

**WETLAND DELINEATION REPORT  
OLIVER III TRANSMISSION LINE**

**MORTON & OLIVER COUNTIES  
NORTH DAKOTA**



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## 1.0 INTRODUCTION

NextEra Energy Resources, LLC (NextEra Energy) contracted with Tetra Tech EC, Inc., (Tetra Tech) to conduct a wetlands delineation survey of its Oliver III Transmission Line (the Project), located in Morton and Oliver Counties, North Dakota (Appendix A, Figure 1). This Wetland Delineation Report summarizes the activities conducted during the field survey for wetlands and other waters within the study area.

### 1.1 Project Description

NextEra Energy proposes to construct and operate the Project, located approximately 20 miles northwest of Bismarck in Morton and Oliver Counties, North Dakota (Figure 1, Table 1). The Project includes the construction of a 230-kilovolt (kV) overhead electrical transmission line connecting the proposed Morton County Wind Energy Center's collection substation in the southwest quarter of Section 3, T140N, R83W in Morton County to the existing Oliver Phase II Substation east of Nelson Lake in the southeast quarter of Section 33, T142N, R83W in Oliver County.

The proposed Project includes the construction of:

- A 9.2-mile transmission line; and,
- A 0.4-acre expansion of the Oliver Phase II Substation.

**Table 1. Sections with Proposed Project Infrastructure**

County	Township Name	Township	Range	Section(s)
Morton	Unnamed	T140N	R83W	3-5, 9-10, and 15-16
Oliver	Unnamed	T141N	R83W	4, 9-10, 15, 22, 27-28, and 33-35
Oliver	Unnamed	T142N	R83W	33

### 1.2 Project Area

The Project Area described in this report includes all areas that may be permanently or temporarily impacted during construction and allows for minor potential shifts in the route and pole locations during construction. The Project Area includes surveyed areas as described below.

The Project Area (based on the project design dated November 1, 2010) consists of the 9.2-mile transmission line connecting the Morton County Wind Energy Center to the Oliver Phase II Substation. The 9.2 miles of transmission line will include a 150-foot (ft) wide construction easement. Tetra Tech surveyed a 150-ft wide corridor; however, in some instances Tetra Tech's proposed survey corridor expanded onto adjacent parcels. Tetra Tech did not survey land on non-participating landowner parcels. Tetra Tech understands that all construction related activities will be confined to parcels containing the

transmission line facilities and such activities will not be taking place on adjacent landowners' properties, unless specifically indicated by NextEra Energy.

Tetra Tech also surveyed two alternative routes that parallel the preferred route from Pole 74 to Pole 81. These alternate routes were located 75 feet on either side of the primary route for 3,300 feet. The alternative routes were included within the surveyed corridor.

The expansion of the Oliver Phase II Substation will encompass 0.4 acres. Tetra Tech surveyed the entire 0.4-acre area to be disturbed for the substation expansion.

### **1.3 Physical Setting and Hydrology**

The Project Area is located within the Level IV Missouri Plateau and River Breaks Ecoregions (Bryce et al. 1998). The River Breaks region forms broken terraces and uplands that descend to the Missouri River and its tributaries. The Missouri Plateau topography is characterized by level to rolling plains with isolated sandstone buttes. Landscape components within the ecoregions include western mixed grass/short grass prairie, planted or tame grassland, upland deciduous forest, and numerous wetlands. 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 region. The Project Area is privately owned and current land uses are cattle pastureland and agricultural cropland. Land elevations in Morton County range from 1,600 feet above mean sea level (msl) in the southeastern part to 2,460 feet above msl in the western part (USDA NRCS 2002). Elevations in Oliver County range from 2,420 feet above msl in the southwestern portion of the county to 1,640 feet above msl on the Missouri River (USDA NRCS 1975).

The climate of the region 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 Morton 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 Painted Woods-Square Butte watershed basins (hydrologic unit codes 10130203 and 10130101, respectively), which ultimately drain to the Missouri River. The drainage network in the region is well defined. The southern portion of the Project Area (generally, south of 30<sup>th</sup> Street Southwest) is located in the Lower Heart watershed basin and drains to Sweet Brier Creek and eventually to the Missouri River. The northern portion of the Project Area (generally, north of 30<sup>th</sup> Street South West) is located within the Painted Woods-Square Butte watershed basin and drains to Square Butte Creek and eventually to the Missouri River. Square Butte Creek originates from Lake Nelson and intersects the Project Area near the northern terminus of the transmission line. The Project Area contains numerous linear drainages, the majority of which drain to Square Butte Creek.

## 1.4 Regulatory Framework

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

Wetlands with “jurisdictional” status are waters of the U.S. 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 RGL 07-01, 2007).

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. These types of waters include:

- Non-navigable tributaries that are relatively non-permanent;
- Wetlands adjacent to non-navigable tributaries that are relatively non-permanent; and,
- Wetlands adjacent to, but not directly abutting, a relatively permanent non-navigable tributary.

The regulations define adjacent as “bordering, contiguous, or neighboring,” and state that wetlands separated from other waters of the U.S. 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 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 waters of the U.S. should be considered waters of the U.S. In the absence of adjacent wetlands, lateral jurisdiction over non-tidal waters extends to the ordinary high water mark. The definition of the ordinary high water mark 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, 2006).

Only the USACE can make a final determination on the jurisdiction of a wetland at a site. If development is to occur, the USACE also determines the type of permit, if any, that may be required under the CWA. This report provides a description of wetlands and surface waters bodies identified within the Project Area. Included is a description of the Project Area, methods used to identify and delineate wetlands, field survey results and references used to support the conclusions. Appendices include detailed aerial views, field data forms, Jurisdictional Determination (JD) Forms and site photographs.

U.S. Fish and Wildlife Service (USFWS) wetland easements protect wetland basins on private land. The easements are perpetual and stay with the land when ownership changes. The USFWS Office of Conservation Science in Bismarck, North Dakota was contacted regarding the location of wetland easements within the Project Area. An email from the USFWS, dated November 9, 2009, indicates no wetland easements exist within the Project Area.

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## 2.0 METHODS

Tetra Tech used a tiered approach to analyze for wetland and waters within the Project Area. Utilizing this approach, general wetland features were first identified during a desktop data review. The desktop data were used to guide a facility micro-siting field visit with NextEra Energy engineers to avoid and reduce impacts on wetlands and waters followed by a wetland survey and delineation of features within areas of potential impact once the preliminary Project layout was complete.

### 2.1 Data Review

Prior to and during the field reconnaissance, available information was reviewed to identify areas that may exhibit characteristics of jurisdictional and other waters of the U.S. Tetra Tech evaluated these data layers as a whole to make probable wetland and other waters determinations; this included review of aerial photographs, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database, and the Oliver and Morton County Soil Surveys.

#### 2.1.1 Aerial Photograph Review

Locations of proposed Project facilities with the potential to impact wetland areas were identified based on a review of aerial photography obtained from the USDA Farm Service Agency (FSA). The Project layout was overlain onto digital versions of aerial photographs using ESRI Geographic Information Systems (GIS) software (see Appendix A, Figure 2).

#### 2.1.2 National Hydrography Dataset

The NHD was downloaded from the USGS NHD Viewer. Perennial, intermittent, and ephemeral streams and drainages that could potentially be affected by the Project were identified and investigated during the field reconnaissance. The NHD data are presented in Appendix A, Figure 2.

#### 2.1.3 Topographic Maps

The Hazen and Glen Ullin USGS 100K Topographic Quadrangles were streamed from the North Dakota Geographic Information Systems Web Map Service through GIS. Perennial, intermittent, and ephemeral streams that could possibly be affected by the project were identified and investigated during the field reconnaissance. The topographic map data are presented in Appendix A, Figure 1.

#### **2.1.4 National Wetlands Inventory Map Review**

The NWI data for the Project Area were downloaded from the USFWS NWI Geospatial Wetlands Digital Data website (2009). According to these data, areas identified as wetlands were present within the Project Area. The NWI data are presented in Appendix A, Figure 2.

#### **2.1.5 Soil Survey Review**

Soils data for Morton and Oliver Counties were obtained from the USDA NRCS Morton and Oliver County Soil Surveys and the NRCS Soil Survey Geographic (SSURGO) Database. These data depict the distribution of soil series and mapping units. This information was used to study the distribution of hydric soils within the Project Area. According to reviewed data, numerous soil types are present within the Project Area. 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 1987 Manual and Regional Supplement. 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. Tetra Tech used the Hydric Classification field within the SSURGO soils database to identify hydric soils in the Project Area. The Hydric Classification is a data field that indicates whether or not a map unit soil component is classified as a hydric soil. According to the SSURGO, the majority of the soils within the Project Area are classified as non-hydric. However, hydric soils were identified to exist within the Project Area. The distribution of hydric soils within the Project Area is depicted in Appendix A, Figure 3.

#### **2.2 Micrositing**

A micrositing effort was undertaken by NextEra Energy prior to Tetra Tech's survey. The purpose of micrositing was to review the preliminary proposed Project facilities' locations and make adjustments as necessary to meet regulatory and set-back requirements. This includes evaluations for possible impacts on jurisdictional wetlands and other waters of the U.S. Tetra Tech Wetland Biologist Ms. Kathy Bellrichard met with representatives of NextEra Energy in the field to review preliminary transmission line routes in the spring of 2009. The previously reviewed data including aerial photographs, NHD and NWI, were utilized along with limited field observations to determine if jurisdictional wetlands or waters of the U.S. were located within the Project Area, and recommendations were made in the field to modify the proposed layout of Project facilities to avoid permanent impacts on wetland resources.

#### **2.3 Onsite Wetland Delineations**

The purpose of the field survey was to identify the presence and location of wetlands and waters that may be subject to USACE jurisdiction. When a wetland or water feature was encountered in the Project Area, a USACE Jurisdictional Determination Form was completed. Wetland features determined to be jurisdictional were delineated in accordance with the routine three-parameter approach outlined in the

USACE 1987 Wetland Delineation Manual (Environmental Laboratory 1987) and the “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region” (USACE 2010). Due to the similarity of wetland characteristics across the site, wetland features determined to be non-jurisdictional during the field survey were delineated based on desktop information and visual indicators of hydrophytic vegetation, hydrology, and topography.

Generally, transects were placed perpendicular to the feature being investigated nearest the location of proposed potential impacts that would result from construction of the Project. Sample plots were then placed along each 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 “A” 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 “A”, data was collected from additional sample plots placed to delineate the transition from wetland to non-wetland habitats. The boundary of each wetland delineated was determined as the location where at least one of the above three parameters failed to meet wetland criteria.

Vegetation within each sample plot was characterized to determine dominance of either hydrophytic or non-hydrophytic vegetation. Dominance was estimated 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 (USFWS 1988). Soils at each sample plot were evaluated and determined to be hydric or non-hydric according to the guidelines put forth in the USACE Regional Supplement and USDA NRCS Field Indicators of Hydric Soils in the U.S. (NRCS 2006). 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.

Linear drainages and streams that were observed to be channelized in a well defined bed and bank and that were not observed to have adjacent wetlands were delineated along the ordinary high water level (OHWL). The OHWL is an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial.

A summary of the delineated features in the Project Area (generally from north to south) are presented in Table 2, sorted by Feature ID Number. Field data sheets and photo documentation are presented in Appendix B.

## 2.4 Jurisdictional Determinations

Tetra Tech completed field data evaluation sheets for each potential wetland feature to assist in determining jurisdictional status. The field data evaluation sheets were designed following USACE and EPA guidance (USACE and EPA 2007). In order to evaluate the significant nexus of field identified NRPWs, drainage swales, and ponds, the following questions were considered: Does the tributary, in combination with its adjacent wetlands (if any):<sup>1</sup>

- 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?

Field surveys followed this guidance to determine hydrologic connectivity (i.e. nexus determinations) between waters of the U.S. and wetland areas. Assumptions made for the nexus determinations included:

- Named streams were considered RPWs – perennial or seasonal flow;
- Lines in the NHD that were field confirmed to be present were considered to be RPWs, NRPWs<sup>2</sup>, or drainage swales;
- NRPWs, or field-confirmed drainage swales that were not identified in the NHD dataset, were considered isolated or jurisdictional based on the field data evaluation sheet completed; and,
- Wetlands were considered potentially jurisdictional or jurisdictional if they were adjacent to a named stream, NHD line, or appeared hydrologically connected to a NHD line.

## 2.5 Digital Capture of Data

A Tetra Tech GIS Specialist designed a geodatabase specifically for the Project that was used to capture data in the field using Trimble GPS technology, as well as to manage and display features for quality control and electronic client deliverables. The geodatabase prepared by the GIS Specialist contains four feature classes for data capture: wetland points, wetland lines, wetland polygons, and wetland survey polygons (i.e. location of project survey facilities with appropriate buffer areas). Additional attribute data that were built into the geodatabase are present as drop-down menus, which allow specific feature information to be gathered in the field. Examples of attribute data fields include:

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<sup>1</sup> These questions were answered using visual indications, as well as desk top sources, such as aerial photography and the NHD. 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.

<sup>2</sup> Not all NHD lines depicted in this dataset were confirmed in the field. If a NHD line is depicted in the buffer area of an evaluation area and no corresponding field evaluation feature is present, this indicates the field reconnaissance did not confirm the presence of the NHD line at that specific location.

