

March 16, 2011

Jason Renschler
U.S. Army Corps of Engineers, Omaha District
North Dakota Regulatory Office
1513 South 12th Street
Bismarck, North Dakota 58504

Re: COLT Connector Pipeline Pre-Construction Notification for Nationwide Permit 12

Dear Mr. Renschler:

On behalf of Rangeland Pipeline, LLC (Rangeland Pipeline), Barr Engineering (Barr) hereby provides notice to the U.S. Army Corps of Engineers (Corps), Omaha District, about the planned construction of the COLT Connector Pipeline Project (the Project) in Williams County, North Dakota. The Project is eligible for Nationwide Permit (NWP) 12 of Section 404 of the Clean Water Act because it will involve the construction of a utility (underground pipeline) and associated facilities through waters of the U.S., and because the proposed activities will not result in any loss of waters of the U.S.

This notice is being provided in accordance with General Condition 27 (Pre-Construction Notification), subpart (b)(6), of NWP 12 as issued by the North Dakota Regulatory Office of the Corps Omaha District. Under this condition, the permittee must submit a pre-construction notification (PCN) to the Corps because federally-listed species “might be affected” by the proposed activities. Although no adverse effects are expected as a result of the Project, six federally-listed species may occur in Williams County, as discussed on Page 3 below (Federally-Listed Species). Barr asks that the Corps initiate consultations with the United States Fish and Wildlife Service (FWS) under Section 7 of the Endangered Species Act (ESA) and that the Corps make a finding of no adverse effects regarding the Project. The information presented in this letter and its attachments should satisfy the requirements of a PCN for the purposes of NWP 12 and the ESA.

Project Location and Description

Rangeland Pipeline is proposing to build a new crude oil pipeline in Williams County, North Dakota and has retained Barr to assist with the environmental review and permitting process for the Project. The 8-inch-diameter pipeline will be approximately 20.3 miles long and will connect the COLT Hub terminal near the town of Epping with Beaver Lodge/Ramberg Station, south of Tioga. See Figure 1 for a general site location map. From there, connections will be provided to the Enbridge and Tesoro transmission pipelines in order to facilitate the transportation of North Dakota crude oil to various markets. Rangeland Pipeline is proposing to install the pipeline generally 100 feet north of an existing Enbridge pipeline. The alignment of the existing Enbridge pipeline and the alignment of the proposed pipeline, including crossovers and route variations, are depicted on the maps included in Figure 2. Rangeland Pipeline plans to install the proposed pipeline within a newly-acquired 30-foot-wide right-of-way. During construction, Rangeland Pipeline proposes to use a temporary work area that varies between 80 and 100 feet wide for a majority of the pipeline route. In wetland areas, the total width of the construction right-of-way may be reduced to 70 feet or less. A temporary work area up to 150 to 200 feet wide may be required at some locations such as where the pipeline approaches wetlands, waterbodies, roads, and railroads, and in areas of rocky soil, steep slopes, and rugged terrain or where horizontal directional drilling techniques

would be used to install a segment of the pipeline. Following construction, the work area generally will be allowed to revert to its previous use.

Rangeland Pipeline will generally use existing permanent roads to access the construction right-of-way. Roads that are paved or graveled will not require modification. Dirt roads and two-track trails may require grading and improvement to make the roads passable for construction equipment, but no fill will be placed in wetlands as part of the improvements to these access roads. Rangeland Pipeline may need to construct temporary access roads for this Project. These roads would be needed to allow access to remote areas of the construction right-of-way. To support construction activities, Rangeland Pipeline will use temporary contractor staging areas and/or pipe storage yards at strategic points along the Project route. Additionally, Rangeland Pipeline anticipates a need for a pipe offloading yard to accommodate transportation of pipe from the mill to the general Project vicinity. The location of the contractor and pipe offloading yards has not yet been determined, but the COLT Hub site could be used for some of these activities if suitable. No wetlands will be dredged or filled as a result of these ancillary project activities.

Where appropriate, erosion and sediment control devices would be installed between the temporary workspace and water resources to provide further protection. Disturbed areas would be revegetated in accordance with Rangeland Pipeline mitigation procedures, permit requirements, and landowner agreements. The time between the start of clearing activities and the start of restoration activities would be approximately 4 to 5 months. Temporary revegetation would be established in construction work areas where 14 days or more will elapse between the completion of final grading at a site and the establishment of permanent vegetation, or where there is a high risk of erosion due to site-specific soil conditions and topography. Temporary seeding may be accomplished sooner than 14 days at locations near sensitive resource areas and areas prone to wind and water erosion. Final seeding operations would be completed soon after final grading. Permanent revegetation would be established using seed mixes that would include native seed varieties commonly occurring in the area. The seed mixes would be approved by landowners and/or the United States Department of Agriculture – Natural Resources Conservation Service.

Construction of the COLT Connector Pipeline is scheduled to begin in late May, 2011, and the pipeline is expected to be in service by November, 2011.

Special Aquatic Sites and Waters of the U.S.

The enclosed Natural Resources and Wetland Determination Report includes a field-based wetland determination completed by SWCA Environmental Consultants. The wetland and waterbodies mapped during this field assessment are also shown in Figure 2. This project will result in no permanent wetland drainage or fill and it meets none of the regional criteria within the State of North Dakota that would initiate a requirement for other permit types.

To minimize impacts on wetlands, Rangeland Pipeline will:

- mark wetland boundaries prior to construction;
- reduce the width of the construction work area to 70 feet or less through wetland areas;
- restrict the equipment working in and passing through wetlands to the extent practicable;

- strip the existing amount of topsoil, up to a maximum depth of 12 inches, from over the trench in unsaturated wetlands (where there is less than 12 inches of topsoil strip the existing amount);
- in unsaturated wetlands, store topsoil and subsoil in a manner that prevents mixing, and return topsoil to its original horizon during backfilling;
- implement temporary erosion best management practices (e.g., slope breakers, and sediment barriers) to minimize the potential for erosion and sedimentation in wetlands during construction;
- use equipment pads or timber mats as needed to support construction equipment in saturated wetlands and reduce the potential for soil compaction;
- prohibit equipment refueling and the storage of fuels and hazardous substances in or within 100 feet of wetlands;
- reseed unsaturated wetlands with annual ryegrass or similar cover crop at a rate of 40 pounds per acre to temporarily stabilize the soils and allow native vegetation to reestablish without excessive competition;
- return all soil to pre-construction contours and ensure that there are no alterations to existing drainage patterns; and
- prohibit installation of surface facilities within wetlands.

Some small route changes have resulted in portions of the current pipeline alignment being outside the area surveyed in 2010. These areas will be re-visited this spring as soon as conditions permit. If additional wetlands or waterbodies are discovered, a final route map showing updated wetlands and waterbodies will be submitted to the Corps before construction begins.

Mitigation

No wetland mitigation is required for this project because there is no wetland loss associated with temporary impacts in emergent wetlands.

Federally-Listed Species

The enclosed Natural Resources and Wetland Determination Report includes a description of habitats found within the proposed pipeline corridor and provides a species determination for each of the federally-listed species that may occur in Williams County.

The enclosed report provides an analysis of six federally-listed threatened and endangered species that may occur in Williams County. The effect determination for each of these species is as follows:

- Black-footed ferret (*Mustela nigripes*, Endangered) – No effect
- Gray wolf (*Canis lupus*, Endangered) – No effect
- Whooping crane (*Grus americana*, Endangered) – May affect, not likely to adversely affect
- Piping plover (*Charadrius melodus*, Threatened) – May affect, not likely to adversely affect
- Interior least tern (*Sterna antillarum*, Endangered) – May affect, not likely to adversely affect
- Pallid sturgeon (*Scaphirhynchus albus*, Endangered) – May affect, not likely to adversely affect

In addition, two species considered candidates for federal listing are also potentially present in the project area. Habitat information is provided in the enclosed report and the effect determination is as follows:

- Dakota skipper (*Hesperia dacotae*) – May affect, not likely to adversely affect
- Sprague’s pipit (*Anthus spragueii*) – May affect, not likely to adversely affect

In general, the construction of the Project is not likely to adversely affect any federally-listed species or the associated critical habitat for these species. Construction methods, as described above in the Project Location and Description section, will minimize the effects of construction and restore the area to pre-existing conditions within a year. The construction will have minimal impact on natural resources in the area and the maintenance and operation of the pipeline will not significantly reduce habitat quality for any federally protected species.

Historic Properties

The State Historical Society of North Dakota concurred with the determination provided by SWCA Environmental Consultants on behalf of Rangeland Pipeline that no significant sites and no historic properties will be affected by the proposed project. The letter of concurrence is enclosed.

We appreciate your review of the information provided in this pre-construction notification for the COLT Connector Pipeline Project. Please contact me at any time at 952-832-2975 or by email at dflo@barr.com if you require additional information or have any questions regarding the proposed Project and its eligibility under NWP 12.

Sincerely,



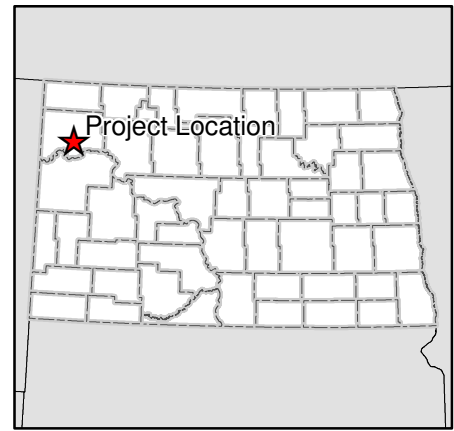
Daniel Flo
Environmental Scientist

Enclosures: Figure 1 – Project Overview Map;
Figure 2 – Route Maps;
Natural Resources and Wetland Determination Report; and
Letter of concurrence from the State Historical Society of North Dakota

CC: Rafael Colaco, Rangeland Energy, LLC
Patrick Fahn, North Dakota Public Service Commission

Figures

Barr Footer: Date: 3/1/2011 4:23:42 PM File: I:\projects\341521002\Colt\Mapos\Reports\COE Letter\Figure 1 Project Overview.mxd User: JLC



-  COLT Connector Pipeline
-  State Highway
-  US Highway
-  County Road
-  Railroad
-  River or Stream
-  Waterbody
-  Township Boundary

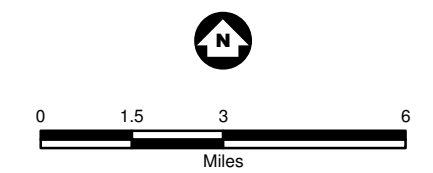
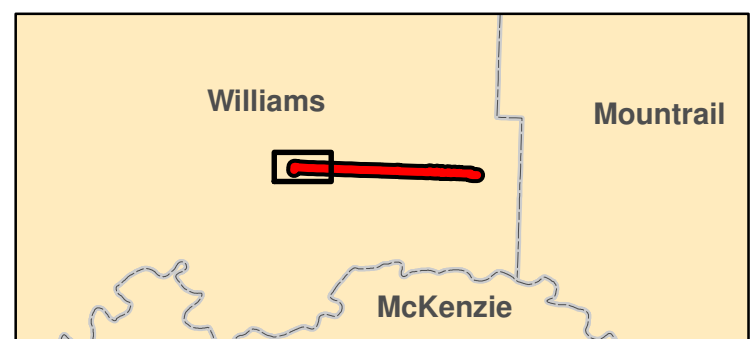


Figure 1
 PROJECT OVERVIEW
 COLT Connector Pipeline
 Williams County, North Dakota

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Imagery: National Agricultural Imagery Program, 2010, 1.0 Meter Resolution



COLT Connector Pipeline	1-Mile Evaluation Corridor	Wetland
Existing Pipeline	200-Foot Field Survey Corridor	Waterbody
Milepost	Public Land Survey Section	Watercourse
Block Valve	Municipal Boundary	
Pump Station		

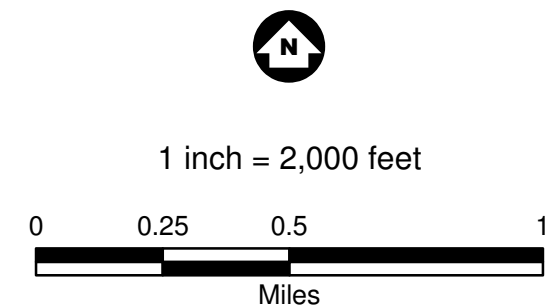


Figure 2 - Sheet 01 of 04
ROUTE MAPS
COLT Connector Pipeline
 Williams County, North Dakota



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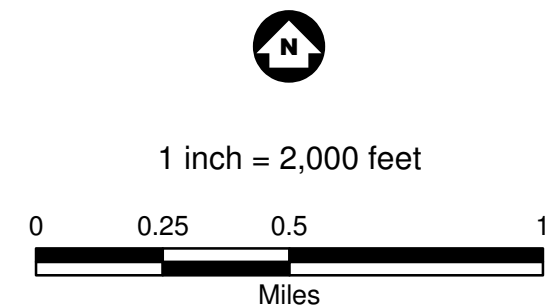
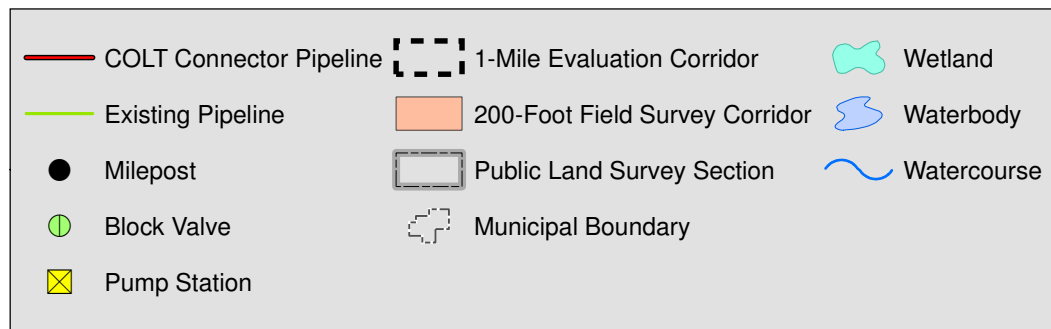
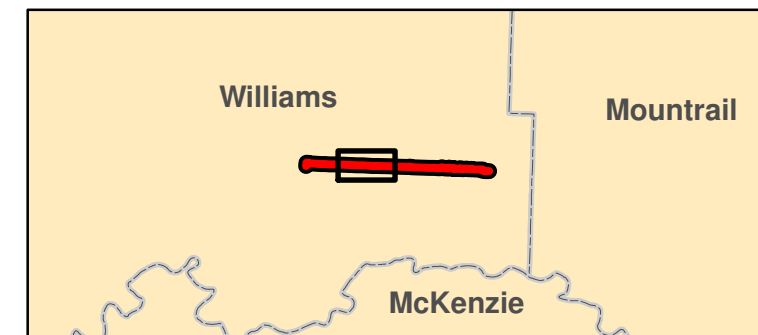


Figure 2 - Sheet 02 of 04
 ROUTE MAPS
 COLT Connector Pipeline
 Williams County, North Dakota



