United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Nebraska Field Office
9325 South Alda Road
Wood River, Nebraska 68883

IN REPLY REFER TO
FWS/R6/NEFO
DCN 065165

March 16, 2017

FWS-NE: 2013-164

Ms. Mary D. Hassell
Office of Environmental Quality and
Transboundary Issues (EQT)
Bureau of Oceans and International
Environmental and Scientific Affairs (OES)
U.S. Department of State
Washington, D.C. 20520

RE: Request for Reinitiation of Section 7(a)(2) Consultation for the TransCanada Keystone XL Pipeline Project

Dear Ms. Hassell:

This is in response to your letter dated March 15, 2017, requesting reinitiation of section 7 consultation and concurrence that the proposed Keystone XL Pipeline Project (Project) may affect, but is not likely to adversely affect, the federally threatened northern long-eared bat *(Myotis septentrionalis)*. The March 15, 2017, letter also evaluates the potential for Project effects on the federally threatened Dakota skipper *(Hesperia dacotae)* and reevaluates conclusions drawn for several species, including applicability as previously considered in section 7 consultation documents. Section 7 consultation documents include the Biological Opinion (Opinion) dated May 15, 2013, the U.S. Department of State's (Department) request to reinitiate section 7 consultation for the rufa red knot (*Calidris canutus rufa*), and the U.S. Fish and Wildlife Service's (Service) August 27, 2015, concurrence with a finding of not likely to adversely affect for that species. It should be noted that the Department's request to reinitiate section 7 consultation and our response represents the culmination of many productive discussions between our agencies; this collaboration began in 2015 when the rufa red knot was listed and resumed in February 2017 with discussion about the northern long-eared bat.

Northern Long-eared Bat

The Service has reviewed the Department's March 15, 2017, letter and attached analysis of Project effects on the northern long-eared bat. In that letter, the Department and its applicant TransCanada commit to ensuring implementation of two conservation measures designed to

protect maternity roost trees and hibernacula for the species consistent with *Endangered and Threatened Wildlife and Plants; 4(d) Rule for the Northern Long-Eared Bat,* ((50 CFR Part 17, Federal Register Notice, January 14, 2016 (81 Fed. Reg. 1900)). Given the commitment to implement these conservation measures, the Service concurs with the Department's determination that the proposed Project may affect, but is not likely to adversely affect, the northern long-eared bat. Please note that the northern long-eared bat is state-listed as threatened in the States of Kansas, Nebraska, and Montana. We recommend coordination with the Nebraska Game and Parks Commission, Kansas Department of Wildlife and Parks, and Montana Fish, Wildlife, and Parks as other state requirements may apply.

Dakota Skipper

The Department completed an evaluation of the potential effects of the Project on the Dakota skipper and concluded there would be no effect on the species as there is no habitat available in the area of the Project. The Service has reviewed this evaluation as well as the best available information for the species including survey and habitat information for the Dakota skipper in South Dakota. Based on that review, we agree with the rationale utilized by the Department as it is based on a reasoned analysis of the best available information and we acknowledge the no effect determination.

Previously Considered Species

We acknowledge and appreciate the reevaluation of the species previously considered in the May 15, 2013, Opinion in addition to the rufa red knot, which was the subject of the Department's request to reinitiate section 7 consultation, dated June 9, 2015, following listing of this species as federally threatened. The Department's reevaluation was based on whether Project modifications or new information about the Project might indicate new effects to the previously considered species to the extent that reinitiation of section 7 consultation may be necessary. Based on the results of the reevaluation, the Department confirmed that the conclusions of the previous section 7 consultation documents regarding anticipated Project effects on listed species remain valid and that reinitiation of section 7 consultation is unnecessary. We agree with the Department's conclusions based on a review of the available information including Project maps and our knowledge of Project effects on these species. This is predicated on the completion of required pre-construction population surveys for the federally endangered American burying beetle *(Nicrophorus americanus)* to confirm that the amount of take authorized in the Incidental Take Statement (ITS) will not be exceeded for this species as annual populations are cyclic and dependent on weather conditions.

Greater Sage-grouse and Sprague's Pipit

The Service determined that the greater sage-grouse (*Centrocercus urophasianus*) and Sprague's pipit (*Anthus spragueii*) were not warranted for listing in October 2015 and April 2016, respectively. The May 15, 2013, Opinion identified several conservation measures for these species. Given the current status of these species, however, we confirm that these conservation measures are no longer in force. We appreciate the Department's commitment to coordinate with the Bureau of Land Management and the States of Montana and South Dakota as other requirements for these species may still apply.

The Service acknowledges the Department's recognition of its responsibilities as the recipient of the ITS as outlined in your letter and included in the May 15, 2013, Opinion. We appreciate the Department's commitment to provide the appropriate oversight of the applicant TransCanada to ensure implementation of reasonable and prudent measures, which continue to remain in force, and encourage implementation of conservation measures for the listed species. We confirm that the ITS covers incidental take caused by the applicant TransCanada provided that such take is in compliance with the ITS terms and conditions.

This concludes section 7 consultation pursuant to the Endangered Species Act. As provided in 50 C.F.R. § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control is authorized by law and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion. The Service views the Department's March 13, 2017, request for reinitiation and this response as supplements to the May 15, 2013, Opinion.

The Service appreciates the opportunity to work cooperatively with the Department in assuming a shared responsibility for protecting federal trust fish and wildlife resources along the proposed Project route in Montana, South Dakota, Nebraska, and Kansas. If you have any questions or require technical assistance, please do not hesitate to contact Mr. Robert Harms at robert_harms@fws.gov; (308)382-6468, extension 208.

Sincerely,

Eliza Hines
Nebraska Field Supervisor

Cc: TransCanada Corporation, Alberta, Canada (Attn: Jim White)
BLM, Reno, NV (Attn: Jim Stobaugh)

3.8 THREATENED AND ENDANGERED SPECIES AND SPECIES OF CONSERVATION CONCERN

3.8.1 Introduction

This section discusses federal threatened, endangered, proposed and candidate species, Bureau of Land Management (BLM) sensitive species, state threatened and endangered species, and species of conservation concern in the proposed Project area. The description of these species is based on information provided in the 2011 Final Environmental Impact Statement (Final EIS) as well as new circumstances or information relevant to environmental concerns that have become available since the publication of the Final EIS, including the proposed reroute in Nebraska. The information that is provided here builds on the information provided in the Final EIS and, in many instances, replicates that information with relatively minor changes and updates. Other information is entirely new or substantially altered from that presented in the Final EIS. The following information, data, methods, and/or analyses have been substantially updated in this section from the 2011 Final EIS:

- Federal and state endangered species regulations that would be applicable under the proposed Project;
- Federal endangered, threatened, proposed, or candidate species, in addition to species under consideration;
- State endangered or threatened species;
- Federally designated critical habitat;
- Bureau of Land Management (BLM) sensitive species; and
- Species of conservation concern.

The following information, data, methods, and/or analyses have been substantially updated from the 2013 Draft Supplemental EIS:

- A summary section has been added;
- Federal endangered, threatened, proposed, or candidate species, in addition to species under consideration; and
- In response to public and agency comments, text has been revised throughout the section, as appropriate.

Species have been evaluated using a qualitative assessment of the potential direct and indirect impacts to species and their habitat through literature review and consultations with federal and state agencies and regional biologists. This section also addresses federally designated critical habitat that may occur in the proposed Project area. Summaries of occurrence and life history are based on available literature; consultations and correspondence with federal and state agencies; agency required site-specific surveys; public and agency websites; and review of state natural heritage data.

Summary

This section describes the baseline environmental conditions and regulatory framework for federal threatened, endangered, proposed and candidate species, BLM sensitive species, state threatened and endangered species, and species of conservation concern in the proposed Project area. The regulatory framework section describes the federal ESA, Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), and relevant state laws addressing special-status species in Nebraska, North Dakota, South Dakota, Kansas, and Montana. There are 14 federally protected, proposed, and candidate species (three mammals, six birds, two fish, one invertebrate, and two plant species) that may be affected by the project and 25 state-listed species (five mammals, six birds, one reptile, ten fish, one invertebrate, and two plant species). Each species description provides information on species life history, best available information on status of species and their populations in each state, and any existing recovery plans that are being implemented to ensure their continued survival and maintenance. This section also describes baseline conditions for three connected actions including: 1) the Bakken Marketlink Project; 2) the Big Bend to Witten 230-kilovolt (kV) Transmission Line; and 3) Electrical Distribution Lines and Substations.

3.8.2 Regulatory Framework

3.8.2.1 Federal Regulations

Federal Endangered Species Act

Under the ESA, the Secretary of the Interior and the Secretary of Commerce (through the National Oceanic and Atmospheric Administration [NOAA]) jointly have the authority to list a species as threatened or endangered (16 United States Code [USC] 1533[c]). Consistent with the ESA, the U.S. Department of State (the Department) reviews a proposed project within its jurisdiction to determine whether any federally listed threatened, endangered species, or proposed species (*federally protected species)* may be present in a project site, and whether the proposed project would have a potentially significant impact on such species. The Department would determine whether the project were likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification to federal designated critical habitat (16 USC 1536[2], [3]). In addition, the Department would determine whether the project were likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[4]).

