Federally-listed Threatened and Endangered Species Habitat Assessment

Targa Keene to Charlson Station Project – 7.35 Miles
McKenzie County, North Dakota

Apex Project No. 7010815N031

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1.0 INTRODUCTION

The purpose of this assessment is to review the proposed 7.35-mile Keene to Charlson Station Pipeline located within McKenzie County, North Dakota, hereafter referred to as the proposed Project, for potential federally-listed threatened, endangered, proposed, and candidate species habitat.

1.1 Regulatory Framework

The Endangered Species Act of 1973

The United States Fish and Wildlife Service (USFWS) has authority under the Endangered Species Act (ESA) to list and monitor the status of species whose populations are considered imperiled. Species listed as threatened or endangered by the USFWS are provided full protection under the ESA including a prohibition of indirect "take." The term ''take'' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct with regards to a federally-endangered species. Critical habitat is also protected under the ESA. Critical habitat is defined as areas that are essential for the conservation of a threatened or endangered species and that may require special management and protection.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof" (USFWS 1999).

Migratory Bird Treaty Act of 1918

The migratory Bird Treaty Act (MBTA) makes it illegal to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird…or any part, nest, or egg of any such bird."

2.0 PROJECT DESCRIPTION

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7.35 miles of transmission pipeline in McKenzie County, North Dakota.

The southern terminus of the proposed Project is located at an existing station approximately 0.30 mile east of the intersection of 34th Avenue NW (Highway 12) and 107th Avenue NW

(County Road 1806). The alignment generally travels north for approximately 7.35 miles to its northern terminus in an undeveloped agricultural field located approximately 0.95 mile southwest of the intersection of 42th Street NW and 107th Avenue NW.

The proposed Project includes the installation of a gathering pipeline within an assumed 50-foot-wide permanent easement. It is assumed a 50-foot wide temporary workspace easement will be utilized during construction.

A map of the proposed Project location is included as Appendix A, Figure 1.

Ecoregion, hydrology, topography, vegetation, land use, and soil within the proposed Project were reviewed for characteristics that may assist in the evaluation of federally-listed species habitat.

2.1 Ecoregion

The proposed pipeline alignment crosses one distinct ecoregion, as mapped by the Environmental Protection Agency Level III and IV Ecoregions of North Dakota and South Dakota poster (Bryce et al. 1996) and digital data.

The Missouri Plateau (43a) Ecoregion includes much of North Dakota west of the Missouri River, the landscape opens up to become the "wide open spaces" of the American West. This ecoregion is a semiarid rolling plain of shale, siltstone, and sandstone punctuated by occasional buttes and badlands. Native shortgrass prairie persists in areas of steep or broken topography, but they have been largely replaced by spring wheat, alfalfa, and grazing land over most of the ecoregion. Agriculture is limited by erratic precipitation patterns and limited opportunities for irrigation (Bryce et al. 1996).

Field investigations confirmed the proposed Project as exhibiting the characteristics of this designation.

2.2 Hydrology

The proposed Project is located within one major (HUC 8) watershed, Lake Sakakawea Watershed (10110101) (EPA 2014).

According to United States Geological Survey (USGS) topographic maps, eleven blue-line tributaries are intersected by the proposed Projecy. No additional potential tributaries not delineated as USGS blue-lines were identified on aerial imagery. These eleven potential tributaries belong to two drainage systems, Sand Creek and Tobacco Garden Creek, which eventually flow into the Missouri River/Lake Sakakawea, a TNW.

According to the National Wetlands Inventory (NWI) (USFWS 2014), four freshwater emergent wetlands are delineated within the proposed Project boundaries. One freshwater emergent wetland is isolated and the rest are associated with blue-line tributaries. During field investigations, three freshwater emergent wetlands not delineated by the NWI were identified.

2.3 Topography

Elevation of the proposed Project ranges from 2,535 feet above mean sea level (msl) in disturbed rangeland approximately 2 miles north of the southern terminus of the alignment to 2,273 feet above msl approximately 0.40 mile south of the southern terminus of the alignment.

The overall topographic relief of the proposed Project alignment is generally rolling plains with drops in elevation when in proximity to drainages.

A topographic map of the proposed Project is included as Appendix A, Figure 2.

2.4 Vegetation

The vegetation in the proposed Project area consisted primarily of non-native herbaceous species due to the extensive agricultural practices in the area. Plants observed during field investigations in drainages and immediately adjacent upland areas include: broadleaf cattail (*Typha latifolia*), hardstem bulrush (*Scirpus acutus*), common rush (*Juncus effusus*), common reed (*Phragmites australis*), blunt spikerush (*Eleocharis obtusa*), Canada thistle (*Cirsium arvense*), smooth brome (*Bromus inermis*), meadow fescue (*Festuca pratensis*), foxtail barley (*Hordeum jubatum*), and prairie cordgrass (*Spartina pectinata*).

2.5 Land Use

According to the National Land Cover Database (NLCD) (Homer et al. 2004), the proposed Project intersects three listed cover type designations: agricultural vegetation, shrubland and grassland, and forest and woodland. The most dominant cover type designation identified within the proposed Project is agricultural vegetation, followed by shrubland and grassland, which is located in areas of varied and broken topography. The forest and woodland cover type designation is located sporadically at the tributaries and water features.

Aerial imagery and field observations note the proposed Project area as undeveloped with the exception of disturbance from agricultural practices, paved and unpaved roadways, well pads associated with oil and gas extraction and transmission activities and scattered residences.

