27 hydrologic features, 25 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 jurisdictional by the USACE, and (2) assumed isolated, non-jurisdictional waters.

All wetland and water features within the survey corridor were further evaluated for temporary and permanent impacts 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 the impact corridor were assumed to have no impacts, therefore no temporary or permanent impacts were calculated for these features.

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	Access 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-49	A02	Seasonally Flooded Wetland	None	Service road and collection line between Turbine 25 and Turbine Alt 4	0.023	0.008	0.031
PY-1	D03	Drainage Swale	None	Turbine Alt 2	n/a	n/a	n/a
PY-2	F04	Seasonally Flooded Wetland	None	Turbine Alt 1	0.000	0.000	0.000
PY-3	E04	Pond	None	North of access 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 access 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 access 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 10 and Turbine 14	n/a	n/a	n/a
PY-16	E04	Drainage Swale	None	Service road and collection line between Turbine 4 and Turbine 5	n/a	n/a	n/a
PY-17	E03	Drainage Swale	None	Access 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 14	n/a	n/a	n/a
PY-24	C02, D02	Drainage Swale	None	Turbine 16	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-25	C02	Drainage Swale	None	Collection line along CR-83 ~0.4 mile south of CR-140	n/a	n/a	n/a
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	Service road between 31st Street and Turbine 29; Collection line northeast of Turbine 29	n/a	n/a	n/a
PY-30	A02	Drainage Swale	None	Service road and collection line between Turbine 25 and Turbine Alt 4	n/a	n/a	n/a
PY-31	A02	Drainage Swale	None	Turbine Alt 4	n/a	n/a	n/a
PY-48	D02	Seasonally Flooded Wetland	None	Turbine 18	0.000	0.000	0.000
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	Access road along 31st Avenue ~0.65 mile north of 34th Street	n/a	n/a	n/a
Potential Project impacts for non-jurisdictional hydrologic features					0.023	0.060	0.083
Potential Project impacts for jurisdictional hydrologic features					0.000	0.042	0.042
Potential total Project impacts					0.023	0.102	0.125

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 access 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 access roads. The entire substation 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 three probable non-jurisdictional wetlands (PY-8, PY-47 and PY-49) that may be impacted by development of the Project. These features are identified in

Table 4 and depicted on **Figure 2**.

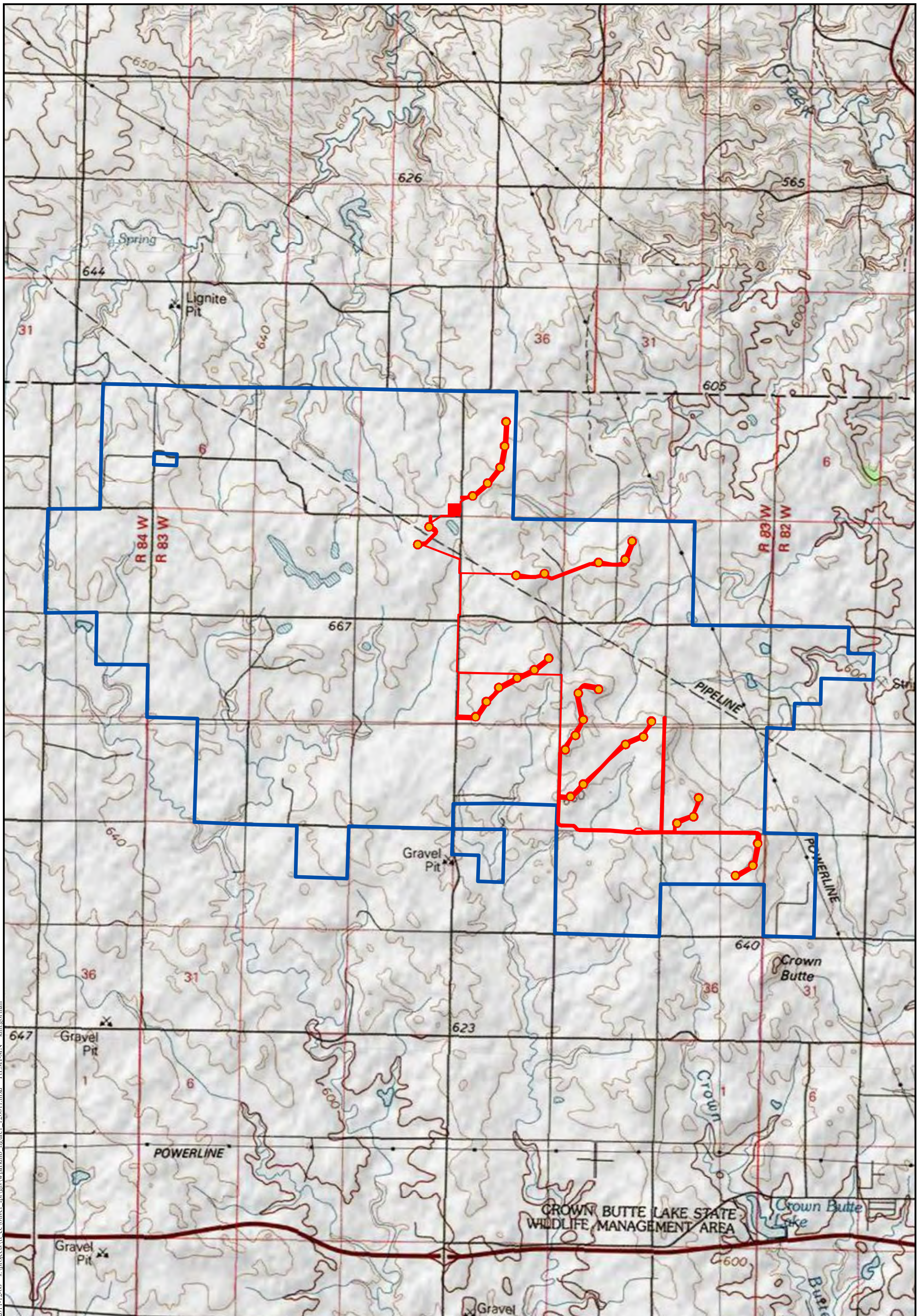
Approximately 0.023 acres of permanent impacts to non-jurisdictional wetlands are estimated for the projects. No permanent impacts to jurisdictional wetlands or WOUS are anticipated as a result of this Project. A total of approximately 0.102 acres of temporary wetland loss are estimated in jurisdictional and non-jurisdictional wetlands. All of these temporary impacts are the result of collection line installation. These impacts should be able to be avoided completely during construction by utilizing HDD for collection line installation.

6.0 REFERENCES

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High Resolution dataset for the Lower Heart Subbasin (10130203)
NHD High Resolution dataset for the Painted Woods-Square Butte Subbasin (10130103)

USGS. 7.5 Minute Series Topographic Maps.
1972. Crown Butte, North Dakota
1972. Crown Butte NW, North Dakota

APPENDIX A – FIGURES



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Source: ArcGIS Map Service - USA Topos and Project data provided by NextEra Energy 9/02/2011 (turbines), 9/6/2011 (project area), and 11/20/2011 (service roads, collection, and substation).



