APPENDIX E

Threatened and Endangered Species in McKenzie and Mountrail Counties, North Dakota

SPECIES ACCOUNTS AND EFFECTS DETERMINATIONS

ENDANGERED SPECIES ACT (ESA)

Black-footed Ferret (*Mustela nigripes*)
Federal Status: Endangered

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 U.S. Fish and Wildlife Service as endangered since 1967, and have been the object of extensive re-introduction programs (USFWS 2013a). 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 are not found in the project area. In addition, this species has not been observed in the wild for more than 20 years. The proposed project will have **no effect** on this species.

Gray Wolf (*Canis lupus*)
Federal Status: Endangered

The gray wolf, listed as endangered in the United States in 1978 (USFWS 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 North Dakota are believed to be young males seeking to establish territory (Hagen et al. 2005). The Turtle Mountains region in 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 montane and low-elevation forests, grasslands, and desert scrub (USFWS 2013b). Due to a lack of suitable habitat and distance from Minnesota and Manitoba resident 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, in particular road construction as a result of oil and gas development, may further act as a barrier against wolf recolonization in western North Dakota. Although there are no recent documented occurrences, wolves that are sighted on the Fort Berthold Indian Reservation are likely transients, dispersing from populations elsewhere (Mann-Klager 2011). Overall, while there are lower densities of people and roads in western North Dakota, which is favorable for gray wolves, the establishment of a pack within the Reservation is highly unlikely, given existing infrastructure development and

the potential for detrimental human/wolf interactions. Although dispersing wolves could occur in the proposed project area, they would be expected to avoid the immediate project area due to human disturbance. The proposed project will have **no effect** on this species.

Whooping Crane (*Grus americana*)
Federal Status: Endangered

The whooping crane was listed as endangered in the United States in 1970 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 of suitable wetland habitats that support breeding and nesting, as well as feeding and roosting during their fall and spring migration (Canadian Wildlife Service and USFWS 2007).

The July 2010 total wild population was estimated at 383 (USFWS 2013c). 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 USFWS 2007; USFWS 2013c). Mountrail County, including the project 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 USFWS 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 USFWS 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 0.6 mile (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 USFWS 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 and stopover habitat (i.e., cultivated cropland and wetlands >0.04 hectare) was observed within the survey area. In addition, the project area is located within the migratory corridor for the whooping crane, with the nearest sighting being 1.3 miles from the northern portions of the pipeline system corridor north of Newtown (USFWS, M. Tacha, unpublished data). The surface disturbance and changes to native vegetation due to the project are unlikely to adversely affect whooping cranes. Cranes could be deterred from using an otherwise suitable roosting wetland due to nearby human disturbance during the construction phase. However, construction crews will be instructed to cease work and notify USFWS and BIA if a whooping crane is sighted within 1 mile of the construction area. Impacts to wetlands would be avoided and minimized to the maximum extent practical. Therefore, the proposed project **may affect, but is not likely to adversely affect** the endangered whooping crane.

Piping Plover (*Charadrius melodus*)
Federal Status: Threatened

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, 2012a). 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, 2012a). 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, 2012a).

Suitable shoreline habitat for breeding and nesting plovers does not occur within the project area and Lake Sakakawea is approximately 0.5 mile from the proposed project area disturbance corridor. Construction crews will be instructed to ensure no activity within 0.5-mile line-of-sight of the shoreline of Lake Sakakawea during the nesting period (April 1–August 31); and potential habitat was avoided during site selection/on-site process. Therefore, the proposed project **may affect, but is not likely to adversely affect** piping plovers.

Designated Critical Habitat of Piping Plover

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, including areas near the proposed project, along the shoreline of Lake Sakakawea in McKenzie and Mountrail Counties, North Dakota (USFWS 2002).

The proposed project will not modify, alter, disturb, or affect the shoreline of Lake Sakakawea or any of its tributary streams. No alkaline wetlands that have been designated as critical habitat for the piping plover occur in the project area. The nearest piping plover designated critical habitat to the corridor is an alkali lake 0.35 miles northeast of the ROW near the Palermo State Game Management Area. Therefore, the proposed project **will not destroy or adversely modify** designated critical habitat of the piping plover.