2.6 Soil

Twenty-seven soil units are intersected by the proposed Project alignment. Table 1 lists the soil units within a 100-foot corridor along the proposed Project (NRCS 2013).

Table 1: Soil Units within the Proposed Project Corridor

Map Unit Symbol	Map Unit Name
E1865B	Tally-Parshall fine sandy loams, 2 to 6 percent slopes
E3523A	Tansem-Roseglen silt loams, 0 to 2 percent slopes
E3567F	Zahl-Max loams, dissected, 15 to 45 percent slopes
E0447B	Daglum-Belfield complex, 0 to 6 percent slopes
E0515B	Rhoades-Daglum complex, 0 to 6 percent slopes
E0559B	Dogtooth-Janesburg silt loams, 0 to 6 percent slopes
E0605A	Belfield-Grail clay loams, 0 to 2 percent slopes
E0701F	Dogtooth-Janesburg-Cabba complex, 6 to 35 percent slopes
E1355D	Vebar-Flasher-Tally complex, 9 to 15 percent slopes
E2120A	Farnuf loam, 0 to 2 percent slopes
E2617F	Cabba-Chama-Shambo loams, 9 to 50 percent

Map Unit Symbol	Map Unit Name
	slopes
E2641C	Reeder-Werner loams, 6 to 9 percent slopes
E2737C	Chama-Cabba-Sen silt loams, 6 to 9 percent slopes
E2803B	Amor-Shambo loams, 3 to 6 percent slopes
E2913B	Chama-Sen-Cabba silt loams, 3 to 6 percent slopes
E3513A	Niobell-Williams loams, 0 to 3 percent slopes
E3513B	Niobell-Williams loams, 3 to 6 percent slopes
E3527A	Williams-Bowbells loams, 0 to 3 percent slopes
E3527B	Williams-Bowbells loams, 3 to 6 percent slopes
E3541B	Williams-Zahl loams, 3 to 6 percent slopes
E3541C	Williams-Zahl loams, 6 to 9 percent slopes
E3555D	Zahl-Williams loams, 9 to 15 percent slopes
E3559E	Zahl-Max loams, 15 to 25 percent slopes
E3609F	Zahl-Cabba-Maschetah complex, 6 to 70 percent slopes
E3639C	Zahl-Williams-Cabba complex, 6 to 9 percent slopes
E3641D	Zahl-Cabba-Williams complex, 9 to 15 percent slopes
E4715A	Dimmick silty clay loam, 0 to 1 percent slopes

Six soil units are listed as hydric in McKenzie County: E0701F, E3513A, E3513B, E3527A, E3527B, and E4715A (NRCS 2014). Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

3.0 METHODOLOGY

Desktop and field investigations were conducted along the proposed Project alignment to determine the potential for listed species and habitat. A review for potential habitat for each listed species was conducted using aerial photography, topographic maps, and vegetative and ecoregion data along the proposed alignment. Field investigations were conducted by Apex biologists on October 21, 2014 at tributary crossings and along various upland portions of the proposed alignment. The presence of riparian vegetation, canopy cover, tree height range, tree maturity, percent ground cover, and general landscape features were noted throughout the survey area.

4.0 FEDERALLY-LISTED SPECIES

According to the USFWS Information, Planning, and Conservation System (IPaC), nine federally protected species should be considered in an effects analysis for the proposed Project: interior least tern (*Sterna antillarum*), northern long-eared bat (*Myotis septentrionalis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus*), whooping crane (*Grus americana*), pallid

sturgeon (*Scaphirhynchus albus*), Dakota skipper (*Hesperia dacotae*), black-footed ferret (*Mustela nigripes*), and gray wolf (*Canis lupus*) (USFWS 2015).

The Sprague's pipit (*Anthus spragueii*) is a candidate species in McKenzie County. Candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species receive no statutory protection under the ESA.

Table 2 provides a summary review of the endangered, threatened, and candidate species reviewed for the proposed Project in McKenzie County.

Table 2: Species Reviewed for the Proposed Project in McKenzie County, North Dakota

Species	Federal Designation	Habitat	Species likely to occur in Project?
Birds			
Interior Least Tern	E	Sparsely vegetated sandbars on the Missouri and Yellowstone Rivers	No
Whooping Crane	E	Shallow wetlands that are characterized by cattails, bulrushes and sedges; may be found in upland areas, especially during migration	No
Piping Plover	T	Barren sand and gravel shores of rivers and lakes along Missouri and Yellowstone Rivers	No
Golden Eagle	Protected by the BGEPA	Undisturbed areas; variable habitat types	No
Bald Eagles	Protected by the BGEPA	Large rivers and lakes bordered with mature stands or old-growth trees	No
Red Knot	T	Coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves	No
Sprague's Pipit	C	Nest in large patches of undisturbed prairie	No
Mammals			
Black-footed Ferret	E	Short grass prairies, always within close proximity to prairie dog towns; no known populations in ND	No
Gray Wolf	E	Rare; likely habitat in ND is the forested areas in north-central and north-east ND, however, they may appear anywhere	No
Northern Long-eared Bat	T	Old-growth forests composed of trees 100 years old or older within relative proximity of caves or	No

Species	Federal Designation	Habitat	Species likely to occur in Project?
		inactive mines	
Fish			
Pallid Sturgeon	E	Missouri River; bottom of large, silty rivers with swift currents; prefer areas with sand flats and gravel bars	No
Insect			
Dakota Skipper	T	Undisturbed tall grass and mid-grass prairie; in the western part of its range, can be found in ungrazed native pastures with little bluestem, needle and thread, and purple coneflower	No