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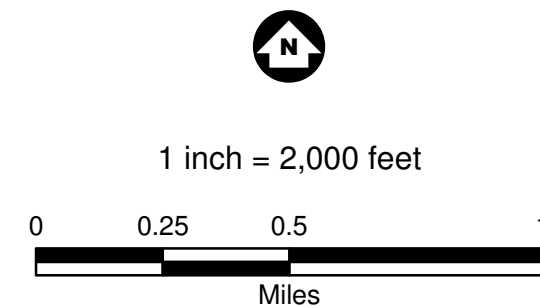
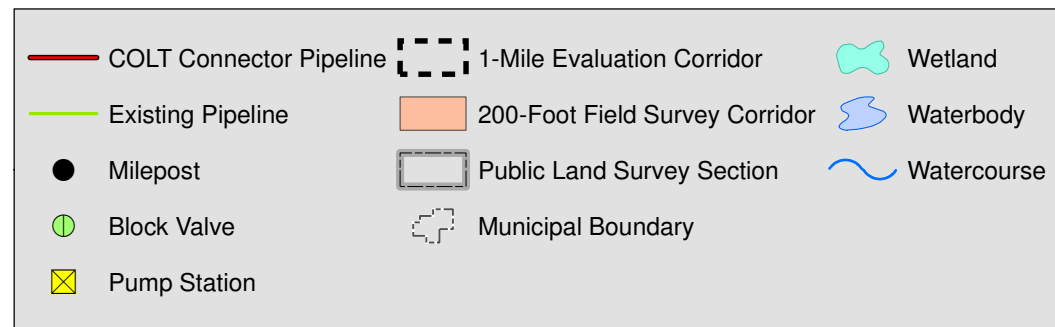
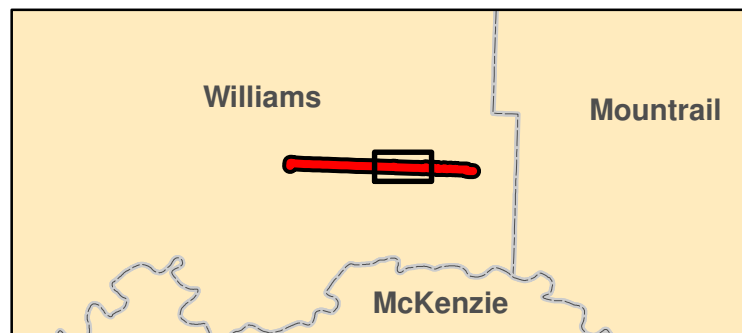
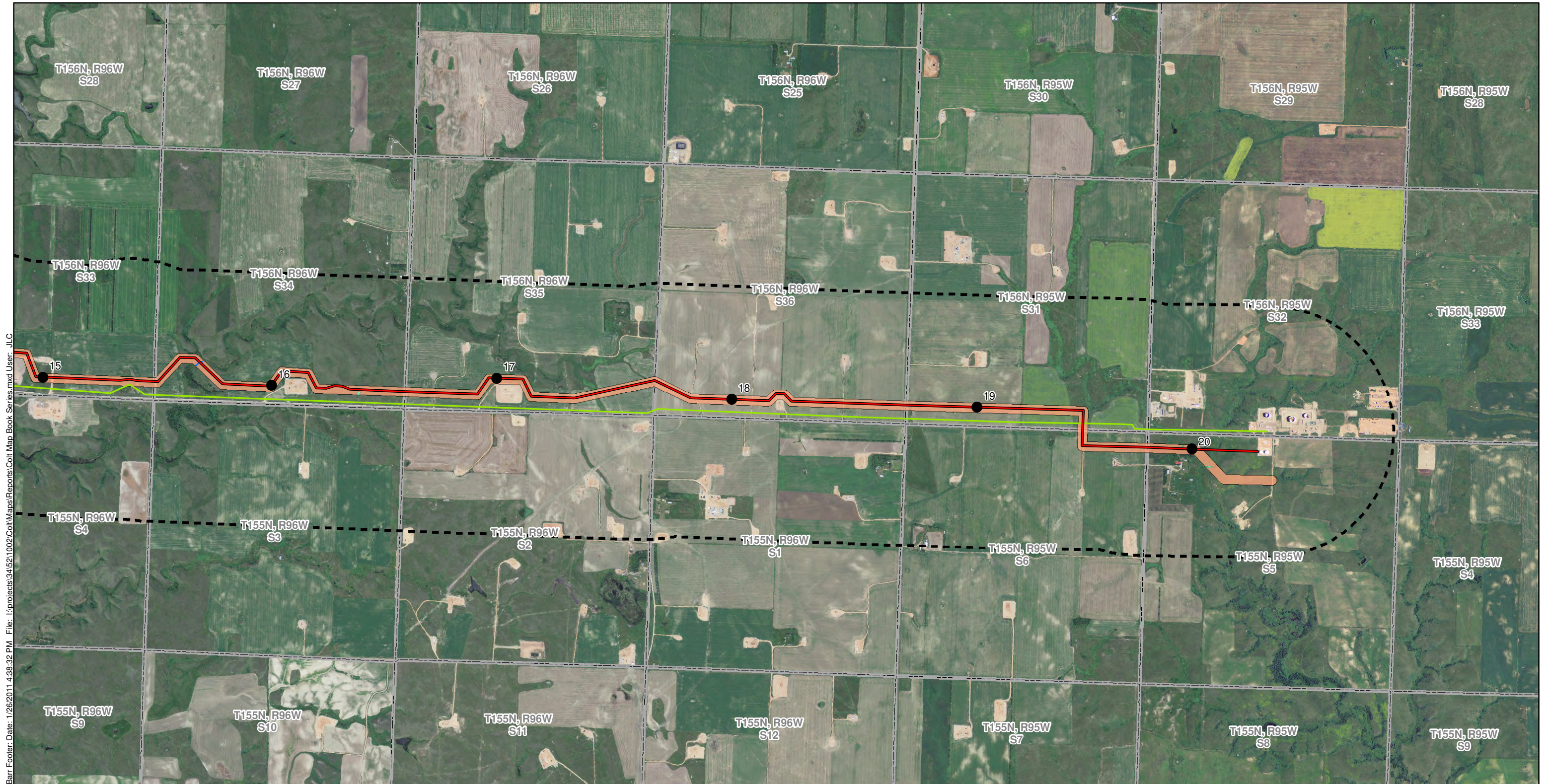


Figure 2 - Sheet 03 of 04
 ROUTE MAPS
 COLT Connector Pipeline
 Williams County, North Dakota



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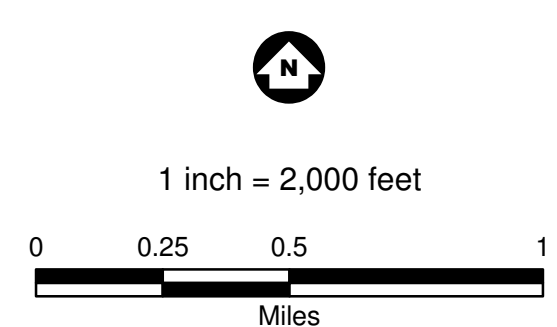
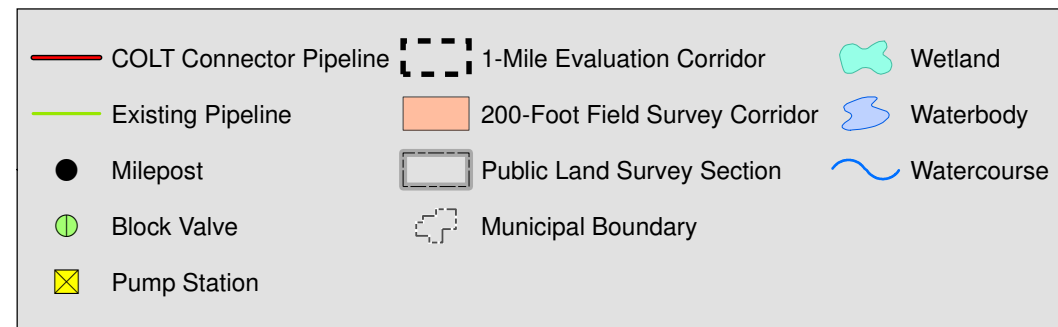
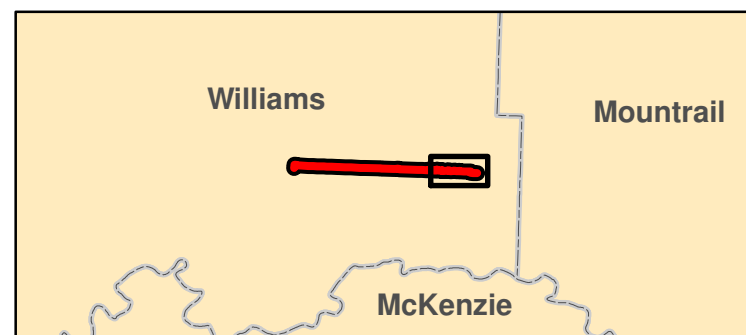


Figure 2 - Sheet 04 of 04
 ROUTE MAPS
 COLT Connector Pipeline
 Williams County, North Dakota

Enclosure:
Natural Resources
and Wetland Delineation Report

Natural Resources and Wetland Determination Report for the COLT Connector Pipeline, Williams County, North Dakota

Prepared for

Barr Engineering Company

Prepared by

SWCA Environmental Consultants

18 January 2011

**Natural Resources and Wetland Determination Report for the COLT
Connector Pipeline, Williams County, North Dakota**

Prepared for:

**Barr Engineering Company
234 West Century Avenue
Bismarck, ND 58503**

Prepared by:

**Levi Binstock
Environmental Specialist**

Reviewed by:

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SWCA Project No. 17121

18 January 2011

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1.0 INTRODUCTION

1.1 BACKGROUND

Rangeland Energy, LLC is proposing to construct an approximately 20.5-milelong crude oil pipeline named the COLT Connector in Williams County, North Dakota (survey area). The proposed pipeline will be constructed within a 100-foot temporary construction right-of-way (ROW) and a permanent 30-foot-wide ROW will be maintained after construction is complete.

The North Dakota Public Service Commission (ND PSC) has claimed jurisdiction over the survey area and is requiring a certificate of corridor compatibility and route permit be obtained prior to the commencement of construction activities. SWCA Environmental Consultants (SWCA) was contracted by Barr Engineering Company (Barr) to complete natural and cultural resource field surveys in order to identify exclusion and avoidance areas as specified in North Dakota Administrative Code (NDAC) 69-06-08-02.

SWCA conducted a field survey of a 200-foot-wide corridor between November 8 and 17, 2010, to determine the potential presence and extent of waters of the U.S., commonly referred to as a wetland determination, within the proposed survey area. Concurrently with the wetland determination, SWCA also conducted a cursory threatened and endangered species survey and habitat assessment; a tree, sapling, and shrub enumeration survey; and a noxious weed survey.

This report outlines the methodology used by SWCA's ecologists to complete each of the aforementioned surveys. Additionally, this report presents the results of the completed field surveys and regulatory recommendations to ensure compliance with the ND PSC and the U.S. Army Corps of Engineers (USACE) Nationwide Permit 12.

1.2 REGULATORY BACKGROUND

1.2.1 Clean Water Act, Section 404

Section 404 of the Clean Water Act prohibits the discharge of fill material into waters of the U.S., also known as jurisdictional waters, without a permit from the USACE.

1.2.2 USACE Nationwide Permit 12

The USACE Nationwide Permit 12 authorizes the construction of utility lines and associated facilities in waters of the U.S., provided the activity does not result in the permanent loss of greater than 0.5 acre of waters of the U.S., including wetlands.

Nationwide Permit 12 also authorizes the construction of access roads for utility lines, provided that the access road:

- does not result in the permanent loss of greater than 0.5 acre of waters of the U.S.;
- is constructed to the minimum width necessary;

- is constructed so that the length of the road minimizes any adverse effects to waters of the U.S.;
- is as near as possible to pre-construction contours and elevations; and
- is properly bridged or culverted when constructed above pre-construction contours.

If the access roads are used exclusively for construction purposes, they must be temporary and removed upon project completion.

Nationwide Permit 12 requires that the permittee submit a pre-construction notification prior to commencing construction if any of the following criteria are met.

- The activity involves mechanized land clearing in a forested wetland.
- A Section 10 permit is required to cross a navigable waterbody (Rivers and Harbors Act).
- The utility line exceeds 500 feet in length through any single crossing of a water of the U.S.
- The utility line is placed within a jurisdictional area (i.e., water of the U.S.) and it runs parallel to a stream bed that is within that jurisdictional area.
- Discharges result in the permanent loss of greater than 0.1 acre of waters of the U.S.
- Permanent access roads are constructed above grade in waters of the U.S. for a distance of more than 500 feet.
- Permanent access roads are constructed in waters of the U.S. with impervious materials.

Please refer to Appendix D for a copy of the USACE Nationwide Permit 12 conditions.

1.2.3 USACE Regional Conditions

The USACE has published several regional conditions for projects operating under Nationwide Permits in North Dakota. The regional conditions apply to wetlands classified as “fens,” waters adjacent to natural springs, the Missouri River, historic properties, and fish spawning areas. Please refer to Appendix D for a copy of the USACE Nationwide Permit Regional Conditions for the state of North Dakota.

2.0 METHODS

2.1 SURVEY AREA

The proposed survey area trends east to west entirely within Williams County, North Dakota, beginning at a point south of Tioga, North Dakota, in Section 5, Township (T) 155 North (N), Range (R) 95 West (W), of the 5th Prime Meridian. Moving east to west, the survey area first traverses Section 6, T155N, R95W, then moves north into Section 31, T156N, R95W, and back west through Sections 31–36, T156N, R96–98W, turning south in Section 31, T156N,

R99W and ending at a point in Section 1, T155N, R99W. The study area is located in the Great Plains (Level I), West-Central Semi-Arid Prairies (Level II), Northwestern Glaciated Plains (Level III), and the Missouri Coteau Slope (Level IV) ecoregions. The Missouri Coteau Slope is characterized by an average precipitation amount of 15 to 18 inches and mean July temperatures ranging from 59 degrees Fahrenheit (°F) to 86°F (U.S. Geological Survey [USGS] 2006).

2.2 WETLANDS

SWCA ecologists conducted wetland determinations, within the survey area, based on the principles and guidelines provided in the 1987 Corps of Engineers Wetlands Delineation Manual (Manual) (Environmental Laboratory 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetlands Determination Manual: Great Plains Region* (Supplement) (USACE 2008). According to the Manual, an area is a wetland if three mandatory wetland indicators are present in a given area, with special exceptions. These criteria include the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. All wetlands and waterbodies geographically referenced within the survey area during field survey are depicted on the Site Layout Maps in Appendix A.