Interior Least Tern (*Sterna antillarum*)
Federal Status: Endangered

The interior population of the least tern is listed as endangered by the USFWS (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 2013d).

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 2013d).

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, 2013d). Approximately 100 pairs breed in North Dakota (USFWS 2013d). Details of their migration are not known, but their winter range is reported to include the Gulf of Mexico and Caribbean Islands (USFWS 1990a, 2013d).

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 2013d). 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 2013d).

Suitable shoreline habitat on Lake Sakakawea for breeding and nesting terns occurs in the project action area, and a portion of the project will be located beneath the bed of the lake. However, given the protective measures and BMPs referenced above, the potential for disturbance or adverse effects from construction, operation, and reclamation of the project is extremely small. Terns may visit wetlands and waterbodies off the lake that contain forage fish. However, any disturbance or alterations to wetlands will be temporary and minor. Therefore, the proposed project **may affect, but is not likely to adversely affect** endangered least terns.

Pallid Sturgeon (*Scaphirhynchus albus*)
Federal Status: Endangered

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 populations occur in 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 15.5 miles (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, the North Dakota Game and Fish Department has caught and released pallid sturgeon in nets set in 80 to 90 feet of water between the New Town and Van Hook areas. 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 SWCA Environmental Consultants, September 3, 2010).

Potential pollution occurring as a result of construction activities, hydrostatic testing, and pipeline operations is a concern for downstream populations of endangered pallid sturgeon. Continuous monitoring of input and output volumes and pressures would detect leaks in the pipeline. However, given the protective measures and BMPs referenced above, the potential for disturbance or adverse effects from construction, operation, and reclamation of the project is extremely small. Activities associated with the proposed project are not anticipated to adversely affect water quality and subsequently the pallid sturgeon. Therefore, the proposed project **may affect, but is not likely to adversely affect** pallid sturgeon.

Dakota Skipper (*Hesperia dacotae*)
Federal Status: Threatened

The Dakota skipper is a small butterfly with a 1-inch wingspan. The male wing ranges from a tawny orange to brown and the female wing is darker brown with tawny orange spots and faint white spots (USFWS 2011a). The Dakota skipper was found to be warranted for protection under the ESA, was precluded for higher-priority species in 1995, and was the subject of a proposed rule for listing as threatened under the ESA, in addition to a proposed rule for designation of critical habitat in October 2013 (78 *Federal Register* 63625; 78 *Federal Register* 63573). On October 24, 2014, the USFWS determined a threatened species status for the Dakota skipper, and the final rule became effective November 24, 2014 (79 *Federal Register* 63672). Of the three North Dakota units of proposed critical habitat, Dakota unit 10 (Eagle Nest Butte) is located in the southwest corner of the Reservation in McKenzie County.

The primary cause for decline includes the loss of high-quality native prairie habitat due to overgrazing, conversion to agriculture, and disruption of natural prairie fire cycles (USFWS

2011a). One known population occurs on the Reservation: the Eagle Nest Butte population, located on the western edge of the Reservation, approximately 10.67 miles south of the closest point of the proposed project area. The area is considered too small (approximately 10 acres) and isolated to be secure (Towner 2011). The prognosis for the persistence of the population in this area is uncertain since the species was not encountered during a 2012 survey (Royer 2012). However, other possibly suitable habitat for the Dakota skipper does exist within the Reservation (Towner 2011).

Two habitat types have been described for Dakota skipper in North Dakota. 'Type A' habitat is low, wet-mesic prairie with little topographic relief occurring in near-shore glacial lake deposits (Royer and Marrone 1992). Three plant species dominate 'Type A' habitat and include wood lily (*Lilium philadelphicum*), bluebell bellflower (*Campanula rotundifolia*), and mountain deathcamas (*Zigadenus elegans*) (McCabe 1981). 'Type B' habitat of the Dakota skipper occurs on rolling terrain over gravelly glacial moraine deposits and is dominated by big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), and needlegrasses (*Stipa* spp.), and may include bluebell bellflower and wood lily (USFWS 2014). Additionally, 'Type B' habitat supports extensive stands of purple coneflower (*Echinacea angustifolia*), upright prairie coneflower (*Ratibida columnifera*), and common gaillardia (*Gaillardia artistata*) (USFWS 2014).