E = Endangered, T=Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate, BGEPA = Bald and Golden Eagle Protection Act
Source: USFWS 2015

Interior Least Tern (*Sterna antillarum*)
Least tern was federally-listed as threatened in U.S. Northern Great Plains on May 28, 1985. The interior population of the least tern currently breeds along over 4,600 km (2,858 mi) of river channels across the Great Plains and the Lower North Dakota River Valley. In North Dakota, the least tern is found mainly on sparsely vegetated riverine and reservoir sandbars in the Missouri River from Garrison Dam south to Lake Oahe, and on the Missouri and Yellowstone Rivers upstream of Lake Sakakawea (USFWS 2013a). The first complete range-wide survey for interior least tern was completed in 2005. The survey observed around 225 adult terns in North Dakota, 26 (5 colonies) of which were on the Missouri River-Lake Sakakawea and 199 (20 colonies) of which were on the Missouri River-Garrison River (Lott 2006).

The breeding season for the interior least tern lasts from May through August. The peak of the nesting season occurs from mid-June to mid-July. Least terns are colonial nesters with colonies ranging in size from a few breeding birds to over 1,200. Vegetation-free sand or gravel islands are preferred for nesting, though sandbanks, point bars, and beaches may also be utilized. Terns may also nest on manmade sites near water bodies with appropriate feeding habitat, including industrial sites, deposition sites, sand pits, and rooftops. Terns prefer areas distant from trees or other vegetation that may hide or support predators. Terns migrate as far as 2,000 miles to their winter habitats in Central and South America (USFWS 2013a).

No critical habitat has been established for the interior least tern.

Results
No habitat for the interior least tern, such as sparsely vegetated sandbars within riverine habitat, is located in the proposed Project boundaries. The proposed Project is located primarily on uplands utilized for agriculture approximately 8 miles from the Missouri River. The likelihood of encountering interior least terns or their habitat in the proposed Project is very unlikely.

Whooping Crane (*Grus americana*)
The whooping crane was originally listed as an endangered species on March 11, 1967, following establishment of the Endangered Species Preservation Act and is currently listed as endangered under the Endangered Species Act of 1973. The historical breeding range of the whooping crane extended from Illinois, northwest through North Dakota, and up to the Northwest Territories. The last nesting record for North Dakota was in McHenry County in 1915 (Johnsgard 2009). About 264 whooping cranes presently occur in the wild. Almost all of these birds are in the Aransas-Wood Buffalo flock, which migrates through North Dakota in the summer and in the fall. The spring migration occurs from late April to mid-June; the fall migration occurs from September to October. Birds can show up in all parts of North Dakota, although most sightings occur in the western two-thirds of the State (CWS and USFWS 2007).

Whooping cranes may migrate alone, in pairs, in family groups, or in small flocks. Migration habitat typically includes wetland sites with good horizontal visibility, water depth of 30 centimeters or less, and minimum wetland size of 0.04 hectares for roosting. Wetlands within a half-mile of human activity are generally considered unsuitable. Wetlands with adjacent food sources, like crop fields, may be more attractive as stopover sites (Armbruster 1990).

Critical habitat for the whooping crane was designated on May 15, 1978 for nine locations in the U.S., none of which are in North Dakota (USFWS 1978a).

Results
Due to the presence of roadway and human activity and the relatively small size of the wetlands, no stopover habitat for the migrating whooping crane is located on or in the vicinity of the proposed Project. The likelihood of encountering whooping cranes or their habitat in the proposed Project is very low.

Sprague's Pipit (*Anthus spragueii)*
Sprague's pipit was listed as a candidate species on September 15, 2010. Sprague's pipit breeds from north central Alberta to central Manitoba, south to Montana and north central South Dakota, and east to northwestern Minnesota. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358 acres). Pipits strongly prefer native grasslands but are increasingly utilizing planted grasslands if the vegetative structure is appropriate. Preferred vegetative structure includes well drained, open grasslands with grass heights of 10 to 30 cm (4 to 12 inches) and without excessive shrubs. They are rarely found in cultivated areas and may avoid roads, trails, and habitat edges. The wintering range includes parts of Arizona, Texas, Oklahoma, Arkansas, Louisiana, North Dakota, and Mexico (USFWS 2010a).

Results
The proposed Project consists of primarily disturbed agricultural and range land. No undisturbed native prairie that may be utilized by the Sprague's pipit is likely to be located at the proposed Project site. If this species was to occur in the proposed Project during construction, it will likely be flying overhead. The likelihood of encountering Sprague's pipit within the proposed Project is very low.

Red Knot (*Calidris canutus rufa*)
The red knot is a threatened species for listing under the Endangered Species Act. The *rufa* subspecies is one of six recognized subspecies of red knot and one of three subspecies occurring in North America. This subspecies makes one of the longest distance migrations

known in the animal kingdom as it travels between breeding areas in the central Canadian Arctic and wintering areas that are primarily in southern South America along the coast of Chile and Argentina. They migrate along the Atlantic coast of the U.S. where they may be found from Maine to Florida. The Delaware Bay area (in Delaware and New Jersey) is the largest known spring migration stopover area with far fewer migrants congregating elsewhere along the Atlantic coast. The concentration in the Delaware Bay area occurs from the middle of May to early June, corresponding to the spawning season of horseshoe crabs. The knots feed on horseshoe crab eggs, rebuilding energy reserves needed to complete migration to the Arctic and arrive on the breeding grounds in good condition (USFWS 2006).