2.2.1 Vegetation

SWCA taxonomically identified all plant species within each recorded wetland area. All species were recorded according to their respective vegetative stratum. A tree is defined by the Supplement to be a woody-stemmed plant with a trunk diameter at breast height (DBH) of equal to or greater than 3 inches, regardless of height. The sapling and shrub stratum is defined by the Supplement to be composed of woody-stemmed plants with a trunk DBH of less than 3 inches, regardless of height. The herbaceous stratum includes all non-woody-stemmed plants regardless of height. Finally, the woody vine stratum includes all woody-stemmed vines, regardless of diameter.

SWCA ecologists noted each plant species' respective U.S. Fish and Wildlife Service (USFWS) indicator status (i.e., upland [UPL], facultative upland [FACU], facultative [FAC], facultative wetland [FACW], and obligate [OBL]).

SWCA also noted all populations of North Dakota state or county listed noxious weeds identified within the survey area.

2.2.2 Hydrology

A wetland was determined to contain wetland hydrology if at least one primary indicator or at least two secondary indicators of wetland hydrology were present, as defined by the Manual. Common hydrologic indicators include the presence of surface water, high water table, soil saturation, water marks on trees or other objects, sediment deposits, water-stained leaves, and oxidized rhizospheres on living roots.

2.2.3 Soil

No soil profiles were excavated by SWCA during the wetland determination. Hydric soils were assumed to be present within each area that exhibited greater than 50% hydrophytic vegetation, a positive indication of wetland hydrology. Additionally, the assumption of the presence of hydric soil was predicated on the geomorphic position of each wetland area.

2.3 WATERBODIES

Waterbodies (i.e., creeks, streams, rivers) were identified by the presence of an ordinary high water mark (OHWM). Common identifiable indicators of an OHWM include a clear, natural line visible on the bank; shelving; changes in soil characteristics; the destruction of terrestrial vegetation; the presence of litter and debris; and watermarks on structures that are inundated during normal high water conditions. The OHWM typically represents the potential limits of the USACE jurisdiction. Please note that the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies.

SWCA classified streams as perennial, intermittent, or ephemeral based on field observations. During a typical year, a perennial stream contains flowing water year-round and the water table is located above the stream bed. Groundwater is the primary water source for stream flow while precipitation runoff is supplemental. Ecologists classified streams that showed significant flow during the field survey or were named or designated as solid blue lines on the USGS topographic maps as perennial.

An intermittent stream has flowing water for only portions of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

2.4 WILDLIFE INCLUDING THREATENED AND ENDANGERED SPECIES

Information regarding the presence of threatened or endangered species, which may occur within the survey area, was obtained from the U.S. Fish and Wildlife Service (USFWS) list of threatened and endangered species by North Dakota county (USFWS 2010a). This document does not represent a comprehensive survey, but rather acknowledges the past and/or current presence of listed species. The lack of discovery of threatened or endangered species does not signify their non-existence within the area, but only that no primary or secondary indications of these species were recorded.

SWCA conducted a cursory pedestrian survey concurrently with the wetland determination for all listed species that could be potentially impacted by construction activities. Additionally, SWCA characterized suitable threatened and endangered species habitat encountered during the field survey.

SWCA ecologists noted all wildlife observed during the field survey. Wildlife sightings can involve primary observations (i.e., actual sighting of an animal) or secondary observations (i.e., observation of scat, tracks, or fur deposits).

2.5 TREE, SAPLING, AND SHRUB COUNT

SWCA ecologists determined the total number of trees, saplings, and shrubs present within the surveyed 200-foot ROW by employing several different techniques depending on the type of woody vegetation habitat (i.e., forested upland, shrubland, or shelterbelt) encountered and the overall extent of each habitat within the ROW. The boundary of all forested upland, shrubland, and shelterbelt habitat was geographically referenced using a Trimble GeoXT series handheld global positioning system (GPS) unit. In forested upland and shrubland habitat, SWCA counted or estimated the number of all woody stemmed vegetation regardless of DBH. In shelterbelt areas, all woody stemmed vegetation with a DBH of ≥ 1 inch were inventoried, regardless of height. Ecologists taxonomically identified all recorded individuals to the species level within each habitat type.

Linear Spacing Estimates: SWCA ecologists estimated the total number of individual trees or shrubs within each observed shelterbelt by calculating the total number of individuals, regardless of DBH of each species within a set linear distance. This method assumes that spacing and species pattern between individuals is equal along the entire length of the shelterbelt. When a satisfactory number of replications was averaged (usually up to 50% of the total shelterbelt length), ecologists determined the total shelterbelt length and estimated the total number of individuals potentially present based on the average number of individuals per linear foot. Once the number of individuals per foot was estimated for each shelterbelt, SWCA used a shapefile depicting the width of the proposed disturbance area (i.e., 100 feet) to determine the linear length of each shelterbelt segment potentially impacted by construction activities. This linear length was then used to estimate the number of individual trees or shrubs potentially impacted through construction activities.

Sub-Plot Estimates: Some shrub species, such as silver buffaloberry (*Shepherdia argentea*), are difficult to individually count due to the nature of their assemblages. Therefore, SWCA used a sub-plot estimation technique to estimate the total number of silver buffaloberry individuals within the ROW. SWCA completed an actual count of all silver buffaloberry individuals within a given geographically referenced sub-plot area. The area contained within the geographically referenced sub-plot was calculated using ArcGIS v9.3 (ESRI Redlands, CA). This process was repeated until a satisfactory number of replications were completed. Once the total number of individuals was determined per the total geographically referenced area, an average number of individuals per acre was calculated. SWCA then calculated the total area of silver buffaloberry assemblages within the ROW and determined the total number of individuals based on the average individuals per acre value.

2.6 MAPPING

The boundaries of each wetland, waterbody, and woody vegetation habitat were geographically recorded using a Trimble GeoXT GPS unit. The aforementioned GPS unit is capable of recording geographic data with sub-meter accuracy. SWCA used Universal

Transverse Mercator Zone 13N as the projected coordinate system and North American Datum 1983 as the datum. ArcGIS v9.3 (Redlands, California) was used to analyze collected features, calculate areas, and generate the maps provided in Appendix A. Please note that all data collected using the GPS unit, and displayed on the attached maps, are for review purposes only and do not represent a professional civil survey.

3.0 RESULTS

3.1 VEGETATION

SWCA ecologists identified four general types of vegetative communities within the survey area. These vegetative communities were classified as herbaceous upland, shrubland, cropland, and palustrine emergent (PEM) wetland. PEM wetlands are characterized by the presence of herbaceous hydrophytic or submergent aquatic macrophytes.

Vegetation communities met the hydrophytic vegetation criterion for wetlands if greater than 50 percent of dominant species had an indicator status of FAC, FACW, or OBL. The upland communities failed to meet at least one of the two assessed wetland criteria. Refer to Appendix B for photographs that depict representative vegetation at wetlands surveyed. Examples of common dominant species identified within each vegetative community are listed below.

SWCA ecologists did not observe any occurrences of North Dakota state or county listed noxious weeds within the surveyed area.

3.1.1 Herbaceous Upland

Herbaceous upland communities occurring throughout the survey area consisted of non-wetland areas dominated by non-woody vegetation such as grasses and forbs. Common species found within these communities include crested wheatgrass (*Agropyron cristatum*), big bluestem (*Andropogon gerardii*), green sagewort (*Artemisia campestris*), fringed sagewort (*Artemisia frigida*), cudweed sagewort (*Artemisia ludoviciana*), sideoats grama (*Bouteloua curtipendula*), blue grama (*Bouteloua gracilis*), smooth brome grass (*Bromus inermis*), purple coneflower (*Echinacea angustifolia*), squirreltail (*Elymus elymoides*), American licorice (*Glycyrrhiza lepidota*), curlycup gumweed (*Grindelia squarrosa*), needle and thread (*Hesperostipa comata*), gayfeather (*Liatris punctata*), yellow sweetclover (*Melilotus officinalis*), green needlegrass (*Nassella viridula*), western wheatgrass (*Pascopyrum smithii*), Kentucky bluegrass (*Poa pratensis*), prairie coneflower (*Ratibida columnifera*), prairie rose (*Rosa arkansana*), and little bluestem (*Schizachyrium scoparium*).

3.1.2 Shrubland

Shrubland communities occurring throughout the survey area consisted of upland areas dominated by woody-stemmed vegetation including downy hawthorn (*Crataegus mollis*), Russian olive (*Elaeagnus angustifolia*), silverberry (*Elaeagnus commutata*), chokecherry (*Prunus virginiana*), silver buffaloberry (*Shepherdia argentea*), and western snowberry (*Symphoricarpos occidentalis*).

3.1.3 Cropland

Cropland vegetation included canola (*Brassica napus*) and hard red spring wheat (*Triticum aestivum*).

3.1.4 PEM Wetland

PEM wetlands found within the survey area mainly consisted of herbaceous, non-woody vegetation such as sedges, spike-rushes, grasses, and forbs although some woody vegetation was present but not dominant. Common species found within these communities include quackgrass (*Agropyron repens*), big bluestem, smooth brome, *Carex* spp., redosier dogwood (*Cornus sericea*), creeping spikerush (*Eleocharis palustris*), Canada wildrye (*Elymus canadensis*), American licorice, foxtail barley (*Hordeum jubatum*), witchgrass (*Panicum capillaire*), reed canarygrass (*Phalaris arundinacea*), fowl bluegrass (*Poa palustris*), Kentucky blue grass, smartweed (*Polygonum* sp.), *Rumex* sp., bulrush (*Scirpus* sp.), prairie cordgrass (*Spartina pectinata*), cattail (*Typha angustifolia*), and stinging nettle (*Urtica dioica*).

3.2 HYDROLOGY

Wetland communities observed during the determination effort displayed at least one primary or two secondary indicators of wetland hydrology, as defined by the Manual. Upland communities either failed to display hydrologic indicators or failed to meet the hydrophytic vegetation requirement, as defined by the Manual.

According to National Weather Service (NWS) preliminary climatological data for Williston, North Dakota, 3.21 inches of precipitation was recorded from 1 September through 17 November 2010 (Table 1). This amount is 0.6 inch above normal for this time period.

Table 1. Monthly Recorded Rainfall at NWS Williston, ND.

Month	Recorded Precipitation (inches)	Normal Precipitation (inches)	Difference (inches)
September 2010	1.41	1.35	0.06
October 2010	1.26	0.87	0.39
Nov. 1–17, 2010	0.54	0.39	0.15
Total	3.21	2.61	0.60

Source: National Oceanic and Atmospheric Administration 2009

3.3 SOILS

SWCA assumed all wetland areas that exhibited the hydrophytic vegetation and wetland hydrology criteria also exhibited hydric soil characteristics. Table 2 summarizes the soil types present within the survey area. Please refer to Appendix C for Natural Resources Conservation Service (NRCS) soil series descriptions.

Table 2. NRCS Derived Soil Series Present within the ROW.

Soil Types	Acres within 100-foot ROW	Hydric Component Present	Component Name and % Within Map Unit
Arnegard loam, 0 to 2 percent slopes	1.65	No	N/A
Bowdle loam, 0 to 2 percent slopes	1.69	No	N/A
Farnuf loam, 0 to 2 percent slopes	22.0	No	N/A
Lehr loam, 2 to 6 percent slopes	0.40	No	N/A
Williams-Bowbells loams, 0 to 3 percent slopes	42.5	Yes	Tonka – 2% Heil – 1%
Williams-Bowbells loams, 3 to 6 percent slopes	76.1	Yes	Tonka – 1%
Williams-Zahl loams, 3 to 6 percent slopes	14.1	Yes	Tonka – 1%
Williams-Zahl loams, 6 to 9 percent slopes	49.2	No	N/A
Zahl-Williams loams, 9 to 15 percent slopes	11.6	No	N/A
Zahl-Williams loams, 15 to 60 percent slopes	9.73	No	N/A
Amor-Zahl-Cabba loams, 9 to 25 percent slopes	1.19	No	N/A
Cabba-Amor-Zahl loams, 25 to 60 percent slopes	1.11	No	N/A
Korchea-Divide loams, channeled 0 to 2 percent slopes	4.78	No	N/A
Lehr-Williams loams, 0 to 6 percent slopes	6.60	No	N/A
Wabek sandy loam, 6 to 25 percent slopes	2.76	No	N/A

Source: NRCS 2009

3.4 WETLANDS

SWCA recorded 15 PEM wetlands within the survey area, totaling 3.9 acres. However, only approximately 1.97 acres of PEM wetland is anticipated to be temporarily impacted by the proposed 100-foot construction ROW centered on the proposed centerline.

Table 3. PEM Wetland Acreage within the Survey area.

Wetland ID	Total Wetland Area (acres)	Temporarily Impacted Wetland Area within 100- foot ROW (acres)	Crossing Distance (feet)	USACE Jurisdictional Status ¹
WET 1	0.07	0.03	3.3	Jurisdictional
WET 2	0.01	0	0	Jurisdictional
WET 3	0.02	0.02	22.7	Non- Jurisdictional

Wetland ID	Total Wetland Area (acres)	Temporarily Impacted Wetland Area within 100-foot ROW (acres)	Crossing Distance (feet)	USACE Jurisdictional Status¹
WET 4	0.07	0.01	0	Non-Jurisdictional
WET 5	0.02	0	0	Jurisdictional
WET 6	1.84	1.02	454.3	Jurisdictional
WET 7	0.11	0.0004	0	Non-Jurisdictional
WET 8	0.25	0.14	66.4	Jurisdictional
WET 9	0.24	0.05	0	Non-Jurisdictional
WET 10	0.30	0.17	74.4	Jurisdictional
WET 11	0.11	0.06	0	Non-Jurisdictional
WET 12	0.01	0	0	Non-Jurisdictional
WET 13	0.01	0	0	Non-Jurisdictional
WET 14	0.60	0.30	77.8	Jurisdictional
WET 15	0.24	0.17	90.7	Jurisdictional
Total	3.9	1.97	789.6	

¹ The USACE has the final authority on the jurisdictional status of a waterbody

3.5 WATERBODIES

SWCA identified one perennial stream, one intermittent stream, and one pond of approximately 0.19 acre (Table 4). The single perennial waterbody (Beaver Creek) will be crossed approximately three times by the currently proposed centerline. Two drainages were noted within the survey area and displayed no indicators of an ordinary high water mark (Appendix A). Additionally, these drainages did not meet the criteria to be considered a wetland.

Table 4. Waterbody ID, Names, Classification, Acreages, Crossing Methods and Lengths, and Jurisdictional Status.

Waterbody ID	Waterbody Name	Classification	Determined Area (acres)	Crossing Length (feet)	USACE Jurisdictional Status¹
WB1	Unnamed	Intermittent Stream	N/A	5.9	Jurisdictional
WB2	Beaver Creek	Perennial Stream	N/A	4.3	Jurisdictional
WB3	Beaver Creek	Perennial Stream	N/A	5–15	Jurisdictional
WB4	Beaver Creek	Perennial Stream	N/A	5–15	Jurisdictional

WB5	Beaver Creek	Perennial Stream	N/A	5–15	Jurisdictional
WB6	Unnamed	Pond	19	N/A	Jurisdictional

¹ The USACE has the final authority on the jurisdictional status of a waterbody.