Proposed species are those that have been proposed in a Federal Register (FR) after the completion of a status review and consideration of other protective conservation measures. The northern long-eared bat (*Myotis septentrionalis*) has been proposed for federal listing as an endangered species under the ESA and has been identified as potentially occurring within the proposed project area. The mountain plover (*Charadrius montanus*) was also identified as occurring within the proposed Project area. However, listing for this species was not warranted (U.S. Fish and Wildlife Service [USFWS] 2011a). Although this species is not discussed in Section 3.8.3, Federally Protected, Proposed, and Candidate Species, the mountain plover is a BLM sensitive species and is therefore discussed in Section 3.8.4, Bureau of Land Management Sensitive Animals and Plants.

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 ESA, but for which development of a proposed listing regulation is precluded by other higher-priority listing activities. Candidate species are not federally protected under the ESA, but most candidate birds are federally protected under the MBTA. However, because it is reasonably foreseeable that candidate species may become protected under the ESA within the life of the proposed Project, they are addressed herein.

Delisted species are species that were formerly listed as threatened or endangered under the ESA, but have been formally removed from listing. The bald eagle (*Haliaeetus leucocephalus*) is a species occurring in the proposed Project area that has been delisted from the ESA. The gray wolf (*Canis lupus*), which was considered in this Final Supplemental EIS and the 2012 Biological Assessment (BA), was later determined to be unlikely to occur in the proposed Project area. The gray wolf has been delisted from the ESA in Montana, but remains listed in South Dakota and Nebraska. In June 2013, delisting of the species in all remaining states (including South Dakota and Nebraska) was proposed and is pending final decision by the USFWS.

The ESA is administered by both the National Marine Fisheries Service of the NOAA and the USFWS. NOAA Fisheries is responsible for animals that spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish (i.e., those fish which travel from the ocean and ascend up rivers for breeding) such as Pacific salmon (*Oncorhynchus* spp.). The USFWS is responsible for all other federally listed plants and animals.

Consistent with the ESA, a federal agency that undertakes, funds, or approves a project (which may include the issuance of a license, permit, or grant for a non-federal project) would determine whether the project may affect federally protected species or designated critical habitat. If so, consistent with Section 7 of the ESA (Section 7 ESA), the federal agency would consult with NOAA Fisheries or the USFWS, as appropriate, to ensure that the project would not jeopardize any species continued existence or result in the adverse modification of designated critical habitat. The consultation process can be informal, resulting in a determination that the project is not likely to adversely affect federally protected species or critical habitat, or it can be formal, resulting in the issuance of a Biological Opinion, including reasonable and prudent measures to minimize adverse impacts to federally protected species and designated critical habitat.

Projects that would result in a take of any federally protected species would obtain authorization from NOAA Fisheries and/or USFWS, as appropriate. Under the ESA definition, *take* means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Authorization for a take that is incidental to a lawful activity is obtained through one of two processes, depending on whether a federal agency is involved in carrying out, funding, or permitting the project. For projects with a federal nexus, (i.e., connection with a federal action such as a permit) take authorization is provided through an incidental take statement, which is typically included as a part of a Biological Opinion issued after completion of the formal Section 7 ESA consultation process described above. For projects without a federal nexus, the project proponent must obtain an incidental take permit issued under Section 10 of the ESA, which requires completion of a habitat conservation plan.

Migratory Bird Treaty Act

The federal MBTA (16 USC, Section 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Bald and Golden Eagle Protection Act

The federal BGEPA, enacted in 1940, (16 USC 668-668d) prohibits the take of bald eagles and golden eagles (*Aquila chrysaetos*) except as otherwise permitted in the BGEPA. From 1967 to 2007 the bald eagle was federally protected under the ESA as an endangered species and state-protected as either threatened or endangered (depending on the state). While the bald eagle is no longer listed under the ESA, it remains protected under the BGEPA and some state endangered species acts. In addition, both the bald eagle and golden eagle are protected under the MBTA (16 USC 703-712).

3.8.2.2 State Regulations

Montana Species Regulations

Montana does not have a state endangered species act, but does have a list of species of concern, which is maintained by the Montana Natural Heritage Program (NHP) and the Montana Fish, Wildlife & Parks (MFWP). Montana species of concern are native animals breeding in the state that are considered to be at risk due to declining population trends, threats to their habitats, and/or restricted distribution.

The species of concern designation does not provide as much protection to species as federal/state endangered species acts. Montana species of concern that are not federally protected or protected by another Montana state agency are evaluated in Appendix N, Supplemental Information for Compliance with the Montana Environmental Policy Act (MEPA).

North Dakota Species Regulations

North Dakota does not have any endangered species regulation. Only those species listed under the federal ESA are considered threatened or endangered in North Dakota.

South Dakota Species Regulations

The South Dakota endangered species law was passed in 1977. The lead agency responsible for the conservation of threatened and endangered species is the South Dakota Department of Game, Fish, and Parks (SDGFP). The SDGFP reviews and updates the list of threatened and endangered species every 2 years.

Rare species are also protected by the South Dakota NHP, a cooperative project of The Nature Conservancy and the SDGFP. The NHP documents and monitors if species are declining and the potential threats to the continued survival of approximately 400 plant and animal species, as well as a number of unique natural features and plant communities. The goal of the NHP is to intervene before species decline to the point of being listed as threatened or endangered (Ashton and Dowd 1991).

Nebraska Species Regulations

In Nebraska, threatened and endangered species are protected under the Nebraska Nongame and Endangered Species Conservation Act (Nebraska Rev. Stat. §37-801 through 37-811). The lead agency in charge of implementing this law is the Nebraska Game and Parks Commission (NGPC). In addition, Nebraska has special laws that protect all birds except game birds, English sparrows, European starlings, and pigeons other than Antwerp or homing pigeons (§37-237.01). It is unlawful to hunt, have in possession, take, or needlessly destroy the nests or eggs of any protected birds (§37.540).

Kansas Species Regulations

The Kansas Nongame and Endangered Species Conservation Act of 1975 protects state and federally listed species. The Kansas Department of Wildlife, Parks and Tourism (KDWPT) is the agency responsible for identifying and undertaking appropriate conservation measures for species listed as threatened and endangered under this act.

3.8.3 Federally Protected, Proposed, and Candidate Species

Consistent with section 7 of the ESA, the Department would initiate consultation with the USFWS and/or NOAA Fisheries to determine the likelihood of the project adversely affecting federally protected ESA species (see Section 3.8.2, Regulatory Framework, above for more information on the ESA). If, upon review of existing data, the Department determines that any federally protected species or habitats may be affected by the proposed Project, the Department would prepare, in consultation with the USFWS, a BA to identify the nature and extent of impacts and recommend conservation and avoidance measures for species and/or habitat or that would reduce potential impacts to the extent practicable. If one or more species were likely to be adversely affected, the USFWS would use the information contained in the BA to develop a Biological Opinion for the proposed project, which includes recommended conservation measures and compensatory mitigation for unavoidable impacts that were assessed during the formal consultation process.

For the previously proposed Project, the Department and TransCanada Keystone Pipeline, LP (Keystone), acting as the Department's non-federal designee for informal consultation, consulted with the USFWS on threatened and endangered species (no NOAA Fisheries-listed species were determined to be potentially affected by the previously proposed Project). The Department, the USFWS, and Keystone worked to develop the 2011 BA for the previously proposed Project, which includes analyses of potential Project impacts to federally protected species, recommended conservation measures, and affect determinations. For the proposed Project, the Department did not designate Keystone as the non-federal representative.

Since the Final EIS, the proposed Project has been revised and a 2012 BA has been prepared and is included as Appendix H, 2012 BA, 2013 USFWS Biological Opinion, and Associated Documents (2012 BA and Associated Documents), of this Final Supplemental EIS. Table 3.8-1 lists 14 federal threatened, endangered, proposed, or candidate species which were considered in the 2012 BA for the proposed Project (see Appendix H). These federally listed species were identified by the Department, USFWS, BLM, and state agencies as potentially occurring in the proposed Project area. In the paragraphs following this table, the 14 federally protected, proposed, and candidate species status and potential occurrence in the proposed Project area are

discussed. The northern long-eared bat is also discussed below. The northern long-eared bat was recently proposed by the USFWS for listing under the ESA.

Table 3.8-1 Summary of Federally Protected, Proposed, and Candidate Species and their State Status

Common Name *(Scientific Name)*	Federal Status	State Status
Mammals		
Black-footed ferret *(Mustela nigripes)*	Endangered/experimental Populations	MT Species of Concern SD Endangered NE Endangered KS Endangered ND Endangered
Gray wolf *(Canis lupus)*	Endangered/ Experimental Populations	SD Endangered NE Endangered ND Endangered
Northern long-eared bat *(Myotis septentrionalis)*	Proposed	MT Species of Concern
Birds		
Eskimo curlew *(Numenius borealis)*	Endangered	SD Endangered NE Endangered KS Endangered
Greater sage-grouse *(Centrocercus urophasianus)*	Candidate	MT Species of Concern SD Species of Greatest Conservation Need
Interior least tern *(Sternula antillarum)*	Endangered	MT Species of Concern SD Endangered NE Endangered KS Endangered ND Endangered
Piping plover *(Charadrius melodus)*	Threatened	MT Species of Concern SD Threatened NE Threatened KS Threatened ND Threatened
Sprague's pipit *(Anthus spragueii)*	Candidate	MT Species of Concern
Whooping crane *(Grus americana)*	Endangered	MT Species of Concern SD Endangered NE Endangered KS Endangered ND Endangered
Fish		
Pallid sturgeon *(Scaphirhynchus albus)*	Endangered	MT Species of Concern SD Endangered NE Endangered KS Endangered ND Endangered
Topeka shiner *(Notropis topeka)*	Endangered	NE Endangered KS Endangered

Common Name *(Scientific Name)*	Federal Status	State Status
Invertebrates		
American burying beetle *(Nicrophorus americanus)*	Endangered	NE Endangered KS Endangered
Plants		
Blowout penstemon *(Penstemon haydenii)*	Endangered	NE Endangered
Western prairie fringed orchid *(Platanthera praeclara)*	Threatened	NE Threatened ND Threatened

MT = Montana; SD = South Dakota; NE = Nebraska; KS = Kansas

3.8.3.1 Federally Protected and Proposed Mammals

Preliminary evaluations identified two federally protected mammals that could potentially occur within the proposed Project area (Table 3.8-1): the black-footed ferret (*Mustela nigripes*) and the gray wolf. Note, however, that the gray wolf was eliminated from detailed analysis, as explained below. The northern long-eared bat, which was recently proposed by the USFWS for listing under the ESA, was also identified as occurring within the proposed Project area.