Both in the spring and fall, migrating red knots can be found anywhere along the coastal and inland migration corridors from Canada to Argentina. The USFWS proposes to protect the red knot across all of its range, which includes North Dakota, based on historical and current occurrence data; the red knot's U.S. range includes 40 states and two territories. The red knot occurs primarily along the coasts, but the United States' data sets contain roughly 1,900 records of red knots more than 25 miles from any ocean coast. Most records in the interior states show small numbers (fewer than 10) of red knots, but there are multiple records in nearly every inland state (USFWS 2010b).

While migrating red knots will stop and actively feed at intermediate points known as 'staging areas.' Staging stops include coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves (DeGraaf and Rappole 1995). Knots rarely occur inland from the coast during migration (Hayman et al. 1986).

Results
Red knots are very rare in North Dakota. No appropriate staging area habitat that may be utilized by the red knot during migration is located at the proposed Project site. If this species was to occur in the proposed Project during construction, it will likely be flying overhead. The likelihood of encountering red knot within the proposed Project is extremely low.

Piping Plover (*Charadrius melodus*)
The Great Plains piping plover population was federally-listed as threatened on December 11, 1985. North Dakota is the most important state in the Great Plains for nesting piping plovers. The state's population of piping plovers has increased from around 300 pairs in 1986 to close to 800 pairs as recently as 2008, which meets the North Dakota recovery goal of 650 pairs (USFWS 2009).

Piping plovers inhabit barren sand and gravel shores of rivers and lakes. The species typically avoids areas of dense vegetation. Nearly all natural lakes used by plovers in North Dakota are alkaline in nature and have salt-encrusted, white beaches and are probably selected due to their sparse vegetation. Beaches used by piping plovers are generally 10 to 40 yards wide. Piping plovers also use barren river sandbars. In North Dakota, this habitat type is found on the Missouri and Yellowstone Rivers. More than three-fourths of piping plovers in North Dakota nest on prairie alkali lakes, while the remainder uses the Missouri River. The North Dakota population spends fall to early spring primarily in the Gulf of Mexico, especially the Texas coast (USFWS 2009).

The USFWS has established various places along the Missouri River and numerous alkali lakes as critical habitat for the piping plover in North Dakota.

Results
No habitat for the piping plover, such as alkali lakes or barren sand and gravel river shores, is located on the proposed Project. The likelihood of encountering piping plovers or their habitat along the proposed Project is very low.

Eagles
Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chryaestos canadensis*) are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, which prohibits anyone from "taking" bald eagles, including their parts, nests, or eggs, without a permit issued by the Secretary of the Interior.

Bald eagles prefer large rivers and lakes bordered with mature stands or old-growth trees such as cottonwood. Breeding habitat often includes some type of edge and relatively open canopy. The large nests are usually built within the top quarter of tall, living trees. Nests are relatively close to water, typically less than 2 km (NDGF 2012a).

Golden eagles can be found in a variety of habitats, including tundra, grasslands, forested habitat, woodland-brushlands, and in arid deserts. They are aerial predators and eat small to mid-sized reptiles, birds, and mammals up to the size of mule deer fawns and coyote pups. They also are known to scavenge and utilize carrion. Golden eagles build nests on cliffs or in the largest trees of forested stands with unobstructed views of the surrounding habitat. Their nests usually include sticks and soft material added to existing nests; nests are strong, flat or bowl shaped platforms. Golden eagles avoid nesting near urban habitat and do not generally nest in densely forested habitat. Individuals will occasionally nest near semi-urban areas where housing density is low and in farmland habitat; however, golden eagles have been noted to be sensitive to some forms of human presence (USFWS 2011a).

In North Dakota, bald eagle breeding pairs mostly nest along the Missouri River south of the Garrison Dam and in the eastern part of the state (Johnson 2010). Golden eagles occur in the southwestern part of North Dakota but are considered uncommon (NDGF 2012b).

Results
According to the North Dakota Game and Fish Department Golden Eagle Breeding Map, the proposed Project is entirely located within the secondary breeding range for the golden eagle (NDGF 2014). No ideal breeding habitat for the golden eagle, such as cliffs and forested areas with large trees, is located in the proposed Project boundaries. Bald eagles are not expected to nest in the geographic range of the proposed Project and no appropriate nesting habitat is intersected by the proposed Project. If bald or golden eagles were to occur in the proposed Project during construction, they would likely be flying overhead.

Black-footed Ferret (*Mustela nigripes*)
The black-footed ferret was originally listed as an endangered species on March 11, 1967, following establishment of the Endangered Species Preservation Act and is currently listed as endangered under the Endangered Species Act of 1973. The historic range of the black-footed ferret spanned much of western North America's intermountain and prairie grasslands, extending from Canada to Mexico. Ferrets have a close association with prairie dogs. Habitat destruction, poisoning, and disease in native prairie dog populations was an important factor in the decline of the black-footed ferret. Ferrets were thought to be extremely rare until a small population was located in Mellette County, South Dakota in 1964. After wild and captive individuals of the Mellette population died, the ferret was thought to be extinct until a remnant

population was discovered near Meeteetse, Wyoming in 1981. Since 1991, 20 black-footed ferret reintroduction projects have been conducted across eight states and Mexico. None of the reintroduction sites are in North Dakota. It is very unlikely that any undiscovered wild populations remain (USFWS 2015).