- Feature Type: Wetlands were classified according to the USFWS Circular 39 system (USFWS 1956). Other waters were classified as relatively permanent water (RPW), non-relatively permanent water (NRPW), drainage swale, drainage ditch, pond, filled feature, etc.;
- Comment Box for Feature Type;
- Jurisdictional Status (Yes, No, or Potential);
- Width and Depth of the Feature;
- Does the feature extend beyond the buffer boundaries; and,
- Other Feature Issues (i.e. impacts by landowner, road crossing, or other noted disturbances).

The Geodatabase features classes were converted and uploaded to a Trimble GeoXT handheld GPS unit running both ESRI's ArcPad 7 and Trimble GPS Correct Software for editing. Upon return from the field, the field-modified GPS data were post-processed, converted to shapefiles, and loaded into the Geodatabase as a feature class. Differential correction was performed on an as-needed basis and accuracy results indicated that 97.5 percent of all positions were estimated to be accurate to within one meter.

## 2.6 Data and Area of Impact Analysis

After the field data were post-processed, the biologists who captured the field data reviewed the geodatabase and maps for quality control review. Data packages were prepared and submitted for use by NextEra Energy project managers and engineers. Tetra Tech biologists also conducted an analysis of the identified features in relation to permitting requirements under NWP 12. The features identified in the study area were categorized into (1) jurisdictional areas and potentially jurisdictional areas, which are assumed jurisdictional waters of the U.S., based on the nexus determination completed during field evaluations, 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 NWP 12 Utility Line Activities<sup>3</sup>. Impact thresholds generally apply to single, per water body, event impacts (e.g. stream crossings) and are not cumulative across a project, unless multiple events occur along the same tributary or water body (for example, cumulative impacts would occur if the project were to affect a wetland adjacent to a tributary and the stream bed to the same tributary). To qualify for NWP authorization, the prospective permittee must comply with the general conditions identified within the NWP Permit 12. The following summarizes thresholds for permanent impacts, pre-construction notification (PCN), and mitigation requirements under NWP 12:

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<sup>3</sup> If permanent impacts do not exceed 0.1 acre then no PCN or action with the USACE is required based on conversations with the Omaha District of the USACE (Tetra Tech 2009).

- The activity cannot result in impacts of greater than 0.5 acre in non-tidal waters of the U.S. For impacts greater than 0.5 acre, application for an Individual Permit with the USACE must be submitted;
- A PCN is required for impacts between 0.1 acre and 0.5 acre;
- Mitigation is required for water bodies that exceed 0.1 acre of impact;
- A PCN is also required if: (1) the activity involves mechanized land clearing in a forested wetland for the utility right-of-way; (2) a section 10 permit is required; (3) the utility line exceeds 500 feet in length in waters of the U.S. (excluding overhead lines); (4) the utility line is placed in a water of the U.S. and it runs parallel to a stream bed; or (5) above-grade permanent access roads exceed 500 feet or permanent access roads are constructed with impervious materials. These thresholds only apply to waters regulated by the USACE or wetlands adjacent to regulated waters; and
- A PCN is also required if there is a discharge into a special aquatic site, which can include wetlands (special aquatic sites are sites with special ecological characteristics of productivity, habitat, wildlife protection or other important and easily disrupted ecological values).

Assumptions were made on the calculation of temporary and permanent impacts for hydrological features identified. The assumptions were based on correspondence between Tetra Tech and NextEra Energy construction engineers. The construction and operational corridor impacts assumed for the Project were as follows:

- Total construction easement for transmission line construction is 150 feet wide. However, the easement does not extend onto non-participating landowner parcels;
- Structure pole borings will be 7 feet in diameter and will extend 20 to 22 feet below surface grade. Soils removed during boring will be spread around the base of the pole structure;
- The anticipated area of disturbance at each structure location will be approximately 100 square feet;
- Vegetation that is greater than 14 feet tall and located within the construction easement will be cleared to ensure proper clearance of the transmission line;
- Construction work will be performed from existing roads where they exist, thus negating a wetland/waterbody crossing and associated temporary impacts;
- Major streams and USACE jurisdictional areas are generally avoided, which will usually require an alternate form of access;
- The maximum width of disturbance at wetland crossings is 16 feet for construction equipment;
- Wetland crossings will occur at a single location within the easement;
- Mat bridging will be used at wetland crossings to reduce soil compaction and other disturbances to the ground surface;
- The temporary installation of culverts and associated fill (if necessary) will be entirely removed once work in the area is complete;
- If disturbance to the ground surface occurs, the area will be restored to pre-existing contours and revegetated as necessary; and,

- A main laydown yard for temporary storage of materials will be established in a previously disturbed or developed area. Other staging areas will be located within the construction easement, and will be limited to structure site areas for structure laydown and framing prior to installation.

Features recorded within the survey corridor that were not intersected by the construction impact corridor were assumed to have no impacts, therefore no temporary or permanent impacts were calculated for these features.

## 3.0 RESULTS

The wetland survey was conducted on three separate field visits including October 13-19, 2009, May 4-6, 2010, and September 8, 2010. The following sections describe conditions at the Project site based on data collected during the wetland survey. Hydrologic features collected during the survey using GPS technology were assigned a feature identification number (ID) consisting of a label identifying it as a polygon (PY), polyline (L), or point (P) feature followed by a unique identification number.

Copies of field data sheets and site photographs taken of the investigated areas to document delineation activities are included as Appendix B and are organized by feature ID as described above. Figure 2 depicts the investigated features, Project facility layout, NHD data, and NWI map. A summary of details on hydrologic features collected including feature ID, feature type, Public Land Survey Section location information, jurisdictional opinion, and potential impacts is presented in Table 2.

### 3.1 Vegetation Evaluation

Much of the vegetation encountered in the Project Area 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 tussock sedge (*Carex stricta*), cattails (*Typha latifolia*) and reed canary grass (*Phalaris arundinacea*). Vegetation identified at each delineation plot is presented on the field data sheets in Appendix B.

### 3.2 Soils Evaluation

Six hydric soils were identified at wetland delineation locations during the field survey and were consistent with soil series descriptions from the Morton and Oliver County Soil Surveys and NRCS SSURGO Dataset. These soils included: Regan silt loam, Regent-Janesburg silty clay loam, Cabbawerner complex, Straw loam, Cable-Werner complex, and Grail-Belfield silty clay loam.

The most common hydric soil indicators observed at soil test plot locations were “depleted below dark surface”, and “thick dark surface”. A complete description of the hydric soil types identified and the hydric soil indicators observed at delineation plots are presented in the data forms in Appendix B. See Appendix, A, Figure 3 for a depiction of the Project on a SSURGO soil map.

### 3.3 Hydrologic Evaluation

The region is well drained and numerous linear drainages, intermittent and perennial streams were observed within the Project Area. Wetlands were generally observed to be adjacent to or abutting linear stream features.

No traditional navigable waters were identified within the Project Area. Square Butte Creek, a tributary to the Missouri River, was identified within the Project Area and vicinity. The Project Area intersects Square Butte Creek in four locations near the northern terminus. Twelve perennial and intermittent streams with associated wetlands were identified as tributaries to Square Butte Creek. Additionally, six drainage swale features were identified as tributaries to Square Butte Creek. Based on nexus determinations, Tetra Tech classified these drainage swales as non-jurisdictional.

Observed primary and secondary wetland hydrologic indicators were recorded at wetland delineation plots and are presented in the wetland delineation data forms in Appendix B. These include surface water, high water table, saturation, inundation visible on aerial imagery, drainage patterns, sparsely vegetated concave surface, and geomorphic position.

### 3.4 Wetlands and Waters

During the field survey, Tetra Tech identified 18 hydrologic features within the Project Area. The features observed were primarily linear stream and drainage features. Many of the stream features were observed to have associated adjacent wetlands. Specifically, this included 5 perennial streams, 7 intermittent streams and 6 drainage swales. Areas identified as drainage swales lacked characteristics of RPWs or NRPWs such as ordinary high water marks or defined bed and banks and, therefore, did not meet the definition of a jurisdictional area according to the USACE Jurisdictional Determination Form Instructional Guidebook. Wetlands that were classified as potential USACE jurisdictional areas were wetlands that directly abut or are immediately adjacent to a NHD flow line that was observed to have at least seasonal flow or were areas classified as RPWs or NRPWs. During the field survey, 12 features were assumed jurisdictional waters of the U.S. Six features were determined to be non-jurisdictional isolated wetlands or drainage swales based on the nexus determinations completed. Wetland types found in the Project Area are primarily seasonally flooded basins and shallow marshes. No forested wetlands are crossed by the Project. A summary of the delineated features in the Project Area (generally from north to south) are presented below in Table 2, sorted by Feature ID Number. Field data sheets and photo documentation are presented in Appendix B.

**Table 2. Summary of Investigated Wetland and Water Features**

Feature ID	Map Book Page	Section Location	Feature Type <sup>a</sup>	Jurisdiction <sup>b</sup>	Potential Temporary Impacts <sup>c</sup> (acres)	Recommendations and Comments <sup>a</sup>
PY-46	B01	T141N, R83W, Section 3 & 4	Perennial stream, RPW	USACE	0.122	The stream is Square Butte Creek and is a Tributary to the Missouri River. This feature was documented in four locations where the proposed transmission line intersects the creek. Square Butte Creek is a perennial stream observed to contain flowing water. The feature was identified on a NHD line and corresponds to a feature in the NWI. Tetra Tech classified the stream as a relatively permanent water (RPW) due to the observation of a bed and bank characteristic of an OHWM. The USACE typically asserts jurisdiction to RPWs as being waters of the U.S. Tetra Avoidance of this feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-44	C01	T141N, R83W, Section 9 & 10	Intermittent stream, NRPW	USACE	0.021	The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow less than three months. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional. Avoidance of this feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
L-8	C01	T141N, R83W, Section 9 & 10	Drainage swale	None	0	The drainage swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. The feature was observed to contain upland vegetation typical of non-wetland areas. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
L-7	C01	Section 10, T141N, R83W	Intermittent stream, NRPW	USACE	0.001	The feature is an intermittent stream and was identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow less than three months. The narrow stream channel was observed to be located in a much larger ravine with steep banks containing upland vegetation. It is Tetra Tech's opinion that a significant nexus exists and the stream is a jurisdictional water of the U.S.; therefore, avoidance of the feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.

Feature ID	Map Book Page	Section Location	Feature Type <sup>a</sup>	Jurisdiction <sup>b</sup>	Potential Temporary Impacts <sup>c</sup> (acres)	Recommendations and Comments <sup>a</sup>
PY-43	D01	Sections 15 & 16, T141N, R83W	Intermittent stream, NRPW	USACE	0.015	The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow of less than three months. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional. Avoidance of this feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-42	D01	Sections 15 & 16, T141N, R83W	Intermittent stream, NRPW	USACE	0.039	The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow less than three months. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional and, therefore, should be avoided. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
L-6	E01	Sections 21 & 22, T141N, R83W	Drainage swale	None	0	The feature is a drainage swale and was identified on a NHD line. The swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. The feature was observed to contain upland vegetation typical of non-wetland areas. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S.
PY-41	E01	Section 22, T141N, R83W	Intermittent stream, NRPW	USACE	0.023	The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow of less than three months. To determine jurisdiction of NRPWs the USACE makes a significant nexus determination. A significant nexus exists if the tributary has more than a speculative or insubstantial effect on the chemical, physical, and/or biological integrity of a traditional navigable water. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional. Tetra Tech recommends avoidance of this feature. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-40	F01	Sections 21, 22, 27, & 28, T141N, R83W	Perennial stream, RPW	USACE	0.073	The feature is a perennial stream observed to contain flowing water. The feature was identified on a NHD line and corresponds to a feature in the NWI. Tetra Tech classified the stream as a RPW due to the observation of a bed and bank characteristic of an OHWM. The stream is a tributary to feature PY-39. The USACE typically asserts jurisdiction to RPWs as being waters of the U.S. and Tetra Tech recommends avoidance of this area. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.

Feature ID	Map Book Page	Section Location	Feature Type <sup>a</sup>	Jurisdiction <sup>b</sup>	Potential Temporary Impacts <sup>c</sup> (acres)	Recommendations and Comments <sup>a</sup>
PY-39	F01	Section 27 & 28, T141N, R83W	Perennial stream, RPW	USACE	0.301	The feature is a perennial stream observed to contain flowing water. The feature was identified on a NHD line and corresponds to a feature in the NWI. Tetra Tech classified the stream as a RPW due to the observation of a bed and bank characteristic of an OHWM. The stream was observed to contain flowing water. This feature was collected upstream of feature PY-45 along the same channel. The USACE typically asserts jurisdiction to RPWs as being waters of the U.S. and Tetra Tech recommends avoidance of this area. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-45	F01 & G01	Section 27, T141N, R83W	Perennial stream, RPW	USACE	0.068	The feature is a perennial stream observed to contain flowing water. The stream was identified on an NHD line. Tetra Tech classified the stream as a RPW due to the observation of a bed and bank characteristic of an OHWM. This feature was collected downstream of feature PY-39 and along the same channel. The USACE typically asserts jurisdiction to RPWs as waters of the U.S.; therefore, Tetra Tech recommends avoidance of this area. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-32	H01	Sections 33 & 34, T141N, R83W	Drainage swale	None	0	The feature is within the survey corridor but not within the impact analysis area and no temporary impacts area anticipated. The drainage swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S.
L-5	H01	Section 34, T141N, R83W	Drainage swale	None	0	The drainage swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S.
PY-33	H01	Section 5, T140N, R83W, Section 34, T141N, R83	Perennial stream, RPW	USACE	0	An adjacent road exists and no temporary impacts are anticipated. The feature is a perennial stream observed to contain flowing water. The feature was identified on a NHD line. Tetra Tech classified the stream as a RPW due to the observation of a bed and bank characteristic of an OHWM. The USACE typically asserts jurisdiction to RPWs as being waters of the U.S. and Tetra Tech recommends avoidance of this area. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-34	H02	Section 5, T140N, R83W, Section 34, T141N,	Intermittent stream, NRPW	USACE	0	An adjacent road exists and no temporary impacts are anticipated. The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow less than three months. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional. Avoidance of this feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.