Gray Wolf—Endangered/Experimental Populations

The gray wolf (*Canis lupus*) is currently listed as federally endangered in Nebraska and the western half of North Dakota and South Dakota, and was delisted in Montana in May 2011. It is also a Montana species of concern.

The USFWS has split this species into five distinct population segments (DPS), of which three DPS (the Western Great Lakes, Wyoming, and Northern Rocky Mountain; the last DPS includes the Montana population) were delisted from the ESA due to recovery. One population (the Mexican gray wolf population) is an experimental, non-essential population, and not an endangered species under the ESA; the last population in western South Dakota and Nebraska remains endangered under the ESA but is under consideration for delisting.

In Montana, the gray wolf's range is in the western part of the state, and does not extend as far east as the proposed Project area. In Nebraska, one gray wolf was killed in Spalding, Nebraska in 2002 and was determined to be a dispersing male from Minnesota (USFWS 2003). Prior to this 2002 occurrence, a gray wolf had not been sighted in Nebraska since 1913 (USFWS 2003). There are no known resident populations of gray wolves in South Dakota (USFWS 2011b). Some wolves that disperse from Yellowstone National Park have occasionally been found in western South Dakota, but sightings are infrequent, with only three gray wolves recorded in recent years (Wildlife News 2012). Since there are no resident populations of gray wolves in South Dakota or Nebraska, and since the species is no longer listed in Montana and does not occur as far east as the proposed Project area in this state, the gray wolf is unlikely to be adversely affected by the Project; therefore, it was eliminated from detailed analysis in this Final Supplemental EIS.

Black-Footed Ferret—Endangered/Experimental Populations

The black-footed ferret is an endangered species throughout its range, except where non-essential, experimental populations have been introduced (e.g., the population of ferrets introduced into the Rosebud Sioux Reservation in south-central South Dakota). Members of non-essential experimental populations located outside national wildlife refuge or national park lands are protected as proposed species under the ESA (16 USC 1531 *et seq.*), and as threatened species where they occur on national wildlife refuges or national parks (Section 10[j]). Members of reintroduced populations within the species historic range that have not been designated as experimental populations are protected as endangered. This species is also a state-listed endangered species in South Dakota, Nebraska, and Kansas, and a Montana species of concern. There is no USFWS-designated critical habitat for the black-footed ferret.

Black-footed ferrets once numbered in the tens of thousands, but widespread destruction of their habitat and exotic diseases in the 1900s brought them to the brink of extinction. Only 18 remained in 1986, but due to reintroduction efforts there were approximately 1,000 black-footed ferrets in the wild in 2011, and an additional 280 in breeding facilities (USFWS 2010b). Black-footed ferrets are nocturnal and solitary; they feed almost exclusively on prairie dogs and use prairie dog burrows (USFWS 2008c). Black-footed ferrets use the same habitats as prairie dogs: grasslands, steppe, and shrub steppe. It is estimated that about 99 to 148 acres of prairie dog colony are needed to support one ferret (NatureServe 2009). The breeding season is generally between March and April.

Experimental, non-essential populations were reintroduced to several sites in the United States in 1994, including north-central Montana and South Dakota. None of the four reintroduced black-footed ferret populations in Montana is well established at this time, and there is ongoing concern about the genetic viability of the captive population (MFWP 2013, USFWS 2008c). Six populations of ferrets have been reintroduced to South Dakota, of which two of these populations (the Cheyenne River, South Dakota, and the Conata Basin, South Dakota) were classified as successful, self-sustaining populations in 2008 (USFWS 2008c). In Nebraska, the black-footed ferret probably occurred historically in the western three-quarters of the state, coincident with the range of the prairie dog. The black-footed ferret is a Nebraska state endangered species, although this species has not been observed there since 1949 (NGPC 2009a).

The proposed Project route crosses the historical range of the black-footed ferret in Montana, South Dakota, southwest North Dakota, Nebraska, and Kansas. Black-footed ferrets are not known to exist outside of reintroduced populations (USFWS 2008c), and the 10 reintroductions of black-footed ferrets in Montana and South Dakota are outside of the proposed Project right-of-way (ROW). NHP data for Montana and South Dakota (Montana NHP 2008; SDGFP 2008) contain no historical records of black-footed ferret occurrences within 5 miles of the proposed Project ROW.

During a meeting with Keystone representatives on May 5, 2008, the USFWS Grand Island Ecological Services Field Office indicated that black-footed ferrets do not occur within the previously proposed Keystone XL Project area in Nebraska. On June 11, 2008, the USFWS Pierre Ecological Services Field Office and AECOM indicated that black-tailed prairie dog (*Cynomys ludovicianus*) towns in the entire state of South Dakota are block-cleared, meaning the towns no longer contain any wild free-ranging black-footed ferrets, and activities within these areas that result in the removal of black-tailed prairie dogs and/or their habitat would not be

required to meet the USFWS survey guidelines for black-footed ferrets, or undergo consultations under Section 7 of the ESA (P. Lorenz [AECOM], personal communication, June, 11, 2008).

Since the black-footed ferret is dependent on prairie dogs, the assessment of potential impacts to experimental populations has focused on black-tailed prairie dog colonies and complexes that could be affected by the proposed Project. The proposed Project route does not occur within the known ranges of the Gunnison's prairie dog (*Cynomys gunnisoni*) or white-tailed prairie dog (*Cynomys leucurus*) (NatureServe 2009), the other two prairie dog species that could serve as prey for black-footed ferrets.

Aerial and/or pedestrian field surveys were conducted from 2008 through 2012 along the proposed Project route in Montana, to identify prairie dog towns crossed by the Project ROW. In 2008, one potential prairie dog town was identified in Valley County, Montana. Subsequent surveys determined that this town was occupied by Richardson's ground squirrel (*Urocitellus richardsonii*), and possibly black-tailed prairie dogs, although no prairie dogs were observed. As a result of a Montana Department of Environmental Quality (MDEQ) reroute incorporated into the proposed Project, the currently proposed Project route avoids this town.

In summary, all prairie dog towns within the proposed Project ROW are unsuitable for the reintroduction of the black-footed ferret, and there are no currently existing black-footed ferret populations known to be present within the proposed ROW (USFWS 2011a).

Northern Long-Eared Bat—Proposed

The northern long-eared bat, previously a species under consideration, was recently proposed for ESA listing by the USFWS. In January 2010, the USFWS received a request to list the northern long-eared bat as either threatened or endangered under the ESA, as well as the eastern small-footed bat (*Myotis leibii*) (which is not located in the states in which the proposed Project would cross). In June 2011, the USFWS released a 90-day finding on the request (USFWS 2011c). In that finding, the USFWS determined that substantial information exists to warrant further evaluation of both bat species to determine if they should be listed. The USFWS then began a review of the status of this species to determine if listing was warranted. On October 2, 2013, the USFWS issued a 12-month finding and proposed listing the northern long-eared bat as an endangered species (USFWS 2013). The USFWS has determined that critical habitat for the northern long-eared bat cannot be determined at this time. The Department has contacted the UFSWS regarding the recent proposed listing of the northern long-eared bat and will coordinate with the USFWS on whether the proposed Project could have impacts on the species. This species is also a BLM sensitive species.

The northern long-eared bat ranges from the southeast corner of the Northwest Territory, east across each Canadian province, and covers 39 states in the central and eastern part of the United States including eastern Montana, North Dakota, South Dakota, Kansas, and Nebraska. The northern long-eared bat does not migrate, but may travel up to 30 miles from winter hibernation to summer roosts. This species uses caves and mines during hibernation which can begin as early as August and continue through the winter months. During the summer months, this species relies less on caves and more on forests for roosts and reproduction. They roost under the bark of dead and dying trees. Old and mature forests provide habitat (decaying trees, loose bark, tree snags, and stumps) for roosting, feeding, and maternity colonies of northern long-eared bats. The northern long-eared bat is somewhat opportunistic and will use a variety of tree species for roosts

throughout its range, as long as the tree will form suitable cavities or retain bark. In addition to the natural setting, the northern long-eared bat also roosts in buildings. Northern long-eared bats are known to switch roosts often, typically using one site for 2 to 3 days (USFWS 2013). Breeding takes place in late summer and early fall with a gestation period ranging between 50 and 60 days. Females give birth to one pup the following spring. The northern long-eared bat typically forages on the edge of heavily forested areas, along hillsides, ridges, water, and clearings. These opportunistic insectivores use echolocation to find their prey and forage one to two hours after dusk and before dawn.