Black-footed ferrets are exempt from the requirement to designate critical habitat because they were listed prior to the 1978 amendments requiring critical habitat.

Results
The black-footed ferret depends on prairie dogs (*Cynomys* spp.) for food and on prairie dog burrows for shelter. No wild or reintroduction populations are known to occur in North Dakota. Most unconfirmed sightings of black-footed ferrets come from the southwest part of the state (USFWS 2014b). The likelihood of encountering black-footed ferret or their habitat within the proposed Project is very low.

Gray Wolf (*Canis lupus*)
Various gray wolf subspecies were listed as endangered under the Endangered Species Conservation Act of 1969 and under the Endangered Species Act of 1973. In 1978, the USFWS published a rule reclassifying the gray wolf (*Canus lupus*) as an endangered population at the species level (USFWS 1978b). The Western Great Lakes Distinct Population Segment (DPS), including eastern North Dakota, was determined recovered and delisted in 2011 (USFWS 2011b). Western North Dakota, including the proposed Project, falls within the range of the species which is still listed as endangered. In June 2013, the USFWS proposed to remove the gray wolf in the contiguous 48 states from the list of endangered species after confirmation of successful recovery (USFWS 2013c). Under the proposal, protection of the species would fall to state wildlife management agencies. A final determination has not been made at the time of this report.

Historically, gray wolves have only rarely occurred in North Dakota (Licht and Huffman 1996). The few lone individuals that have been more recently detected in these areas are believed to be dispersing away from the more saturated habitat in the primary range (of the recovered DPSs or Canada populations) into peripheral areas where wolves are scarce or absent. The USFWS has no information suggesting that persistent breeding pairs have become established in the Great Plains outside of DPSs (USFWS 2012).

Results
Gray wolves are very rare in North Dakota. The likelihood of encountering the gray wolf within the proposed Project is considered extremely low.

Northern Long-eared Bat (*Myotis septentrionalis*)
A threatened species under the Endangered Species Act, the northern long-eared bat ranges across much of the eastern and north central United States, and all Canadian provinces west to the southern Northwest Territories and eastern British Columbia. However, in all these places, the species is patchily distributed and rarely found in large numbers. The species' range within the United States includes: Alabama, Arkansas, Connecticut, Delaware, the District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin, although the species is rare in the northwestern portion and some

of the southern states within its range (USFWS 2013d). Although the northern long-eared bat is not a migratory species, movements of the species between summer roost and winter hibernacula can be up to 35 miles (NatureServe 2014).

Summer roost habitat is defined variably across the species' range; however, its presence is generally correlated with old-growth forests composed of trees 100 years old or older. Relevant late-successional forest features include a high percentage of old trees, uneven forest structure (resulting in multilayered vertical structure), single and multiple tree-fall gaps, standing snags, and woody debris. Males typically roost singly and prefer coniferous trees in conifer-dominated stands, while females roost singly or in small groups, preferring shade-tolerant deciduous trees of mid-stage decay in mature stands. Females may form small maternity colonies behind exfoliating bark, in tree snags, and in stumps, as well as in bat houses and behind building shutters (USFWS 2013d).

Northern long-eared bats may hibernate solitarily or in multispecies hibernacula, and are commonly found in caves or inactive mines. The species appears to favor small cracks or crevices in cave ceilings, preferring cooler, higher humidity areas for hibernation (USFWS 2013d).

Results
Mature, old-growth forests, caves, and inactive mines are not located on or within the vicinity of the proposed Project. If this species was to occur in the proposed Project area during construction, it will likely be flying overhead. The likelihood of encountering the northern long-eared bat within the proposed Project is extremely low.

Pallid Sturgeon (*Scaphirhynchus albus*)
Pallid sturgeon was federally-listed as endangered on September 6, 1990. This large fish species occupies large, turbid, free-flowing riverine habitat, typically in strong currents over firm gravel or sandy substrate. Sturgeons primarily utilize main channel, secondary channel, and channel border habitats, and are rarely observed in areas without flowing water (USFWS 2014c).

Historically, pallid sturgeons were found in the Missouri and Yellowstone Rivers in Montana downstream to the Missouri-North Dakota confluence and in the North Dakota River from near Keokuk, Iowa downstream to New Orleans, Louisiana. They were also documented in lower reaches of larger tributaries to the Missouri, North Dakota, and Yellowstone Rivers, including the Tongue, Milk, Niobrara, Platte, Kansas, Big Sioux, St. Francis, Grande, and Big Sunflower Rivers (USFWS 2014c).

Today, pallid sturgeon populations are fragmented by dams on the Missouri River. Pallid sturgeons are scarce in the upper Missouri River above Ft. Peck Reservoir, in the Missouri and lower Yellowstone Rivers between Ft. Peck Dam and Lake Sakakawea, in the Missouri River downstream of Gavins Point Dam, and in the North Dakota and Atchafalaya Rivers. Pallid sturgeons are not known to occupy Lake Sakakawea near the proposed Project (USFWS 2014c).

No critical habitat has been established for the pallid sturgeon.

Results
Habitat for the pallid sturgeon is not located within the proposed Project. The proposed Project consists of primarily disturbed agricultural and range land and no perennial streams are intersected by the proposed Project that exhibit the characteristics necessary for pallid sturgeon habitat such as a large channel and turbid and strong free-flowing water. The likelihood of encountering pallid sturgeon or their habitat within the proposed Project is very low.