3.6 WILDLIFE

SWCA conducted a cursory threatened and endangered species survey concurrently with the wetland determination. Ecologists did not observe any primary (i.e., actual sighting) or secondary (tracks, scat, fur) indication of the presence of threatened or endangered species. However, the survey area does contain suitable foraging and stopover habitat for the whooping crane (*Grus americana*) and foraging habitat for the gray wolf (*Canis lupus*).

3.6.1 Endangered Species Act

3.6.1.1 Black-footed Ferret (*Mustela nigripes*)

Federal Status: Endangered

Affects Determination: No Effect

Black-footed ferrets are nocturnal, solitary carnivores of the weasel family that have been largely extirpated from the wild primarily due to range-wide decimation of the prairie dog (*Cynomys* sp.) ecosystem (Kotliar et al. 1999). They have been listed by the USFWS as endangered since 1967, and have been the object of extensive re-introduction programs (USFWS 2010b). Ferrets inhabit extensive prairie dog complexes of the Great Plains, typically composed of several smaller colonies in proximity to one another that provide a sustainable prey base. The *Black-footed Ferret Survey Guidelines for Compliance with the Endangered Species Act* (USFWS 1989) states that ferrets require black-tailed prairie dog (*Cynomys ludovicianus*) towns or complexes greater than 80 acres in size, and towns of this dimension may be important for ferret recovery efforts (USFWS 1988a). Prairie dog towns of this size were not observed during the field survey. In addition, this species has not been observed in the wild for more than 20 years. Therefore, the proposed COLT Connector Pipeline project would have **no effect** on this species.

3.6.1.2 Gray Wolf

Federal Status: Endangered

Affects Determination: No Effect

The gray wolf, listed as endangered in the United States in 1978, was believed extirpated from North Dakota in the 1920s and 1930s with only sporadic reports from the 1930s to present (Licht and Huffman 1996). The presence of wolves in most of North Dakota consists of occasional dispersing animals from Minnesota and Manitoba (Licht and Fritts 1994; Licht and Huffman 1996). Most documented gray wolf sightings that have occurred within western North Dakota are believed to be young males seeking to establish territory (Hagen et al. 2005). The Turtle Mountain region of north-central North Dakota provides marginal habitat that may be able to support a very small population of wolves. The closest known pack of wolves is the Minnesota population located approximately 28 kilometers (km) from the northeast corner of North Dakota.

The gray wolf uses a variety of habitats that support a large prey base, including mountain and low-elevation forests, grasslands, and desert scrub (USFWS 2010c). Due to a lack of forested habitat and distance from Minnesota and Manitoba populations, as well as the troubled relationship between humans and wolves and their vulnerability to being shot in open habitats (Licht and Huffman 1996), the re-establishment of gray wolf populations in North Dakota is unlikely. Additionally, habitat fragmentation may further act as a barrier against wolf recolonization in western North Dakota. Therefore, the proposed COLT Connector Pipeline project would have **no effect** on the gray wolf.

3.6.1.3 Whooping Crane (*Grus americana*)

Federal Status: Endangered

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The whooping crane was listed as endangered in 1970 in the United States by the USFWS and in 1978 in Canada. Historically, population declines were caused by shooting and destruction of nesting habitat in the prairies from agricultural development. Current threats to the species include habitat destruction, especially suitable wetland habitats that support breeding and nesting, as well as feeding and roosting during their fall and spring migration (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007).

The July 2010 total wild population was estimated at 383 (USFWS 2010d). There is only one self-sustaining wild population, the Aransas-Wood Buffalo National Park population, which nests in Wood Buffalo National Park and adjacent areas in Canada, where approximately 83% of the wild nesting sites occur (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007; USFWS 2010d). Williams County, including the survey area, is within the primary migratory flyway of whooping cranes.

Whooping cranes probe the soil subsurface with their bills for foods on the soil or vegetation substrate (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007). Whooping cranes are omnivores and foods typically include agricultural grains, as well as insects, frogs, rodents, small birds, minnows, berries, and plant tubers. The largest amount of time during migration is spent feeding in harvested grain fields (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007). Studies indicate that whooping cranes use a variety of habitats during migration, in addition to cultivated croplands, and generally roost in small palustrine (marshy) wetlands within 1 km of suitable feeding areas (Howe 1987, 1989). Whooping cranes have been recorded in riverine habitats during their migration, with eight sightings along the Missouri River in North Dakota (Canadian Wildlife Service and U.S. Fish and Wildlife Service 2007:18). In these cases, they roost on submerged sandbars in wide, unobstructed channels that are isolated from human disturbance (Armbruster 1990).

Suitable whooping crane foraging habitat (i.e., cultivated cropland) was observed within the survey area. Therefore, the proposed project **may affect, but is not likely to adversely affect** the endangered whooping crane.

3.6.1.4 Piping Plover (*Charadrius melodus*)

Federal Status: Threatened

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The piping plover is a small shorebird which breeds only in three geographic regions of North America: the Atlantic Coast, the Northern Great Plains, and the Great Lakes. Piping plover populations were federally listed as threatened and endangered in 1985, with the Northern Great Plains and Atlantic Coast populations listed as threatened, and the Great Lakes population listed as endangered (USFWS 1985a).

Plovers in the Great Plains make their nests on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands, and on beaches, sand bars, and dredged material islands of major river systems (USFWS 2002, 2010e). The shorelines of lakes of the Missouri River constitute significant nesting areas for the bird. Piping plovers nest on the ground, making shallow scrapes in the sand, which they line with small pebbles or rocks (USFWS 1988b). Anthropogenic alterations of the landscape along rivers and lakes where piping plover nest have increased the number and type of predators, subsequently decreasing nest success and chick survival (USFWS 2002, 2010e). The birds fly south by mid to late August to areas along the Texas coast and Mexico (USFWS 2002). The Northern Great Plains population has continued to decline despite federal listing, with population estimates of 1,500 breeding pairs in 1985 reduced to fewer than 1,100 in 1990. Low survival of adult birds has been identified as a factor (Root et al. 1992). Current conservation strategies include identification and preservation of known nesting sites, public education, and limiting or preventing shoreline disturbances near nests and hatched chicks (USFWS 1988b, 2010e).

A suitable shoreline habitat for breeding and nesting plovers does not occur within the survey area, and Lake Sakakawea is a minimum of 13 river miles away from the proposed survey area. It is unlikely that migrating plovers would visit the survey area during their migration. Therefore, the proposed project **may affect, but is not likely to adversely affect** piping plovers.

3.6.1.5 Designated Critical Habitat of Piping Plover

Affect Determination: No Effect

The USFWS has designated critical habitat for the Great Lakes and Northern Great Plains populations of piping plover (USFWS 2002). Designated critical habitat for the piping plover includes 183,422 acres and 1,207.5 river miles of habitat along the shoreline of Lake Sakakawea in McKenzie County, North Dakota (USFWS 2002).

Since the proposed project will not modify, alter, disturb, or affect the shoreline of Lake Sakakawea or any of its tributary streams in any way, **no effect** to designated critical habitat of the piping plover would occur.

3.6.1.6 Interior Least Tern (*Sterna antillarum*)

Federal Status: Endangered

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The interior population of the least tern is listed as endangered by the USFWS (1985b). This bird is the smallest member of the gull and tern family, measuring approximately 9 inches in

length. Terns remain near flowing water, where they feed by hovering over and diving into standing or flowing water to catch small fish (USFWS 2010f).

The interior population of least terns breeds in isolated areas along the Missouri, Mississippi, Ohio, Red, and Rio Grande river systems, where they nest in small colonies. From late April to August, terns nest in a shallow hole scraped in an open sandy area, gravel patch, or exposed flat and bare sandbars along rivers, sand and gravel pits, or lake and reservoir shorelines. The adults continue to care for chicks after they hatch. Least terns in North Dakota will often be found sharing sandbars with the piping plover, a threatened species (USFWS 2010f).

Census data indicate over 8,000 least terns in the interior population. In North Dakota, the least tern is found mainly on the Missouri River from Garrison Dam south to Lake Oahe, and on the Missouri and Yellowstone rivers upstream of Lake Sakakawea (USFWS 1990a, 2010f). Approximately 100 pairs breed in North Dakota (USFWS 2010f). Details of their migration are not known, but their winter range is reported to include the Gulf of Mexico and Caribbean Islands (USFWS 1990a, 2010f).

Loss of suitable breeding and nesting habitat for terns has resulted from dam construction and river channelization on major rivers throughout the Mississippi, Missouri, and Rio Grande River systems. River and reservoir changes have led to reduced sandbar formation and other shoreline habitats for breeding, resulting in population declines. In addition, other human shoreline disturbances affect the species (USFWS 1990a). Critical habitat has not been designated for the species (USFWS 2010f).

Current conservation strategies include identification and avoidance of known nesting areas, public education, and limiting or preventing shoreline disturbances near nests and hatched chicks (USFWS 2010f).

A suitable shoreline habitat for breeding and nesting terns does not occur in the survey area, and Lake Sakakawea is a minimum of 13 river miles away from the survey area. It is unlikely that terns would visit the upland or wetland habitats present in the survey area. Therefore, the proposed COLT Connector Pipeline project **may affect, but is not likely to adversely affect** endangered least terns.

3.6.1.7 Pallid Sturgeon (*Scaphirhynchus albus*)

Federal Status: Endangered

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The pallid sturgeon was listed as Endangered in 1990 in the United States by the USFWS (1990b). The primary factor leading to the decline of this species is the alteration of habitat through river channelization, creation of impoundments, and alteration of flow regimes (USFWS 1990b). These alterations within the Missouri River have blocked movements to spawning, feeding, and rearing areas; destroyed spawning habitat; altered flow conditions which can delay spawning cues; and reduced food sources by lowering productivity (USFWS 2007a). The fundamental elements of pallid sturgeon habitat are defined as the bottom of swift waters of large, turbid, free-flowing rivers with braided channels, dynamic flow patterns, flooding of terrestrial habitats, and extensive microhabitat diversity (USFWS 1990b).

The pallid sturgeon population which may be found approximately 13 river miles from the survey area occurs from the Missouri River below Fort Peck Dam to the headwaters of Lake Sakakawea and the lower Yellowstone River up the confluence of the Tongue River, Montana (USFWS 2007a). This population consists of approximately 136 wild adult pallid sturgeon (USFWS 2007a). Hatchery reared sturgeon have also been stocked since 1998. The pallid sturgeon has been found to utilize the 25 km of riverine habitat that would be inundated by Lake Sakakawea at full pool (Bramblett 1996 per USFWS 2007a). Larval pallid sturgeons have also been found to drift into Lake Sakakawea. While the majority of pallid sturgeons are found in the headwaters of Lake Sakakawea, North Dakota Game and Fish have caught and released pallid sturgeon in nets set in 80 to 90 feet of water between the New Town and Van Hook area. Based on this information, pallid sturgeon could be found throughout Lake Sakakawea (personal communication, email from Steve Krentz, Pallid Sturgeon Project Lead, U.S. Fish and Wildlife Service, to Mike Cook, Aquatic Ecologist, SWCA Environmental Consultants, September 3, 2010).

A suitable habitat for pallid sturgeon does not occur in the survey area, and Lake Sakakawea is a minimum of 13 river miles away from the proposed survey area. However, Beaver Creek, which drains a portion of the survey area, is a perennial tributary to the Missouri River and Lake Sakakawea. Potential pollution occurring as a result of construction activities and pipeline operations are concerns for downstream populations of endangered pallid sturgeon. Activities associated with the construction, reclamation, and operation of the proposed COLT Connector Pipeline project are not anticipated to adversely affect water quality and subsequently the pallid sturgeon. Therefore, the proposed project **may effect, but is not likely to adversely affect** pallid sturgeon.

3.6.1.8 Dakota Skipper (*Hesperia dacotae*)

Federal Status: Candidate

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The Dakota skipper is a small butterfly with a 1-inch wingspan and is found primarily in undisturbed native tall grass and upland dry mixed grass prairie areas with a high diversity of wildflowers and grasses (Committee on the Status of Endangered Wildlife in Canada 2003). The Dakota skipper appears to require a range of precipitation-evaporation ratios between 60 and 105 and a soil pH between 7.2 and 7.9 (McCabe 1981). Larvae feed on grasses, favoring little bluestem. Adults commonly feed on nectar of flowering native forbs such as harebell (*Campanula rotundifolia*), wood lily (*Lilium philadelphicum*), and purple coneflower. The species is threatened by conversion of native prairie to cultivated agriculture or shrublands, over-grazing, invasive species, gravel mining, and inbreeding (USFWS 2005). Dakota skippers are not known to occur within the survey area; however, suitable habitat does occur. The proposed project **may affect, but is not likely to adversely affect** this species. The use of best management practices and conservation guidelines (USFWS 2007b) during construction and operation and immediate reclamation of short-term disturbance should decrease direct, indirect, and cumulative impacts to this species.

3.6.1.9 Sprague's Pipit (*Anthus spragueii*)

Federal Status: Candidate

Affect Determination: May Affect, Is Not Likely to Adversely Affect

The Sprague's pipit is a small passerine bird that is native to the North American grasslands. It is a ground nester that breeds and winters on open grasslands and feeds mostly on insects and spiders and some seeds. The Sprague's pipit is closely tied with native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota, and South Dakota as well as south-central Canada (USFWS 2010g). Wintering occurs in the southern states of Arizona, Texas, Oklahoma, Arkansas, Mississippi, Louisiana, and New Mexico. Within the survey area, suitable habitat does occur. The proposed project **may affect, but is not likely to adversely affect** this species.

3.6.2 Migratory Bird Treaty Act / Bald and Golden Eagle Protection Act

3.6.2.1 Bald Eagle (*Haliaeetus leucocephalus*)

Federal Status: Delisted in 2007; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Effects of Project: No adverse effects anticipated

Suitable nesting or foraging habitat for bald eagles includes old growth trees relatively close (usually less than 1.24 miles [Hagen et al. 2005]) to perennial waterbodies. The survey area does not contain old growth trees and is at least 6.4 actual miles from Lake Sakakawea. Therefore, no adverse effects are anticipated. However, the possibility of transient, flying bald eagle individuals traversing the survey area does exist.

3.6.2.2 Golden Eagle (*Aquila chrysaetos*)

Federal Status: Unlisted; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Effects of Project: No adverse effects anticipated

No golden eagles were observed during the field surveys, however, golden eagles may occur within or near the survey area. The golden eagle prefers habitat characterized by open prairie, plains, and forested areas. Usually, golden eagles can be found in proximity to badland cliffs which provide suitable nesting habitat. However, no primary or secondary indication of golden eagle presence, including nests, was observed within or near the survey area during the field survey. Therefore, the proposed project is unlikely to cause any adverse effects to golden eagles.

3.6.3 Wildlife Observed

During the field survey, SWCA ecologists observed different species of wildlife which utilize wetlands and other habitat within the survey area. Species observed included a leopard frog (*Rana pipiens*), ring-necked pheasant (*Phasianus colchicus*), and a sharp-tailed grouse (*Tympanicus phasianellus*).