In Montana, there is one known record of this species in Richland County. A male collected in an abandoned coal mine in 1978 (USFWS 2013). Other sources suggest there are two MFWP records of this species. One record is from Flathead County in northwestern Montana, but there is little information about this record except that it is 5 to 10 years old, it is out of their known range, and the proposed Project ROW does not go through northwestern Montana (MNHP and MFWP 2012c). The second record for this species is from an abandoned coal mine near Culbertson, Montana in Roosevelt County, over 60 miles east of the proposed Project ROW, but this mine has been closed and bats can no longer enter the cave. In addition, this species may have been misidentified at this location (Fritz Prellwitz, personal communication, October 11, 2012).

In North Dakota, there is a single record in McKenzie County, and the proposed pipe yard and rail siding would not be in McKenzie County (it would be in Bowman County). No hibernacula are known within North Dakota; however, there has been very limited survey effort in North Dakota (USFWS 2013).

In South Dakota, this species is known to occur in 11 counties including Harding, Perkins, Meade, Custer, Pennington, Lawrence, Charles Mix, Gregory, Hughes, Lyman, and Yankton counties. Of these counties in South Dakota, the pipeline is routed through three counties where northern long-eared bat occurs (Meade, Perkins, and Custer). The northern long-eared bat has been observed hibernating and residing during the summer and is considered abundant in the Black Hills National Forest in South Dakota. Also, northern long-eared bats have been captured during the summer along the Missouri River in South Dakota (USFWS 2013).

In Nebraska, northern long-eared bats have been observed at two quarries located in east-central Nebraska, but there are no survey data for either of these sites (USFWS 2013). They are also known to summer in the northwestern parts of Nebraska, specifically Pine Ridge in Sheridan County (only males have been documented), and a reproducing population has been documented north of Valentine in Cherry County (USFWS 2013). During an acoustic survey conducted during the summer of 2012, the species was common in Cass County (east-central Nebraska), but was uncommon or absent from extreme southeastern Nebraska (USFWS 2013). The occurrence of this species in Cass County, Nebraska is likely attributable to limestone quarries in the region that are used as hibernacula by this species and others (USFWS 2013).

In Kansas, the northern long-eared bat was first found in summer mist-net surveys in 1994 and 1995 in Osborne and Russell counties. Before this, the species was thought to only migrate through parts of the state (USFWS 2013).

3.8.3.2 Federally Protected and Candidate Birds

Preliminary evaluations identified four federally protected birds and two listed as candidates which could potentially occur within the proposed Project area (Table 3.8-1). In addition to ESA protection, all of the birds listed in this section are federally protected under the MBTA, except for the greater sage-grouse (*Centrocercus urophasianus*) (excluded from protection under the MBTA because it is a non-migratory game bird). Additional federal protections under the MBTA and the BGEPA are discussed in Section 3.8.2, Regulatory Framework.

Eskimo Curlew—Endangered

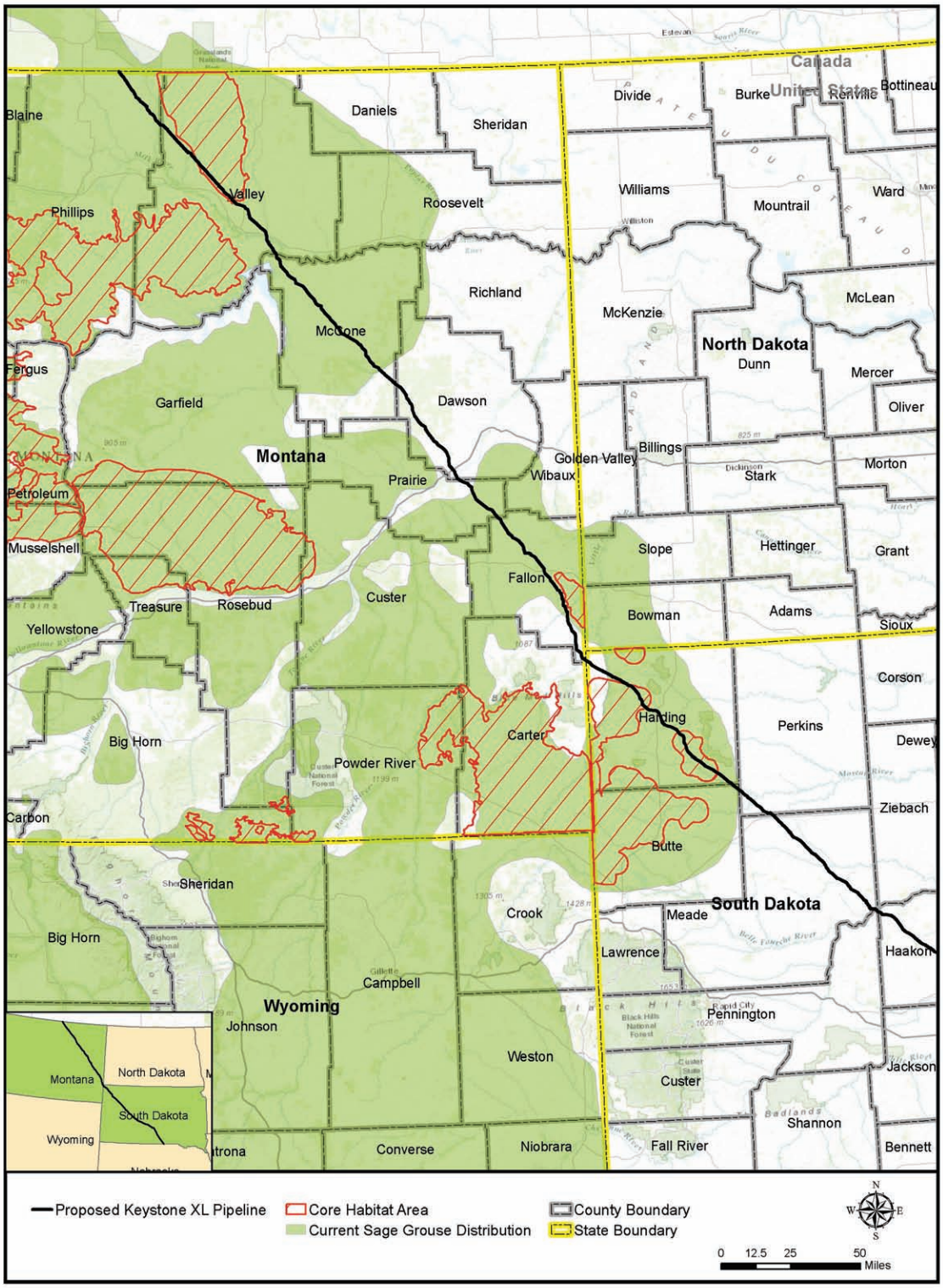
The Eskimo curlew (*Numenius borealis)* is a federally endangered species as well as a South Dakota and Nebraska endangered species. This species historically migrated through the proposed Project area in Nebraska. The Eskimo curlew was reliant on wet meadow and grassland habitats in the Great Plains as it migrated between its breeding and overwintering habitats in Alaska and South America, respectively. Habitat loss, widespread overhunting, and loss of food resources led to the decline and eventual loss of this species. It is now thought to be extinct. Swenk reports in 1926, "The last report for Nebraska was on April 8, 1926. A flock of eight birds was seen 6 kilometers (4 miles) east of Hastings (Swenk 1926:117)" (Gollop et al. 1986). Correspondence from the Nebraska USFWS and NGPC has determined that this species would not be impacted by the proposed Project (AECOM 2009b, USFWS 2012d). The species has not been confirmed in Nebraska since 1926 and in South Dakota since 1963. The species does not occur in Montana. It is unlikely that the proposed Project would have an adverse effect on the Eskimo curlew given the paucity of confirmed sightings of the species and the lack of suitable habitat along the proposed Project route. Because the Eskimo curlew has not been found in Nebraska since 1926 and in South Dakota since 1963, the proposed Project is not expected to impact this species and was eliminated from further analysis.

Greater Sage-Grouse—Candidate

The greater sage-grouse (*Centrocercus urophasianus*) was identified as a candidate species under the ESA, as amended on March 5, 2010 (75 FR 13910), and accordingly is not at present provided federal protection under the ESA. For purposes of the proposed Project, the greater sage-grouse has been analyzed because it is a federal candidate species. As a federal candidate species, the greater sage-grouse is a species in decline that the USFWS believes needs to be listed as threatened or endangered, but listing is currently precluded by other priorities.

In addition to its status under the ESA, the greater sage-grouse is a BLM sensitive species, a Montana species of concern, and a South Dakota species of greatest conservation need. Critical habitat has not been identified for greater sage-grouse, but they are considered a sagebrush obligate species (species that occur only in specific habitat) (Braun et al. 2001). Core habitat has been designated in Montana and South Dakota (see Figure 3.8.3-1 below).

Greater sage-grouse are the largest grouse species in North America. Greater sage-grouse occur in 11 western states including Montana and South Dakota, where they are hunted during a limited season in September. They depend on a variety of shrub-steppe habitats throughout their life cycle, and are considered obligate users of several species of sagebrush (USFWS 2010a). They occur at elevations ranging from 4,000 feet (ft) to over 9,000 ft (USFWS 2012a).