In the rolling terrain of river valleys and the Missouri Coteau of North Dakota, on the western edge of the species' known range, Dakota skippers inhabit a variant of Type B habitats. These habitats typically contain an association of little bluestem, big bluestem and needlegrasses that is often invaded by Kentucky bluegrass (*Poa pratensis*) (Royer and Marrone 1992:22). These prairies also typically contain wood lily, bluebell bellflower, coneflowers, and other asters as nectar sources; in some areas, mountain deathcamas also occurs (Royer and Marrone 1992:22).

Within western North Dakota, the species inhabits dry mesic habitats characterized by little bluestem, needlegrasses, and Kentucky bluegrass (Cochrane and Delphey 2002). Dry mesic habitats are marginally dry climate for Dakota skipper (Cochrane and Delphey 2002; Environment Canada 2007). In dry mesic habitats, Dakota skipper use microhabitats on rolling upland sites, such as north slopes of river valleys, that mimic mesic areas found in the eastern tallgrass prairies (Cochrane and Delphey 2002; Environment Canada 2007). Dakota skipper populations in dry-mesic habitats are typically less dense than those in wet-mesic habitats (Environment Canada 2007).

Habitat requirements for larvae survival include specific food and edaphic features as soil moisture, soil compaction, and soil bulk density, as well as related non-biotic factors such as temperature and relative humidity at and near (within 2.0 centimeters of) the soil surface (Royer et al. 2008). Vegetation required for larval food sources and shelter in dry-mesic mixed grass includes prairie dropseed (*Sporobolus heterolepis*) or little bluestem (USFWS 2014). Exotic cool season grasses (e.g., smooth brome [*Bromus inermis*] and Kentucky bluegrass) may reduce food availability for and survival of skipper larvae (USFWS 2011a).

Larval Dakota skipper habitat within dry-mesic habitat is associated with more gravelly glacial landscapes of relatively higher relief, more variable soil moisture, and somewhat

higher soil temperatures (Royer et al. 2008). Soils in these habitats are classified predominantly as sandy loams, and occasionally as loamy sands (Royer et al. 2008). Royer et al. (2008) found that mean season-long larval nest zone temperatures range from 17.8 to 20.5 degrees Centigrade. Relative humidity in the larval nest zone was recorded as ranging from 72.5% to 78.4% (lowest recorded season-long mean) and 84.2% to 85.1% (highest recorded season-long mean) (Royer et al. 2008). Soil compaction and vegetation removal substantially alter soil water movement and evaporation, thereby altering near-surface humidity (Royer et al. 2008). Livestock grazing has been shown to increase bulk density and soil compaction, which are correlated with decreased soil water content and hydraulic conductivity (Royer et al. 2008). Dakota skippers will tolerate little to no grazing in mixed-grass prairie (Conchrane and Delphay 2002; McCabe 1981).

The U.S. Forest Service (USFS) developed a GIS tool to focus on habitat available for larval Dakota skipper in drought conditions. The tool has been used to focus adult Dakota skipper surveys on areas with potential larval habitat. Dr. Royer with Minot State University uses the habitat modeled as Good and Best habitat to identify survey areas and then searches for adult Dakota skipper in available feeding habitats within 0.25 mile of the modeled larval habitat. Although the model has not been scientifically tested, it is estimated to be 70% accurate in representing available larval habitats (personal communication, telephone call from Laura Burckhardt, SWCA, to Gary Foli, USFS, September 8 and 9, 2014).

- Higher slope ranges (10% to 35%) represent areas where cattle are less likely to graze and the vegetative community and height of vegetation is suitable habitat for larval survival.
- Aspects ranging from 315 to 90 degrees (northwest-west to east) represent areas with the highest likelihood of moist soil conditions necessary for larval survival (Royer et al. 2008).
- Distance from existing range livestock water developments (greater than 264 feet) and naturally occurring wetlands and waterbodies (greater than 660 feet) also represents areas that are less likely to have grazing pressure and have the little bluestem and other tall grass-dominated plant communities intact. The closer an area is to a water source used by livestock, the greater the intensity their vegetation utilization (Derner et al. 2009; Launchbaugh and Howery 2005).