Additionally, secondary observations of a northern raccoon (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), bivalve shells, and various waterfowl were observed.

3.7 TREE, SAPLING, AND SHRUB COUNT

During SWCA’s field survey, approximately 15 windbreaks and 9 naturally occurring forested upland and shrubland areas were geographically referenced within the survey area. SWCA calculated an average density of 182 individual silver buffaloberry individuals per acre. Table 5 indicates the number of trees estimated to be impacted by the COLT Connector Pipeline project as currently proposed. The ND PSC requires a 2:1 post- to pre-construction mitigation for all trees impacted during the construction of the proposed pipeline. Therefore, SWCA estimates approximately 720 2-year-old sapling individuals will need to be replanted in order to fulfill the 2:1 mitigation requirement.

Table 5. Tree, Sapling, and Shrub Count

Woody Vegetation (WV) ID	Species	Type	Number of Trees		Estimated Mitigation Commitment
			200-foot Survey ROW	100-foot Construction ROW	
WV1	<i>Elaeagnus angustifolia</i> , <i>Caragana arborescens</i>	Farmstead windbreak	117	0	0
WV2	<i>Shepherdia argentea</i>	Natural	60	42	84
WV3	<i>Shepherdia argentea</i> , <i>Fraxinus pennsylvanica</i>	Natural	21	2	4
WV4	<i>Shepherdia argentea</i>	Natural	5	2	4
WV5	<i>Shepherdia argentea</i>	Natural	20	9	18
WV6	<i>Prunus virginiana</i>	Natural	50	7	14
WV7	<i>Prunus virginiana</i>	Natural	75	4	8
WV8	<i>Crataegus mollis</i>	Natural	75	20	40
WV9	<i>Pinus ponderosa</i>	Field windbreak	16	8	16
WV10	<i>Prunus virginiana</i>	Field windbreak	40	20	40
WV11	<i>Pinus ponderosa</i>	Field windbreak	40	20	40
WV12	<i>Pinus ponderosa</i>	Field windbreak	40	20	40
WV13	<i>Ulmus pumila</i> , <i>Pinus ponderosa</i> , <i>Caragana arborescens</i>	Farmstead windbreak	120	60	120
WV14	<i>Shepherdia argentea</i>	Natural	5	5	10
WV15	<i>Ulmus pumila</i> , <i>Fraxinus pennsylvanica</i>	Field windbreak	22	11	22
WV16	<i>Ulmus pumila</i> , <i>Fraxinus pennsylvanica</i>	Field windbreak	10	5	10
WV17	<i>Ulmus pumila</i> , <i>Fraxinus pennsylvanica</i>	Field windbreak	25	12	24
WV18	<i>Ulmus pumila</i> , <i>Fraxinus pennsylvanica</i>	Field windbreak	30	15	30

Woody Vegetation (WV) ID	Species	Type	Number of Trees		Estimated Mitigation Commitment
			200-foot Survey ROW	100-foot Construction ROW	
WV19	<i>Ulmus pumila, Fraxinus pennsylvanica</i>	Field windbreak	50	25	50
WV20	<i>Ulmus pumila, Fraxinus pennsylvanica</i>	Field windbreak	46	23	46
WV21	<i>Ulmus pumila, Fraxinus pennsylvanica</i>	Field windbreak	45	22	44
WV22	<i>Ulmus pumila, Fraxinus pennsylvanica</i>	Field windbreak	40	20	40
WV23	<i>Ulmus pumila, Fraxinus pennsylvanica</i>	Field windbreak	10	5	10
WV24	<i>Ulmus pumila, Shepherdia argentea, Prunus virginiana</i>	Natural	3	3	6

4.0 CONCLUSIONS AND RECCOMENDATIONS

1. SWCA ecologists recorded approximately 3.9 acres of wetlands within the survey area.
2. In total, 1.97 acres of PEM wetland *may* be temporarily impacted by construction activities.
3. SWCA estimates 360 trees, saplings, and shrubs may be impacted. Therefore, approximately 720 2-year-old saplings may need to be replanted to fulfill the 2:1 mitigation requirement.
4. According to the recommendations of the North Dakota Forest Service, tree species selection for replacement should be accomplished through collaboration with a reputable area nursery. This will allow for species to be selected based on various factors including species hardiness and area soil type (personal communication, telephone conversation between Tom Claeys, Forestry and Fire Management Team Leader, North Dakota Forest Service, and Michael Cook, Ecologist, SWCA, December 7, 2009).
5. According to the recommendations of the North Dakota Forest Service, non-native species are permitted and to an extent recommended for planting as they may be more resistant to known tree pathogens in the area (personal communication, telephone conversation between Tom Claeys, Forestry and Fire Management Team Leader, North Dakota Forest Service, and Michael Cook, Ecologist, SWCA, December 7, 2009).
6. No threatened or endangered species were observed during the field survey. The known species which occur in Williams County are not likely to be detrimentally impacted by construction activities.

5.0 LITERATURE CITED

- Armbruster, M.J. 1990. Characterization of habitat used by whooping cranes during migration. *Biological Report* 90(4):1–16.
- Bramblett, R.G. 1996. Habitats and Movements of Pallid and Shovelnose Sturgeon in the Yellowstone and Missouri Rivers, Montana and North Dakota. Doctoral dissertation. Montana State University, Bozeman.
- Canadian Wildlife Service and U.S. Fish and Wildlife Service. 2007. International recovery plan for the whooping crane. Ottawa: Recovery of Nationally Endangered Wildlife (RENEW), and U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- Committee on the Status of Endangered Wildlife in Canada. 2003. COSEWIC Assessment and Status Report on the Dakota Skipper *Hesperia dacotae* in Canada. Ottawa: Committee on the Status of Endangered Wildlife in Canada.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Determination Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.
- Hagen, S.K., P.T. Isakson, and S.R. Dyke. 2005. *North Dakota Comprehensive Wildlife Conservation Strategy*. North Dakota Game and Fish Department. Bismarck, ND.
- Howe, M.A. 1987. Habitat use by migrating whooping cranes in the Aransas-Wood Buffalo corridor. In *Proceedings of the 1985 Crane Workshop*, edited by C. Lewis and J.W. Ziewitz, pp. 303–311. Platte River Whooping Crane Habitat Maintenance Trust and USFWS, Grand Island, Nebraska.
- . 1989. *Migration of Radio-Marked Whooping Cranes from the Aransas-Wood Buffalo Population: Patterns of Habitat Use, Behavior, and Survival*. USFWS Technical Report.
- Kotliar, N.B., B.W. Baker, A.D. Whicker, and G. Plumb. 1999. A critical review of assumptions about the prairie dog as a keystone species. *Environmental Management* 24(2):177–192.
- Licht, D.S., and S.H. Fritts. 1994. Gray wolf (*Canis lupus*) occurrences in the Dakotas. *American Midland Naturalist* 132:74–81.
- Licht, D.S., and L.E. Huffman. 1996. Gray wolf status in North Dakota. *The Prairie Naturalist* 28(4):169–174.
- McCabe, T.L. 1981. The Dakota skipper (*Hesperia dacotae* [Skinner]): Range and biology, with special reference to North Dakota. *Journal of the Lepidopterists' Society* 35(3):179–193.

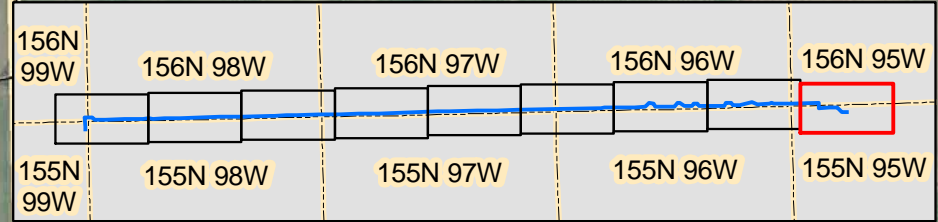
- National Oceanic and Atmospheric Administration. 2009. National Weather Service Office; Williston, ND. Archived Monthly Data. Last updated September 2009.
- Natural Resources Conservation Service (NRCS). 2009. Web Soil Survey. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Available online at <http://websoilsurvey.nrcs.usda.gov> and <http://soildatamart.nrcs.usda>. Accessed October 7, 2009.
- Root, B.G., M.R. Ryan, and P.M. Mayer. 1992. Piping plover survival in the Great Plains. *Journal of Field Ornithology*, Vol. 63, No. 1, pp. 10–15.
- U.S. Army Corps of Engineers (USACE). 2008. *Interim Regional Supplement to the Corps of Engineers Wetland Determination Manual: Great Plains Region*. Edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-12. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service (USFWS). 1978. Reclassification of the gray wolf in the United States and Mexico, with determination of critical habitat in Michigan and Minnesota. *Federal Register* 43(47):9607–9615.
- . 1985a. Endangered and Threatened Wildlife and Plants: Determination of Endangered and Threatened Status for the Piping Plover. *Federal Register* 50 (238):50726–50734.
- . 1985b. Interior population of the least tern. *Federal Register* 50 FR 21784–21792. May 28, 1985.
- . 1988a. Black-footed Ferret Recovery Plan. U.S. Fish and Wildlife Service. Denver, Colorado. 154 pp.
- . 1988b. Great Lakes and Northern Great Plains Piping Plover Recovery Plan. U.S. Fish and Wildlife Service, Twin Cities, MN. 160 pp.
- . 1989. Black-footed Ferret Survey Guidelines for Compliance with the Endangered Species Act. Denver and Albuquerque: U.S. Fish and Wildlife Service.
- . 1990a. Interior Population of the Least Tern Recovery Plan. U.S. Fish and Wildlife Service, Twin Cities, MN. 160 pp.
- . 1990b. Endangered and threatened wildlife and plants; Determination of endangered status for the pallid sturgeon. *Federal Register* 55(173):36641–36647.
- . 2002. Designation of Critical Habitat for the Northern Great Plains Breeding Population of the Piping Plover; Final Rule. *Federal Register*. September 11, 2002 (Volume 67, Number 176), Rules and Regulations, pp. 57637–57717.
- . 2005. Endangered and Threatened Wildlife and Plants; Review of Native Species that are Candidates or Proposed for Listing as Endangered or Threatened; Annual

Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. *Federal Register* 70(90):24870–24934.

- . 2007a. Pallid sturgeon (*Scaphirhynchus albus*) 5-year review summary and evaluation. U.S. Fish and Wildlife Service, Pallid Sturgeon Recovery Coordinator. Billings, Montana.
 - . 2007b. Dakota skipper conservation guidelines *Hesperia dacotae* (Skinner) (Lepidoptera: Hesperidae). U.S. Fish and Wildlife Service, Twin Cities Field Office. Available online at <http://www.fws.gov/midwest/endangered/insects/dask-cons-guid2007.pdf>. Accessed September 3, 2010.
 - . 2010a. County Occurrence of Endangered, Threatened, and Candidate Species and Designated Critical Habitat in North Dakota. Available online at http://www.fws.gov/northdakotafieldoffice/county_list.htm. Accessed May 14, 2010.
 - . 2010b. Black-footed ferret. Available online at <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A004>. Accessed September 7, 2010.
 - . 2010c. Gray wolf. Available online at <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A00D>. Accessed September 7, 2010.
 - . 2010d. Whooping crane. Available online at <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B003>. Accessed September 2, 2010.
 - . 2010e. Piping plover. Available online at <http://www.fws.gov/mountain-prairie/species/birds/pipingplover>. Accessed September 7, 2010.
 - . 2010f. Least tern (interior population). Available online at <http://www.fws.gov/southwest/es/oklahoma/lestern.htm>. Accessed September 7, 2010.
 - . 2010g. Endangered and threatened wildlife and plants; 12-month finding on a petition to list Sprague’s pipit as endangered or threatened throughout its range. *Federal Register* 75(178): 56028-56050.
- U.S. Geological Survey. 2006. Ecoregions of North Dakota and South Dakota. Available at <http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/42c.htm>. Last updated August 2006.

APPENDIX A
Vicinity Maps and Site Layout Maps

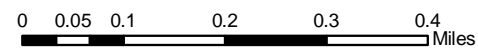
COLT Connector Pipeline



Legend

- Field Surveyed/Final Pipeline Alignment
- Originally Proposed Pipeline Alignment
- 200-foot Surveyed Area
- 100-foot Construction ROW
- Stream
- Ephemeral Drainage
- Existing Road
- Woody Vegetation
- Pond
- Wetland
- Township/Range
- Section Line

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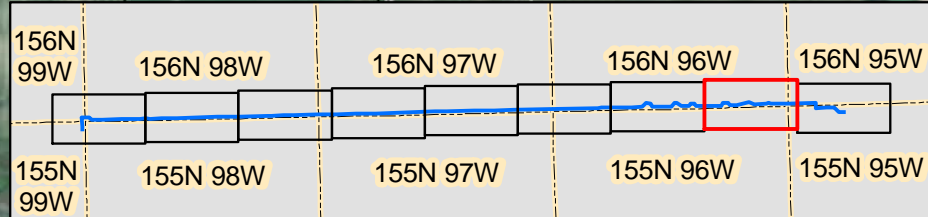


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 Agricultural Imagery Program, 2010
 Williams County, North Dakota

UTM Zone 13N, NAD83, Meters
 January 03, 2011



COLT Connector Pipeline

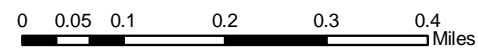


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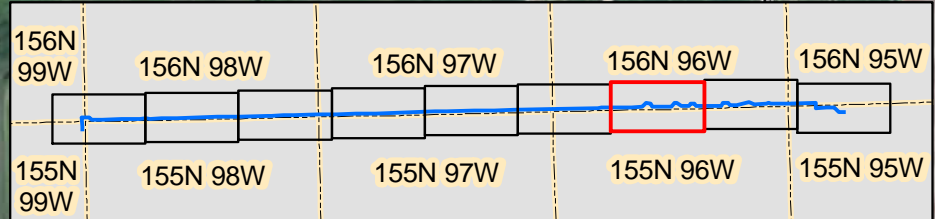