Facility Layout 9/2/2011

- Proposed Turbine Location
- Survey Corridor
- Project Area

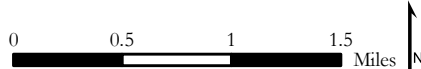
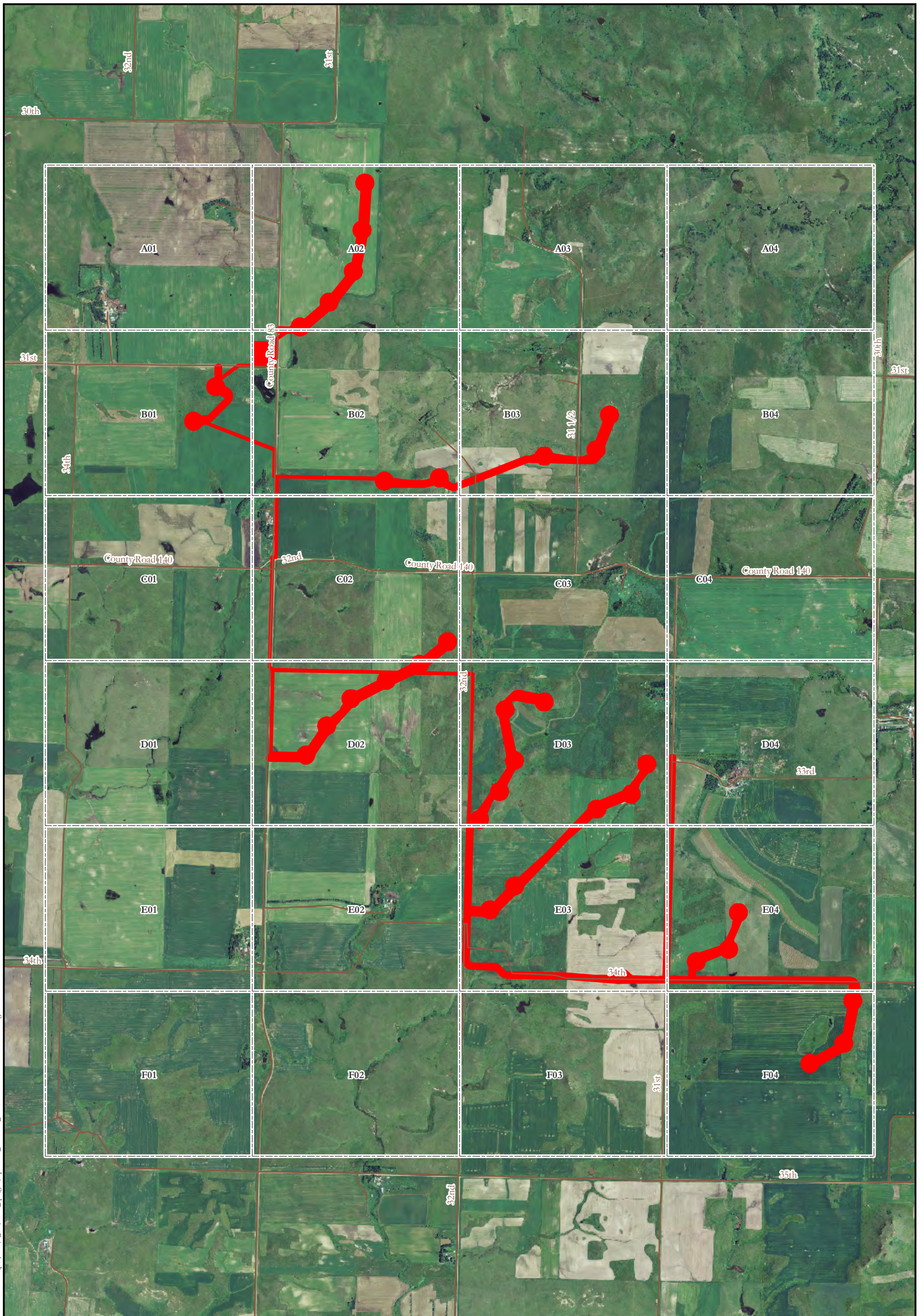


Figure 1
Project Area
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), TIGER Roads, and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection, and substation).

- Survey Corridor
- Road
- Map Book Grid

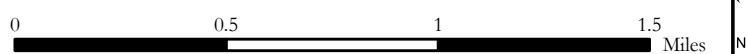


Figure 2
 Map Book Index
 Oliver III Wind Energy Center
 Morton County, North Dakota



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

- Facility Layout 9/2/2011**
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- Facility Layout 11/20/2011**
- Proposed Service Road
 - Proposed Collection Line
 - ▤ Proposed Substation
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- Surveyed Wetland/Water Feature**
- ~ Non-Jurisdictional
 - ~ Non-Jurisdictional
 - ~ Potentially Jurisdictional
 - - - NHD Subregion 1013
 - ~ National Wetland Inventory
 - Roads

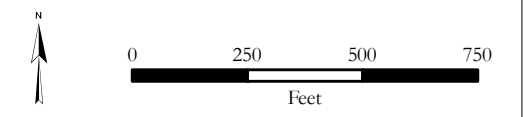
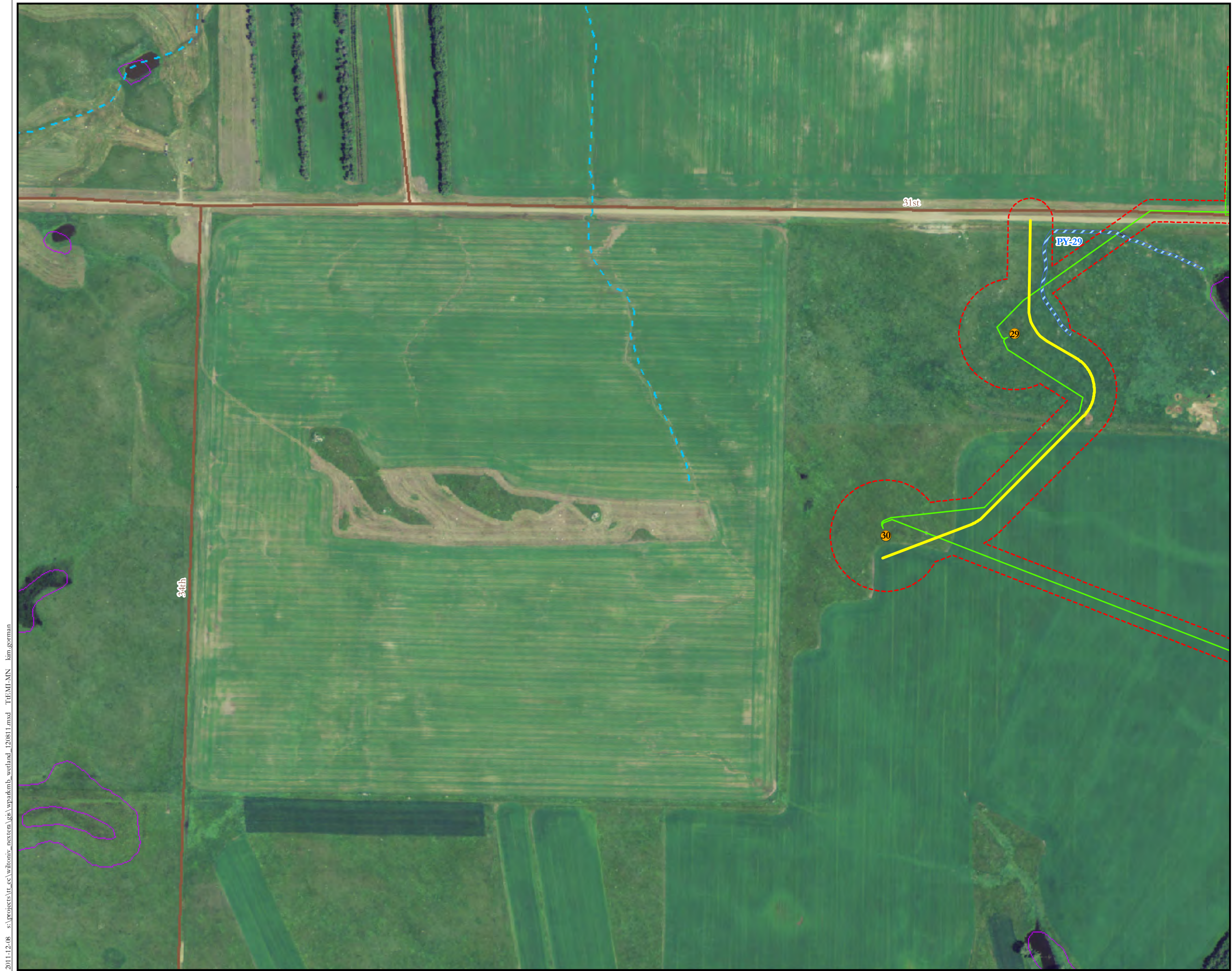


Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), USFWS National Wetland Inventory, NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech field survey data collected through 10/13/2011, and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection, and substation).



B01

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C01	C02	C03	C04
D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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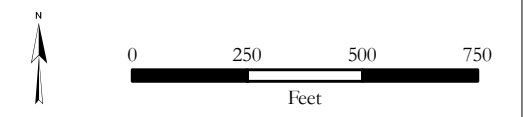


Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), USFWS National Wetland Inventory, NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech field survey data collected through 10/13/2011, and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection, and substation).



B02

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C01	C02	C03	C04
D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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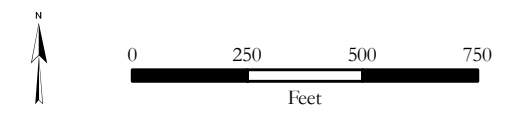
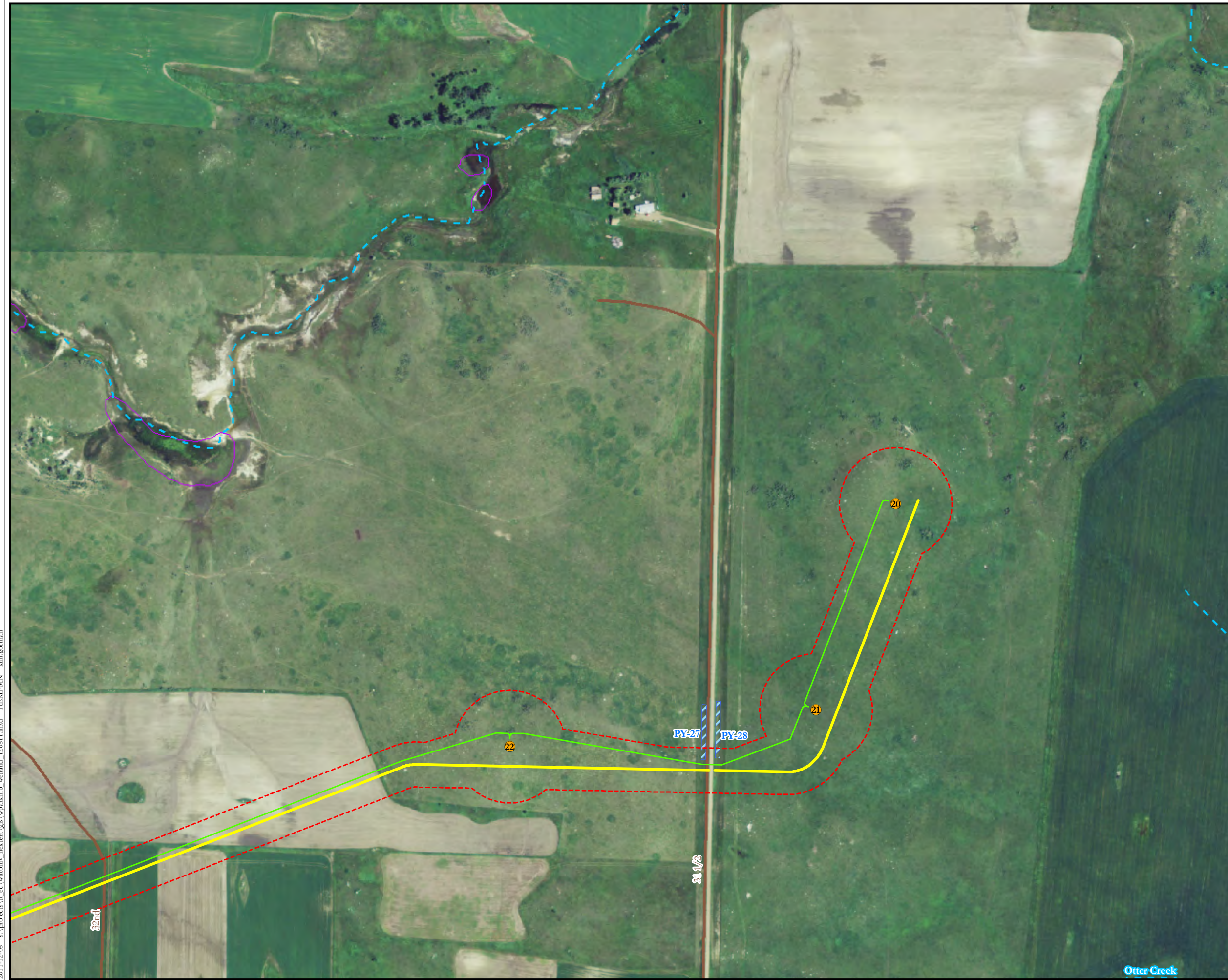


Figure 2
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B03

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C01	C02	C03	C04
D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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 - ~ Potentially Jurisdictional
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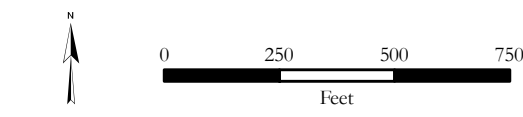


Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



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Source: NAIP 2010 Aerial Photography (Morton County), USFWS National Wetland Inventory, NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech field survey data collected through 10/13/2011, and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection, and substation).