SWCA conducted field surveys on the Sacagawea Pipeline from June 24, 2014 through July 10, 2015. During this time habitat data was compiled and later analyzed for suitability for the Dakota skipper based on requirements for larval and adult habitat. SWCA personnel experienced with Dakota skipper habitat requirements and aerial imagery interpretation completed a desktop analysis of potential Dakota skipper habitat in the action area.

The action area surrounding the selected segment of pipeline analyzed for the project was defined as a 0.6-mile radius around the project area and derived from the estimated average maximum dispersal distance of adult skippers. The distance to proposed critical habitat (i.e., known populations) was considered in the analysis. The desktop analysis assessed the potential for habitat based on the USFS tool attributes, documented habitat requirements for Dakota skipper in western North Dakota, and the results of a field survey of the vegetation on

the project site. Slope and aspect were modeled using 10-meter digital elevation models. Aerial imagery was reviewed to determine plant communities; previously disturbed areas including non-native vegetation and cultivated land; aspect; distance to water; location of adjacent habitat; and distance to known occurrences and proposed critical habitat areas. The analysis reviews the suitability of the project area and the action area separately due to the differences in field survey accessibility.

The dominating landcover within the survey area was non-native or in a level of agricultural production with hard red spring wheat (*Triticum aestivum*), and/or barley (*Hordeum vulgare*). Hayland was also a common land cover within the survey area. Hayland is land used in agriculture to produce forage for livestock with the intent of harvesting and letting cure before feeding. It can consist of native vegetation, but most often is comprised of introduced grasses and legumes.

Additional habitat types identified during the field surveys included mixed grass prairie, forested upland, and shrubland. Northern mixed grass prairie can include wetlands, native grassland, and grass-shrub habitats, with riparian and floodplain forests along major drainages.

Native vegetation noted within isolated areas the proposed project location includes big bluestem (*Andropogon gerardii*), red three awn (*Aristida purpurea*), sideoats grama (*Bouteloua curtipendula*), common yarrow (*Achillea millefolium*), meadow anemone (*Anemone canadensis*), green sagewort (*Artemisia campestris*), silver sagebrush (*Artemisia cana*), blue grama, prairie sandreed (*Calamovilfa longifolia*), green needlegrass (*Nassella viridula*), fringed sage (*Artemisia frigida*), white sagebrush (*Artemisia ludoviciana*), purple coneflower (*Echinacea angustifolia*), curlycup gumweed (*Grindella squarrosa*), little bluestem (*Schizachyrium scoparium*), tall dropseed (*Sporobolus asper*), porcupine grass (*Hesperostipa spartea*), and western poison ivy (*Toxicodendron rydbergii*).

Non-native grasses were dominant on agricultural field edges, roadway ditches and haylands. These areas held species such as crested wheatgrass (*Agropyron cristatum*), smooth brome (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*), and Canada thistle (*Cirsium arvense).*

Common forested upland and shrubland habitat noted within the survey area include green ash (*Fraxinus pennsylvanica*), eastern red cedar (*Juniperus virginiana*), bur oak (*Quercus macrocarpa*), American elm (*Ulmus americana*), downy hawthorn (*Crataegus mollis*), creeping juniper (*Juniperus horizontalis*), American plum (*Prunus americana*), common chokecherry (*Prunus virginiana*), silver buffaloberry (*Shepherdia argentea*), and western snowberry (*Symphoricarpos occidentalis*).

Habitat and vegetation within the project area disturbance corridor that are allotted lands was of high quality, including species such as little bluestem, western snowberry, white sagebrush, red three awn, and curly cup gumweed. Although these are quality native grasslands, these areas lacked forb diversity and known forage species for larvae habitat or adult foraging habitat. Within the allotted lands under jurisdiction of the BIA, SWCA did not identify any acres of potential larval or adult habitat within the proposed project area.