Dakota Skipper (*Hesperia dacotae*)
The Dakota skipper was federally-listed as threatened on October 24, 2014. This species is a small- to medium-sized butterfly with a wingspan of 2.4 to 3.2 centimeters (cm) (0.9 to 1.3 inches (in)) and hooked antennae (USFWS 2011c). The most significant remaining populations of Dakota skipper occur in western Minnesota, northeastern South Dakota, and north central and southeastern North Dakota (USFWS 2014d). The only known population of Dakota skipper in McKenzie County is the Eagle Nest Butte population within the boundaries of the Fort Berthold Indian Reservation (USFWS 2011c).

This species is found in undisturbed, high quality native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily (*Lilium philadelphicum*), harebell (*Campanula rotundifolia*), and smooth camas (*Zygadenus elegans*); and 2) upland (dry) prairie dominated by bluestem grasses, needlegrass, pale purple coneflower (*Echinacea pallida*), upright coneflower (*Ratibida columnifera*), and blanketflower (*Gaillardia aristata*) (USFWS 2011c).

Dakota skippers have been historically reported from 50 sites in 18 North Dakota counties. This species is now possibly extirpated from fourteen sites and three counties in North Dakota, primarily due to heavy grazing, weed control, and other disturbances (USFWS 2011c). The species is now considered to be present at only 18 sites in the State. The nearest two occupied sites in McKenzie County are over 15 miles northwest of the proposed Project. In addition, the Eagle Nest Butte population is over 25 miles southwest of the proposed Project. The likelihood that significant numbers of undiscovered Dakota skipper populations occur in North Dakota is low (USFWS 2013e).

In North Dakota, critical habitat has been proposed for Dakota skipper in Richland, Ransom, McHenry, Rolette, McKenzie, and Wells counties (USFWS 2013e).

Results
The vegetation in and adjacent to the proposed Project consists of a primarily disturbed agricultural land setting adjacent to roadways. Native prairie containing high diversity of wildflowers and grasses was not identified on or in the vicinity of the proposed Project. This type of altered habitat is not conducive to the species. The likelihood of encountering Dakota skipper or their habitat within the proposed Project is very low.

5.0 MIGRATORY BIRDS

Numerous migratory birds pass through or breed and nest in North Dakota from February 1st to July 15th each year. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) (916 U.S.C. 703-711) and Executive Order 13186. It is important to note that though while EO 13186 emphasizes the preservation of migratory bird habitat, destruction of habitat is not included in the definition of “take” in the MBTA and is therefore not unlawful under the MBTA.

In order to fully comply with the MBTA and in a good faith effort to protect North Dakota bird species, Apex recommends implementing all avoidance strategies recommended by the USFWS in order to avoid impacts to migratory birds. Strategies may include the following efforts, which are listed in order of preference:

- Avoid construction during the migratory bird nesting season (February 1 to July 15).
- Clear and grub any potential nesting habitat prior to the spring nesting period. Any areas that are cleared and grubbed prior to the migratory bird season but that are not constructed within a reasonable timeframe would be maintained, as practicable and necessary, to avoid the regrowth of nesting habitat.
- Survey for nesting birds within five days of construction in any areas that were not cleared prior to February 1. If nests are identified during surveys, work would stop within 0.1 mile of the nest. Construction would restart after nest had failed or the chicks have fledged.
- Other reasonable, prudent, and effective measures include use of suitable mufflers on engines to minimize noise and use of approved roadways for construction traffic.

In order to reestablish bird habitat as much as practicable following construction, all grassland areas (native and non-native) impacted by construction should be promptly reclaimed using approved NRCS seed mixes based on ecological site and seeding will be timed to maximize establishment of native species. By implementing these USFWS-recommended avoidance measures and revegetating disturbed areas, no impacts to migratory birds are expected to occur and only minor impacts to their habitat may occur during construction of the Project. Furthermore, once built, the Project would result in reduced truck traffic and human use of the area, which would be beneficial to migratory birds that avoid human presence.

Under the no-impact scenario afforded by the minimization and avoidance strategies implemented for this Project, implementation of a detailed conservation plan, purchase of a grassland easement, or implementation of habitat mitigation is not proposed as necessary for this Project.

6.0 SUMMARY OF BEST MANAGEMENT PRACTICES

In an effort to minimize potential effects to listed species and migratory birds, Apex recommends implementation of the following measures during construction and operation of the Project.

- Site the Project in areas with existing disturbances to the greatest extent practicable.
- Co-locate the crude oil and produced water pipelines in the same trench.
- Minimize the width of the pipeline trench to be excavated.
- Minimize the removal of trees and woody shrubs.
- Separate topsoil from subsoil and protect and stabilize stockpiles until reclamation.
- Avoid construction and vehicle use during wet conditions that could result in excessive rutting or compaction.
- Maintain buffer strips or use other sediment control measures such as earth berms, fiber rolls, or straw wattles to avoid sediment migration to drainages during construction.
- Implement approved Stormwater Pollution Prevention Plan, SPCC Plan, and BMPs during construction to prevent erosion, sedimentation, and contaminants from entering drainages.
- Install culverts to maintain drainage where needed.