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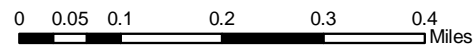
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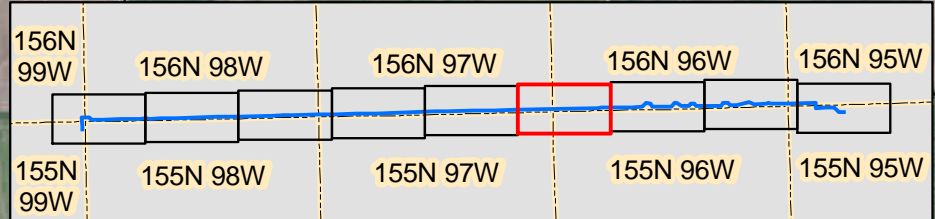
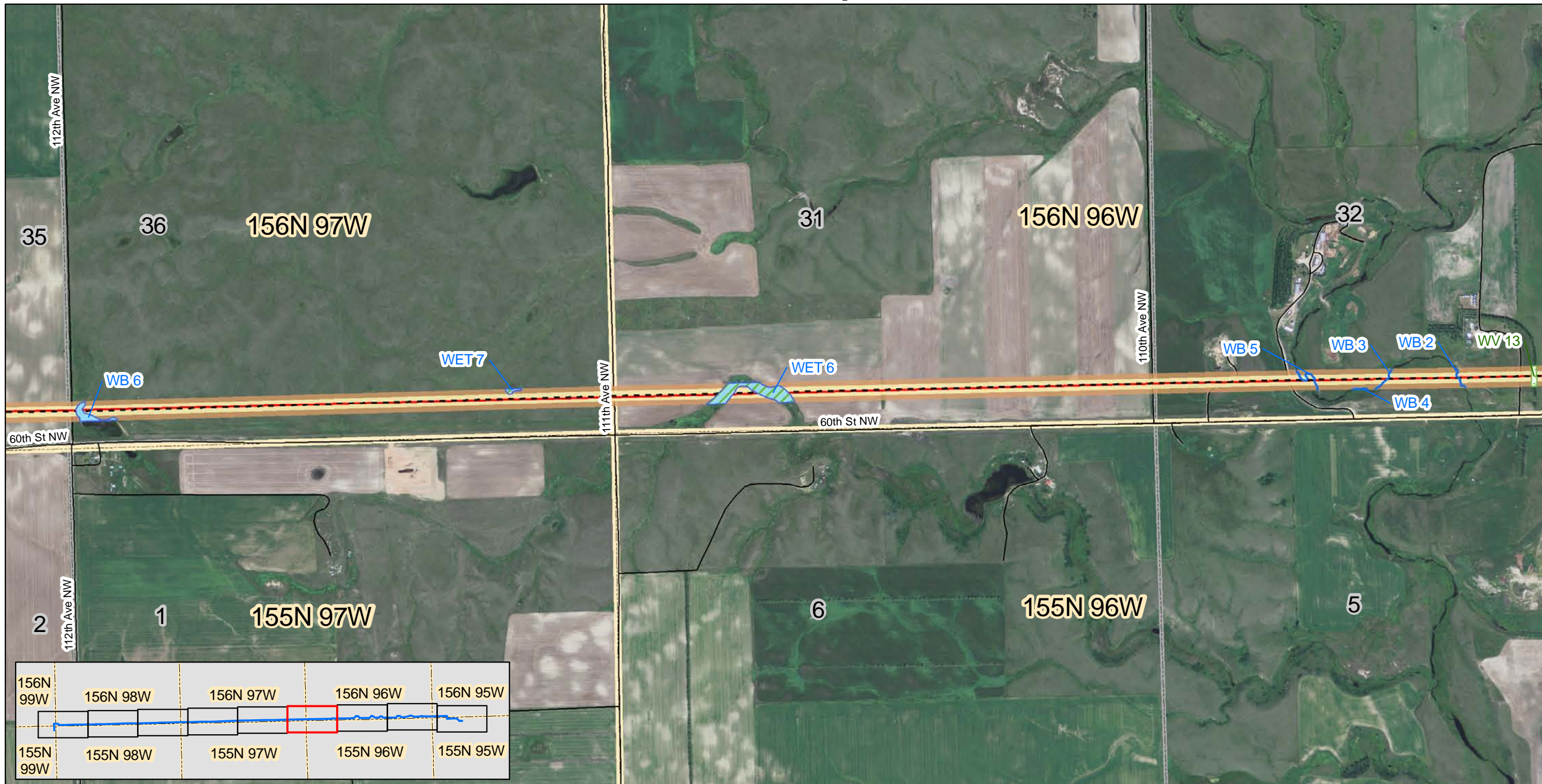


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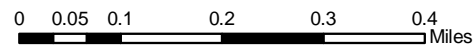
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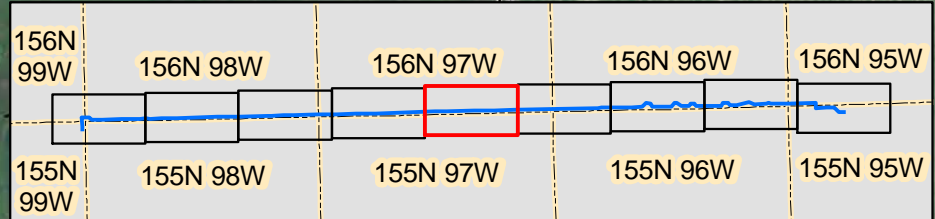
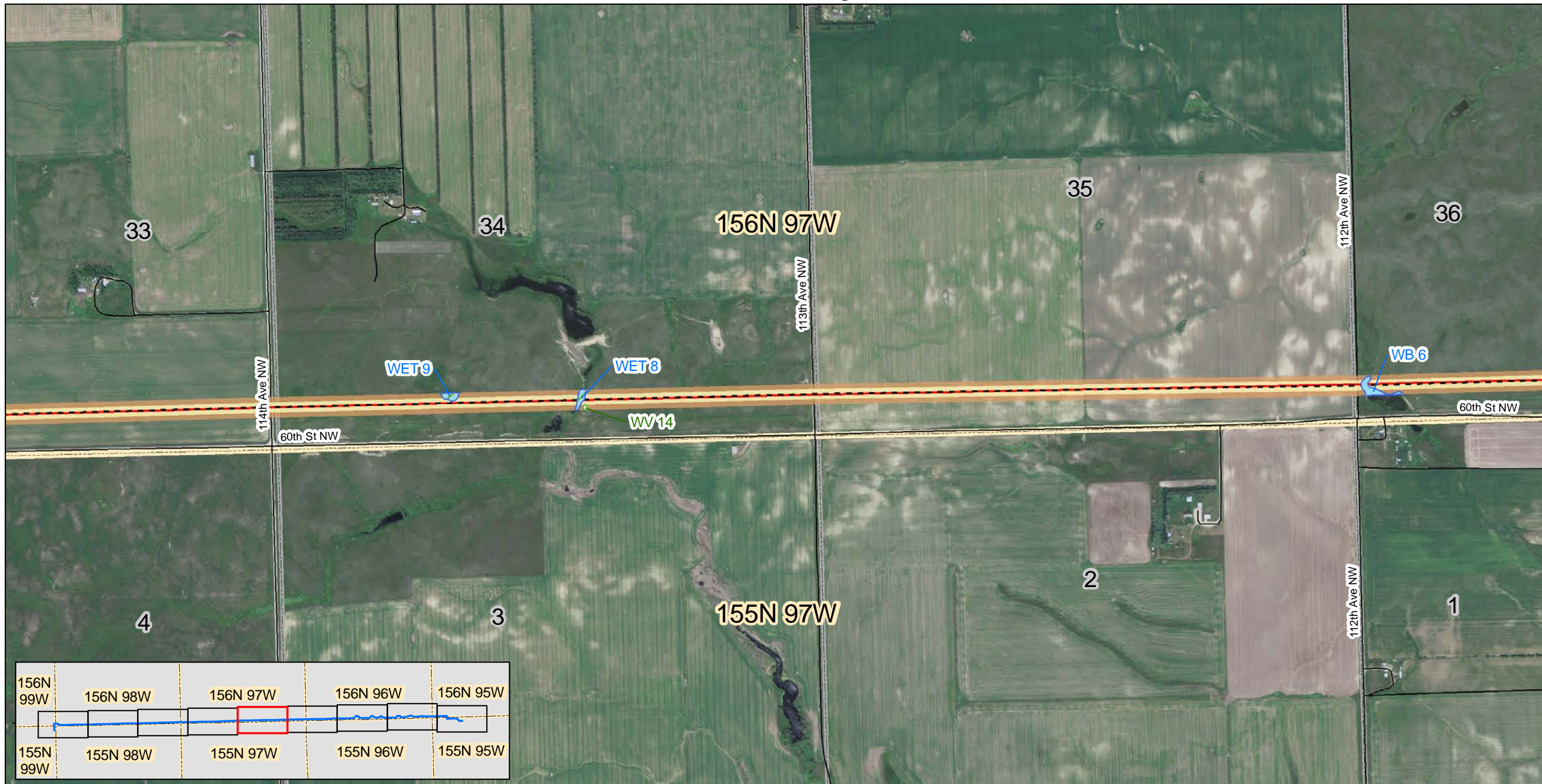


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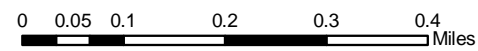
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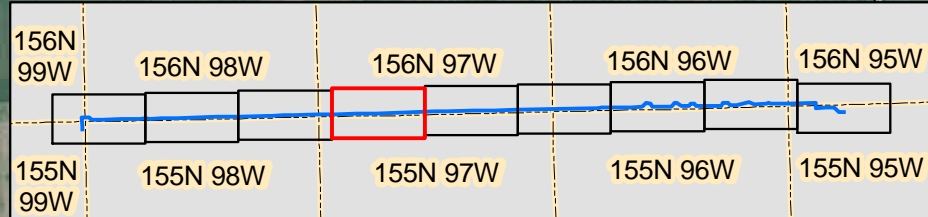
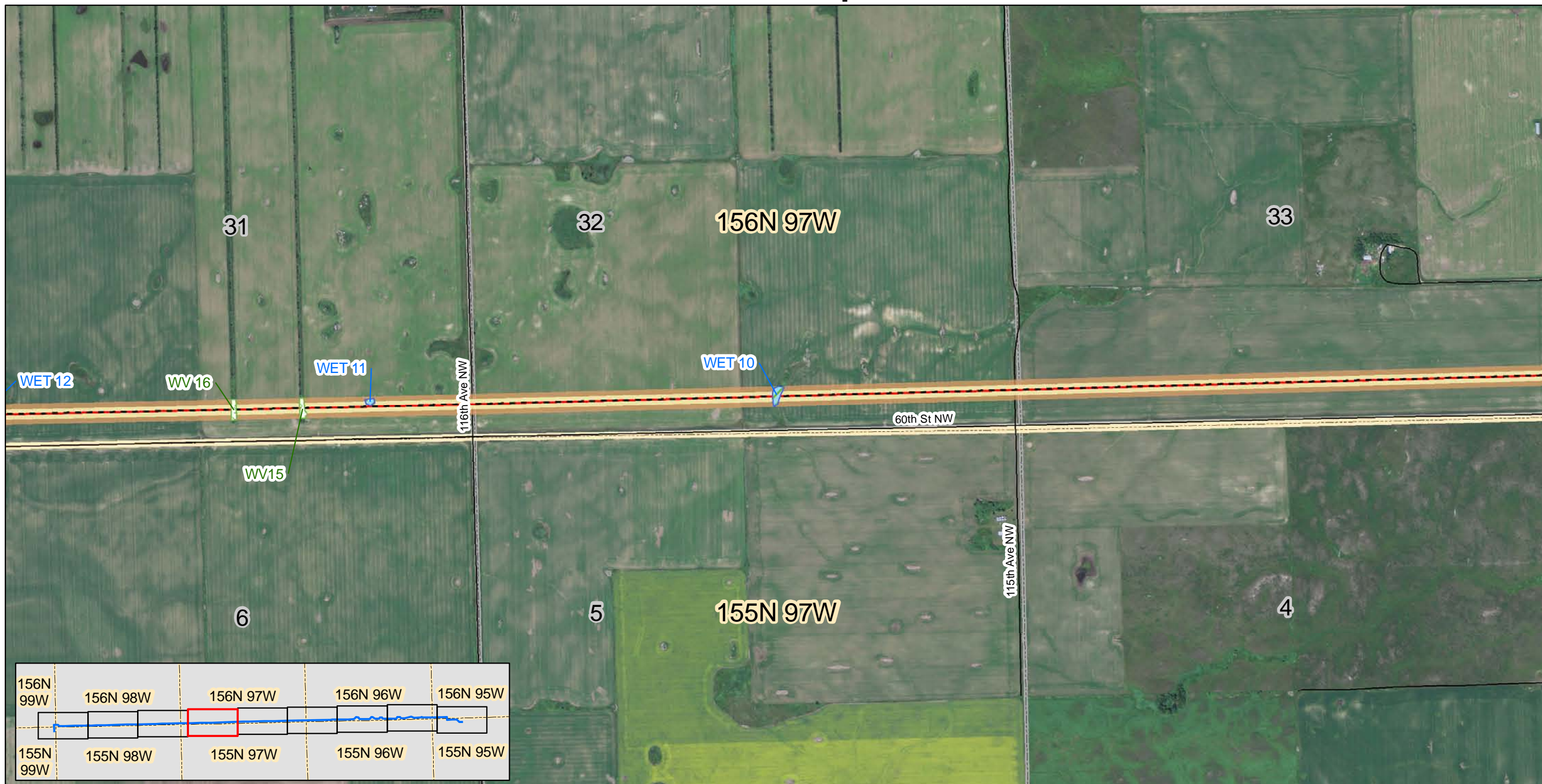


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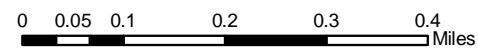


Legend

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|---------------------------------------------|---------------------------|------------------|----------------|
| --- Field Surveyed/Final Pipeline Alignment | 100-foot Construction ROW | Woody Vegetation | Township/Range |
| — Originally Proposed Pipeline Alignment | Stream | Pond | Section Line |
| 200-foot Surveyed Area | Ephemeral Drainage | Wetland | |
| | Existing Road | | |