Results from the desktop analysis were paired with previous survey data and reviewed for the presence of native grasses and forbs. All areas dominated by native grasses and forbs were then selected for re-survey for Dakota skipper habitat. Based on the review of all collected field notes, photographs and desktop assessment of the entire project area, the selected segment of pipeline within the project area showed the most potential for suitable Dakota skipper habitat (Figure 1). The habitat survey within this selected segment was conducted by a qualified biologist on July 10, 2015.

The selected segment, a total of 4.5 miles, was surveyed for vegetative structure, grazing pressure, distance to water, aspect, and slope; the vegetative structure was measured using percentage of plant species found within a 10-foot diameter vegetative plot. Three areas totaling 2.32 acres of possible suitable adult foraging habitat were identified and documented with detailed vegetation sampling and photographs. The vegetation sampling of each area showed that there is a dominance of green needle (*Nassella viridula*), Kentucky bluegrass (*Poa pratensis*), and prairie Junegrass (*Koeleria macrantha*) in those areas, as well as a moderate to high diversity of forbs. The forbs present included purple coneflower (*Echinacea angustifolia*), upright prairie coneflower (*Ratibida columnifera*), prairie rose (*Rosa arkansana*), tarragon (*Artemisia dracunculus*), and common yarrow (*Achillea millefolium*). The vegetation that is present makes these identified areas suitable for foraging adult Dakota skippers. These areas will be avoided by horizontal drilling techniques.

The action area, defined here as, the 0.6-mile dispersal distance from the selected segments contains a moderate-to-heavy level of disturbance, including fragmentation from agriculture, heavily-grazed pasture land, existing oil and gas development, roads, and residences. In total, there are approximately 1,031.73 acres of disturbed areas within the action area and 763.33 acres of wooded draws, all of which are not suitable habitat for Dakota skippers. Potential stressors from the proposed project to surrounding areas of potentially suitable habitat may include erosion deltas or sedimentation of adjacent suitable habitat, and the potential for hazardous material releases from the project location. However, the use of BMPs and conservation guidelines (USFWS 2007; BIA 2014) during construction and operation, as well as immediate reclamation of short-term disturbance, should decrease direct, indirect, and cumulative impacts to this species.

The action area is entirely within McKenzie County, a county in which Dakota skipper is known to occur (USFWS 2015). However, the closest known population of Dakota skipper is within proposed critical habitat Unit 10 approximately 10.7 miles southeast of the project area. According to the latest available survey report (Royer et al. 2014), no positive detections have been reported closer than Unit 10. SWCA is unaware of any known populations within 0.6 mile of the project area (i.e., action area) that may disperse into the project area.

Sprague's Pipit (*Anthus spragueii*)
Federal Status: Candidate

The Sprague's pipit is a small passerine, 10 to 15 centimeters in length, endemic to the Northern Great Plains (USFWS 2011b). The Sprague's pipit requires large tracts of native prairie habitat, unplowed, throughout their life cycle. Because native grasslands are

disturbance-dependent, Sprague's pipit prefers grassland habitats that are regularly disturbed. The frequency of disturbance required for habitat maintenance depends on how quickly grasses grow to an intermediate height (4 to 12 inches) following a disturbance event.

In North Dakota, Sprague's pipit has been found in areas of moderate grazing. Sprague's pipits are sensitive to patch size and avoid edges between grasslands and other habitat features (USFWS 2011b). They may avoid non-grassland features including roads, trails, oil wells, croplands, woody vegetation, and wetlands. The Sprague's pipit is reported to stay up to 350 meters away from anthropogenic features such as roads, oil wells, and wind turbines (USFWS 2011b). The USFWS has estimated that each new oil well and associated road in North Dakota results in potential impacts to approximately 51 acres of pipit habitat due to avoidance and habitat fragmentation (USFWS 2011b). Because of increasing habitat fragmentation, especially by energy development, throughout the Sprague's pipit range, and the loss of native prairie habitat, the Sprague's pipit was listed as a Candidate Species under the ESA in 2010 (USFWS 2011b).

In North Dakota, Sprague's pipit breeds throughout the state except for the easternmost counties. During the breeding season they prefer large patches of well drained, open native grassland with a minimum size of 358.3 acres (range = 170 to 776 acres). They have not been observed in areas smaller than 71.6 acres on their breeding grounds (USFWS 2011b).