Sources; Esri 2013; Connelly et al. 2004; SDGP 2012; MFWP 2002

Figure 3.8.3-1 Greater Sage-Grouse Core Habitat Areas and Current Distribution

Greater sage-grouse are lekking birds; males gather and perform mating displays for females at leks. After mating, females nest, on average, between approximately 2 to 4 miles and up to approximately 12 miles from the lek site. Leks are typically located in areas of bare ground or low-density vegetation such as ridge tops; individuals return to about the same location each spring (March through June), although leks may shift in location over time. Nesting typically occurs in areas with a sagebrush canopy cover of between 15 to 25 percent (USFWS 2010a). Although sagebrush habitat is crucial throughout the year for all life stages, wet meadows and riparian areas are critical for brood-rearing. Greater sage-grouse diet varies by season. Spring, nesting, and brood-rearing birds eat forbs (herbaceous flowering plants) and insects, and wintering birds eat and take cover in sagebrush (USFWS 2010a). Greater sage-grouse may migrate between winter, breeding, and summer areas with movements of up to 100 miles (USFWS 2010a); greater sage-grouse gradually move from sagebrush uplands to moister areas such as streambeds or wet meadows during the late brood-rearing period (3 weeks after hatch) as vegetation withers during the hot, dry summer months (USFWS 2010a).

Since issuance of the August 2011 Final EIS, the BLM issued the *Instruction Memorandum No. 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures (Interim Policy)* in order to maintain or promote sustainable greater sage-grouse populations and conservation of its habitat (BLM 2011). The Interim Policy identifies policies and procedures to minimize habitat loss in Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH) areas. PPH in Montana are the MFWP delineated core areas, which are the highest conservation value habitats, as determined by coordination between BLM and MFWP. The BLM is coordinating with the respective state wildlife agency in Montana and with SDGFP in accordance with the Interim Policy, although federal lands are not involved with the proposed Project in South Dakota. The proposed Project crosses PPH within one area of South Dakota, on private lands which are not applicable to the interim policy.

Greater sage-grouse inhabit sagebrush habitats in the proposed Project area between the Canadian/Montana border and northwestern South Dakota. The proposed Project route crosses through greater sage-grouse Management Zone I (MZ I) in Montana and western South Dakota, which supported an estimated 62,320 greater sage-grouse in Montana and 1,500 greater sage-grouse in South Dakota during 2007 (USFWS 2010a). Keystone has been conducting annual surveys within a 4-mile radius of proposed Project components to locate greater sage-grouse leks, or monitor known leks, since 2009. The 4-mile radius used for locating greater sage-grouse leks was developed based on agency recommendations and includes a survey buffer to accommodate future route modifications.

In 2011, Keystone monitored 46 lek sites within Montana and South Dakota; displaying[1] male greater sage-grouse were observed at 35 of these lek sites (WESTECH 2011). In 2012, displaying male greater sage-grouse were observed at 18 of these same leks on the day(s) of survey (see 2012 BA in Appendix H for greater sage-grouse survey results). Surveys in 2011 and 2012 show that activity levels at each lek site vary from year to year and the MFWP and SDGFP consider 28 of these 46 lek sites to be active in any given year.

[1] Flamboyant plumage colors and elaborate displays of prominent feathers, skin sacs or body shape can show off how strong and healthy a bird is, advertising its suitability as a mate.

Interior Least Tern—Endangered

The interior population of least tern (*Sternula antillarum*) was federally listed as endangered in 1985. The interior least tern is listed by state endangered species acts as endangered in South Dakota and Nebraska, and is a Montana species of concern. They are small, migratory shorebirds that hover and dive into standing or flowing water to catch small fish (USFWS 1994). The interior least tern is one of three subspecies of the least tern; the east coast subspecies is not federally listed, and the west coast subspecies is federally listed as endangered. The interior least tern is migratory; it winters along the Gulf Coast, the coast of Caribbean Islands, the eastern coast of Central America, and northern South America, then journeys north to central North American river systems to breed. The summer breeding population extends west-east from eastern Colorado and New Mexico to southern Indiana, and north-south from Montana down to Texas. The nesting season for interior least tern is from April 15 through September 1 throughout the breeding range, with nesting occurring later at more northern latitudes. This species nests on riverine sandbars and at sand and gravel mining operations and forages in rivers and associated wetlands.

Surveys for suitable habitat and the occurrence of interior least tern nests were conducted at the crossings of the Yellowstone, Missouri, Cheyenne, Platte, Loup, and Niobrara rivers in 2008, 2011, and 2012 (see the 2012 BA in Appendix H for more information on these surveys).

In Montana, the Yellowstone River crossing of the proposed pipeline route in Dawson County has historically supported, and currently supports breeding populations of interior least terns (AECOM 2008b; Debora Endriss and Omar Bocanegra, personal communication, April 28, 2009). Suitable habitat also may be present along the Missouri River in Valley and McCone counties. Surveys were conducted along these two rivers in the summer of 2011 and no least terns were observed, but this river was flooded during the surveys, and therefore habitat was not visible. Within South Dakota, the Cheyenne River crossing of the proposed pipeline route, on the border of Meade, Pennington, and Haakon counties, has potentially suitable habitat for interior least terns (AECOM 2008c). This species was not observed along the Cheyenne River during 2008 and 2011 surveys, but the 2011 surveys were conducted when there was flooding and suitable habitat may not have been present that year.

Within Nebraska, there is suitable habitat for interior least terns along the proposed Project ROW at the Platte, Loup, and Niobrara river crossings (AECOM 2008a). The proposed Project route would cross the Platte River along the Merrick and Polk county border, and sandbars and sand/gravel pits associated with this segment of river are known to support breeding interior least terns. In addition, four interior least terns were observed at the Niobrara River crossing between Boyd and Holt counties in 2012, and two non-nesting interior least terns were observed along the Loup River crossing in Nance County in 2012 (see 2012 BA in Appendix H).

Habitat for interior least terns is included in the Platte River Recovery and Implementation Program (Nebraska Department of Natural Resources 2010), which is a basin-wide effort undertaken by the Department of the Interior and the states of Colorado, Nebraska, and Wyoming to provide benefits for four target species: the federally endangered interior least tern, whooping crane (*Grus americana*), and pallid sturgeon (*Scaphirhynchus albus*), and the federally threatened piping plover (*Charadrius melodus*). One of the long-term goals of the program is to improve and maintain migrational habitat for the three target bird species and the associated

habitats for the pallid sturgeon. The Program will also reduce the likelihood of other species in the area being listed under the ESA.[2]

Piping Plover—Threatened

There are three breeding populations of piping plovers (*Charadrius melodus)* in the United States: the Northern Great Plains population (which occurs in the same area as the proposed Project), the Great Lakes population, and the Atlantic Coast population. The Northern Great Plains population is federally listed as threatened, and state-listed as threatened in South Dakota, Nebraska, and Kansas. It is also a species of concern in Montana. The USFWS designated critical habitat for the Northern Great Plains breeding population of the piping plover (67 FR 57638) in Montana, Nebraska, North Dakota, and South Dakota in 2002 (USFWS 2002), but the Nebraska critical habitat was later remanded (USFWS 2009). The proposed Project route would not cross through any critical habitat for this species, although there is critical habitat near the proposed Project area in Montana at Fort Peck Reservoir, and on the Missouri River downstream of Wolf Point.

The piping plover is a small shorebird that occupies sand and gravel bars and beaches along major rivers and around lakes, reservoirs, ponds, and alkali wetlands. The piping plover forages for invertebrates on exposed beach substrates and nests on barren or sparsely vegetated sandbars in river channels and wetlands. Piping plovers migrate through the proposed Project area during both the spring and fall. The nesting season for the piping plover is from April 15 through September 1.

Presence of breeding piping plovers along the proposed Project route is limited to Montana and Nebraska. During a meeting with Keystone representatives on June 10, 2008, SDGFP indicated that breeding piping plovers are not in the proposed Project area in South Dakota. Potential nesting habitat within the proposed Project area for the piping plover is limited to alkali wetlands and the Fort Peck Reservoir in Montana (Atkinson and Dood 2006, 67 FR 57638), and sandy beaches, sandbars, and mud flats along the Platte, Loup, and Niobrara rivers in Nebraska.

Within Montana, wetland and waterbody surveys conducted between May and November from 2008 to 2011 did not identify any suitable alkali wetlands for nesting piping plovers along the proposed Project route in Valley County. According to the USFWS Billings Ecological Services Field Office, individual transient piping plovers may be observed along some portions of the Yellowstone River, but there are no breeding records within the proposed Project area (AECOM 2009a). The USFWS Billings Ecological Field Office indicated that surveys had not identified nesting piping plover within the proposed Project area in Montana, and therefore did not recommend surveys for this species in Montana (AECOM 2009a).

Keystone conducted breeding piping plover surveys along the proposed Project route crossings of the Missouri, Platte, Loup, and Niobrara rivers in July 2008, June 2011, and June and July 2012. Only one individual foraging plover was identified during these surveys, at the Niobrara River crossing in 2008. Note that the Niobrara River crossing under the currently proposed Project is many miles east of the Niobrara River crossing that was analyzed during 2008 studies, for the previously proposed Project. In the winter of 2011, the Missouri River flooded; suitable piping plover habitat may have also flooded and thus may not have been present that year.

[2] For more information on the Platte River Recovery Implementation Program, visit: platteriverprogram.org, http://dnr.ne.gov/PRRIP/docs/PRRIP_handout_2010.pdf, and http://www.fws.gov/platteriver/index.htm.

Surveys in 2012 along the currently proposed route did not detect this species along the Niobrara River. No nesting piping plovers were identified within line-of-sight of the ROW crossing of the Missouri, Platte, or Loup rivers.