C02

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C01	C02	C03	C04
D01	D02	D03	D04
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F01	F02	F03	F04

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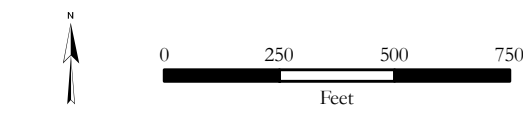


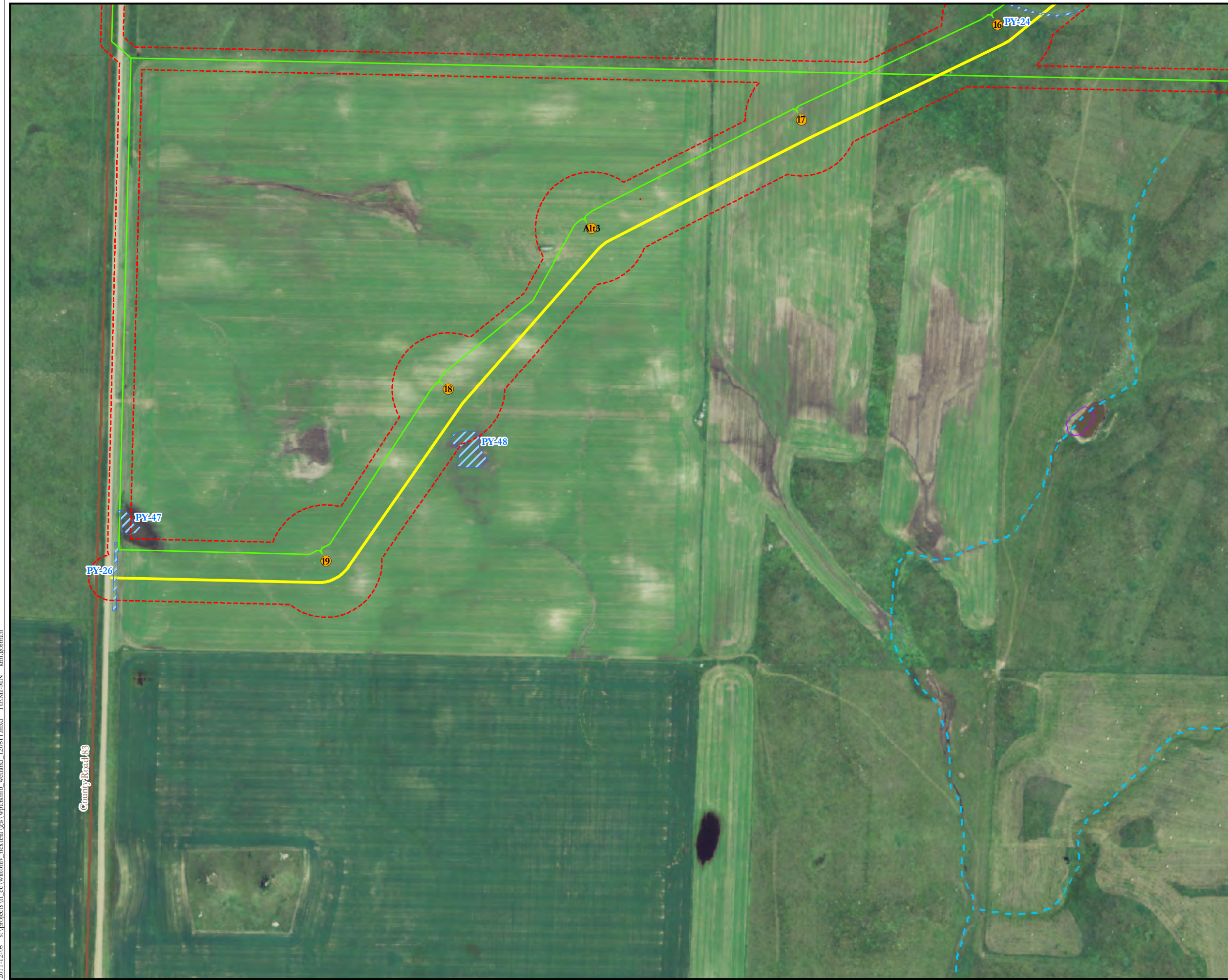
Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



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D02

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C01	C02	C03	C04
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E01	E02	E03	E04
F01	F02	F03	F04

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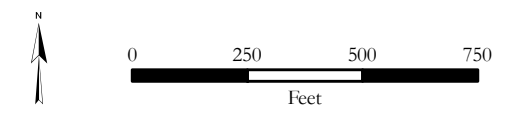
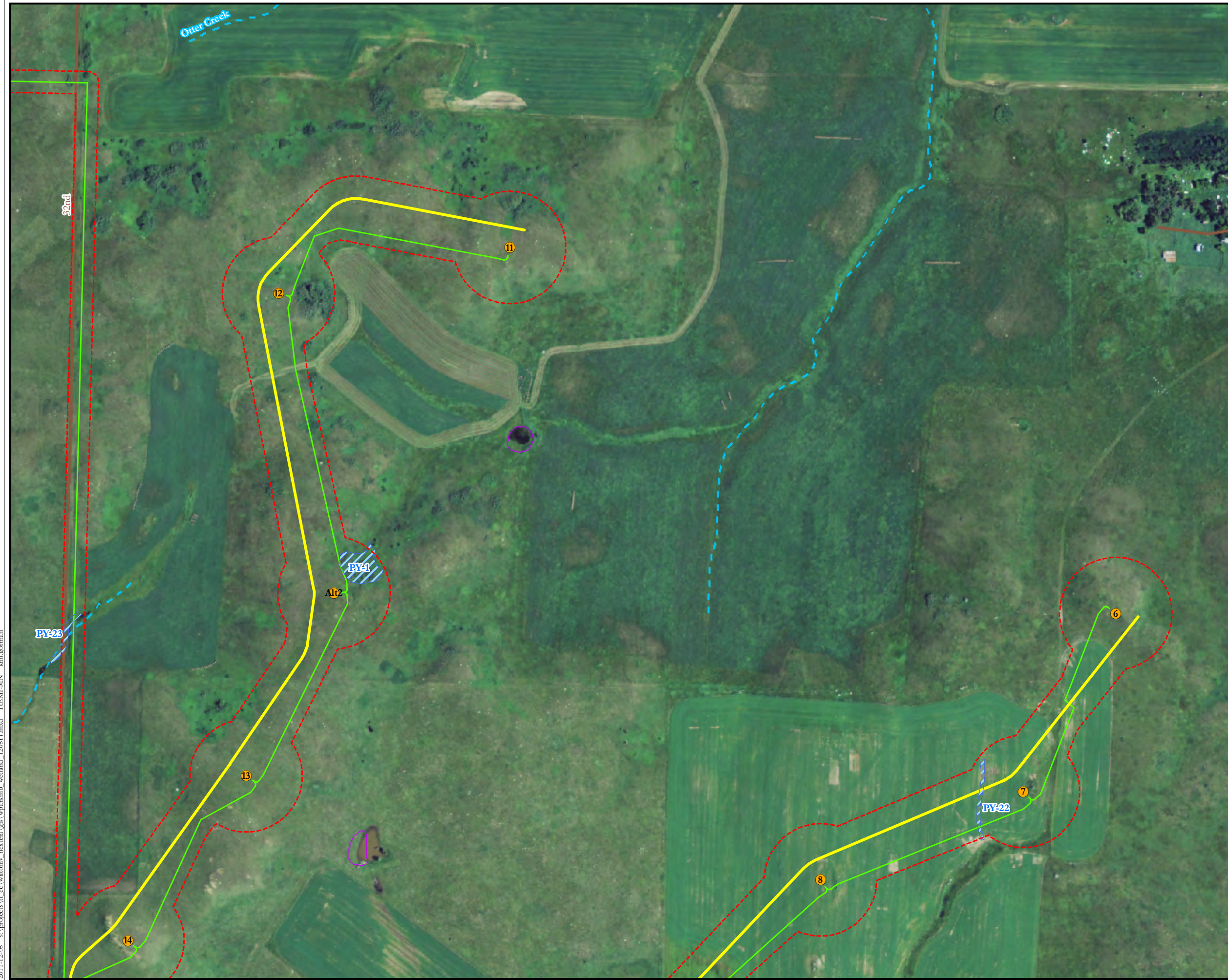