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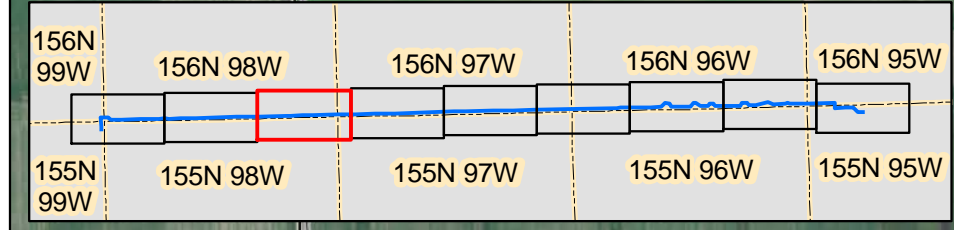
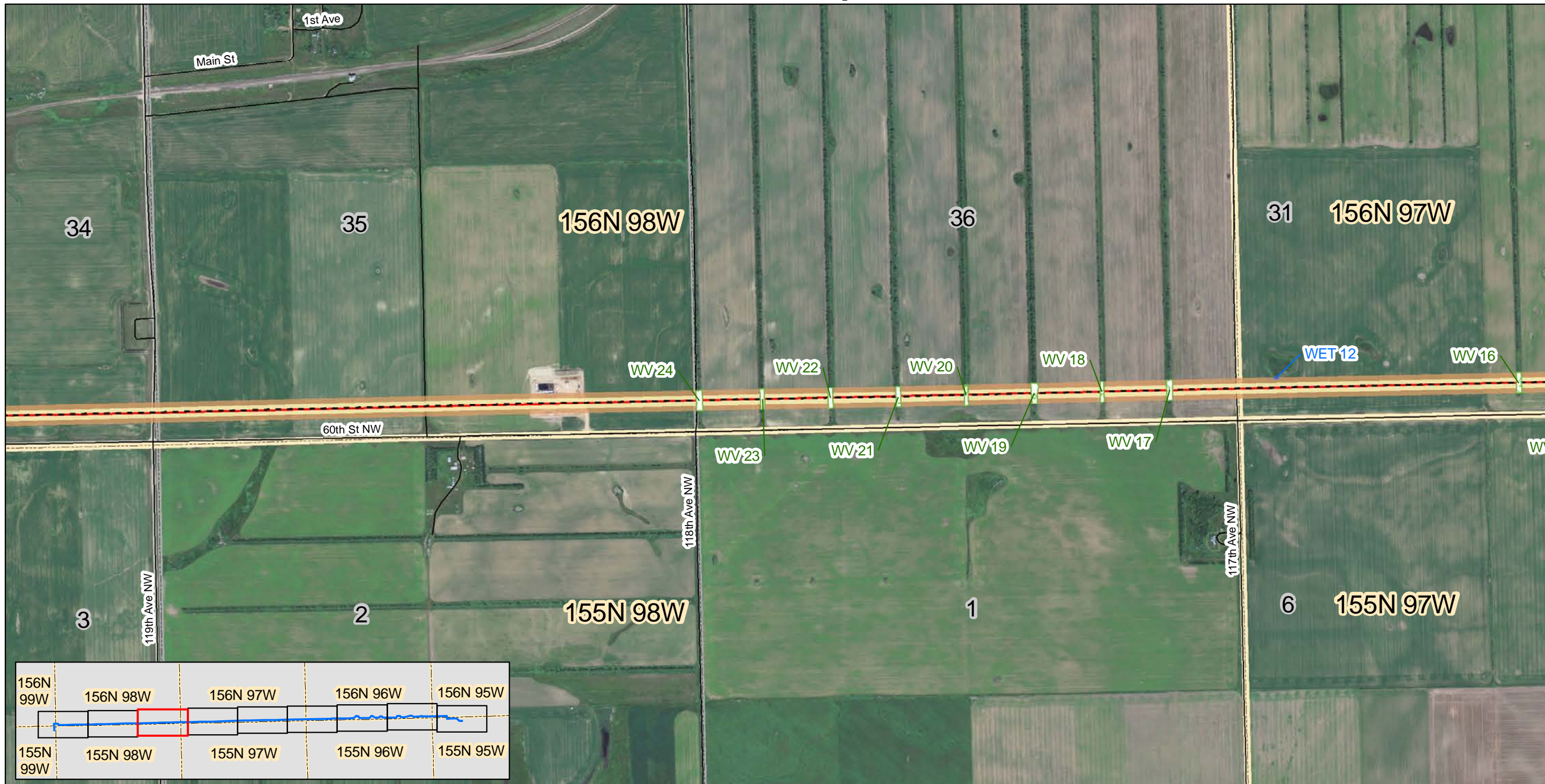


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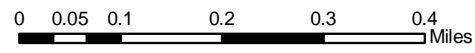
COLT Connector Pipeline



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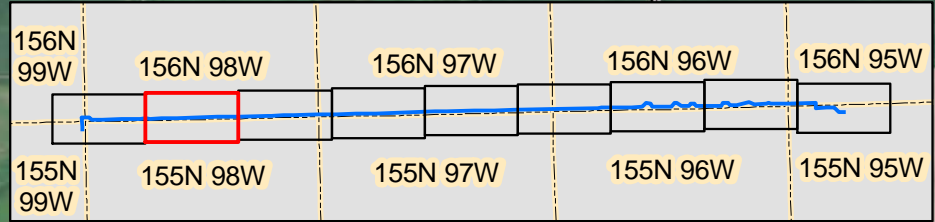


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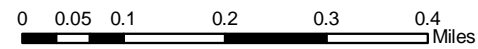


Legend

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| --- Field Surveyed/Final Pipeline Alignment | 100-foot Construction ROW | Woody Vegetation | Township/Range |
| — Originally Proposed Pipeline Alignment | Stream | Pond | Section Line |
| 200-foot Surveyed Area | Ephemeral Drainage | Wetland | |
| | Existing Road | | |



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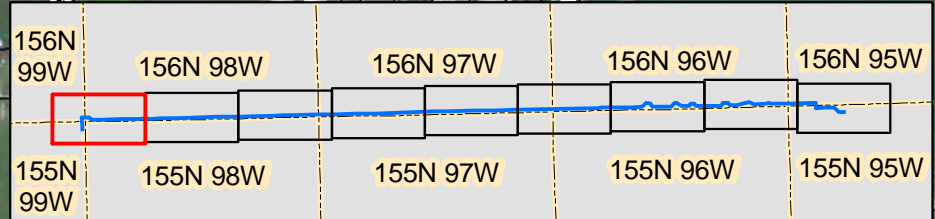
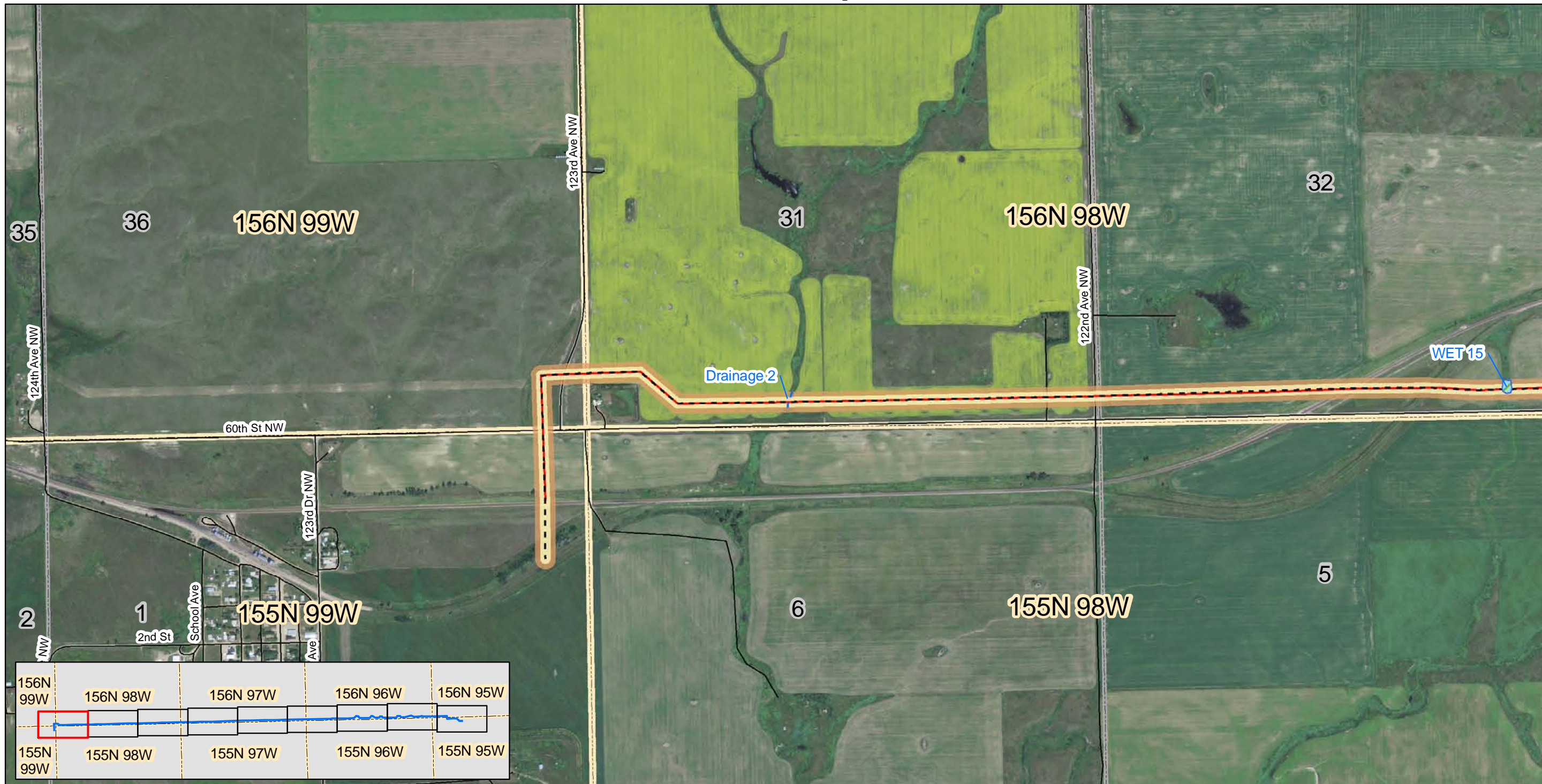


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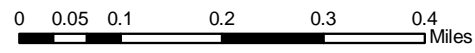
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APPENDIX B
Photographic Log



Photograph 1. Facing west looking across wheat stubble field.



Photograph 2. Facing west toward WET 1



Photograph 3. Facing east toward waterbody near WET 6



Photograph 4. Facing west toward Beaver Creek



Photograph 5. Facing west toward Beaver Creek



Photograph 6. Facing west along centerline



Photograph 7. Facing east along centerline



Photograph 8. Facing south toward termination point of proposed alignment.

APPENDIX C
USDA-NRCS Soil Map Unit Descriptions

AMOR

The Amor series consists of moderately deep, well-drained, moderately permeable soils found on sandstone bedrock uplands with slopes ranging from approximately 0 to 25 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 15 inches and mean annual air temperature is approximately 42 degrees Fahrenheit (°F). This soil type is largely used for cultivation of small grains, flax, and corn. Native vegetation species common to this soil type include needleandthread (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), and blue grama (*Bouteloua gracilis*) (NRCS 2009).

ARNEGARD

The Arnegard series consists of very deep, well- or moderately well-drained soils that formed in calcareous loamy alluvium on upland swales, terraces, fans, and foot slopes. Permeability is moderate. Slopes range from 0 to 25 percent. Mean annual air temperature is 42°F, and mean annual precipitation is 14 inches. Most areas are cropped to spring wheat, oats, barley, and hay. Native vegetation is mid, tall, and short grasses such as western wheatgrass, green needlegrass (*Nasella viridula*), big bluestem (*Andropogon gerardii*), and blue grama (NRCS 2009).

BOWDLE

The Bowdle series consists of well-drained soils formed in loamy alluvium underlain by sand and gravel. The soils are moderately deep over sand and gravel and are on outwash plains and stream terraces. Permeability is moderate in the solum and rapid or very rapid in the underlying material. Slopes range from 0 to 15 percent. Mean annual precipitation is about 18 inches, and mean annual air temperature is about 44°F. This soil type is primarily cropped to small grain, alfalfa, and some flax and corn. Native vegetation is primarily western wheatgrass, blue grama, green needlegrass, needleandthread, forbs, and sedges (NRCS 2009).

CABBA

The Cabba series consists of shallow, well-drained, moderately permeable soils found on hills, escarpments, and sedimentary plains. The soil slopes broadly range between 2 and 70 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 16 inches and mean annual air temperature is approximately 43°F. The most common vegetation species found on this soil type are little bluestem (*Schizachyrium scoparium*), green needlegrass, and other various herbs, forbs, and shrub species (NRCS 2009).

FARNUF

The Farnuf series consists of very deep, well-drained soils that formed in alluvium, glaciolacustrine, or glaciofluvial deposits. These soils are on alluvial fans, stream terraces, hills, sedimentary plains, glacial lake plains, moraines, and outwash plains. Slopes are 0 to 35 percent. Mean annual precipitation is approximately 16 inches and mean annual air temperature is approximately 42°F. Farnuf soils are used mainly for irrigated and nonirrigated cropland. The potential native vegetation is primarily mid and short grasses such as western wheatgrass, prairie sandreed (*Calamovilfa longifolia*), green needlegrass, little bluestem, needleandthread, blue grama, shrubs, and forbs (NRCS 2009).

KORCHEA

The Korchea series consists of very deep, well-drained soils found on floodplains and low stream terraces. Permeability is moderate with slopes ranging from approximately 0 to 6 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 15 inches and mean annual air temperature is approximately 42°F. This soil type is used most often for cultivation of small grains, hay, and corn. Alternatively, this soil is used for rangeland foraging. Native vegetation species common to this soil type include needleandthread, green needlegrass, and western wheatgrass (NRCS 2009).

LEHR

The Lehr series consists of very deep, somewhat excessively drained shallow that formed in loamy alluvium over sand and gravel. Permeability is moderate or moderately rapid in the upper part and rapid or very rapid in the substratum. These soils are on outwash plains and stream valley terraces and have slopes ranging from 0 to 25 percent. Mean annual air temperature is 40°F, and mean annual precipitation is 14 inches. Where cultivated, small grains, corn, and hay are the principal crops. In pastures, the native vegetation consists of mid and short prairie grasses such as western wheatgrass, blue grama, and upland sedges (NRCS 2009).

WABEK

The Wabek series consists of very deep, excessively drained, rapidly and very rapidly permeable soils formed in sand and gravel glaciofluvial deposits. These soils are on outwash plains, beach ridges, terraces, and terrace escarpments and have slopes of 0 to 45 percent. Mean annual air temperature is 42°F, and mean annual precipitation is 16 inches. This series is used mainly for range and pasture. Native vegetation is blue grama, upland sedges (*Carex* spp.), western wheatgrass, needleandthread, and forbs (NRCS 2009).

WILLIAMS

The Williams series consists of very deep, slowly permeable, well-drained soils found on glacial till plains and moraines with slopes at approximately 0 to 35 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 14 inches and mean annual air temperature is approximately 42°F. This soil type is largely used for cultivation. Native vegetation species common to this soil type include western wheatgrass, needleandthread, blue grama, and green needlegrass (NRCS 2009).

ZAHL

The Zahl series consists of very deep, slowly permeable, well-drained soils found on glacial till plains, moraines, and valley side slopes at approximately 1 to 60 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 14 inches and mean annual air temperature is approximately 40°F. This soil type is largely used for rangeland foraging. Native vegetation species common to this soil type include western wheatgrass, little bluestem, and needleandthread (NRCS 2009).

APPENDIX D
USACE NWP 12 Information

Nationwide Permit (12) Utility Line Activities (3/19/2007)

Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidcast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 27.) (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

REGIONAL CONDITIONS:

1. Construction of access roads is limited to 1/3 acre of impacts to waters of the United States.
2. Notification is required for discharges associated with the construction of utility line substations that result in the loss of greater than 5000 square feet of waters of the United States.