Native prairie habitat with grasses of intermediate height does occur within the project area. The proposed project is unlikely to directly affect habitat due to lack of adequate patch sizes required by the Sprague's pipit for breeding grounds in the immediate project area, but may indirectly contribute to reduced use of any nearby suitable grassland habitat patches within 350 meters of the proposed project. Sprague's pipit is a candidate for listing; therefore, an effects determination is not required for this species. However, the BIA has determined the effects of the action is **not likely to contribute to the future listing** of the species.

Northern Long-eared Bat *(Myotis septentrionalis)*
Federal Status: Proposed

On October 2, 2013, the USFWS proposed the northern long-eared bat for listing as endangered under the ESA (USFWS 2013f). This medium-sized bat ranges across the eastern and north central United States and all of the Canadian provinces (USFWS 2013g). Throughout most of this species' range, populations are patchily distributed. They emerge at dusk to fly through the understory of forested hillsides and ridges, feeding on moths, flies, leafhoppers, caddisflies, and beetles.

Most records of northern long-eared bats are from winter hibernacula surveys, with more than 780 hibernacula identified within the United States. No known hibernacula are located in North Dakota, due to either no suitable hibernacula present or a lack of survey effort (USFWS 2013f). This bat species occupies a wide range of rocky and forested habitats. Suitable winter habitat contains large caves and mines (USFWS 2013g). Summer day roosts include abandoned buildings, bridges, hollow trees, stumps, under loose bark, and rock fissures (Jones and Choate 1978).

Northern long-eared bats are not known to occur in the project area, although species-specific surveys have not been conducted. Suitable winter habitat for northern long-eared bats does not occur within the project area. Nearby trees and rocky outcrops can act as suitable summer day roosts. 2,460 trees and shrubs over 1" dbh were identified by SWCA within the 100-ft construction corridor. A determination was not made for suitability of these trees for roost sites. The PBA specifies that if forested upland habitat is identified during the field surveys, and construction occurs between April and September, then bat surveys be conducted to confirm the absence of the species. Therefore, if these preventative measures are followed, as described in the PBA, the proposed project would have **no effect** on this species.

Rufa Red Knot *(Calidris canutus rufa)*
Federal Status: Threatened

The rufa red knot is a medium-sized shorebird approximately 9 to 11 inches in height with breeding plumage consisting of red around the face and a prominent stripe above the eye, breast, and upper belly, and non-breeding plumage a dusky gray and white (BIA 2014). The USFWS published a proposal to list the rufa red knot as threatened under the ESA in the *Federal Register* in September 2013 (78 *Federal Register* 60023). On January 12, 2015, the USFWS determined a threatened species status for the rufa red knot (79 *Federal Register* 73705).

The primary reason for decline includes reduced food supplies in Delaware Bay due to commercial harvest of horseshoe crabs, but also includes areas of range loss due to rising sea levels, shorelines project, and development (USFWS 2013e). The rufa red knot breeds in the Canadian Arctic and migrates 19,000 miles to winter on the U.S. Gulf Coast and in South America. The species generally occurs along the ocean coasts during migration, but a small number have been reported across the interior United States, with the closest sighting approximately 80 miles east of the Reservation in 1998 (eBird.org 2014). The rufa red knot generally prefers sandy, gravel, or cobble beaches, tidal mudflats, salt marshes, shallow coastal impoundments, and lagoons for its migration and wintering habitat. The knot's diet during migration, at least on the coast, is similar to what it eats while wintering: hard-shelled mollusks supplemented by softer invertebrate prey such as shrimp, crab, marine worms, and horseshoe crab eggs (USFWS 2013e).

Suitable habitat along the lake is approximately 0.5 straight-line mile from the proposed project location disturbance corridor. There may be wetlands with suitable shoreline habitat for migrating red knots in the action area. However, the closest reported sighting of a red knot in North Dakota was approximately 80 miles east of the Reservation in 1998 (eBird.org 2014).

If the rufa red knot were to traverse the Reservation during migration, the greatest potential stressor from the proposed action is loss or degradation of the species' potential migration habitat. Construction of the pipeline, roads, or other facilities in migratory habitat could result in the direct loss of suitable migratory habitat if the species traversed over the Reservation.