- During construction, plan transportation to reduce vehicle density and post speed limits on roads.
- Store human trash and waste generated during construction in appropriate containers and dispose at a state-approved facility.
- Conduct reclamation as soon as practicable after construction of segments of the pipeline are complete.
- Contour disturbed areas to approximate original contour of the landscape.
- During reclamation, replace topsoil last and protect it from erosion until vegetation growth provides satisfactory stabilization.
- Re-seed areas not used for cultivation with a NRCS grassland mix from an approved source.
- Implement a noxious weed management plan.
- Design any above ground facilities to minimize visual impacts.
- Use of a SCADA communications system and leak detection metering.
- If a bald or golden eagle begins to nest within 0.5 mile of the Project boundaries during construction, the USFWS would be contacted to determine appropriate buffers or timing restrictions for construction activities near the nest.
- If a whooping crane is sighted within one mile of the Project area while it is under construction, all work shall cease within one mile of that part of the Project. Work may resume after the bird(s) leave the area (record sighting, bird departure time, and work start and stop time). Contact the USFWS if cranes are lingering in the area rather than flying overhead.
- If possible, construction timing would occur outside of the prime breeding season for migratory birds, February 1st to July 15th. If construction cannot be avoided during this period, then either 1) vegetation would be mown or completely removed within the Project ROW prior to the breeding season, or 2) avian surveys within the Project ROW would be completed no more than five days before construction begins. If nests are identified during surveys, work would stop within 0.1 mile of the nest. Construction would restart after nest had failed or the chicks have fledged. If any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.
- Implement other reasonable, prudent, and effective measures to avoid impacts to migratory birds during construction and operation, including use of suitable mufflers on engines to minimize noise and use of approved roadways by construction traffic.

7.0 CONCLUSION

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7.35 miles of transmission pipeline in McKenzie County, North Dakota. This habitat assessment was prepared in order to determine if the proposed Project may intersect habitat for various federally-listed threatened and endangered species. Desktop review and field investigations were conducted to evaluate if the vegetative and landscape characteristics of the proposed Project location were consistent with threatened and endangered species habitat characteristics.

Habitat for the ten federally-listed and candidate species in McKenzie County, interior least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), Dakota skipper (*Hesperia dacotae*), black-footed ferret (*Mustela nigripes*), gray wolf (*Canis lupus*), red knot (*Calidris canutus*), northern long-eared bat (*Myotis septentrionalis*), and Sprague's pipit (*Anthus spragueii*), was not observed within the

proposed Project alignment. Due to the proposed Project's lack of appropriate aquatic and forested habitat and primarily disturbed agricultural and rangeland vegetation, potential for these species to occur within the proposed Project is considered highly unlikely.