Despite the lack of breeding piping plovers observed along the proposed Project route during recent surveys, this species may nest along the Niobrara, Loup, and Platte rivers in Nebraska at the proposed Project crossings.

As discussed in the above section regarding interior least terns, the Platte River Recovery Implementation Program also includes habitat for piping plovers. One of the long-term goals of this program is to improve and maintain reproductive habitat for piping plovers.

Sprague's Pipit—Candidate

Sprague's pipit (*Anthus spragueii*) is a candidate for federal listing as threatened or endangered species (75 FR 56028), and a species of concern in Montana. They are a grassland species—native to the mixed grass prairie ecosystem in the northern Great Plains of North America (Jones 2010).

Sprague's pipit is a small, grassland-dwelling, migratory songbird (passerine). They breed in the northern Great Plains, with their highest numbers in the central mixed-grass prairie primarily in north-central and eastern Montana, to North Dakota through to northwestern and north-central South Dakota (Jones 2010). Migration occurs through the central Great Plains in April and May and late September through early November (Jones 2010). They winter in the southern United States. Sprague's pipits establish nesting territories and construct nests on the ground in intermediate height and density grasslands, primarily with native grasses, little bare ground, and few shrubs, during May to August (Jones 2010). Breeding territories are established for both nesting and foraging, and are likely influenced by the size of grassland patches and the amount of grassland in the landscape (Jones 2010).

In Montana, data indicate that the highest likelihood of Sprague's pipit along the proposed Project route is in native grasslands north of the Missouri River (MNHP and MFWP 2012a), although the species is also known to occur in native grasslands in eastern Montana. The proposed Project route would cross habitats that may support breeding Sprague's pipits in Fallon, Dawson, McCone, Phillips, Prairie, and Valley counties.

High quality breeding habitat for Sprague's pipits occurs in the 42.9 miles of the North Valley Grasslands Important Bird Area (IBA) which is crossed by the proposed Project route (see Section 3.6.2.4, Non-Game Animals, for more information on IBAs crossed by the Project) in northern Montana, where this species is relatively common. Outside of the habitat north of the Missouri River, the proposed Project route would cross approximately 87 miles of native, mixed grass prairie that could serve as suitable habitat for this species, depending on grazing regimes and adjacent human activity.

In South Dakota, Sprague's pipits are a rare summer resident in central and northwestern South Dakota within native prairie grasslands (Jones 2010). The proposed Project route would cross approximately 119 miles of native, mixed grass prairie that could serve as suitable habitat depending on grazing regimes and adjacent human activity. In Nebraska, Sprague's pipits are uncommon seasonal migrants (Jones 2010).

Whooping Crane—Endangered

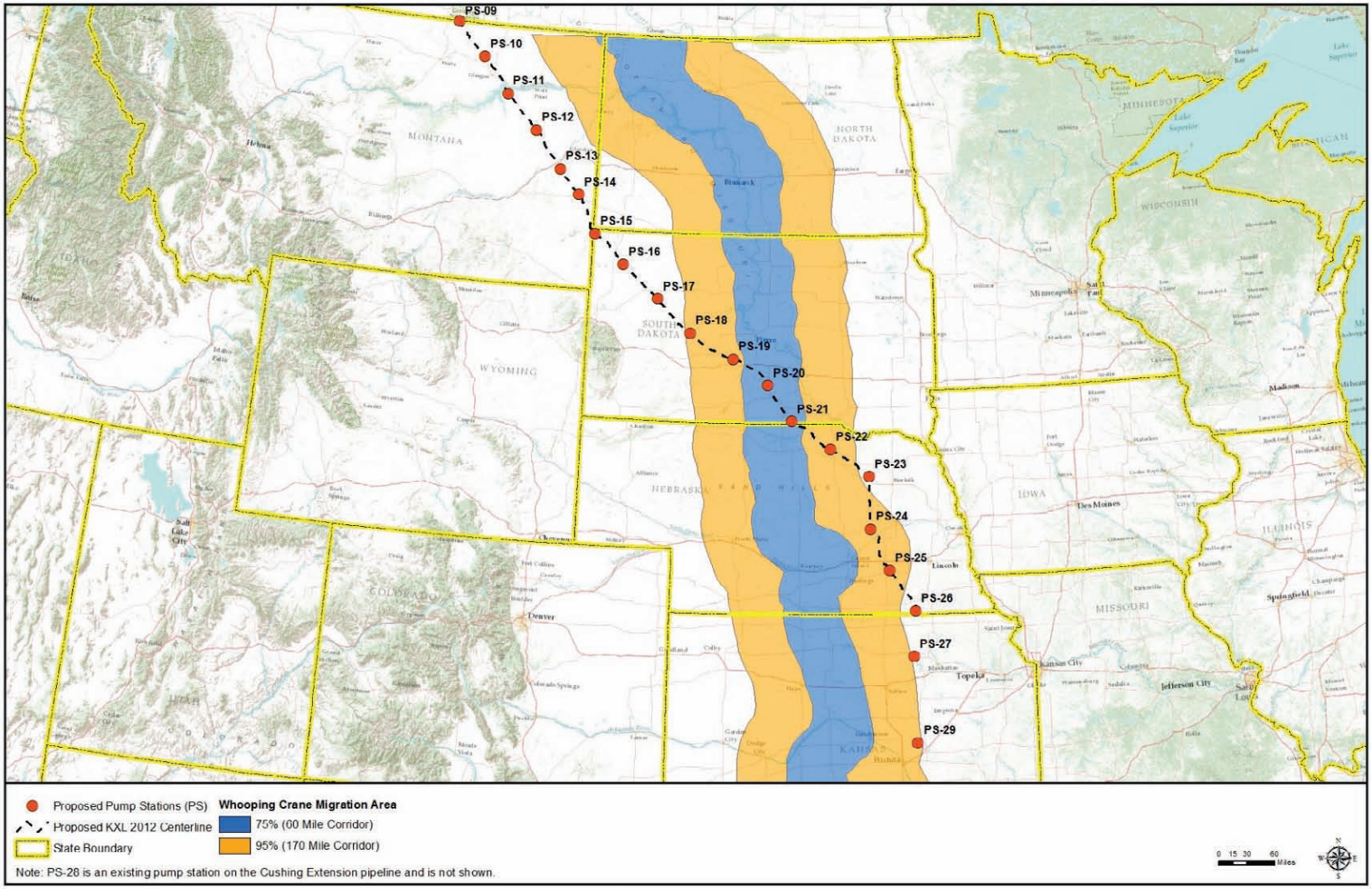
The whooping crane (*Grus americana)* was federally listed as endangered in 1970, is state listed as endangered by South Dakota and Nebraska, and is state listed as a species of concern by Montana (USFWS 2007). The whooping crane is a migratory bird and also is protected under the MBTA.

The USFWS designated critical habitat for whooping crane wintering grounds and migration stopover areas in 1978. The migratory stopover critical habitat areas are along the Platte River between Lexington and Denman, Nebraska (CWS, USFWS 2007), which is west of where the proposed Project would cross the Platte River. Proposed Project activities would not cross through any critical habitat areas.

During spring and fall migration, the Aransas-Wood Buffalo Population (AWBP) moves through the central Great Plains including portions of Montana, North Dakota, South Dakota, Nebraska, and Kansas. Birds from the AWBP depart from their wintering grounds in Texas from late March through early May, for spring migration. Fall migration typically begins in mid-September, with most birds arriving on wintering grounds between late October and mid-November (CWS, USFWS 2007).

Whooping cranes use a variety of habitats during migration, including a variety of croplands, prairie grasslands, and palustrine emergent wetlands for feeding, and semi-permanently flooded palustrine wetlands, broad river channels, and shallow portions of reservoirs for roosting (Austin and Richert 2001, Johns et al. 1997). They eat insects, minnows, crabs, clams, crayfish, frogs, rodents, small birds, and berries (USFWS 2004). The whooping crane occurs as a migrant throughout the proposed Project area. The majority of the proposed Project route in South Dakota, Nebraska, North Dakota, and Kansas is within the central flyway whooping crane migration corridor through the central Great Plains (CWS, USFWS 2007) (see Figure 3.8.3-2 below). Specifically, in South Dakota, approximately 160 miles of the proposed Project route would be within the 95 percent central flyway whooping crane migration corridor (i.e., 95 percent of the AWBP whooping cranes migrate within a 170-mile-wide corridor that runs north south through South Dakota); and in Nebraska, approximately 200 miles of the Project route would be within the 95 percent central flyway whooping crane migration corridor. The Big Bend to Witten 230-kV Transmission Line as well as some of the electrical transmission lines from various substations would lie within the central flyway whooping crane migration corridor. Project ROW in Montana, the northern half of the Project ROW in South Dakota, and the approximately 60-acre pipe yard proposed in North Dakota would all be west of the 95 percent central flyway whooping crane migration. However, individual birds can be found outside the central flyway whooping crane migration corridor and could possibly occur within the proposed Project area in Montana, northern South Dakota, and North Dakota during spring and fall migration.

The MFWP identified the Yellowstone River in Montana as a potential stop-over site for whooping cranes during a MFWP meeting with Keystone representatives on February 3, 2009 (AECOM 2009a). In South Dakota, the Missouri River system is used by whooping cranes, but this species also may use wetlands during severe weather episodes and wetlands close to agricultural lands where they can feed. Additional correspondence with SDGFP indicated that the White and Cheyenne rivers in South Dakota contain suitable stop-over habitat, although it is very unlikely that whooping cranes would be present at these crossings (AECOM 2008a).