Feature ID	Map Book Page	Section Location	Feature Type <sup>a</sup>	Jurisdiction <sup>b</sup>	Potential Temporary Impacts <sup>c</sup> (acres)	Recommendations and Comments <sup>a</sup>
		R83				
PY-35	H02	Section 35, T141N, R83W, Section 4, T140N, R83	Drainage swale	None	0	The drainage swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S.
PY-36	H03	Section 35, T141N, R83W, Section 4, T140N, R83	Intermittent stream, NRPW	USACE	0	An adjacent road exists and no temporary impacts are anticipated. The feature is an intermittent stream identified on a NHD line. Tetra Tech classified the stream as a NRPW due to the observation of a bed and bank characteristic of an OHWM and assumed flow less than three months. This feature was previously classified as a drainage swale. It is Tetra Tech's opinion that a significant nexus exists and the stream is jurisdictional. Avoidance of this feature is recommended. If avoidance cannot be achieved, minimization and/or mitigation methods that reduce impacts on the aquatic resource should be implemented.
PY-37	H03	Section 35, T141N, R83W, Section 4, T140N, R83	Drainage swale	None	0	The drainage swale was not observed to have characteristics of an OHWM and likely only transports water during periods of heavy rainfall. The USACE typically does not assert jurisdiction to swales that are characterized by low volume, infrequent, and short duration of flow. It is Tetra Tech's opinion that a significant nexus does not exist and the swale is not a jurisdictional water of the U.S.
<b>Total Potential Temporary Impacts for Project</b>					<b>0.663</b>	

## Notes:

a Acronym Definitions

NRPW	Non-relatively permanent water
L	Line feature
PY	Polygon feature
OHWL	Ordinary High Water Level
RPW	Relatively Permanent Water
USACE	U.S. Army Corps of Engineers

b Jurisdictional status of features were based on nexus determination completed during the field evaluation, but would require final decision of significant nexus from USACE.

c Temporary impacts were calculated using a disturbance width of 16 feet for crossing of construction equipment. If an adjacent road exists, a wetland crossing will not be necessary and temporary impacts are not anticipated.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

During this investigation, 18 hydrologic features were field identified and delineated within the survey corridor. The majority of the features observed were linear drainages, intermittent, and perennial streams. Twelve features were determined to be jurisdictional waters of the U.S. and six features were determined to be non-jurisdictional wetlands or drainage swales based on the nexus determinations completed. However, at the time this document was produced, the USACE had not made a jurisdictional determination on any of the wetland features within the Project.

Based on the investigation and the current Project layout dated November 1, 2010, no permanent Project facilities would be installed through waters of the U.S. No transmission line structures will be placed within jurisdictional areas along the proposed transmission line route. Based on Tetra Tech's impact analysis, potential temporary impacts up to 0.67 acres may result from crossing wetland features by temporary access roads. Generally, temporary impacts resulting from temporary access roads do not apply to the Nationwide Permit #12 impact thresholds. Tetra Tech recommends complete avoidance of all wetland features. If complete avoidance cannot be achieved, Tetra Tech recommends minimizing the temporary impacts on these features to the practical extent possible. Mat bridging should be used at wetland crossings to minimize the ground disturbance. Temporary culvert crossings may be necessary at certain locations. Culvert crossings and any associated fill should be completely removed and the area should be restored to natural contours once work in the area is complete. Appropriate best management practices and erosion control measures, such as the installation of silt fencing, should be implemented at construction sites adjacent to wetland areas to reduce potential runoff into sensitive areas.

The USACE regulates the discharge of dredged or fill material into waters of the U.S. under Section 404 of the CWA. As currently designed, and assuming that impacts on waters of the U.S. are less than 0.1 acre per single and complete project, the Project is eligible for no notification authorization under Nationwide Permit #12 for Utility Line Activities. If areas beyond the currently surveyed corridor will be used during construction, such as additional Project temporary or permanent access roads, Tetra Tech recommends that a review of wetlands and waters be conducted to determine potential impact within those areas.

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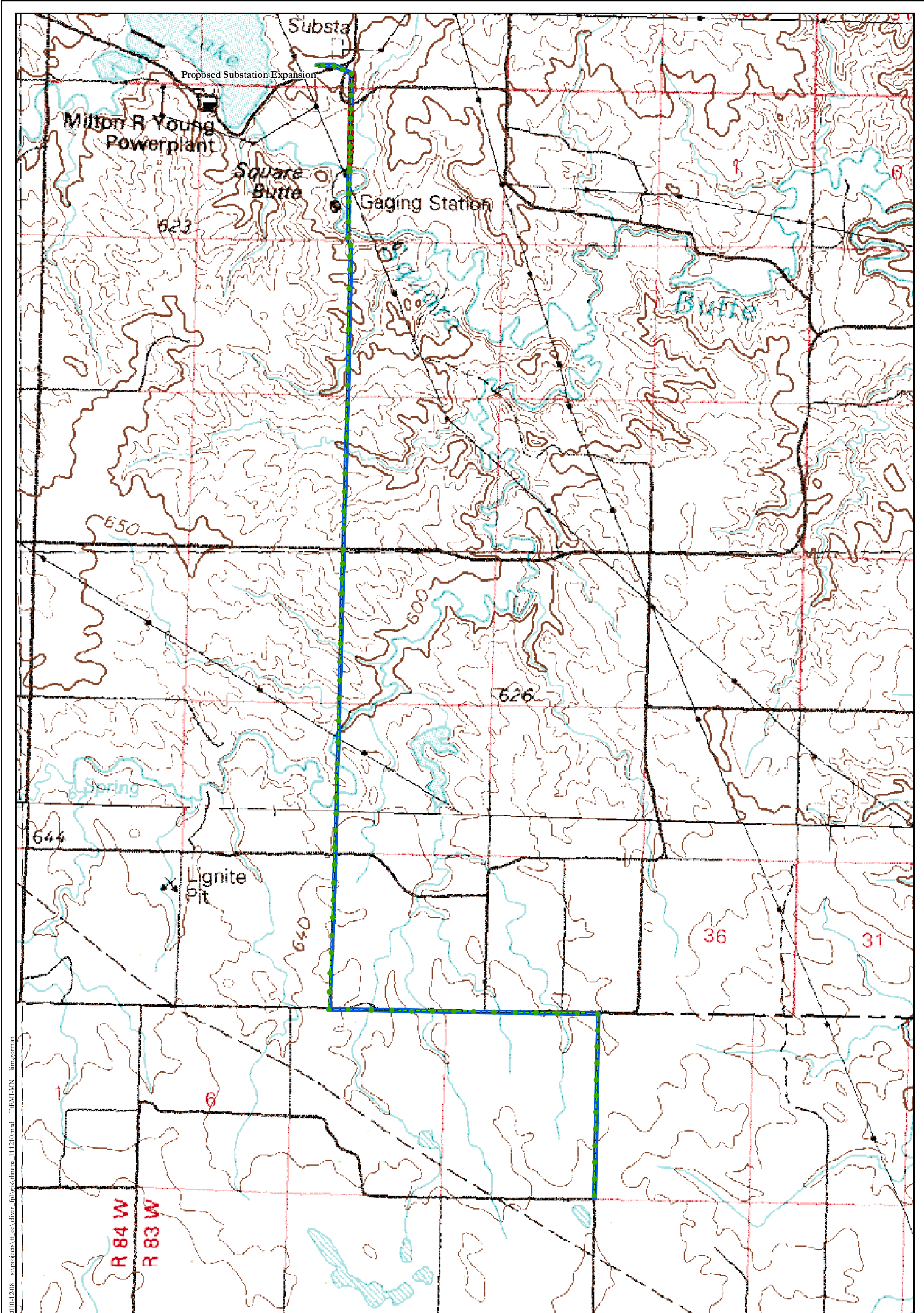
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## **APPENDIX A – FIGURES**



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Sources: USGS 100K Topographic Maps: Hazen and Glen Ullin, NextEra project data dated 11/01/10, and Tetra Tech field survey data collected through 09/09/10.



- Area Surveyed for Wetlands through 9/10/2010
- - - Proposed Transmission Line
- Proposed Pole Location
- Proposed Alternative Route
- Proposed Substation Expansion

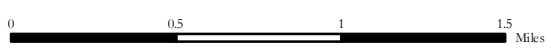
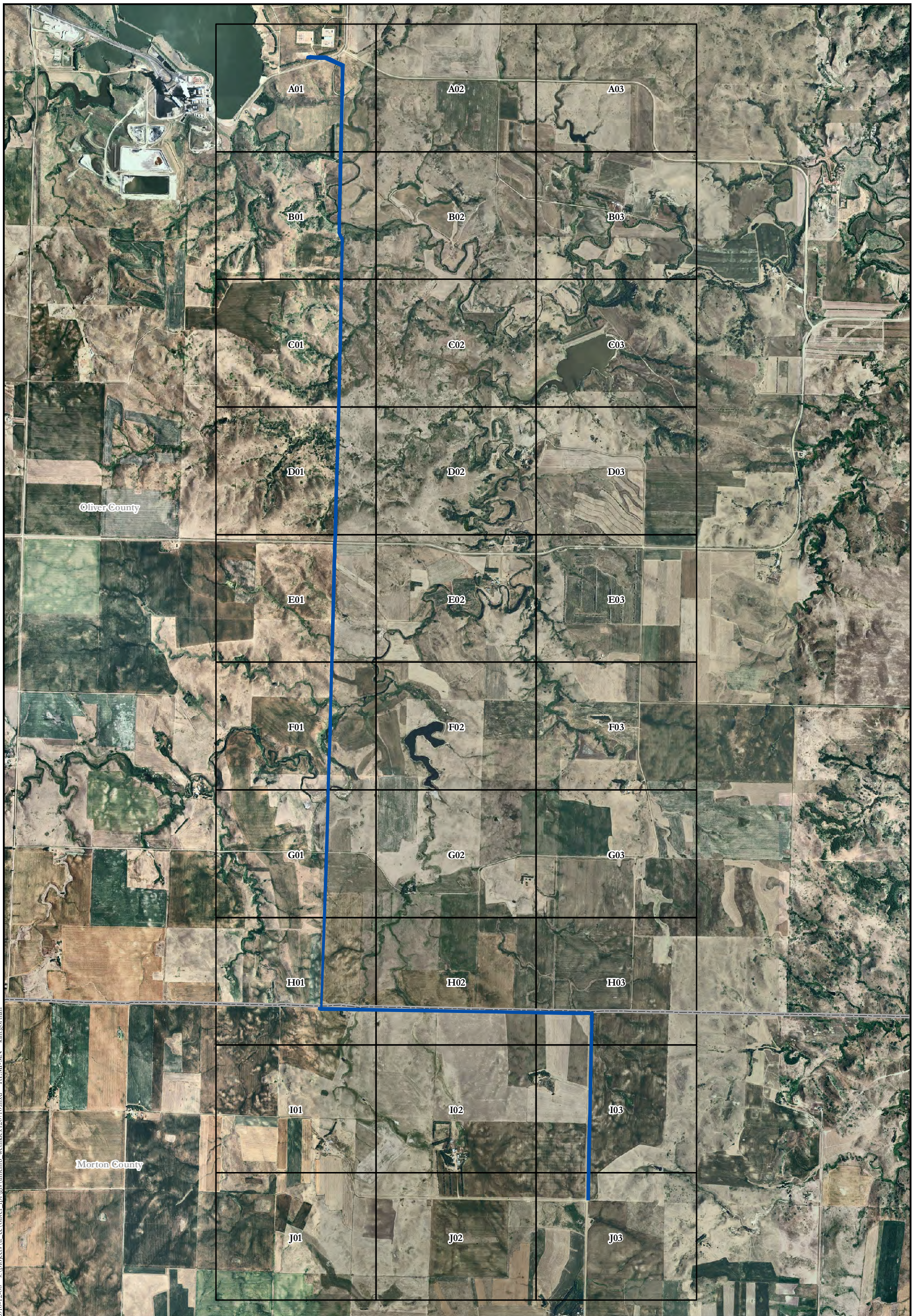


Figure 1  
Project Area  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota





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Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), NextEra project data dated 11/01/10, and Tetra Tech field survey data collected through 09/09/10.