Potential spills and sedimentation occurring within the proposed project location are concerns for downstream water quality and could indirectly affect suitable stopover habitat for the rufa

red knot. However, a variety of mitigation measures have been incorporated into the proposed project as mandatory BMPs that, when implemented, would minimize the potential for spills, or provide immediate remediation should spills occur (BIA 2014). Additionally, protective measures for sensitive water resource areas would be implemented, providing protection to potential migratory habitat including the rufa red knot (BIA 2014).

As referenced above, Lake Sakakawea is 0.5 mile from the proposed project disturbance corridor. Wetlands with over a 500-foot crossing and all wetlands within USFWS easements will be directionally bored to avoid impacts. Other wetlands within the ROW will be temporarily disturbed while implementing proper erosion control methods to avoid additional impacts.

Activities associated with the construction, production, or reclamation of the proposed project are not anticipated to adversely affect suitable stopover habitat for the rufa red knot. Additionally, there is a low likelihood of occurrence of the rufa red knot in the project area, and the likelihood of any adverse effects due to disturbance from construction activities is extremely low. Therefore, the proposed project would have **no effect** on the rufa red knot.

MIGRATORY BIRD TREATY ACT / THE BALD AND GOLDEN EAGLE PROTECTION ACT

Migratory Birds
Status: Protected under the Migratory Bird Treaty Act
Effects of Project: No take anticipated

The mixed-grass prairie habitat within and surrounding the project area provides suitable nesting habitat for many grassland nesting migratory bird species. Woodland draws and wetlands and riparian areas in nearby streams and along Lake Sakakawea also provide nesting habitat for additional woodland nesting migratory birds, shorebirds, and other wetland obligate nesting species.

Bald Eagle (*Haliaeetus leucocephalus*)
Status: Delisted in 2007; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act
Effects of Project: No take 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. According to the bald eagle nest database provided by the North Dakota Game and Fish Department, four bald eagle nests are within 5 miles of the project area. The closest known bald eagle nest is approximately 1.25 miles from the project area. No nests or individuals were observed within 0.5 mile line of sight during the field surveys. Based on the best available information, there could be temporary minor impacts to foraging eagles. However, no significant impacts are expected to nesting bald eagles.

Golden Eagle (*Aquila chrysaetos*)
Status: Not Listed; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act
Effects of Project: No take anticipated

No eagles or nests were observed during the field surveys; however, golden eagles may occur within or near the project area. The closest known golden eagle nest occurrence is approximately 1.26 miles northwest of the Van Hook portion of the corridor. The golden eagle prefers habitat characterized by open prairie, plains, and forested areas. Often, 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 project area during the field survey. Based on the best available information, there could be temporary minor impacts to foraging eagles. However, no significant impacts are expected to nesting golden eagles.

REFERENCES CITED

Armbruster, M.J. 1990. Characterization of habitat used by whooping cranes during migration. *Biological Report* 90(4):1–16.

Bureau of Indian Affairs (BIA). 2014. *Programmatic Biological Assessment and Biological Evaluation for Fort Berthold Indian Reservation Oil and Gas Development*. Prepared for the U.S. Fish and Wildlife Service. Prepared by Cardno. 283 pp.

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 (USFWS). 2007. *International Recovery Plan for the Whooping Crane*. Ottawa: Recovery of Nationally Endangered Wildlife (RENEW), and Albuquerque: U.S. Fish and Wildlife Service.

Carlson McCain, Inc. 2014. *Bald and Golden Eagle Nest 2014 Aerial Survey Fort Berthold Indian Reservation*. Prepared for WPX Energy Williston, LLC. Prepared by Carlson McCain, Inc., Bismarck, North Dakota.

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.

Dana, R. 1991. *Conservation Management of the Prairie Skippers* Hesperia dacotae *and* Hesperia ottoe. Station Bulletin 594-1991 (AD-SB-5511-S0). Minnesota Agricultural Experiment Station, University of Minnesota, St. Paul, MN.

Ebird.org. 2014. Range and point maps. Search date December 19, 2014. Available at: http://ebird.org/ebird/map/. Accessed October 22, 2014.