3. For utility activities requiring notification the permittee shall submit the following information:

- a. A map of the entire utility corridor including a delineation of all wetlands and waters of the United States within the corridor. Aquatic resource information shall be submitted using the Cowardin Classification System mapping conventions (e.g. PFO, PEM, POW, etc.).
- b. An alternatives analysis, which specifically addresses the following:
 - i. Selection of an alignment, which avoids and minimizes wetland impacts to the maximum extent practicable. The utility line should make a direct or perpendicular crossing of a stream. Directional drilling is the preferred method of installation when possible, especially in tidal waters.
 - ii. Selection of an alignment, which avoids fragmenting large tracts of forested wetlands by routing utility lines outside of forested tracts or on the edges of forested tracts.
 - iii. Minimizing clearing of wetlands. Grubbing shall be limited to the permanent easement for underground utility lines. Outside of the permanent easement, wetland vegetation shall be removed at or above the ground surface unless written justification is provided and the impacts are reviewed and approved by the Corps.
 - iv. For overhead utility lines, allow natural succession to restore and maintain the corridor in scrub-shrub wetlands except for a minimum corridor needed for access, to the maximum extent practicable.
 - v. For buried utility lines allowing natural succession to restore the area to tree and scrub/shrub except for a 20-foot wide access corridor, to the maximum extent practicable.

4. For all submerged utility lines across navigable waters of the United States, a location map and cross-sectional view showing the utility line crossing from bank to bank is required. In addition, the location and depth of the Federal Project Channel shall be shown in relation to the proposed utility line. In general, all utility lines shall be buried at least 6 feet below the authorized bottom depth of Federal project channel and at least 3 feet below the bottom depth in all subaqueous areas. When circumstances prevent the placement of at least three feet of cover over the line (outside of the Federal Project Channel), then written justification and an alternative method must be provided with the notification and the deviation must be reviewed and approved by the Corps.

5. Whenever possible, excavated material shall be placed on an upland site. However, when this is not feasible, temporary stockpiling is hereby authorized provided that:

- a. All excavated material stockpiled in a vegetated wetland area is placed on filter cloth, mats, or some other semi-permeable surface. The material will be stabilized with straw bales, filter cloth, etc. to prevent reentry into the waterway.
- b. All excavated material must be placed back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days after the pipeline has been laid through the wetlands area.
- c. Permission must be granted by the District Engineer or his authorized representatives if the material is to be stockpiled longer than 30 days.

6. When open-cut trenching in designated anadromous fish areas or hydrostatic testing of a pipeline involving water withdrawals from tidal waters are proposed, the Corps will coordinate with the National Marine Fisheries Service and/or the Virginia Department of Game and Inland Fisheries. In most cases, the following time-of-year restrictions (TOYR) will apply:

- James River, below Rt. 17 bridge: No TOYR
- James River, at Jamestown Island (Gray's Creek) downstream to Rt. 17 bridge: Feb. 15 - Jun 15
- James River, at Jamestown Island upstream to Boshers's Dam: Feb. 15 - June 30
- James River, above Boshers's (including Rivanna River): March 15 – June 30
- Rappahannock River, below Route 360 bridge: Feb. 15 - June 15
- York River, below Route 33 bridge: Feb. 15 - June 15
- Nansemond River: Feb. 15 - June 15
- Elizabeth River: No TOYR until further data are collected on fish movements and spawning.
- Unless otherwise noted, Feb. 15 - June 30

7. Waters Containing Submerged Aquatic Vegetation (SAV) Beds: Notification is required if work will occur in areas that contain submerged aquatic vegetation (SAVs). Information about SAVs can be found at the Virginia Institute of Marine Science's website <http://www.vims.edu/bio/sav>. Additional avoidance and minimization measures, such as relocating a structure or time of year restrictions may be required to reduce impacts to SAVs.

8. Waters with federally listed endangered or threatened species, waters federally designated as Critical Habitat, and one mile upstream (including tributaries) of any such waters, notification is required for work in the areas listed below for NWP 12.

The Counties of Lee, Russell, Scott, Tazewell, Wise, and Washington in Southwestern Virginia within the following specific waters and reaches:

- 1) Powell River - from the Tennessee-Virginia state line upstream to the Route 58 bridge in Big Stone Gap and one mile upstream of the mouth of any tributary adjacent to this portion of the River.
- 2) Clinch River - from the Tennessee-Virginia state line upstream to Route 632 at Pisgah in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the River, the Little River to its confluence with Maiden Spring Creek, and one mile upstream of the mouth of any tributary adjacent to this portion of Little River.
- 3) North Fork Holston River - from the Tennessee-Virginia state line upstream to the Smyth County/Bland County line and one mile upstream of any tributary adjacent to this portion of the River.
- 4) Copper Creek - from its junction with the Clinch River upstream to the Route 58 bridge at Dickensonville in Russell County and one mile upstream of any tributary adjacent to this portion of the Creek.
- 5) Indian Creek - from its junction with the Clinch River upstream to the fourth Norfolk and Western Railroad bridge at Van Dyke in Tazewell County and one mile upstream of the mouth of any tributary adjacent to this portion of the Creek.
- 6) Middle Fork Holston River - from the Tennessee-Virginia state line to its junction with Walker Creek in Smyth County near Marion, Virginia.
- 7) South Fork Holston River - from its junction with Middle Fork Holston River upstream to its junction with Beech Creek in Washington County.

This NWP requires notification to work in Lee, Russell, Scott, Smyth, Tazewell, Washington or Wise Counties. For any work in Lee, Russell, Scott, or Wise Counties, please submit the notification to the Norfolk District Corps of Engineers, Clinch Valley Field Office, PO Box 338, Abingdon, Virginia 24212. For any work in Smyth, Tazewell, or Washington Counties please submit the notification to the Norfolk District Corps of Engineers, Virginia Highlands Field

Office, PO Box 1295, Abingdon, Virginia 24212-1295. Written verification from these offices would be required prior to performing the proposed work. It is recommended that the prospective permittees first contact the field offices by telephone at (276) 623-5259 (Clinch Valley) or (276) 676-4807 (Virginia Highlands) to determine if the notification procedures would apply. The notification must be in writing and include the following information (the Joint Permit Application may also be used - be sure to mark it with the letters PCN at the top of the first page):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross section).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project may proceed under the nationwide permit or whether an individual permit is required. If, after reviewing the notification, the District Engineer determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, then he will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide the permittee with instructions on how to seek authorization under an individual permit.

Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

9. Designated Trout Waters: Notification is required for work in the areas listed below for NWP 12.

This condition applies to activities occurring in two categories of waters; Class V (Put and Take Trout Waters) and Class VI (Natural Trout Waters), as defined by the Virginia State Water Control Board Regulations, Water Quality Standards (VR-680 21-00), dated January 1, 1991, or the most recently updated

publication. The Virginia Department of Game and Inland Fisheries (VDGIF) designated these same trout streams into six classes. Classes I-IV are considered wild trout streams. Classes V and VI are considered stockable trout streams. Information on designated trout streams can be obtained via their Virginia Fish and Wildlife Information Service's (VAFWIS's) Cold Water Stream Survey database. Basic access to the VAFWIS is available via <http://vafwis.org/wis/asp/default.asp>.

The waters, occurring specifically within the mountains of Virginia, are within the following river basins:

- 1) Potomac-Shenandoah
- 2) James
- 3) Roanoke
- 4) New
- 5) Tennessee and Big Sandy
- 6) Rappahannock

This condition applies to the following counties and cities: Albemarle, Allegheny, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Bristol, Buchanan, Buena Vista, Carroll, Clarke, Covington, Craig, Dickenson, Floyd, Franklin, Frederick, Giles, Grayson, Greene, Henry, Highland, Lee, Loudoun, Madison, Montgomery, Nelson, Page, Patrick, Pulaski, Rappahannock, Roanoke City, Roanoke Co., Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Staunton, Tazewell, Warren, Washington, Waynesboro, Wise, and Wythe.

Any discharge of dredged and/or fill material authorized by the nationwide permits listed above, which would occur in the designated waterways or adjacent wetlands of the specified counties, requires notification to the appropriate Corps of Engineers field office, and written approval from that office prior to performing the work. We recommend that prospective permittees first contact the appropriate field office by telephone to determine if the notification procedures would apply. The notification must be in writing and include the following information (the standard Joint Permit Application may also be used):

- Name, address, and telephone number of the prospective permittee.
- Location of the proposed project.
- Vicinity map and project drawings on 8.5-inch by 11-inch paper (plan view, profile, & cross section).
- Brief description of the proposed project and the project purpose.
- Where required by the terms of the nationwide permit, a delineation of affected special aquatic sites, including wetlands.

When all required information is received by the appropriate field office, the Corps will notify the prospective permittee within 45 days whether the project can proceed under the NWP or whether an individual permit is required. If, after reviewing the notification, the District Engineer determines that the proposed activity would have more than minimal individual or cumulative adverse impacts on the aquatic environment or otherwise may be contrary to the public interest, then he will either condition the nationwide permit authorization to reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide with instructions on how to seek authorization under an individual permit. If the permittee is not notified otherwise within the 45-day period the permittee may begin the activity.

10. Conditions Pertaining to Countersinking of Pipes and Culverts in Nontidal Waters: This condition applies to NWP 12.

NOTE: THE COUNTERSINKING REQUIREMENT DOES NOT APPLY IN TIDAL WATERS.

a. Following consultation with the Virginia Department of Game and Inland Fisheries (DGIF), the Norfolk District has determined that fish and other aquatic organisms are most likely present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below.

b. All pipes: All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the Norfolk District on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.

c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).

d. Floodplain pipes: The requirement to countersink does not apply to pipes or culverts that are being placed above ordinary high water, such as those placed to allow for floodplain flows. The placement of pipes above ordinary high water is not jurisdictional (provided no fill is discharged into wetlands).

e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water *with the countersinking and invert restrictions taken into account*.

f. Pipes on bedrock: Different procedures will be followed for pipes or culverts to be placed on bedrock, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:

i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.

ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that the bedrock prevents countersinking, they should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will

allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then they must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition #27 of the Nationwide Permits. In addition to the information required by General Condition #27, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The PCN must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact their regional fishery biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above and will in most cases be non-reporting. It is recommended that on slopes greater than 5% the permittee install larger pipe than required for passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, they must submit a Pre-Construction Notification to the Norfolk District in accordance with General Condition #27 of the Nationwide Permits. In addition to the information required by General Condition #27, the prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact their regional fishery

biologist for the Virginia Department of Game and Inland Fisheries (DGIF), for recommendations about the measures to be taken to allow for fish movements. When seeking advice from DGIF, the prospective permittee should provide the DGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the PCN. The Norfolk District will notify the prospective permittee whether the proposed work qualifies for the nationwide permit within 45 days of receipt of a complete PCN.

h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, then the permittee must stop work and contact the Norfolk District (contact by telephone and/or email is acceptable). The permittee must provide the Norfolk District with specific information concerning site conditions and limitations on countersinking. The Norfolk District will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the Norfolk District could determine that the work will not qualify for a nationwide permit.

i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The Norfolk District must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, even if it is an otherwise non-reporting activity, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking, and if so, should follow the procedures outlined in (f) and/or (g) above.

GENERAL CONDITIONS:

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or

obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP's 4 and 48.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.
15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
17. Endangered Species.
 - (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical

habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWP.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is

required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only

compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns.

Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

- (1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);
- (4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) **Form of Pre-Construction Notification:** The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) **Agency Coordination:**

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) **District Engineer's Decision:** In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will

notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

D. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWP's do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWP's do not grant any property rights or exclusive privileges.
4. NWP's do not authorize any injury to the property or rights of others.
5. NWP's do not authorize interference with any existing or proposed Federal project.

Section 401 Water Quality Certification (4/20/07):

The State Water Control Board has provided conditional §401 Water Quality Certification for the following Nationwide Permits, as meeting the requirements of the Virginia Water Protection Permit Regulation, which serves as the Commonwealth's §401 Water Quality Certification provided that any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:5.E and as detailed below:

NWP 12: Utility Line Activities, provided that the activities are not associated with intake structures or do not transport non-potable raw surface water.

The Commonwealth requests that all pre-construction notifications for any activities that fall into the excepted category be forwarded to the Department of Environmental Quality in order to accomplish their goal of individual review of certain activities.

Coastal Zone Management Consistency Determination (5/7/07):

The Commonwealth of Virginia's Department of Environmental Quality (DEQ) has determined that the 2007 Nationwide Permits are consistent with the Virginia Coastal Resources Management Program, provided that the Corps and NWP holders comply with all applicable requirements and with the recommendations found in their letter of May 7, 2007. The applicable requirements include, but are not limited to, the following:

- The Section 401 (Clean Water Act) certification provided by DEQ's Division of Water Quality, Office of Wetlands and Water Protection on behalf of the State Water Control Board on April 20, 2007. (Excludes NWP's 16 and 17)
- The permitting requirements for encroachments on subaqueous lands and tidal wetlands administered by the Marine Resources Commission pursuant to *Virginia Code* sections 28.2-1200 et seq. and 28.2-1300 et seq.
- The land use and development performance criteria in the Chesapeake Bay Designation and Management Regulations (9 VAC 10-20-110 through 150) administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance pursuant to the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.2-2100 et seq.).

**2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS**

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38 and 45, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes; after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at:
<https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>

Enclosure

**Letter of Concurrence from State Historical
Society of North Dakota**



**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**

RECEIVED

JAN 31 2011

BARR
ENGINEERING CO.

Jack Dalrymple
Governor of North Dakota

January 27, 2011

North Dakota
State Historical Board

Judith R. Cooper
Principal Investigator
SWCA Environmental Consultants
116 North 4th Street, Suite 200
Bismarck, North Dakota 58501

Chester E. Nelson, Jr.
Bismarck - President

**NDSHPO REF.: 11-0446a PSC Rangeland Energy COLT Connector Pipeline,
Williams County, North Dakota**
Cultural Resources Class I and Class III Inventory Report

Gereld Gerntholz
Valley City - Vice President

Richard Kloubec
Fargo - Secretary

Dear Judy:

Albert I. Berger
Grand Forks

We have reviewed correspondence and project document for: **11-0446a PSC "A Class I and Class III Cultural Resource Inventory of the Rangeland Energy COLT Connector Pipeline, Williams County, North Dakota,"** by Nicholas Smith (SWCA Report No. 11-02, January 2011), and find it acceptable.

Calvin Grinnell
New Town

Diane K. Larson
Bismarck

We concur with **"No Significant Sites Affected"** and **"No Historic Properties Affected"** determinations provided the project is of the nature stated, it takes place in the plotted and mapped location, and that site 32WI961 is avoided from impacts as recommended (pp. ii, 36-38, 42) in the report. Also, we concur that historic site 32WI1109 (pp. 39-41) is not significant and not eligible for listing in the National Register of Historic Places. Finally, we would encourage and recommend that an "Unanticipated Discovery Plan for Cultural Resources" be prepared for the project in the event of an inadvertent discovery.

A. Ruric Todd III
Jamestown

Sara Otte Coleman
Director
Tourism Division

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Thank you for the opportunity to review this project. If you have questions please contact either Paul Picha at ppicha@nd.gov or (701) 328-3574 or Susan Quinnell at squinnell@nd.gov or (701) 328-3576.

Mark A. Zimmerman
Director
Parks and Recreation Department

Francis Ziegler
Director
Department of Transportation

Sincerely,

Merlan E. Paaverud, Jr.
Director

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)
and
Director, State Historical Society of North Dakota
c: Patrick Fahn, ND PSC
c: Daniel Flo, Barr Engineering

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