- Area Surveyed for Wetlands through 9/10/2010
- Map Index
- County Boundary

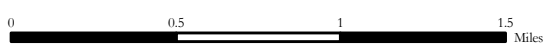


Figure 2  
Map Book Index  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



A01	A02	A03
B01	B02	B03
C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

**A01**

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

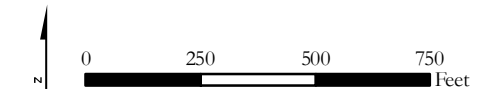
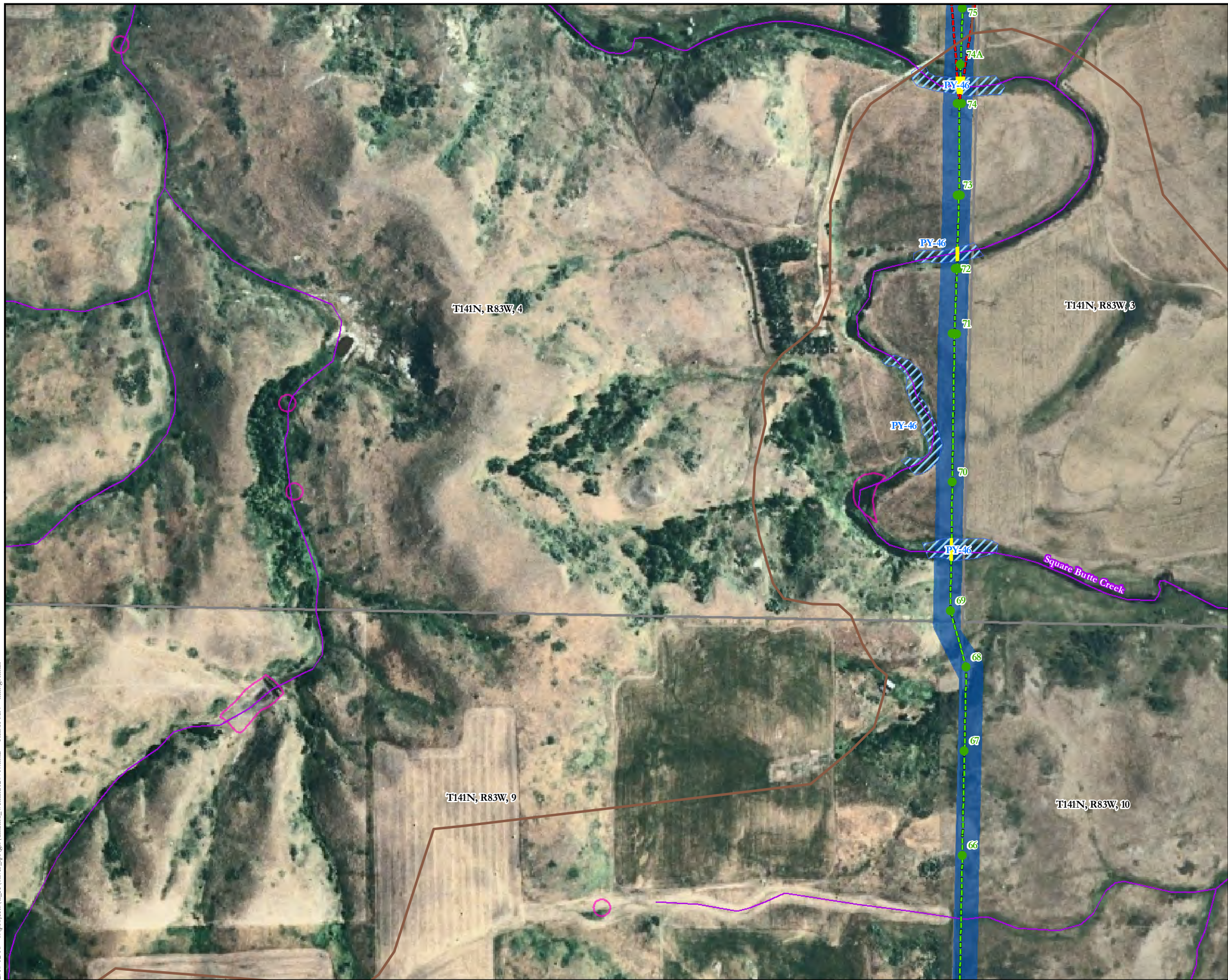


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



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Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



A01	A02	A03	<b>B01</b>
B01	B02	B03	
C01	C02	C03	
D01	D02	D03	
E01	E02	E03	
F01	F02	F03	
G01	G02	G03	
H01	H02	H03	
I01	I02	I03	
J01	J02	J03	

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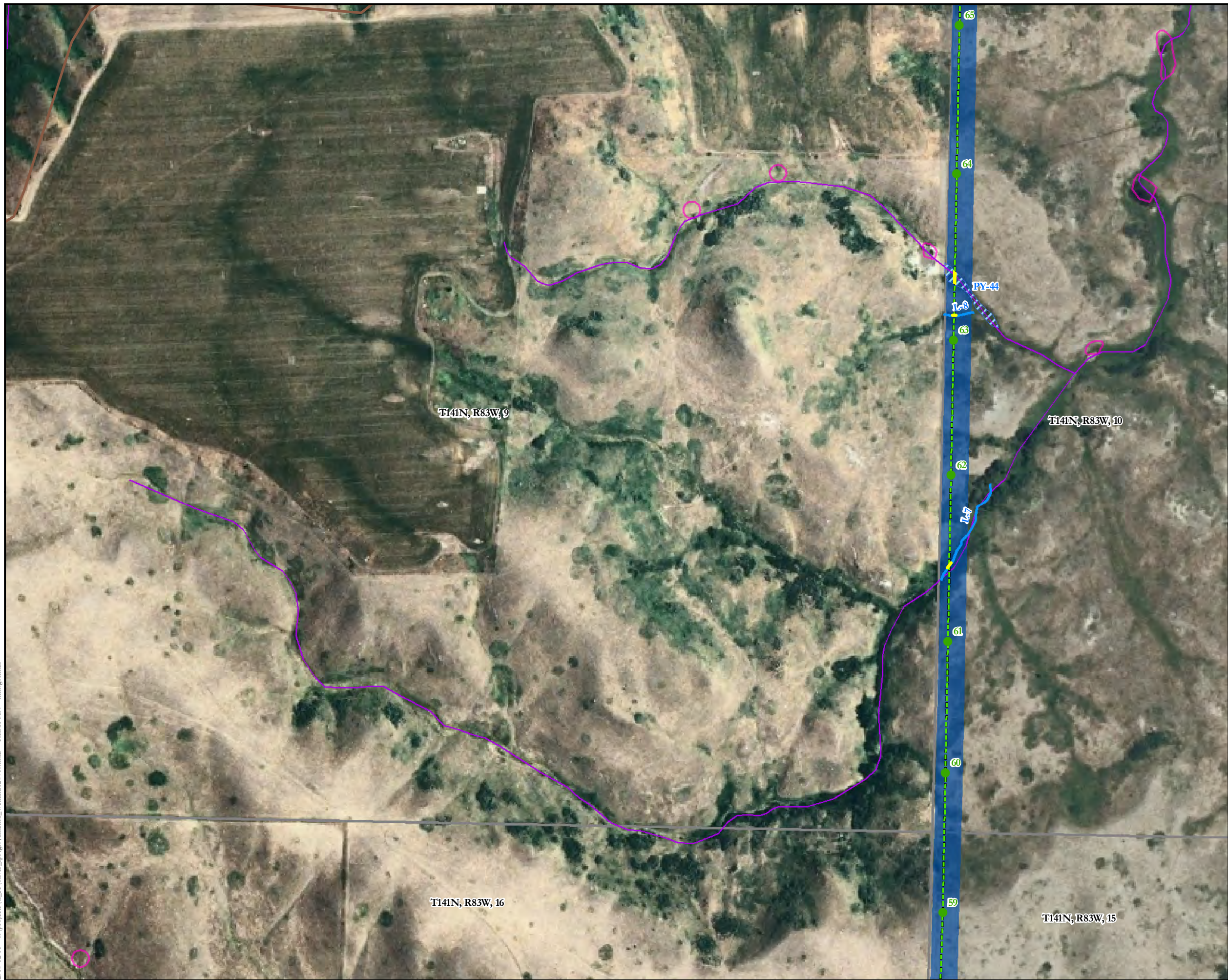


Figure 2  
 Survey Results  
 Oliver III Transmission Line  
 Morton and Oliver Counties  
 North Dakota



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Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



# C01

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C01	C02	C03
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F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

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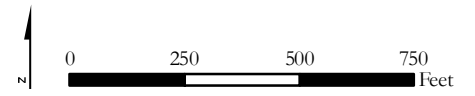
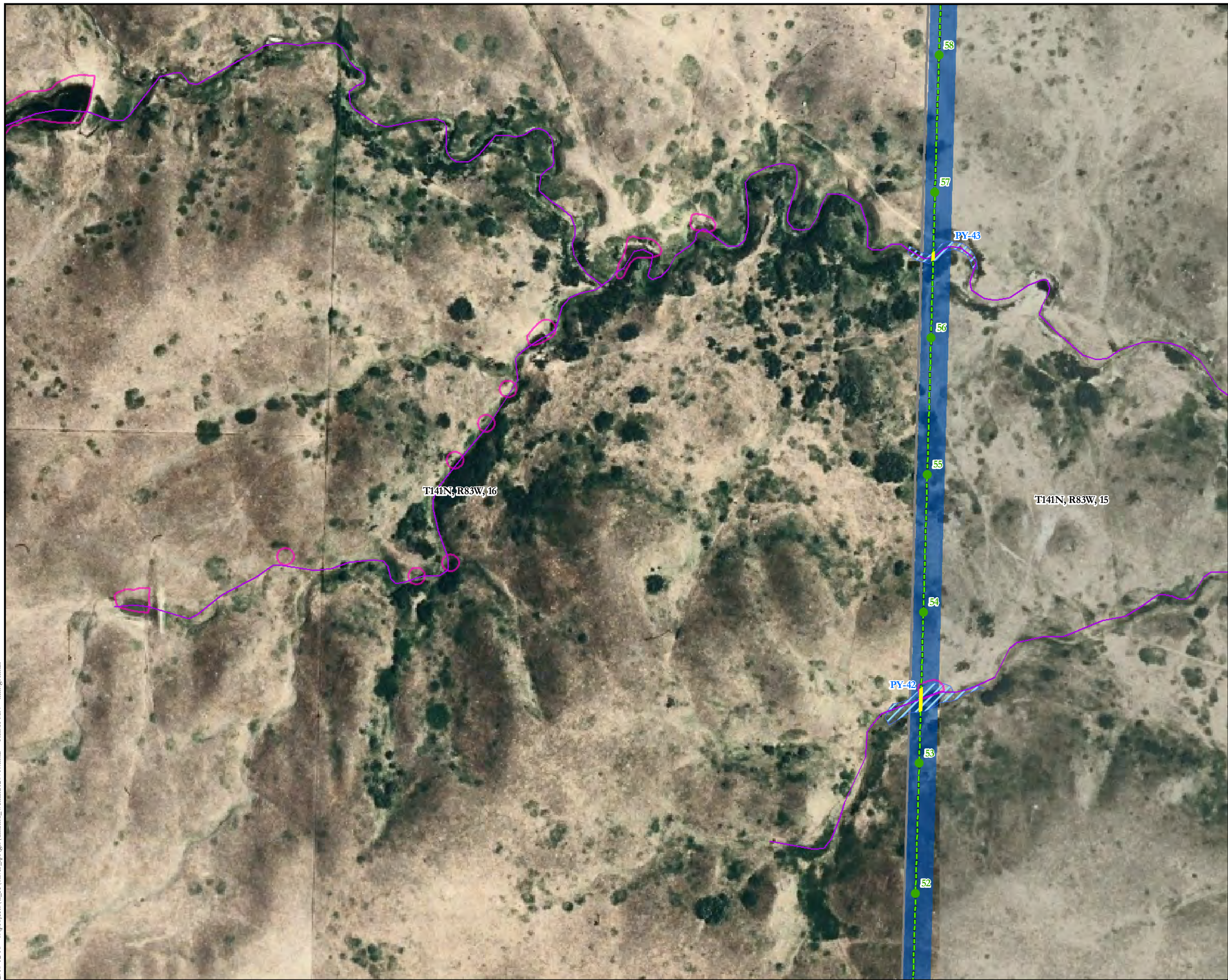


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



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# D01

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E01	E02	E03
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G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

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Figure 2  
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A01	A02	A03
B01	B02	B03
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E01	E02	E03
F01	F02	F03
G01	G02	G03
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I01	I02	I03
J01	J02	J03