Source: TransCanada 2012, Esri 2013

Figure 3.8.3-2 Central Flyway Whooping Crane Migration Corridor for the Aransas-Wood Buffalo Population

According to the USFWS Grand Island Ecological Services Field Office and the NGPC, major river systems used by whooping cranes in Nebraska include the Platte, Loup, Republican, Cedar, and Niobrara rivers (USFWS 2008d). The Platte, Loup, and Niobrara rivers are crossed by the proposed Project route.

As discussed in the above section regarding interior least terns, the Platte River Recovery Implementation Program also includes habitat for whooping cranes. One of the long-term goals of this program is to improve and maintain migrational habitat for whooping cranes.

3.8.3.3 Federally Protected Fish

Preliminary evaluations identified two federally protected fish species that could potentially occur within the proposed Project area (Table 3.8-1). One of these species, the Topeka shiner (*Notropis topeka*), was eliminated from further analysis, as discussed below.

Topeka Shiner—Endangered

The Topeka shiner (*Notropis topeka*) is a federal, Nebraska, and Kansas endangered species. In Nebraska, the proposed Project would be outside of the Topeka shiner's range (AECOM 2008a). In Kansas, the proposed Project would only be within the range of the Topeka shiner in Butler County, Kansas (USFWS 2008a). The proposed Project area would not cross through any critical habitat that is designated for this species. One pump station site is proposed for construction in Butler County, Kansas. The pump station site is located within an agricultural field and suitable habitat does not exist for the Topeka shiner in or near this location. In South Dakota, the Topeka shiner is located in the James, Vermillion, and Big Sioux river watersheds. The species inhabits cool, clear, spring-fed streams with well-developed riparian corridors. The proposed Project route, however, would not cross any streams where Topeka shiners have been found based on extensive survey work conducted for this and other native fish species. Thus, the proposed Project is not expected to impact this species and was eliminated from further analysis.

Pallid Sturgeon—Endangered

The pallid sturgeon (*Scaphirhynchus albus*) was federally listed as endangered in 1990 (55 FR 36641), and is a South Dakota, Nebraska, and Kansas endangered species, and a Montana species of concern. The USFWS produced a recovery plan for the pallid sturgeon (USFWS 1993). No critical habitat has been designated for the species. However, several areas have been designated as Recovery Priority Management Areas (RPMAs) in the species recovery plan (USFWS 1993). The proposed Project crosses the Missouri, Yellowstone, and Milk rivers, which are located in pallid sturgeon RPMAs 1 and 2: RPMA 1 is from the Missouri River from the headwaters of Fort Peck Reservoir upstream to the confluence of the Marias River, Montana; and RPMA 2 is from the Missouri River from Fort Peck Dam to the head waters of Lake Sakakawea, including the Yellowstone River upstream to the mouth of the Tongue River (USFWS 1993). The Milk, Missouri, and Yellowstone rivers would be crossed using the HDD method.

Current distribution of the pallid sturgeon includes the upper and lower Missouri River drainage, the lower Yellowstone River drainage, the upper and lower Mississippi River drainages, and the lower Ohio River drainage (NatureServe 2009). The pallid sturgeon is one of the rarest fish of the Missouri and Mississippi rivers. This sturgeon is adapted to habitat conditions that existed in these large rivers prior to their wide-scale modification by dams, diversions, and flood control structures. Habitats required by pallid sturgeon are formed by floodplains, backwaters, chutes,

sloughs, islands, sandbars, and main channel waters within large river ecosystems. Prior to dam development along the Missouri and Mississippi rivers, these features were in a constant state of change. With the introduction of dams and bank stabilization, areas of former river habitat have been covered by lakes, water velocity has increased in remaining river sections (making deep stretches of clear water), and water temperatures have significantly decreased. All of these factors are believed to have contributed to the decline in pallid sturgeon populations (USFWS 1993).

Pallid sturgeons live in large, free-flowing, warm-water stream systems with a diverse assemblage of habitats, in a constant state of change (USFWS 1993). Pallid sturgeon feeding and nursery habitats include floodplains and backwaters, where adults and juveniles feed primarily on fish, and smaller juveniles feed primarily on the larvae of aquatic insects.

As noted above, this species may occur within the proposed Project area at the crossing of the Milk River above the Fort Peck Reservoir, at the crossing of the Missouri River below Fort Peck Dam, and the crossing of the Yellowstone River downstream of Fallon, Montana. This species also occurs in the lower Niobrara River approximately 5 miles upstream from the confluence of the Missouri and Niobrara rivers, and the lower Platte River downstream from the proposed Project crossing generally in the river segment from the confluence of the Loup and Platte rivers to the confluence of the Platte and Missouri rivers (NGPC 2013a).

As discussed in the above section regarding interior least terns, the Platte River Recovery Implementation Program also includes habitat for pallid sturgeon. One of the long-term goals of this program is to improve and maintain the associated habitats for the pallid sturgeon.

The pallid sturgeon has been found in recent years (2010 and 2011) in the Milk River in Montana from the Missouri River to the Vandalia Dam (Fuller and Haddix 2012). It is estimated that 50 to 100 pallid sturgeons remain above Fort Peck Dam (west of the Project ROW), and 200 to 300 pallid sturgeons remain in the Missouri and lower Yellowstone rivers between Fort Peck Dam and Garrison Dam in North Dakota (Krentz 1997, Gardner 1994). Populations of pallid sturgeon in Montana are declining, with no evidence of reproduction. Pallid sturgeon between Fort Peck Dam and Lake Sakakawea, which is the portion of the Missouri River that would be crossed by the proposed Project, are an important portion of the total population (Tews 1994). Adult fish in this reach are nearing the end of their life expectancy and may attempt reproduction only a few more times (USFWS 2000). Pallid sturgeon move downstream from the Fort Peck Dam to below the confluence of the Yellowstone and Missouri rivers in summer, and generally return to the Fort Peck Dam during winter. Most pallid sturgeons have been documented in the Missouri River downstream from its confluence with the Yellowstone River (Liebelt 1999). While no specific pallid sturgeon spawning locations have been identified in the Missouri River, such locations likely exist.

3.8.3.4 Federally Protected Invertebrates

Preliminary evaluations identified one federally protected invertebrate that could potentially occur within the proposed Project area (Table 3.8-1), the American burying beetle (*Nicrophorus americanus*). The American burying beetle was federally listed as endangered in August 1989 (54 FR 29652), and is state-listed as endangered in Nebraska and Kansas. Critical habitat has not been designated. The Final Recovery Plan (USFWS 1991) was signed on September 27, 1991. One invertebrate, the Platte River caddisfly (*Ironoquia platensis*), that was under consideration

for ESA listing was identified as occurring within the proposed Project area. However, listing for this species was not warranted (USFWS 2012b).