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 J. C. Lewis and J. W. Ziewitz, eds., 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.

Jones, J., and J.R. Choate. 1978. Distribution of Two Species of Long-eared Bats of the Genus *Myotis* on the Northern Great Plains. *Prairie Naturalist* 10(2):49–52.

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.

Root, B.G., Ryan, M.R., and Mayer, P.M., 1992. Piping plover survival in the Great Plains. *Journal of Field Ornithology* 63(1):10–15.

Royer, R. 2012. Eagle Nest Butte site (Royer & Marrone 1992) – McKenzie County excerpt received from H. Riddle, U.S. Fish and Wildlife Service, personal communication, January 2014.

Royer, R., and G. Marrone. 1992. *Conversation Status of the Dakota Skipper (*Hesperia dacotae*) in North and South Dakota.* U.S. Fish and Wildlife Service, Denver, CO. As cited in *78 Federal Register 63573*.

Towner, J. 2011. Response to Scoping Notice to Produce a Programmatic Environmental Assessment for Oil and Gas Development on the Fort Berthold Indian Reservation. U.S. Fish and Wildlife Service, Ecological Services, Bismarck, North Dakota, May 18, 2011. Cited in the *Fort Berthold May 2014 Programmatic Biological Assessment/Biological Evaluation For Oil and Gas Development*. U.S. Fish and Wildlife Service, North Dakota Field Office, Bismarck, North Dakota.

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.

———. 1992. *Recovery Plan for the Eastern Timber Wolf*. Twin cities, Minnesota. 73 pp.

———. 2002. Designation of Critical Habitat for the Northern Great Plains Breeding Population of the Piping Plover; Final Rule. *Federal Register* 67(176):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: Hesperiidae).* U.S. Fish and Wildlife Service, Twin Cities Field Office. Available at: http://www.fws.gov/midwest/endangered/insects/dask-cons-guid2007.pdf. Accessed September 3, 2010.

———. 2011a. 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.

———. 2011b. Dakota skipper (*Hesperia dacotae*). Bismarck: North Dakota Field Office, Mountain Prairie Region. Available at: http://www.fws.gov/northdakotafieldoffice/endspecies/species/dakota_skipper.htm. Accessed October 22, 2014.

———. 2012a Piping plover. Available online at http://www.fws.gov/mountain-prairie/species/birds/pipingplover. Accessed September 7, 2010.

———. 2013a. Black-footed ferret. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A004. Accessed February 21, 2013.

———. 2013b. Gray wolf. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A00D. Accessed February 21, 2013.

———. 2013c. Whooping crane. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B003. Accessed February 21, 2013.

———. 2013d. Least tern (interior population). Available at: http://www.fws.gov/southwest/es/oklahoma/lestern.htm. Accessed February 21, 2013.

———. 2013e. *Northern Long-eared Bat Fact Sheet*. Midwest Endangered Species. Available at: http://www.fws.gov/midwest/endangered/mammals/nlba/nlbaFactSheet.html. Accessed March 11, 2014.

———. 2013f. Endangered and Threatened Wildlife and Plants; 12-month Finding on a Petition to List the Eastern Small-Footed Bat and the Northern Long-eared Bat as Endangered or Threatened Species; Listing the Northern Long-eared Bat as an Endangered Species; Proposed Rule. *Federal Register* 78(191):61046–61080.

———. 2013g. Service Proposes to List Red Knot as a Threatened Species Under the Endangered Species Act. Press Release, September 27, 2013. Available at: http://www.fws.gov/news/ShowNews.cfm?ID=60042DE0-FB9E-C978-063157265CB076C1. Accessed October 22, 2014.

———. 2014a. Endangered and Threatened Wildlife and Plants; Threatened Species Status for Dakota Skipper (*Hesperia dacotae*) and Endangered Status for Poweshiek Skipperling (*Oarisma Poweshiek*). *Federal Register* 79(206):63672–63748.

———. 2014b. Dakota skipper Section 7 Guidance. U.S. Fish and Wildlife Service, Regions 3 and 6. Available at: http://www.fws.gov/midwest/endangered/insects/dask/pdf/DakotaSkipperS7GuidanceMarch2014.pdf. Accessed December 1, 2014.