# E01

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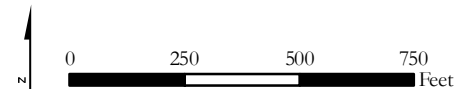
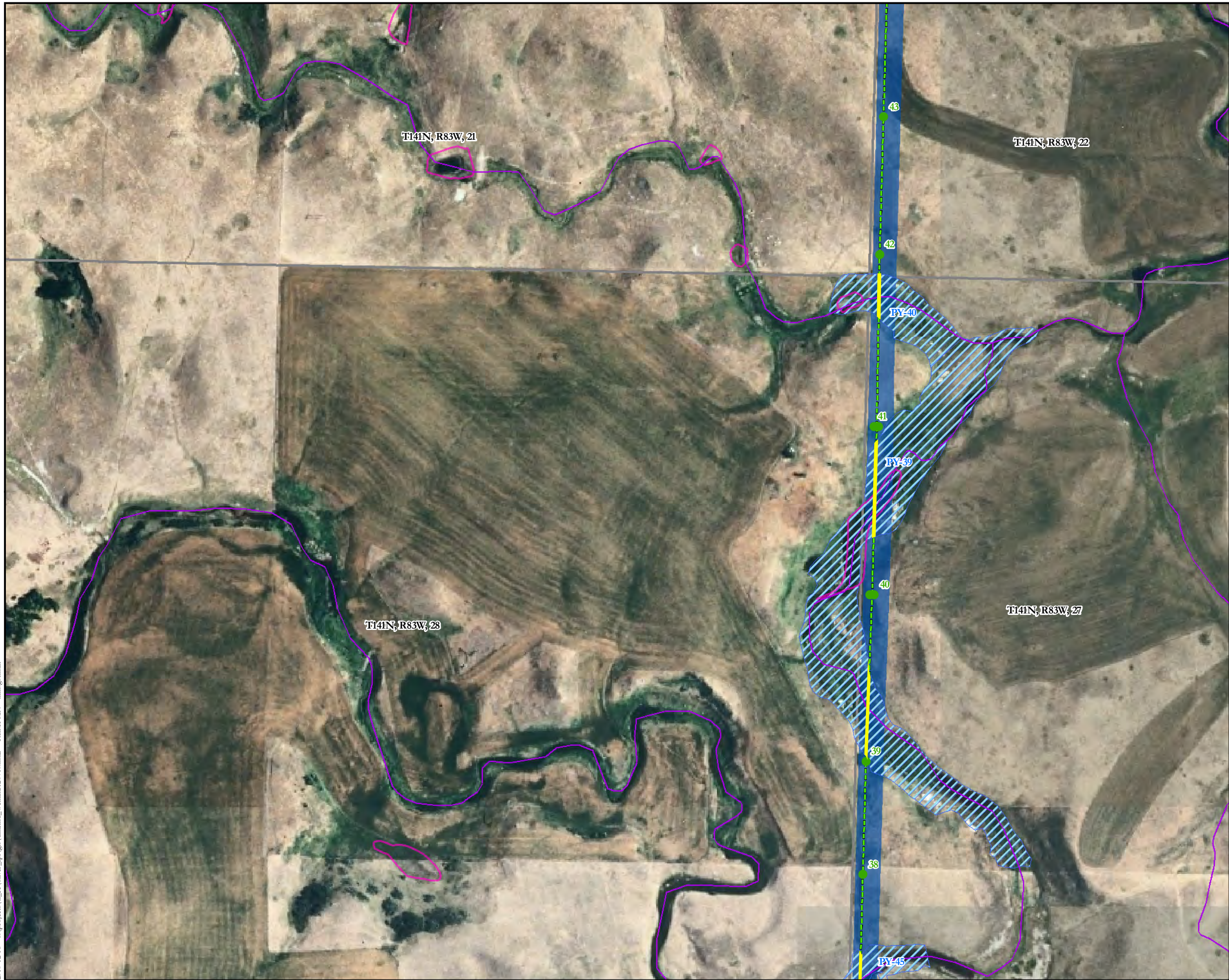


Figure 2  
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# F01

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F01	F02	F03
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H01	H02	H03
I01	I02	I03
J01	J02	J03

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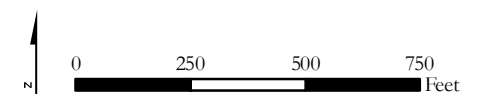


Figure 2  
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North Dakota



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# G01

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H01	H02	H03
I01	I02	I03
J01	J02	J03

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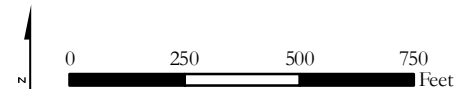


Figure 2  
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North Dakota



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Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



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C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

# H01

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

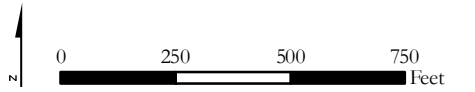


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



2010-12-16 s:\projects\tr\_ec\oliver\_fp\figs\linemb\_wetland\20710.mxd THEM-MN kim.gorman

Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



A01	A02	A03
B01	B02	B03
C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

# H02

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

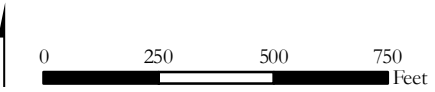


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



2010-12-16 s:\projects\tr\_ec\oliver\_fpl\gis\linemb\_wetland\20710.mxd THEM-MN kim.gorman

Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



A01	A02	A03
B01	B02	B03
C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

# H03

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

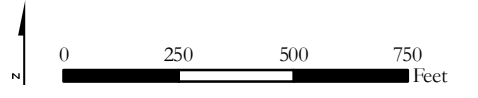


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



2010-12-16 s:\projects\tr\_ec\oliver\_fpl\gis\linemb\_wetland\20710.mxd THEM-MN kim.gorman

Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



# I03

A01	A02	A03
B01	B02	B03
C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

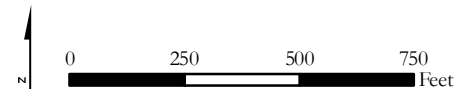
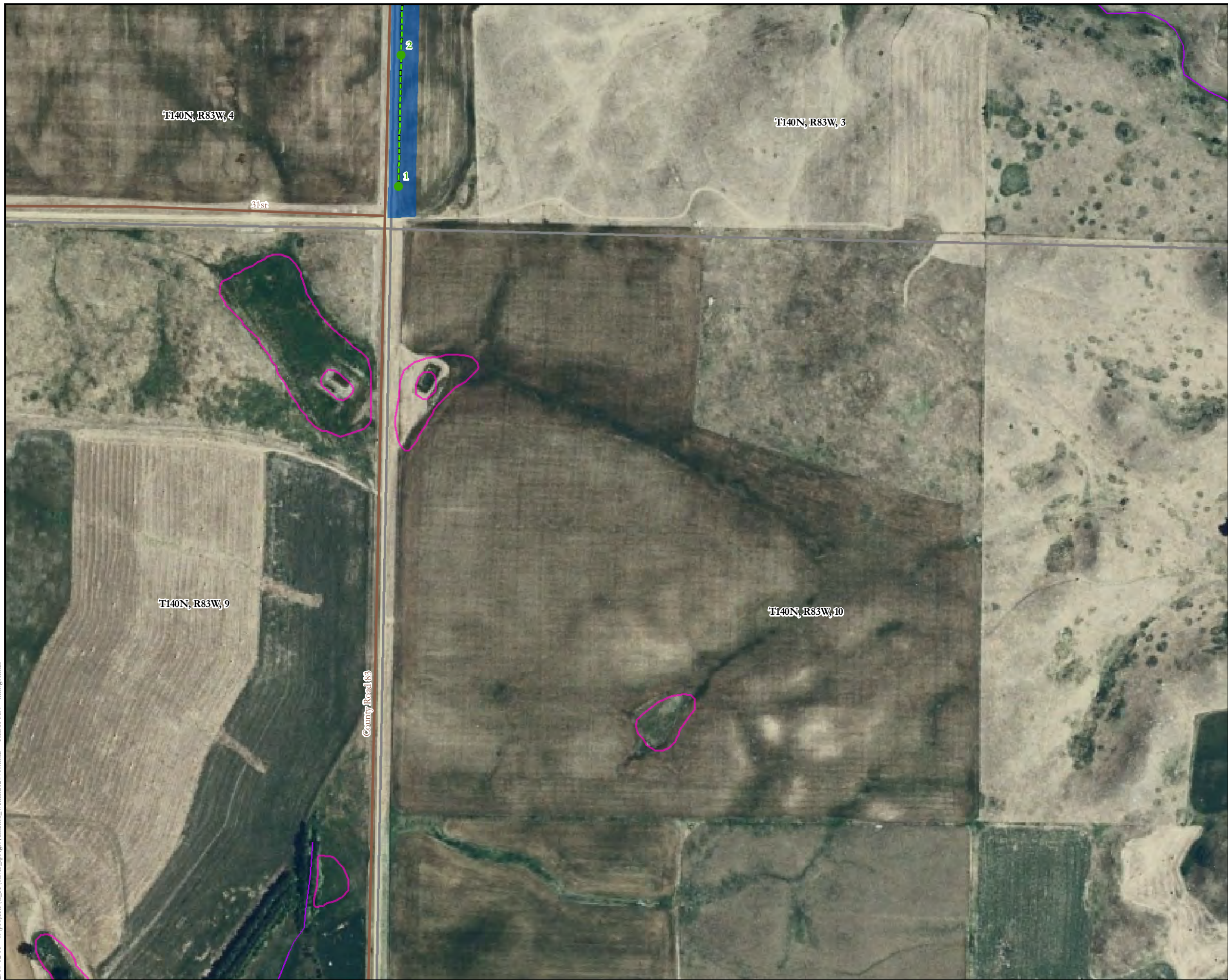


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



2010-12-16 s:\projects\tr\_ec\oliver\_fpl\gis\linemb\_wetland\20710.mxd THEM-MN kim.gorman

Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



A01	A02	A03
B01	B02	B03
C01	C02	C03
D01	D02	D03
E01	E02	E03
F01	F02	F03
G01	G02	G03
H01	H02	H03
I01	I02	I03
J01	J02	J03

**J03**

- Temporary Wetland Impact
- Surveyed Wetland Line
- Surveyed Wetland Polygon
- NHD Subregion 1013
- National Wetland Inventory
- Proposed Pole Location
- Proposed Transmission Line
- Proposed Alternative Route
- Proposed Substation Expansion
- Area Surveyed for Wetlands through 9/10/2010
- Local Roads
- Public Land Survey

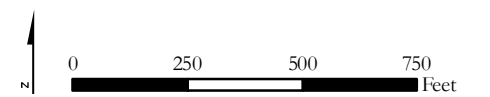
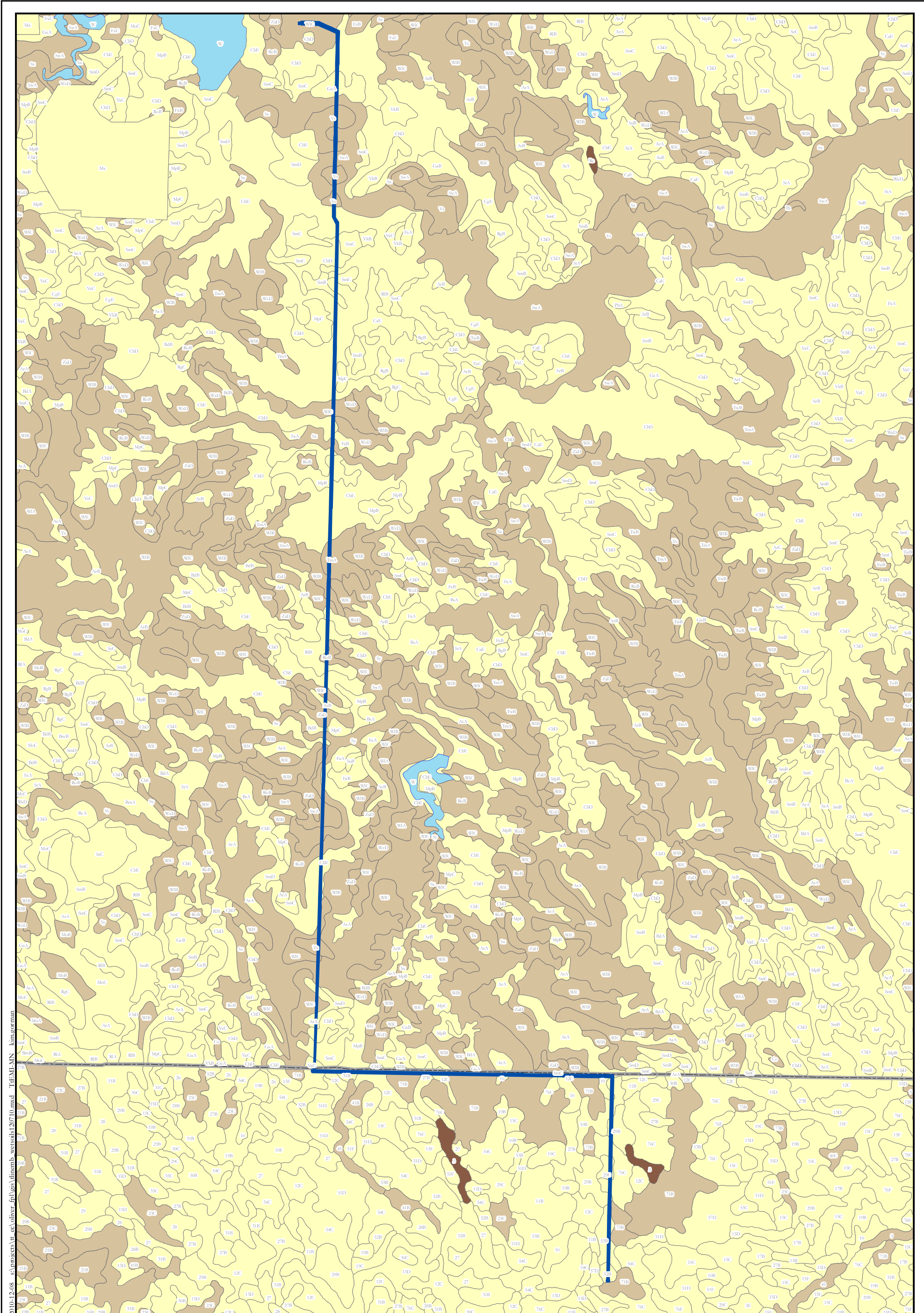


Figure 2  
Survey Results  
Oliver III Transmission Line  
Morton and Oliver Counties  
North Dakota



2010-12-16 s:\projects\tr\_ec\oliver\_ftp\gis\linemb\_wetland\20710.mxd THEM:MN kim.gorman

Sources: NAIP 2006 Aerial Photography (Morton and Oliver Counties), USFWS National Wetland Inventory, USGS National Hydrography Dataset - High Resolution - SubRegion 1013, TIGER Roads, NextEra project data dated 11/1/10, and Tetra Tech field survey data collected through 09/08/10.