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APPENDIX A

FIGURES

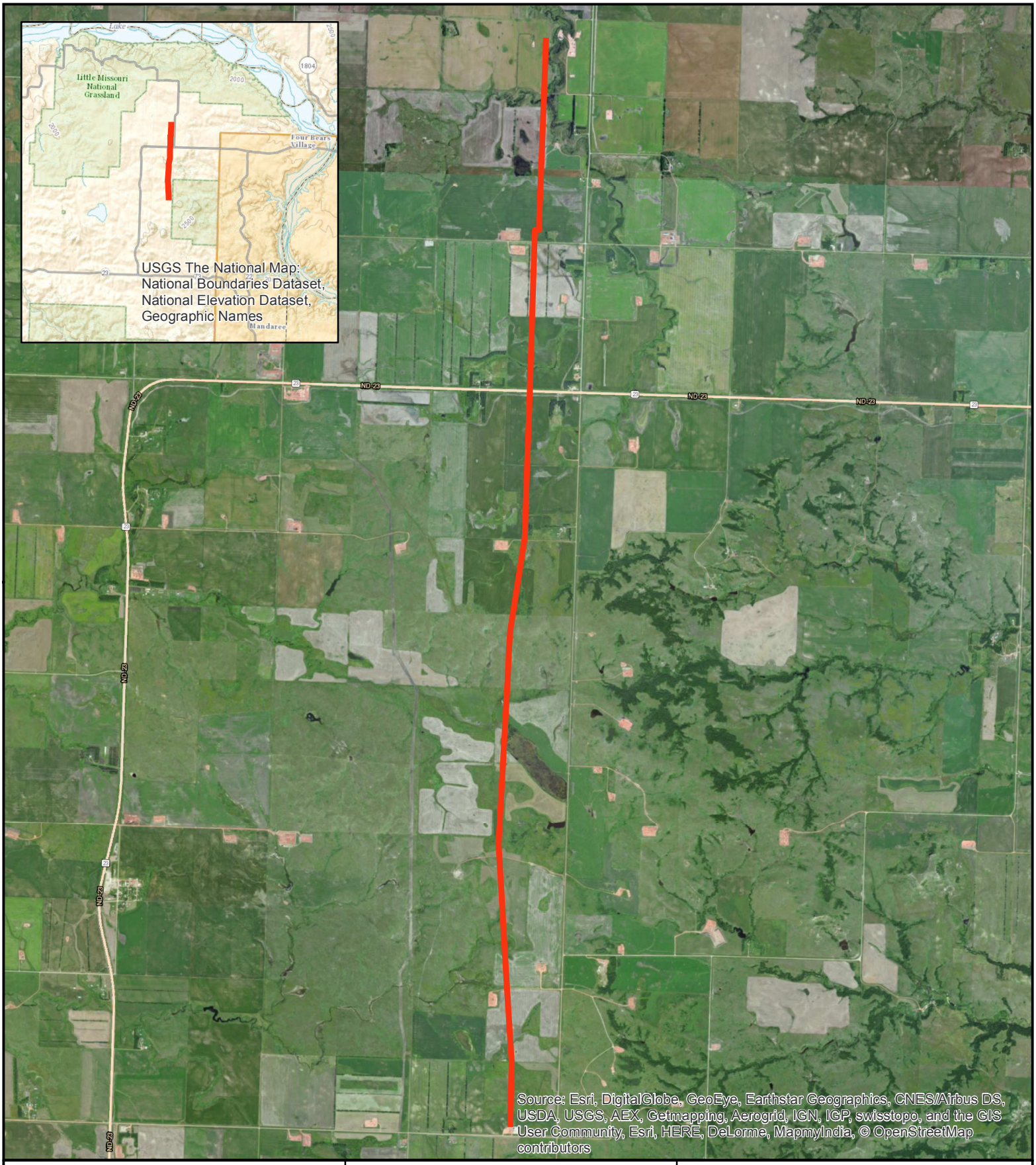

Figure 1: Project Location
T&E Species Habitat Assessment
Keene to Charlson
June 2015
Apex No. 7010815N031

Legend

Keene to Charlson

4,500 2,250 0 4,500 Feet

1:54,000 1 in = 4,500 feet

N

APEX

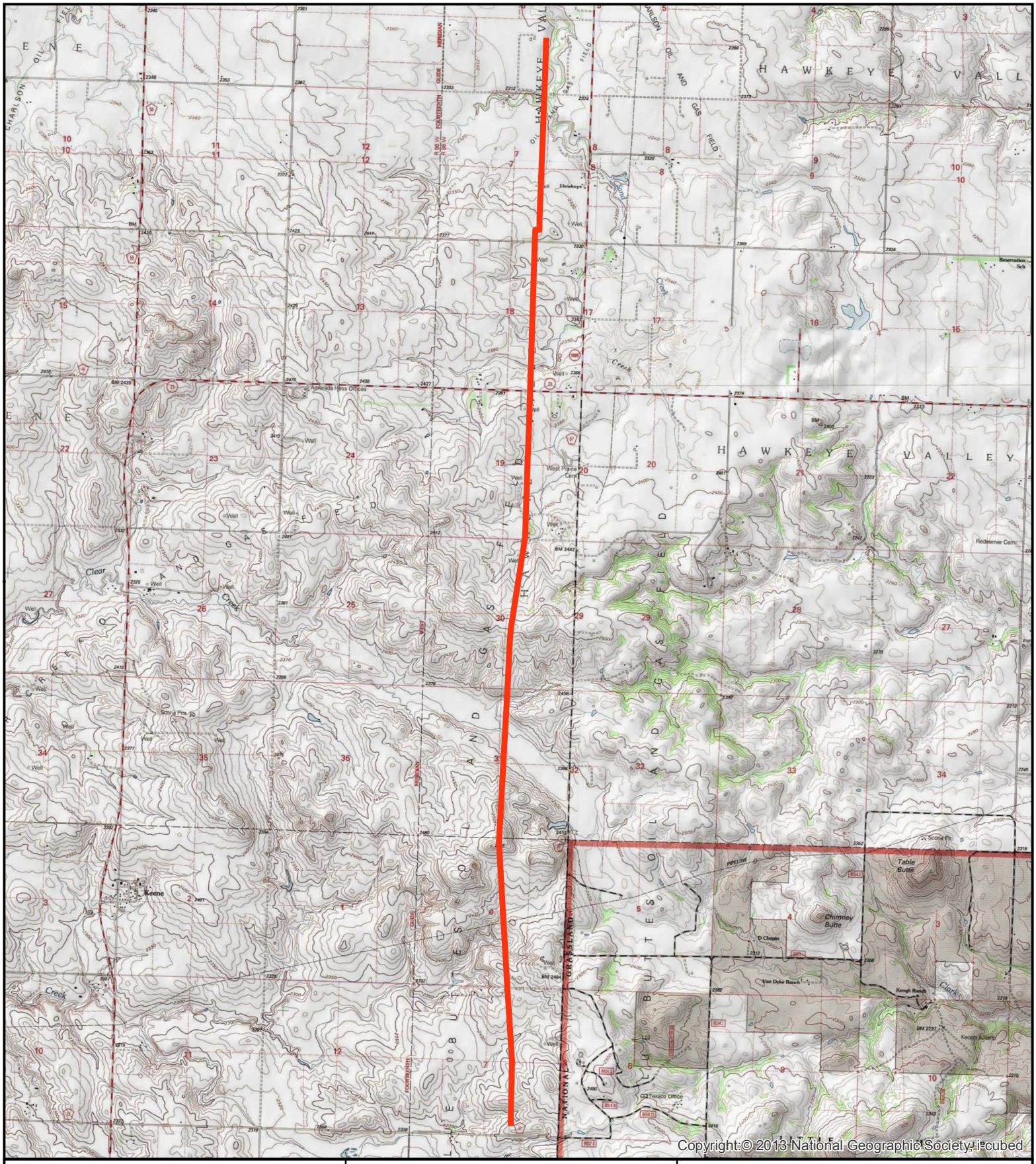

Figure 2: Topography (USGS 7.5')
T&E Species Habitat Assessment
Keene to Charlson
June 2015
Apex No. 7010815N031

Legend

Keene to Charlson

4,500 2,250 0 4,500 Feet

1:54,000 1 in = 4,500 feet

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APEX