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Morton County, North Dakota



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D03

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D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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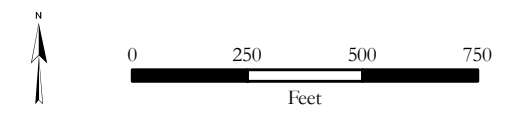


Figure 2
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Oliver III Wind Energy Center
Morton County, North Dakota



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D04

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D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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 - ⊖ National Wetland Inventory
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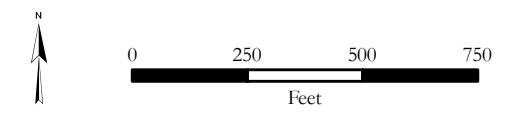


Figure 2
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Oliver III Wind Energy Center
Morton County, North Dakota



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E03

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

Facility Layout 9/2/2011

● Proposed Turbine Location

Facility Layout 11/20/2011

— Proposed Service Road

— Proposed Collection Line

▨ Proposed Substation

⋯ Survey Corridor

Surveyed Wetland/Water Feature

— Non-Jurisdictional

— Non-Jurisdictional

— Potentially Jurisdictional

— NHD Subregion 1013

— National Wetland Inventory

— Roads

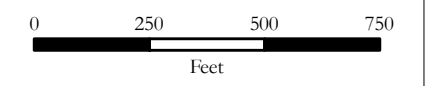


Figure 2
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Oliver III Wind Energy Center
Morton County, North Dakota



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E04

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C01	C02	C03	C04
D01	D02	D03	D04
E01	E02	E03	E04
F01	F02	F03	F04

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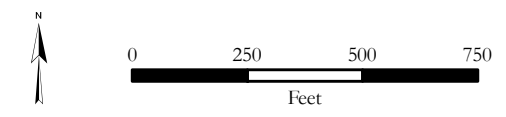
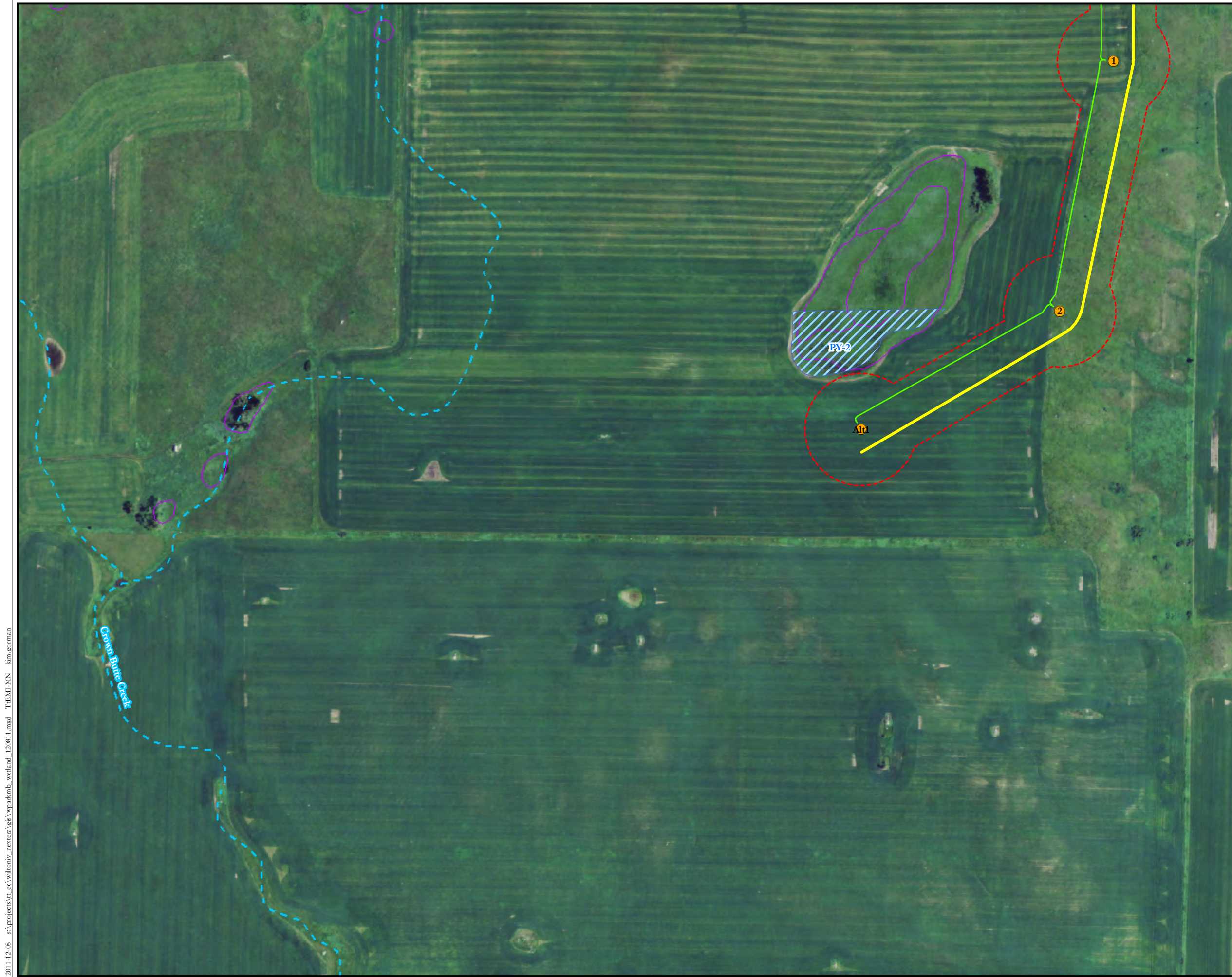


Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



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F04

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

- Facility Layout 9/2/2011**
- Proposed Turbine Location
- Facility Layout 11/20/2011**
- Proposed Service Road
 - Proposed Collection Line
 - ▨ Proposed Substation
 - - - Survey Corridor
- Surveyed Wetland/Water Feature**
- ~ Non-Jurisdictional
 - ▨ Non-Jurisdictional
 - ▨ Potentially Jurisdictional
 - - - NHD Subregion 1013
 - ▨ National Wetland Inventory
 - Roads

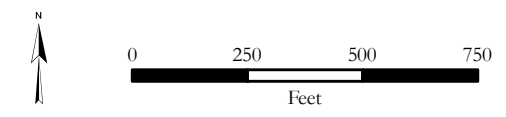
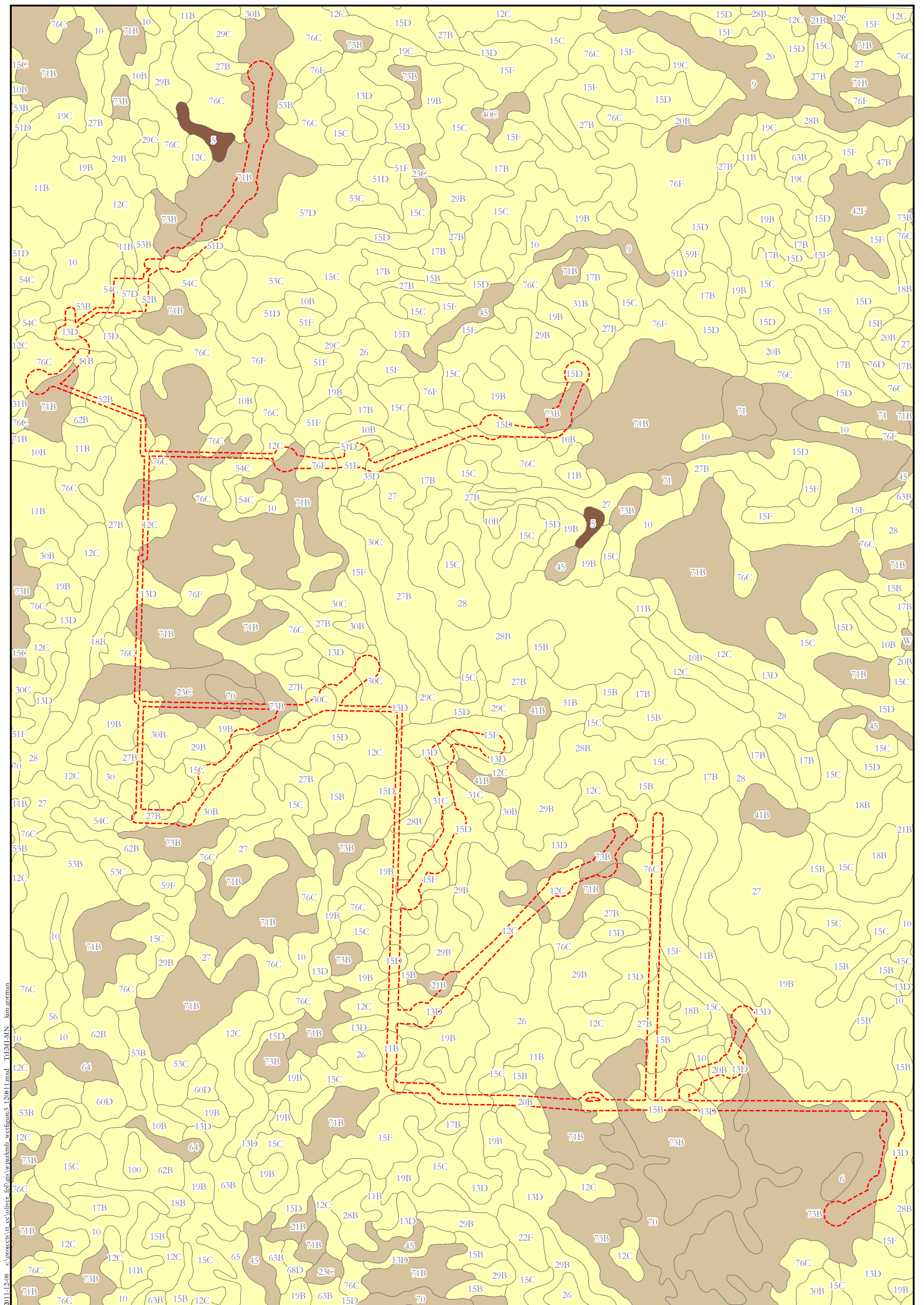


Figure 2
Wetland Survey Results
Oliver III Wind Energy Center
Morton County, North Dakota



2011-12-08 s:\projects\tr.ec\wilroniv_nextera\gs\wpa\kmb_wetland_120811.mxd THEM-MN kim.gorman

Source: NAIP 2010 Aerial Photography (Morton County), USFWS National Wetland Inventory, NHD High Resolution Subregion 1013, TIGER Roads, Tetra Tech field survey data collected through 10/13/2011, and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection, and substation).



2011-12-08 s:\projects\oliver_iii\werc\werc\fig3_120811.mxd THEM1.MN ism.german

Source: USDA Soil Survey Geographic (SSURGO) database (Oliver County) and Project layout data provided by NextEra Energy 9/02/2011 (turbines) and 11/20/2011 (service roads, collection and substation).

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

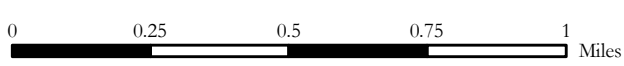


Figure 3
 SSURGO Soils
 Oliver III Wind Energy Center
 Morton County, North Dakota



APPENDIX B – SUPPORTING FIELD DOCUMENTATION

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

PY-1

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

Mile Marker: _____
Date/Time of Evaluation: 10/19/09 1130

Assessors Names: KG + GCU
Feature Name: 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'

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). Explain _____
- Manipulated Explain _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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 canopy + smooth bone
wooded wetland

Other Features:

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

Photo log #:	Orientation:	Brief Description:
<u>26</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

Segment: Between furion 2+3
County: Morton
Landowner Name: _____

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

Assessors Names: KPG & CB TT Team ID: KPG
Feature Name: 1 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

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 Cinguifoil, Dock, Foxtail, Corn Stubble
Inner edge = Mud plain, Common Rush(?), Sungrass(?) 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 NWI wetland

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

46° 54' 56.590" 101° 5' 54.507"

Inner layer (wetland)

0- ~~6~~ 6" clayey loam - No matrix
6- 30" loamy clay - matrix
30" - color change

46° 54' 58.60" 101° 5' 54.73"

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

Project/Site: Oliver III City/County: Morton Sampling Date: 10/15/09
 Applicant/Owner: NextEra State: ND Sampling Point: 3W
 Investigator(s): KPG + CG Section, Township, Range: S25 T140N R83W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR): F Lat: 46° 54' 58.60" Long: 101° 5' 34.73" Datum: _____
 Soil Map Unit Name: Heil silt loam NWI classification: PEMA