2010-12-08 s:\projects\oliver-iii\gis\dimemb\_wetsoils\2010.mxd Title: MN - kimsorran

Source: USDA Soil Survey Geographic (SSURGO) Database (Morton and Oliver Counties).

- SSURGO Soils - Hydric Classification** ● Area Surveyed for Wetlands through 9/10/2010
- Water
  - All hydric
  - Partially hydric
  - Not hydric
  - County Boundary

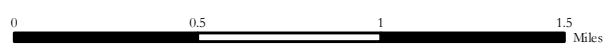


Figure 3  
 SSURGO Soils  
 Oliver III Transmission Line  
 Morton and Oliver Counties  
 North Dakota



**APPENDIX B – SUPPORTING FIELD DOCUMENTATION**

Location: OLIVER T-LINE  
County: OLIVER  
Assessors Names: APK  
Feature type: PER-SWAMP-RPW

TT Team ID: JK  
Date/Time of Evaluation: 9/8/2010  
Jurisdictional status: YES  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
 Explain REDUCE FLOODING + VEGETATION REDUCE POLLUTANTS PREVENTING MISSOURI RIVER

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 FISH OBSERVED IN CREEK

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

d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
 Explain TRIB OF MISSOURI RIVER, VEGETATION REDUCE POLLUTANTS FROM ADJACENT PASTURE

**Streams:**

Name (or tributary to) SQUARE BUTTE CREEK (TRIBUTARY OF MISSOURI RIVER)  
 Water body Type (stream/ditch/culvert/swale/wash) STREAM  
 Width (with respect to top of bank) 15-20'  
 Depth (with respect to top of bank) 3-5'  
 Flow rate (dry/stagnant/low/moderate/high) MODERATE  
 Flow direction EAST  
 Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, COBBLES, GRAVEL  
 Bank vegetation (upland/wetland cover type) UPLAND GRASSES

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

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:

Notes: \_\_\_\_\_

TT EMI QC Check: \_\_\_\_\_

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103I0979  Direction: South	Feature ID	PY-46	Date 9/10/10
	Description	Square Butte Creek is a perennial stream. Tetra tech identified this feature as a RPW. This is the most northern crossing.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: Southeast	Feature ID	PY-46	Date 9/10/10
	Description	Square Butte Creek is a perennial stream identified as an RPW. This location is the second and middle crossing.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: South	Feature ID	PY-46	Date 9/10/10
	Description	Square Butte Creek is a perennial stream identified as an RPW. This location is the first and most southern crossing.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: T-LINE  
County: OLIVER  
Assessors Names: OSK, KFS  
Feature type: INT STREAM - NPW

TT Team ID: OSK  
Date/Time of Evaluation: 5/5/10  
Jurisdictional status: YES  
No. of Features Present: 1

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

- 1. Is this a Traditional Navigable Waters (TNW)?  Yes  No  
 Is this a Wetland adjacent to a TNW?  Yes  No
- 2. 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 or is adjacent to a RPW  Yes  No  
 Does a significant nexus exist? (adjacent only, provide details below)  Yes  No  
 Is this a Non-RPW (Flow - less than 3 months)  Yes  No  
 (including ephemeral waters (i.e. swales, gully or small wash))  
 Does a significant nexus exist? (Provide details below)  Yes  No  
 Is this a Wetland adjacent to Non-RPW  Yes  No  
 Does a significant nexus exist? (Provide details below)  Yes  No
- 3. Is this an Isolated Waters (i.e. isolated wetlands, ditches)  Yes  No

Significant Nexus Determination:

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

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

Streams:

Name (or tributary to): TRIBUTARY TO: SQUIRE BUTTE CREEK  
Water body Type (stream/ditch/culvert/swale/wash): INT STREAM  
Width (with respect to top of bank): 2-7  
Depth (with respect to top of bank): 0-1  
Flow rate (dry/stagnant/low/moderate/high): STAGNANT  
Flow direction: EAST  
Substrate (mud/silt/gravel/cobble/boulders/bedrock): MUD VEGETATION  
Bank vegetation (upland/wetland cover type): WETLAND - BROME

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

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:
0371	EAST	MRPW
0372	WEST	EXHAUSTED POND
0374		WETLAND POINT A
0375		WETLAND POINT B

**Notes:**

FARM POND DUG-OUT TO THE WEST

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver III T-Line City/County: Oliver Co Sampling Date: 3/5/10  
 Applicant/Owner: \_\_\_\_\_ State: ND Sampling Point: 70-A  
 Investigator(s): JKB Section, Township, Range: T14N, R33W, S9  
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): \_\_\_\_\_ Lat: 933497.0 Long: 5212536.0 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Cable-Werner Complex NWI classification: NA

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 <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
--	--

Remarks: FEATURE REMOVED OF A TINT SMEAR THAN WETLAND. HAS BEEN MANIPULATED AND MINED TO THE WEST. FEATURE PT-44

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Eleocharis acicularis</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
2. <u>POA PRATENSIS</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>POA COMPRESSA</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. <u>TRICHOCLERIS</u>	<u>20</u>	<u>N</u>	<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				

Remarks: \_\_\_\_\_

**SOIL**

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					clay loam	
8-32	10YR 4/1	99	7.5YR 4/6	1			loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 of 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 checked="" 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"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: \_\_\_\_\_

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> 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"/> (where tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<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"/> Frost-Heave Hummocks (D7) (LRR F)
<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"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> (where not tilled)	
<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): 0

Wetland Hydrology Present? Yes  No

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

Remarks: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver III T-Line City/County: Oliver CO Sampling Date: 3/3/10  
 Applicant/Owner: \_\_\_\_\_ State: ND Sampling Point: 70-B  
 Investigator(s): JK & KB Section, Township, Range: T141, R23W, S9  
 Landform (hillslope, terrace, etc.): HILL SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5  
 Subregion (LRR): \_\_\_\_\_ Lat: 373497.0 Long: 5212536.0 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Cable-Werner Complex NWI classification: NA  
 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: <p align="center" style="font-size: 1.2em;"><u>FEATURE PY-44</u></p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover																				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Ilex verticillata</u> 20 Y OPL 2. <u>POA PRATIENSIS</u> 30 Y FACU 3. <u>POA COMPRESSA</u> 30 Y FACU 4. <u>BROMUS TERNATUS</u> 30 N UPL 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover																				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ = Total Cover																				
<b>% Bare Ground in Herb Stratum _____</b> _____ = Total Cover																				
Remarks: 																				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

**SOIL**

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-13	10 YR 2/2	100					SILT LOAM	
13-21	10 YR 5/3	100					SILT LOAM	
21-32	2.5 Y 5/3	100					SILT LOAM	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<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 of 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"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)		

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

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

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_

Saturation Present? 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 Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: Southeast	Feature ID	PY-44	Date 5/5/10
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as and NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: OLIVER T-LINE  
County: OLIVER  
Assessors Names: MSK, KB  
Feature type: DEAN SWALE

TT Team ID: MSK  
Date/Time of Evaluation: 5/5/10 2:00  
Jurisdictional status: N  
No. of Features Present: 1

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

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

Significant Nexus Determination:

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

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

Streams:

Name (or tributary to) \_\_\_\_\_

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

Width (with respect to top of bank) 1-2

Depth (with respect to top of bank) 0

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

Flow direction EAST

Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, WETLAND VEGETATION

Bank vegetation (upland/wetland cover type) UPLAND GRASSES

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

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

Trimble Feature # \_\_\_\_\_

L-8  
 \_\_\_\_\_  
 Feature ID

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:
D373	WEST	DRAIN SWALE

**Notes:**

TT EMI QC Check: DMK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: West	Feature ID	L-8	Date 5/5/10
	Description	The feature was identified as a drainage swale with no significant nexus.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: T-LINE  
County: OLIVER  
Assessors Names: OBK, KB  
Feature type: INT STREAM - NR PW

TT Team ID: OBK  
Date/Time of Evaluation: 5/5/10 1245  
Jurisdictional status: YES  
No. of Features Present: \_\_\_\_\_

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

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

**Significant Nexus Determination:**

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

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
Explain VEGETATION REDUCES POLLUTANTS
- 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 ~~WETLAND~~
- c. have the capacity to transfer nutrients and organic carbon that support downstream food webs?  Yes  No  
Explain ADJACENT PASTURE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
Explain \_\_\_\_\_

**Streams:**

Name (or tributary to) TRIBUTARY TO: SQUARE BUTTE CREEK  
Water body Type (stream/ditch/culvert/swale/wash) INT STREAM  
Width (with respect to top of bank) 1-2  
Depth (with respect to top of bank) 0-1  
Flow rate (dry/stagnant/low/moderate/high) DRY  
Flow direction NE  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, UPLAND GRASSES (BROME)  
Bank vegetation (upland/wetland cover type) UPLAND

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

OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET  
Page 2 of 2

Trimble Feature # \_\_\_\_\_

L-7

Feature ID \_\_\_\_\_

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:
0368	NE	NRPW
0369	SW	NRPW
0370	NE	CHANNEL - ERODED BED/BANK

**Notes:** UPLAND VEGETATION THROUGHOUT BROME, WINTERBERRY, COTTONWOOD, ETC  
INTERMITTENT STREAM VERY DEFINED + CHANNELIZE IN 1-2' BED + 1-2' BANK  
WITHIN RAUING

TT EMI QC Check: DMC

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: Southwest	Feature ID	L-7	Date 5/5/10
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: T-LINE  
County: OLIVER  
Assessors Names: OSIC, KB  
Feature type: NRPW - INT STREAM

TT Team ID: OSIC  
Date/Time of Evaluation: 5/5/10 1130  
Jurisdictional status: YES  
No. of Features Present: \_\_\_\_\_

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) TRIBUTARY TO: CROWN BUTTE CREEK

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

Width (with respect to top of bank) 10-15

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

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

Flow direction EAST

Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, COBBLE, VEG

Bank vegetation (upland/wetland cover type) UPLAND

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

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

Trimble Feature # \_\_\_\_\_

PY-43

Feature ID \_\_\_\_\_

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:
0364	<del>W</del>	WET SAMPLE POINT
0365		UPLAND SAMPLE POINT
0366	E	NRPW POSSIBLE EXCAVATION
0367	WEST	NRPW

**Notes:**

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver III T-Line City/County: Oliver Co Sampling Date: 5/5/10  
 Applicant/Owner: \_\_\_\_\_ State: ND Sampling Point: 08-A  
 Investigator(s): JK & KB Section, Township, Range: T 141N, R 83 W, S 15  
 Landform (hillslope, terrace, etc.): Drainage basin Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): \_\_\_\_\_ Lat: 47° 2' 4.312" N Long: 101° 11' 33.693" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Straw loam NWI classification: \_\_\_\_\_

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

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

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

Remarks: NRPW, FEATURE PY-43

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>CAREX STRICTA</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	
2. <u>ELEOCHARIS OLIVATA</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. <u>SPARTINA PECTINATA</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum _____				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks: \_\_\_\_\_

**SOIL**

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR2/1	99	10YR4/6	1	RM	M	clay loam	
7-18	10YR/3	99	10YR/4.6	1	RM	M	clay loam	
18-23	2.5Y 4/2	98	10YR 4/6	2	RM	M	sandy clay	
23-28	2.5Y 4/2	96	2.5Y 6/6	4	RM	M	clay sand	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<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 of 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 checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): 0

Wetland Hydrology Present? Yes  No

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

Remarks:



**SOIL**

Sampling Point: \_\_\_\_\_

**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	Loc <sup>2</sup>		
0-14	10YR 2/2	100					Silty sand	
14-20	10YR 4/2	100					clay sand	
20-26	10YR 5/4	95	10YR 4/6	5			clay sand	gravel
26-31	10YR 4/2	100					sandy clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) <input type="checkbox"/> Dark Surface (S7) (LRR G) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

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

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? 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 Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: West	Feature ID	PY-43	Date 5/5/10
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: Oliver T-Line  
County: Oliver  
Assessors Names: \_\_\_\_\_  
Feature type: NRPW/Wetland/Farm Pond

TT Team ID: JKBKB  
Date/Time of Evaluation: 5/5/10 10:25  
Jurisdictional status: YES  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) trib. to Squane Butte Cr.  
Water body Type (stream/ditch/culvert/swale/wash) stream  
Width (with respect to top of bank) 1-2' NE of pond 10' SW of pond  
Depth (with respect to top of bank) 0-1'  
Flow rate (dry/stagnant/low/moderate/high) stagnant  
Flow direction NE  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) mud/vegetated  
Bank vegetation (upland/wetland cover type) wetland

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

Farm pond constructed in channel

Trimble Feature # \_\_\_\_\_

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: Wetlands adjacent to stream

**Other Features:**

Sinkhole \_\_\_\_\_

Drainage Basins/Areas \_\_\_\_\_

Floodplains \_\_\_\_\_

Depressions \_\_\_\_\_

Gravel Pits/Mined Areas \_\_\_\_\_

Other \_\_\_\_\_

Photo log #:	Orientation:	Brief Description:
106-0360	NE	URPW
0361	SW	farm pond
0362	N	wetland sample point
0363	N	upland sample point

**Notes:**

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver # T-Line City/County: Oliver Co Sampling Date: 5/5/10  
 Applicant/Owner: NEXT ERA State: ND Sampling Point: 67-wet  
 Investigator(s): JK & KB Section, Township, Range: T14N, R32W, S15  
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): \_\_\_\_\_ Lat: 47° 14' 49" N Long: 101° 11' 22.828" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Colpa-Werner Complex NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center" style="font-size: 1.2em;">FEATURE PY-42</p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
_____ = Total Cover																				
<b>Herb Stratum (Plot size: _____)</b>																				
1. <u>Carex stricta</u>	<u>60</u>	<u>1</u>	<u>OBL</u>																	
2. <u>Spartina pectinata</u>	<u>40</u>	<u>4</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
_____ = Total Cover																				
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
_____ = Total Cover																				
<b>% Bare Ground in Herb Stratum _____</b>																				
_____ = Total Cover																				
Remarks:																				

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

SOIL

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 2/1	100					Silt loam	
6-17	10YR 2/1	99	5YR 4/6	1	RM	M	clay loam	
17-21	10YR 3/1	100					clay loam	
21-34	10YR 4/1	95	10YR 5/6	5	RM	M	clay loam	

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

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |   |  |   |
|---|--|---|
| <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 of 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 checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input 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"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                     | <input type="checkbox"/> Redox Depressions (F8)        | <input type="checkbox"/> Other (Explain in Remarks)   |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)    | <input type="checkbox"/> High Plains Depressions (F16) | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)         | <input type="checkbox"/> (MLRA 72 & 73 of LRR H)       |   |

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes  No  Depth (inches): 0  
 Water Table Present? Yes  No  Depth (inches): 3  
 Saturation Present? Yes  No  Depth (inches): 0  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oiver III T Line City/County: Oiver Co Sampling Date: 5/5/10  
 Applicant/Owner: NOTERA State: ND Sampling Point: 67-upland  
 Investigator(s): SKB KB Section, Township, Range: T14N, R93W, S15  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5  
 Subregion (LRR): \_\_\_\_\_ Lat: 47° 1' 44.305" N Long: 101° 11' 32.577" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Calma-Werner complex NWI classification: \_\_\_\_\_

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

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

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

Remarks:  
FEATURE P7-42

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	OBL species _____ x 1 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	FAC species _____ x 3 = _____
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	UPL species <u>2</u> x 5 = <u>10</u>
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Dromus inermis</u>	<u>80</u>	<u>OPL</u>		Prevalence Index = B/A = <u>5</u>
2. <u>Ilex vert. cillata</u>	<u>5</u>	<u>OPL</u>		
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
10. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum _____				

Remarks:

**SOIL**

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/2	100					clay loam	
10-18	10YR 4/2	100					sandy clay	
18-32	10YR 5/2	100					clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 of 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"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

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

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? 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 Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: Northeast	Feature ID	PY-42	Date 5/5/10
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW. A portion of this feature was observed to be an excavated farm pond.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

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Trimble Feature #

OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET

Page 1 of 2

L-6

Feature ID

Location: \_\_\_\_\_  
County: Oliver  
Assessors Names: \_\_\_\_\_  
Feature type: Swale

TT Team ID: SKDKB  
Date/Time of Evaluation: 5/4/10 15:50  
Jurisdictional status: no  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) \_\_\_\_\_

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

Width (with respect to top of bank) no bank - 2' wide

Depth (with respect to top of bank) 0

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

Flow direction E

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

Bank vegetation (upland/wetland cover type) upland

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

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

Trimble Feature # \_\_\_\_\_

L-6  
 \_\_\_\_\_  
 Feature ID

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:
100-0358	E	Swale showing farm pond to E

**Notes:**

All upland vegetation in channel. Drains to man-made farm pond.

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: East	Feature ID	L-6	Date 5/4/10
	Description	The feature was identified as a drainage swale with no significant nexus. An excavated farm pond can be seen in the back ground.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

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Trimble Feature #

PY-41  
Feature ID

Location: T-LINE  
County: OLIVER  
Assessors Names: JK, KB  
Feature type: URPW

TT Team ID: SKB KB  
Date/Time of Evaluation: 5/4/10 17:00  
Jurisdictional status: yes  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) trib. to Square Bottle Cr.  
Water body Type (stream/ditch/culvert/swale/wash) Stream  
Width (with respect to top of bank) 8'  
Depth (with respect to top of bank) 0-1'  
Flow rate (dry/stagnant/low/moderate/high) Stagnant - low  
Flow direction E  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) mud/veg  
Bank vegetation (upland/wetland cover type) wetland

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

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

Trimble Feature # \_\_\_\_\_

P7-41  
 \_\_\_\_\_  
 Feature ID

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: wetlands adjacent to stream

**Other Features:**

Sinkhole \_\_\_\_\_

Drainage Basins/Areas \_\_\_\_\_

Floodplains \_\_\_\_\_

Depressions \_\_\_\_\_

Gravel Pits/Mined Areas \_\_\_\_\_

Other \_\_\_\_\_

Photo log #:	Orientation:	Brief Description:
106-0359	SE	Stream w/ wetlands

**Notes:**

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver III T-Line City/County: Oliver Co. Sampling Date: 5/4/10  
 Applicant/Owner: \_\_\_\_\_ State: ND Sampling Point: Wet-066  
 Investigator(s): JKB KB Section, Township, Range: T14N, R31W, S22  
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): CONCAVE Slope (%): 0  
 Subregion (LRR): \_\_\_\_\_ Lat: 47° 0' 55" N Long: 101° 11' 35.5" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Regent-Janesburg silty clay loam NWI-classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center" style="font-size: 1.2em;">FEATURE PY-41</p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> 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 = _____
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) _____  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Carex stricta</u>	<u>95</u>	<u>Y</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-13	Gray 2.5N	100					clay	
13-23	10YR 3/1	100					clay	
23-31	10YR 4/1	<del>100</del>	10YR 4/6	2			clay	
31-37	10YR 5/1	95	10YR 4/6	5			clay	

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |  |   |
|---|--|---|
| <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 of 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 checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input 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"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                     | <input type="checkbox"/> Redox Depressions (F8)        | <input type="checkbox"/> Other (Explain in Remarks)   |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)    | <input type="checkbox"/> High Plains Depressions (F16) | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)         | <input type="checkbox"/> (MLRA 72 & 73 of LRR H)       |   |

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

Secondary Indicators (minimum of two required)

- |  |   |   |
|--|---|---|
| <input checked="" 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 checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                    |
| <input checked="" type="checkbox"/> Water Marks (B1)               | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> (where tilled)                             |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> (where not tilled)                         | <input type="checkbox"/> Crayfish Burrows (C8)                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input type="checkbox"/> Geomorphic Position (D2)                   |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)          |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 0-2  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): 0  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: Oliver III T-Line City/County: Oliver Co. Sampling Date: 2/4/10  
 Applicant/Owner: \_\_\_\_\_ State: ND Sampling Point: Upland-66  
 Investigator(s): SKOKB Section, Township, Range: 141 N, R23 W, S 22  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): side slope Slope (%): 5  
 Subregion (LRR): \_\_\_\_\_ Lat: 47° 0' 55.9" N Long: 101° 11' 35.4" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Regent-Sandstone silty clay loam NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center" style="font-size: 1.2em;"><u>FEATURE PY-41</u></p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Bromus inermis</u>	<u>90</u>	<u>Y</u>	<u>OPL</u>	
2. <u>Ilex verticillata</u>	<u>2</u>	<u>N</u>	<u>OPL</u>	
3. <u>Solidago sp.</u>	<u>2</u>	<u>N</u>	<u>OPL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**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 <u>3</u>	x 5 = <u>15</u>
Column Totals: <u>3</u> (A)	_____ (B)

Prevalence Index = B/A = 5

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks:

**SOIL:**

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/1	100					loam	
12-27	2.5Y 4/2	100					clay	
27-30	2.5Y 5/3	100					sandy clay	
30-36	2.5Y 4/1						clay	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<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"/> Reduced Vertic (F18)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<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)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)		

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<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) (where tilled)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
<input type="checkbox"/> Water-Stained Leaves (B9)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

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

Wetland Hydrology Present? Yes \_\_\_\_\_ No

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

Remarks:

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: Southeast	Feature ID	PY-41	Date 5/4/10
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

03064  
Trimble Feature #

Location: T-LINE  
County: Oliver  
Assessors Names: \_\_\_\_\_  
Feature type: RPW w/ floodplain wetlands

TT Team ID: SKBKB  
Date/Time of Evaluation: 5/24/10 13:30  
Jurisdictional status: YES  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
 Explain VEGETATION REMOVE POLLUTANTS + ADJACENT WETLAND REDUCE FLOODING
- 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 LITTLE PASTURE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
 Explain \_\_\_\_\_

**Streams:**

Name (or tributary to) trib. to Square Butte Cr.  
Water body Type (stream/ditch/culvert/swale/wash) stream  
Width (with respect to top of bank) up to 30'  
Depth (with respect to top of bank) 5-8'  
Flow rate (dry/stagnant/low/moderate/high) low-moderate  
Flow direction E  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) mud  
Bank vegetation (upland/wetland cover type) wetland

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

Trimble Feature # \_\_\_\_\_

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: floodplain wetlands on banks of stream

**Other Features:**

Sinkhole \_\_\_\_\_

Drainage Basins/Areas \_\_\_\_\_

Floodplains \_\_\_\_\_

Depressions \_\_\_\_\_

Gravel Pits/Mined Areas \_\_\_\_\_

Other \_\_\_\_\_

Photo log #:	Orientation:	Brief Description:
106-0347	N	Stream w/ adjacent wetlands
0348	E	" "
0349	N	" "
0350	E	wetland sample point
0351	S	upland sample point
0352	S	Stream w/ adj. wetlands
0353	<del>S</del>	" "
0354	NE?	" "

Notes: 0355 NE " "  
 0356 N " "  
 0357 NW Feature 64

Feature 64 trib. to Feature 63, 64 stream less defined than 63.  
 More wetland type

TT EMI QC Check: OK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: OLIVER TRUME City/County: OLIVER Sampling Date: 5/2/10  
 Applicant/Owner: NEXTERA State: ND Sampling Point: 63A  
 Investigator(s): NSK, KD Section, Township, Range: T14N, R83W, S27  
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): LOWING Slope (%): 1%  
 Subregion (LRR): \_\_\_\_\_ Lat: 33545.0 Long: 5207614.3 Datum: \_\_\_\_\_  
 Soil Map Unit Name: REGAL SILT LOAM (SY) NWI classification: \_\_\_\_\_

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>ADJACENT TO CREEK (RPH) PERMANENT FLOW</u> <u>FEATURE PT-39</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>PHACELIA RUPESTRIS</u>	<u>100%</u>	<u>Y</u>	<u>FACW+</u>	
2. <u>SIBBINGIA AUSTRALIS</u>	<u>5%</u>	<u>N</u>	<u>FACU+</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>105</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
<b>% Bare Ground in Herb Stratum</b> <u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks:				

**SOIL**

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 3/1	100%					SANDY CLAY	
10-24	10 YR 9/4	100%					SAND	
24-	2.5 YR 5/4	100%					SAND	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Gleyed Matrix (S4)	<input checked="" 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 checked="" 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 of 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 checked="" 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"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)		

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

**Field Observations:**

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

Water Table Present? Yes  No  Depth (inches): 0"

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

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: OLIVER TR LINE City/County: OLIVER Sampling Date: 5/4/10  
 Applicant/Owner: NOCTENA State: ND Sampling Point: 63B  
 Investigator(s): OPK, KB Section, Township, Range: T14N, R87W, S27  
 Landform (hillslope, terrace, etc.): TRAIL SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 10%  
 Subregion (LRR): \_\_\_\_\_ Lat: 332983.0 Long: 5208064.3 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ 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:  <p align="center" style="font-size: 1.2em;">FEATURE PY-39</p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
= Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>BROMUS INERMUS</u>	<u>90%</u>	<u>Y</u>	<u>UPL</u>	
2. <u>ILEX VERTICILLATA</u>	<u>5%</u>	<u>N</u>	<u>UPL</u>	
3. <u>TALUSAGO CANADENSIS</u>	<u>5%</u>	<u>N</u>	<u>UPL</u>	
4. <u>SCANTLEA PURPUREA</u>	<u>3%</u>	<u>N</u>	<u>UPL</u>	
5. <u>AMENONIS ATTENS</u>	<u>2%</u>	<u>N</u>	<u>UPL</u>	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum _____ = Total Cover</b>				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks:				

**SOIL**

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	100%	—————				SILT LOAM	
6-12	2.5 Y 5/4	100%	—————				SILT CLAY LOAM	
12-17	5 Y 5/3	100%	—————				SILT CLAY LOAM	
17-18	10 YR 5/3	100%	—————				SILT CLAY LOAM	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<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 of 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"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No