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No <u>---</u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>wetland-type area surrounded by wheat + corn stubble</u> <u>Ground newly frozen - hydrology disturbed.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Alisma subcordatum</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Juncus effuses</u>	<u>30</u>	<u>Y</u>	<u>FACW+</u>	
3. <u>Polygonum amphibium</u>	<u>1</u>	<u>N</u>	<u>OBL</u>	
4. <u>Sparganium spp.</u>	<u>1</u>	<u>N</u>	_____	
5. <u>Calamagrostis canadensis</u>	<u>1</u>	<u>N</u>	<u>FACW+</u>	
6. <u>Rumex crispus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____				

Remarks: 3 - looking toward NW, listed wetland

SOIL

Sampling Point: 3W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR2/1	100						
6-30	10YR2/1	98	7.5YR4/6	2				
30+	10YR2/1	95	7.5YR4/6	5				

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

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

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

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

Hydric Soil Present? Yes No

Remarks: Ground near frozen

HYDROLOGY

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes No

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

Remarks: very dry fall - outside growing season
ground near frozen - saturation disturbed

WETLAND DETERMINATION DATA FORM – Great Plains Region (DRAFT)

PY-2

Project/Site: Oliver III City/County: Morton Sampling Date: 10/15/09
 Applicant/Owner: Next Era State: ND Sampling Point: 3U
 Investigator(s): KPG + CG Section, Township, Range: S25 T140N R83W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): hillslope - none Slope (%): _____
 Subregion (LRR): F Lat: 46° 54' 56.590" Long: 101° 5' 54.507" Datum: _____
 Soil Map Unit Name: Williams-Reeder loams NWI classification: _____

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

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

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

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species <u>1</u> x 2 = <u>2</u>
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species <u>2</u> x 4 = <u>8</u>
Total Cover: _____				UPL species _____ x 5 = _____
<u>Herb Stratum</u>				Column Totals: <u>3</u> (A) <u>10</u> (B)
1. <u>Potentilla arguta</u>	<u>1</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.33</u>
2. <u>Rumex crispus</u>	<u>1</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Setaria italica</u>	<u>1</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>3</u>				
<u>Woody Vine Stratum</u>				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
Total Cover: _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks: <u>Harvested corn field</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

SOIL

Sampling Point: 30

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100						
12-24	10YR 3/1	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> (LRR H outside MLRA 72 & 73)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	

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

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

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No

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

Remarks:

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 turbin 1+6, No 34th Mile Marker: _____
County: Monroton 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). Explain _____
 Manipulated 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 Berman 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 berming

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

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 + CG

TT Team ID: KPG

Feature Name: 1 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

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 turbin 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: 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
 - 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

Feature Name: Isolated wetland

Feature # 9

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 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	

P4-8

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Feature # 10

Segment: West of turbine Along Collection Rd Mile Marker: _____

County: Morton Date/Time of Evaluation: 10/15/09 1330

Landowner Name: _____

Assessors Names: KP6+ C6 TT Team ID: PK6

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

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 Foxtail, Smooth Brome + 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	

P4-13 + P4-14

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

TTEMI QC Check: DBK
TTECI QC Check: _____

Segment: COLLECTION, T-LINE N OF SUBSTATION Mile Marker: _____
County: MORTON Date/Time of Evaluation: 10/16/09
Landowner Name: _____

Assessors Names: KPG + LG TT Team ID: _____
Feature Name: ENT STREAM No. of Features Present: 1 CONTINUES ON BOTH SIDES OF ROAD

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 REDUCE FLOODING + NUTRIENTS FROM ADJACENT AS USE TO SWEETSPRING CREEK
- 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 ADJACENT AS USE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW? Yes No
Explain VEG REDUCES POLLUTANTS, CONNECTED TO SWEETSPRING CREEK

Streams:

Name (or tributary to) TRIB TO SWEETSPRING CREEK
Water body Type (stream/ditch/culvert/swale/wash) ENT 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

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 _____

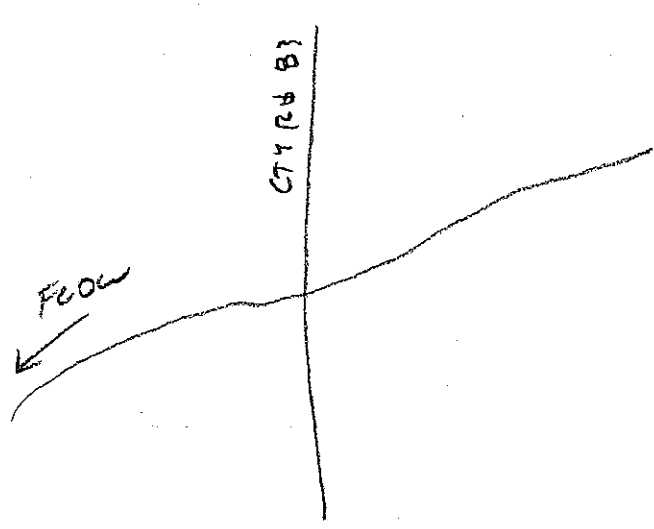
Floodplains _____

Depressions _____

Gravel Pits/Mined Areas _____

Other CULVERT 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	

PY-15

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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

Feature # 7

Segment: Between Turbins 5+6

Mile Marker: _____

County: Morton

Date/Time of Evaluation: 10/15/09 1230

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) 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 Buck

Tributary is: Natural

Artificial (man made). Explain _____

Manipulated Explain _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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

PY-17

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

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

Assessors Names: EDG + CG
Feature Name: DRAINAGE SWALE

TT Team ID: 16126
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 + ALPHALPHA

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

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**

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	SWALE
17	S	SWALE

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

PY-22

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

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

Assessors Names: KPG + CG
Feature Name: Drainage Swale

TT Team ID: KPG + CG
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
 - 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) 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 DBK

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 _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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:

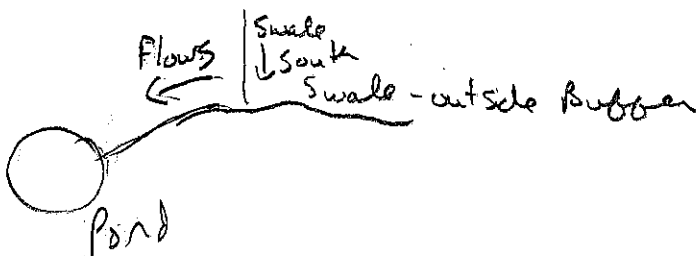
Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
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	

PY-23

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Collection west of herbin 14 Mile Marker: _____
County: Morton Date/Time of Evaluation: 10/16/09 11:50
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

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	NE	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	

P4-24

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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

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

Assessors Names: KPG+LG
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

PK

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 DEPTH (NO) + 1" MAX

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

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:
33	SW	toward farm Drainage Swale
34	NE	toward Pasture Drainage Swale

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	

List Trimble Feature Nos. 25-Culvert
26-Drainage Swale

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

TTEMI QC Check: ME
 TTECI QC Check: _____

Segment: Just N of Substation
 County: Morton
 Landowner Name: _____

Mile Marker: _____
 Date/Time of Evaluation: 10/16/09 1310

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

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:

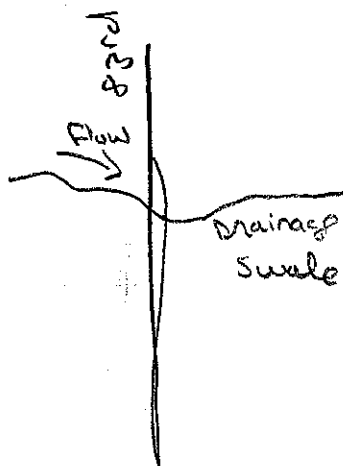
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

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 Brome 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	

PY-26

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Near Substation-toward Mile Marker: 31
County: Morton Date/Time of Evaluation: 10/16/09 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
 - 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 P3 rd - Roadway
 Manipulated Explain _____

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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? Yes No

Was the stream filled in the process? Yes No

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

Comments: _____

Wetlands:

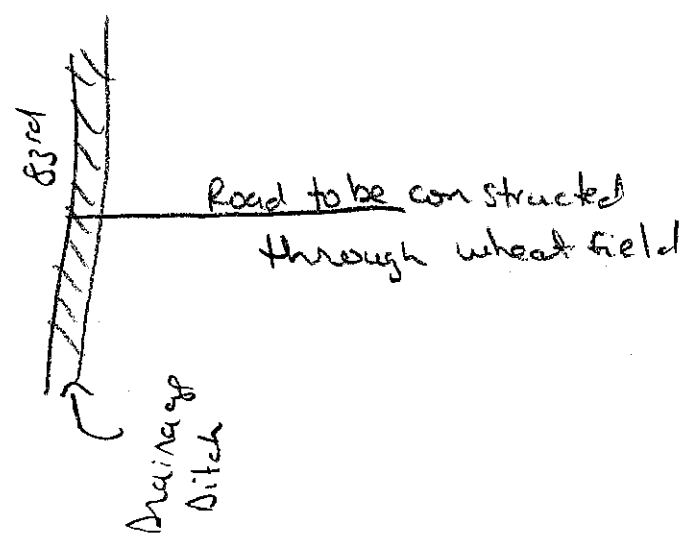
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

Comments: _____

Other Features:

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

Photo log #:	Orientation:	Brief Description:
40	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

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: PERMANENT DITCH

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) PERMANENT 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) BRAMBLES

Tributary is: Natural

Artificial (man made). Explain ROADSIDE DITCH

Manipulated Explain _____

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**

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:

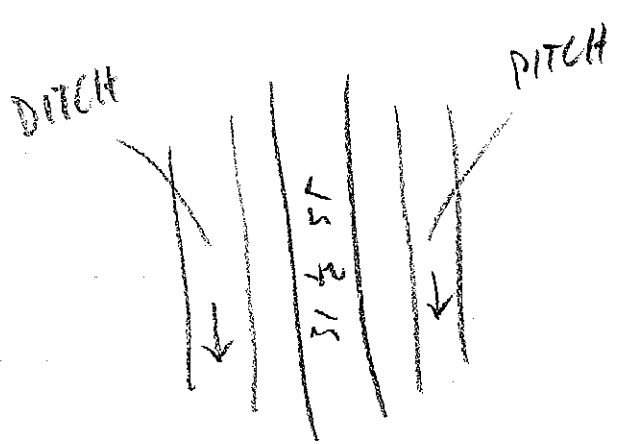
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

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: KPG + LG
Feature Name: DRAINAGE DITCH

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 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) BROME

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

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**

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	DRAIN DITCH EAST SIDE ROAD
42	S	DRAIN DITCH WEST SIDE ROAD

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	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

4-29

Segment: NE OF TURBINE 32
County: MORSON
Landowner Name: _____
Assessors Names: KPG + CG
Feature Name: PERMANENT SWALE

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

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

Bank vegetation (upland/wetland cover type) BROME, ALTEMERIA (OLBOLIE), SOLIDAGO, ROSES

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

**OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET**

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 SW TLE
48	E	DOWN DR WETLAND

SMALL SW TLE THAT DRAINS MILC 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	

94-30

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

Mile Marker: _____
Date/Time of Evaluation: 10/17/09 1010

Assessors Names: KP6 & G6
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
 - 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	

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

PY-31

Segment: turbine 27 Buffer

Mile Marker: _____

County: Morton

Date/Time of Evaluation: 10/17/09 1020

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) 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	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

PY-47

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

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

Assessors Names: KAB KPG
Feature Name: 74

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) _____

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

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	

PY-48

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

Segment: Turbine 18
County: Morton
Landowner Name: _____
Assessors Names: EAB KPG
Feature Name: 25

Mile Marker: _____
Date/Time of Evaluation: 8/20/11 925
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) _____

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

Segment: Road btwn T-Alt 4 + T-25
County: Morton
Landowner Name: _____

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

Assessors Names: KAB KPG
Feature Name: 78

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 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

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

[Faint handwritten notes at the bottom of the page]

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	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

L-2

Segment: N of T29
County: Morton
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)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Wetland adjacent to a TNW?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Tributary to a TNW	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Relatively Permanent Waters (RPW) (Perennial Flow)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Wetland that abuts a RPWs with perennial flow	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a RPW (Seasonal Flow – greater than 3 months)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Wetland that abuts a RPWs (no indicates adjacent)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does a significant nexus exist? (adjacent only, provide details below)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Non-RPW (Flow – less than 3 months)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
[including ephemeral waters (i.e. swales, gully or small wash)]		
Does a significant nexus exist? (Provide details below)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this a Wetland adjacent to Non-RPW	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does a significant nexus exist? (Provide details below)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is this an Isolated Waters (i.e. isolated wetlands, ditches)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Explain _____		
b. provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Explain _____		
c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Explain _____		
d. have other relationships to the physical, chemical, or biological integrity of the TNW?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

6-3

Segment: Between turbine 28 & 29
County: Morton
Landowner Name: _____

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

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) 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) Cropped - wheat

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

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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:

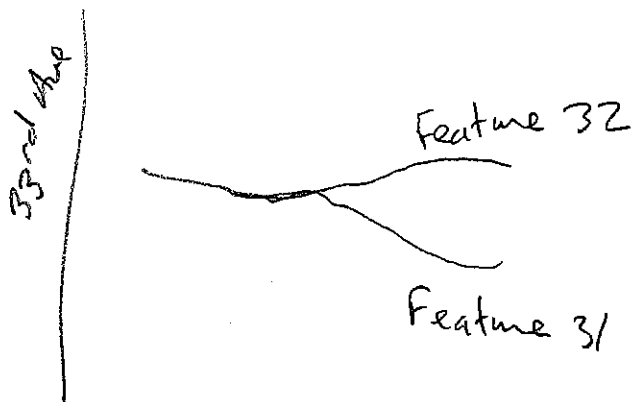
Complete Wetland Determination Field Sheet to evaluate the area and use cheat sheets:

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	

L-9

OLIVER III
WETLAND EVALUATION
FIELD DATA EVALUATION SHEET

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

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

Assessors Names: LCB KPG
Feature Name: BD179

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 west 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	