Remarks: *24th WILLIAMS LOAM 9-15% SLOPE WELL DRAINED*

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> (where not tilled)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
<i>(includes capillary fringe)</i>	

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

Remarks:

## Oliver III Transmission Line



<b>TETRA TECH PROJECT NO. 103IP10979</b>  Direction: North	Feature ID	PY-39 & PY-40	Date 5/4/10
	Description	The feature was identified as perennial stream. Tetra Tech classified the stream as a RPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: T-LINE  
County: Oliver  
Assessors Names: \_\_\_\_\_

TT Team ID: JK+KB  
Date/Time of Evaluation: 5/4/10 12:30  
Jurisdictional status: eyes  
No. of Features Present: 2

Feature type: RPW w/ wetlands/floodplain

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) trib. to ~~Oliver~~ Square Butte Cr.  
Water body Type (stream/ditch/culvert/swale/wash) stream  
Width (with respect to top of bank) 2-25'  
Depth (with respect to top of bank) 2-5'  
Flow rate (dry/stagnant/low/moderate/high) moderate  
Flow direction E  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) mud  
Bank vegetation (upland/wetland cover type) wetland

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

Trimble Feature # \_\_\_\_\_

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: wetlands adjacent to stream

**Other Features:**

Sinkhole \_\_\_\_\_

Drainage Basins/Areas \_\_\_\_\_

Floodplains \_\_\_\_\_

Depressions \_\_\_\_\_

Gravel Pits/Mined Areas \_\_\_\_\_

Other \_\_\_\_\_

Photo log #:	Orientation:	Brief Description:
106-0335	N	Wetland sample plot
0336	NE	upland sample plot
0337	N	"
0338	ESE	Stream to wetlands from S side @ fence
0339	E	"
0340	W	Stream to wetlands on W side of fence
0341	SW	from N side of Stream
0342	S	"
0343	SE	"

Notes: 0344 SE "

TT EMI QC Check: PSK

TT EC QC Check: \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: OLIVER T-LINE City/County: OLIVER Sampling Date: 5/4/10  
 Applicant/Owner: MOATEPA State: ND Sampling Point: M-61A  
 Investigator(s): ODE, KD Section, Township, Range: T 141N, R 03W, S 27  
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONVEX Slope (%): 1  
 Subregion (LRR): \_\_\_\_\_ Lat: 333259.8 Long: 5207666.2 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Regan silt loam NWI classification: \_\_\_\_\_

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

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

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

Remarks:  
FEATURE PY-45

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Phalaris arundinacea</u>	<u>15%</u>	<u>g</u>	<u>FACW+</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum _____</b>				
_____ = Total Cover				

Remarks:  
little vegetation due to cattle & hydrology

SOIL

Sampling Point: \_\_\_\_\_

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10 YR 2/1	100	—	—	—	—	SILT CLAY	
6-14	10 YR 4/1	97	2.5 YR 4/6	3%	C	M	SANDY CLAY	
14-20	10 YR 5/1	98	7.5 YR 4/6	2%	C	M	SILT SAND	
20-34	10 YR 5/1	97	7.5 YR 4/6	3%	C	M	SANDY CLAY	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 of 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 checked="" 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"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<input type="checkbox"/> (MLRA 72 & 73 of LRR H)	

**Restrictive Layer (if present):**  
 Type: SANDY CLAY  
 Depth (inches): 6-14 + 20-34

Hydric Soil Present? Yes  No

Remarks:

HYDROLOGY

**Wetland Hydrology Indicators:**

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

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): 20

Saturation Present? Yes  No  Depth (inches): 10

Wetland Hydrology Present? Yes  No

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

Remarks: NOT NEAR TO CORNER

**WETLAND DETERMINATION DATA FORM – Great Plains Region**

Project/Site: OLIVER T-LINE City/County: OLIVER Sampling Date: 5/21/10  
 Applicant/Owner: NEXTERA State: ND Sampling Point: PY-61B  
 Investigator(s): ABE, KB Section, Township, Range: T14N, R03W, S27  
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 2  
 Subregion (LRR): \_\_\_\_\_ Lat: 333259.8 Long: 5207666.2 Datum: \_\_\_\_\_  
 Soil Map Unit Name: BEAVER SILT WASH NWI classification: NA

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:  <p align="center" style="font-size: 1.2em;">FEATURE PY-45</p>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A)
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>0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: _____)	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>BROMUS INERMUS</u>	<u>80</u>	<u>Y</u>	<u>UPL</u>	
2. <u>POA PRATENSIS</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
3. <u>TARAXACUM OFFICINALE</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: South	Feature ID	PY-45	Date 5/4/10
	Description	The feature was identified as perennial stream. Tetra Tech classified the stream as a RPW. The feature connects to PY-39 upstream and to the north.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

60  
Trimble Feature #

OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET  
Page 1 of 2

PY-32, L-5  
Feature ID

Location: T-LINE  
County: OLIVER  
Assessors Names: DK, KB  
Feature type: Swale

TT Team ID: JK + KB  
Date/Time of Evaluation: 5/4/10 9:28  
Jurisdictional status: no  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) \_\_\_\_\_  
Water body Type (stream/ditch/culvert/swale/wash) swale  
Width (with respect to top of bank) no bank  
Depth (with respect to top of bank) \_\_\_\_\_  
Flow rate (dry/stagnant/low/moderate/high) no flow  
Flow direction E  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) swale in filled field-wheat  
Bank vegetation (upland/wetland cover type) \_\_\_\_\_

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

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:
1060330	E	from road

**Notes:**

Does not connect with 94-32 - road in between

TT EMI QC Check: PSK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: East	Feature ID	PY-32 & L-5	Date 5/4/10
	Description	The feature was identified as a drainage swale with no significant nexus.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	John Kinny	

Location: T-LINE  
County: MORTON/OLIVER  
Assessors Names: KPG, CG  
Feature type: ENT STREAM

TT Team ID: KPG  
Date/Time of Evaluation: 10/17/09 305  
Jurisdictional status: \_\_\_\_\_  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
 Explain REDUCE FLOODING + NUTRIENTS FROM AGRICULTURE AS LAND + PASTURE
- 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 VEGETATION REDUCES POLLUTION FROM AGRICULTURE AS USE PASTURE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
 Explain DITCH CONNECTS TO SOURCE BUTTE CREEK

**Streams:**

Name (or tributary to) THIS TO SOURCE BUTTE CREEK  
Water body Type (stream/ditch/culvert/swale/wash) ENT STREAM  
Width (with respect to top of bank) 20'  
Depth (with respect to top of bank) 1-2'  
Flow rate (dry/stagnant/low/moderate/high) STAGNANT  
Flow direction NORTH  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) SILT + MUD  
Bank vegetation (upland/wetland cover type) CATTAILS + CORD GRASS

Tributary is:  Natural  
 Artificial (man made). Explain \_\_\_\_\_  
 Manipulated Explain CULVERT AT 30<sup>TH</sup> ST.

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

Trimble Feature # \_\_\_\_\_

P7-33

Feature ID

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:
6002	S	SOUTH FLOWING FINE STREAM
6006	W	CULVERT

**Notes:**

TT EMI QC Check: JPK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: East	Feature ID	PY-33	Date 10/17/09
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	

OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET

PT-34

Trimble Feature #

Page 1 of 2

Feature ID

Location: T-LINE  
County: MORTON / OLIVER BORDER  
Assessors Names: AK, KB  
Feature type: FMT. STREAM / NRPW

TT Team ID: AK  
Date/Time of Evaluation: \_\_\_\_\_  
Jurisdictional status: YES  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
Explain REDUCE FLOODING TO SQUARE BUTTE CREEK, VEGETATION REDUCE POLLUTANTS
- 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 TO ITS USE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
Explain IDENTIFIED ON NITD

**Streams:**

Name (or tributary to) TRIB TO SQUARE BUTTE CREEK  
Water body Type (stream/ditch/culvert/swale/wash) FMT STREAM  
Width (with respect to top of bank) 10  
Depth (with respect to top of bank) 0-1  
Flow rate (dry/stagnant/low/moderate/high) STAGNANT  
Flow direction N  
Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, WETLAND VEG  
Bank vegetation (upland/wetland cover type) UPLAND GRASSES

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

Trimble Feature # \_\_\_\_\_

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:
0331	NW	NRPW
0332	NW	NRPW

**Notes:**

*[Faint handwritten notes and bleed-through from the reverse side of the page]*

TT EMI QC Check: JBK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: North	Feature ID	PY-34	Date 10/17/09
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	

**OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET**

PT-35

Trimble Feature # \_\_\_\_\_

Page 1 of 2

Feature ID \_\_\_\_\_

Location: T-LINE  
 County: MORTON / OLIVER PARISH  
 Assessors Names: KRG, CG  
 Feature type: DRY SWALE

TT Team ID: KRG  
 Date/Time of Evaluation: 10/17/09 1545  
 Jurisdictional status: NO  
 No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

- |  |                              |  |
|--|------------------------------|--|
| a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  | <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) TRUB TO SOURCE DITCH CREEK

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

Width (with respect to top of bank) 0-1 NO BED OR BANK

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

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

Flow direction NORTH

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

Bank vegetation (upland/wetland cover type) BROME, GRASS

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

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

Trimble Feature # \_\_\_\_\_

P4-35

Feature ID

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:
6007	S	south drain swale
6008	to N	north drain swale

**Notes:**

1. Wetland Determination Field Sheet (WD-1) completed for all features.  
 2. All features are wetlands.  
 3. All wetlands are seasonal wetlands.  
 4. All wetlands are shallow water wetlands.  
 5. All wetlands are emergent wetlands.  
 6. All wetlands are herbaceous wetlands.  
 7. All wetlands are sedge wetlands.  
 8. All wetlands are sedge meadow wetlands.  
 9. All wetlands are sedge meadow wetlands.  
 10. All wetlands are sedge meadow wetlands.

TT EMI QC Check: DMC

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



<b>TETRA TECH PROJECT NO. 103IP10979</b>  Direction: South	Feature ID	PY-35	Date 10/17/09
	Description	The feature was identified as a drainage swale with no significant nexus.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	

**OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET**

PY-36

Trimble Feature # \_\_\_\_\_

Page 1 of 2

Feature ID \_\_\_\_\_

Location: T-LINE  
 County: MORTON/OLIVER BOUNDARY  
 Assessors Names: PK, CS  
 Feature type: ENT STREAM - NRPW

TT Team ID: JTK  
 Date/Time of Evaluation: 5/9/10 10:19  
 Jurisdictional status: YES  
 No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

- a. have the capacity to carry pollutants or flood waters to, or reduce the amount of pollutants or flood waters reaching a TNW?  Yes  No  
 Explain VEGETATION RETAIN POLLUTANTS
- 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 YES, FROM TREATMENT AS USE
- d. have other relationships to the physical, chemical, or biological integrity of the TNW?  Yes  No  
 Explain ON NHD

**Streams:**

Name (or tributary to) TRIM TO SOURCE BUTTE CREEK  
 Water body Type (stream/ditch/culvert/swale/wash) ENT STREAM  
 Width (with respect to top of bank) 5'  
 Depth (with respect to top of bank) 0-1'  
 Flow rate (dry/stagnant/low/moderate/high) STAGNANT - LOW  
 Flow direction N  
 Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD / WETLAND VEG  
 Bank vegetation (upland/wetland cover type) UPLAND

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

Trimble Feature #

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:
106-0333	NW	STREAM FROM ROAD

**Notes:**

TT EMI QC Check: OBK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



TETRA TECH PROJECT NO. 103IP10979  Direction: North	Feature ID	PY-36	Date 10/17/09
	Description	The feature was identified as an intermittent stream. Tetra Tech classified the stream as a NRPW.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	

OLIVER III  
WETLAND FIELD DATA EVALUATION SHEET

Trimble Feature #

Page 1 of 2

84-37

Feature ID

Location: T-LINE  
County: OLIVER/MORTON  
Assessors Names: DMK, KB  
Feature type: SWALE

TT Team ID: DMK  
Date/Time of Evaluation: 5/9/10 1026  
Jurisdictional status: NO  
No. of Features Present: 1

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

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

**Significant Nexus Determination:**

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

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

**Streams:**

Name (or tributary to) TRIB TO SOURCE BUTTE CREEK

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

Width (with respect to top of bank) 10'

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

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

Flow direction N

Substrate (mud/silt/gravel/cobble/boulders/bedrock) MUD, SOME GRASS

Bank vegetation (upland/wetland cover type) UPLAND

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

Trimble Feature # \_\_\_\_\_

PY-37

Feature ID \_\_\_\_\_

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:
0334	N	SW TLE
6011	N	LOWERT
6012	SE	SW TLE
6013	E	LOWERT

Notes: VEGETATED ORBS SW TLE / UPLAND VEGETATION FN AS FIELD

TT EMI QC Check: DPK

TT EC QC Check: \_\_\_\_\_

## Oliver III Transmission Line



<b>TETRA TECH PROJECT NO. 103IP10979</b>  Direction: North	Feature ID	PY-37	Date 10/17/09
	Description	The feature was identified as a drainage swale with no significant nexus.	
	CLIENT	NextEra Energy	
	PHOTOGRAPHER	Kali Pace-Graczyk	