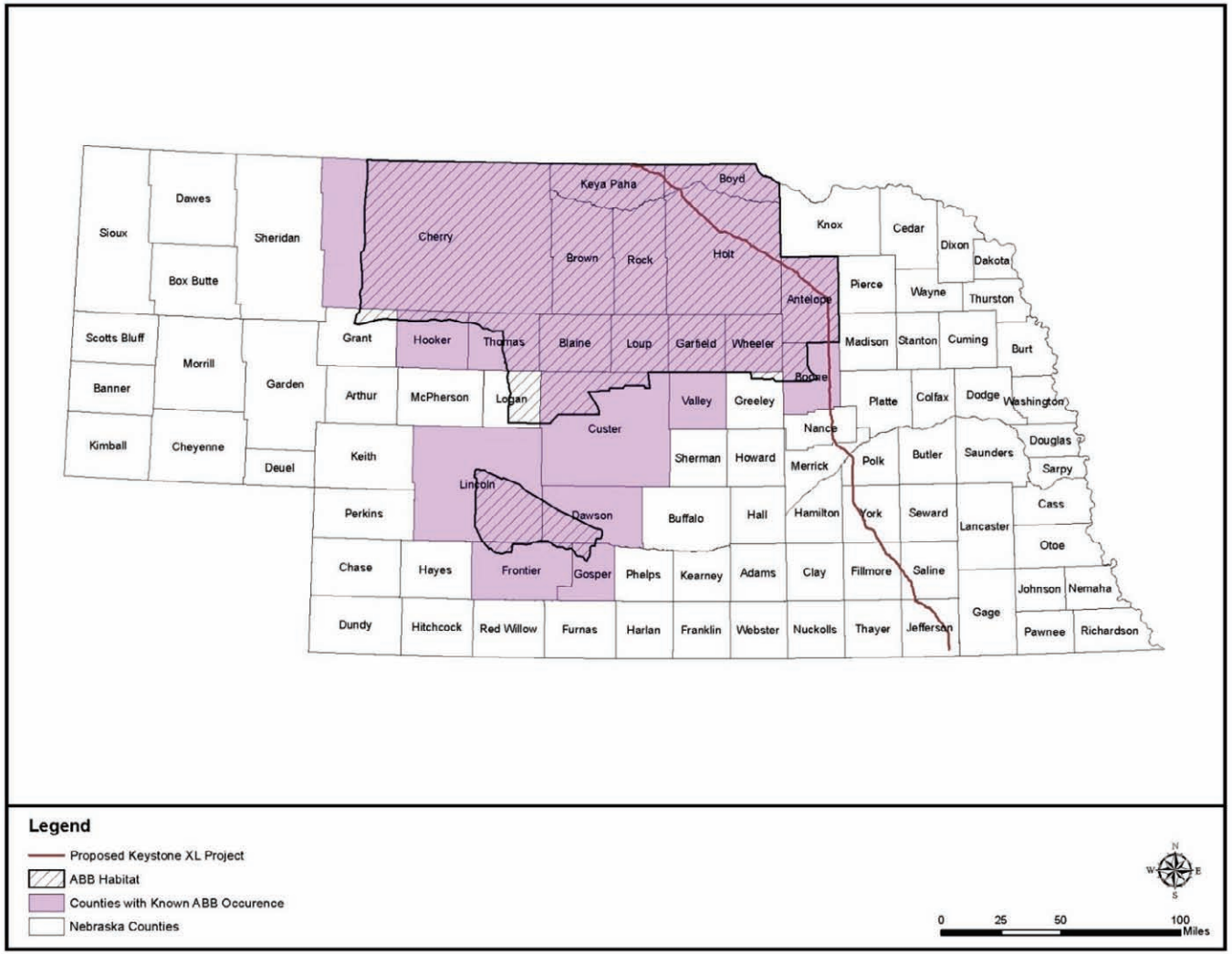
American Burying Beetle—Endangered

American burying beetles have generally been found in level areas with relatively loose, well-drained soils, amongst litter layers from previous years. They are scavengers, dependent on carrion for food and reproduction. This species plays an important role in breaking down decaying matter and recycling it back into the ecosystem. This species was recorded historically in at least 35 states in the eastern and central United States, as well as along the southern portions of the eastern Canadian provinces. Currently, it is known to exist in isolated colonies in at least seven states: Arkansas, Kansas, Nebraska, Oklahoma, Texas, South Dakota, and Rhode Island (USFWS 2008b). American burying beetles have disappeared from over 90 percent of their historical range.

American burying beetles have been collected from three South Dakota counties: Todd, Tripp, and Gregory (Backlund and Marrone 1997). The American burying beetle occupies about a 100-square-mile area centered in Tripp County (USFWS 2008b), and extending into Todd and Gregory counties (Backlund and Marrone 1997). The best habitat for the beetles in South Dakota is similar to that of the northern Nebraska population, and consists of wet meadows in sandy soils with scattered cottonwoods. Surveys in 2005 revealed that American burying beetles are concentrated in Tripp County, a county crossed by the proposed Project. The population is estimated to be approximately 1,000 individuals in an area of approximately 220 square kilometers (54,363 acres) in southern Tripp County (Backlund et al. 2008). The proposed Project route would cross through approximately 33 miles of suitable habitat for this species in South Dakota. American burying beetles occur at high concentrations in two Nebraska regions (Figure 3.8.3-3). In southern Nebraska, they occur in loess canyons, and in the north a large population occurs in the Nebraska Department of Environmental Quality (NDEQ)-identified Sand Hills Region, centered around Rock and Brown counties. However, they also occur in other locations in Nebraska.

The proposed Project would result in construction of approximately 590 miles of pipeline through South Dakota and Nebraska. From 2008 to 2012, reconnaissance surveys of habitat suitability for this species along the proposed pipeline route in South Dakota and Nebraska were conducted and habitat was rated based on the Nebraska habitat readings system that reflects the potential for American burying beetle occurrence based on general habitat characteristics (Hoback 2010). Preliminary range areas were recently developed based on presence of American burying beetle from previous studies in Nebraska, and a windshield survey to categorize suitable habitat based on land use.

The proposed pipeline route enters Nebraska from South Dakota, beginning at Keya Paha County. The proposed route in Nebraska passes through three counties with known American burying beetle presence (Keya Paha, Holt, and Boyd counties), and one county (Antelope) with historical occurrence (Hoback 2010). The route then passes through a number of central and southern Nebraska counties where the American burying beetle has not been found either historically or through recent (in the past 10 years) survey efforts.



Source: USFWS 2008b, Esri 2013

Figure 3.8.3-3 American Burying Beetle Range in Nebraska

Based on 2012 presence/absence sampling, approximately 50 miles of the reroute in Nebraska would affect habitat occupied by low numbers of American burying beetles. These surveys were conducted at 54 sites in northern Keya Paha, Holt, Antelope, and Boyd counties (Hoback 2012). During the August 2012 survey, American burying beetles were found in Holt and Keya Paha counties. No American burying beetles were captured in Boyd or Antelope counties. In Holt County, American burying beetles were found at 19 of 29 sites surveyed. In Keya Paha County, American burying beetles were found at 9 locations of 14 sites surveyed. Capture rates ranged from 0 to 2.8 American burying beetles per trap-night. Because American burying beetles are susceptible to desiccation (drying out), capture rates are likely to have been affected by the drought in Nebraska during summer 2012 (see 2012 BA in Appendix H for more information on these surveys, as well as trap data from 1999 through 2012).

Control traps were run during sampling at sites in Holt County where American burying beetles were known to be numerous to the west of the proposed Project area. The control traps captured 0.7 to 7.0 beetles per trap-night compared to surveys in Holt and Keya Paha counties in the proposed Project area that captured 0 to 2.8 beetles per trap-night. The control traps success suggests that populations of American burying beetles to the east of the NDEQ-identified Sand Hills Region are not as dense as populations that occur in the NDEQ-identified Sand Hills Region.

3.8.3.5 Federally Protected Plants

Information on federally protected plants potentially found along the proposed Project route was obtained from the USFWS, the various state NHPs, state agencies, and field surveys. The NHPs provided information on the status of plant populations within individual states and in some cases, surveys were completed along the proposed Project route. Potential occurrence within the proposed ROW was evaluated for each plant based on its known distribution and habitat requirements.

Two federally protected plants were initially considered because they could potentially occur in the proposed Project area—the blowout penstemon (*Penstemon haydenii*) and the western prairie fringed orchid (*Platanthera praeclara*). As discussed below, the blowout penstemon was eliminated from further consideration.

Blowout Penstemon—Endangered

The blowout penstemon (*Penstemon haydenii*) is a federally listed endangered plant, and a Nebraska listed endangered plant. It occurs in sand blowout areas in Nebraska and Wyoming sandhill habitat. This plant can be found in early successional blowout habitat where it has little competition for scarce water and nutrients from other plants. However, as blowout habitats mature and become stabilized, other plants become established, and the blowout penstemon disappears. Thus, stabilization of blowouts and other disturbances that result in physical loss of these habitats can have an adverse effect on this species.

Blowout penstemons are found in the NDEQ-identified Sand Hills Region of north central Nebraska. The USFWS 2012 5-year review (2012c) cites Stubbendieck's 2008 unpublished annual monitoring report for this species, which indicates that there were 32 known blowout penstemon populations (10 native population sites and 22 introduced population sites) in the NDEQ-identified Sand Hills Region including plantings in Rock County, Nebraska. All 32 of

these populations, and thus the entire known range for this species, are west of the proposed Project area.

The northern portion of the proposed Project in Nebraska has been rerouted to the east to avoid the NDEQ-identified Sand Hills Region of Nebraska. Further, the blowout penstemon is not likely to occur within the proposed Project area in Rock County, Nebraska, as the known occurrences (including the introduced plantings) are well west of the proposed area. Pedestrian botanical surveys of the proposed Project in 2012 also did not locate any suitable habitat for the species. Presence/absence surveys were not recommended for this plant because no construction or related activities and impacts would occur in blowout penstemon habitat. Therefore, the blowout penstemon was eliminated from detailed analysis.

Western Prairie Fringed Orchid—Threatened

The western prairie fringed orchid (*Platanthera praeclara*) is federally listed as threatened and is state listed as threatened in Nebraska. No critical habitat has been designated for the western prairie fringed orchid.

This perennial orchid is found in tallgrass calcareous (chalky) silt loam or sub-irrigated sand prairies and may occur along ditches or roadsides. Flooding may be an important agent of seed dispersal (Hof et al. 1999), although seeds develop into flowering plants only under appropriate hydrologic and other conditions. The western prairie fringed orchid flowers from May to August, but peaks in late June and early July.

The western prairie fringed orchid is presently known to occur in six states (Iowa, Kansas, Minnesota, Missouri, Nebraska, and North Dakota), and may be locally extinct (extirpated) from South Dakota (USFWS 1996, USGS 2006b). Factors that indicate the species could still be present in South Dakota include: 1) incomplete surveys in areas of suitable habitat crossed by the proposed Project route on private lands; and 2) erratic flowering patterns with long dormancies that make detection difficult (Phillips 2003). One area where this species may occur in South Dakota and near the proposed Project area is southwest of Highway 18 in Tripp County (AECOM 2008a). Most remaining populations are found in North Dakota and Minnesota, with about three percent of the populations found in the southern portion of its historical range (USFWS 1996). In Nebraska, the western prairie fringed orchid occurs in Keya Paha, Rock, Holt, Antelope, and Boone counties (NGPC 2013a; NGPC, personal communication, May 2, 2013b).

Surveys were conducted in suitable habitat for the western prairie fringed orchid in June 2009, May through June 2011, and 2012 in Tripp County, South Dakota and Holt, Greeley, and Wheeler counties in Nebraska (more information for these surveys is provided in Appendix H, the 2012 BA). Additional surveys were conducted along the proposed route in May and June 2012, in suitable habitat in Holt, Antelope, and Boone counties in Nebraska. One western prairie fringed orchid was located in 2009 at a wetland in the previously proposed Project ROW. Two plants were located at the same site in 2011. No western prairie fringed orchids were detected during surveys along the proposed Project route in Nebraska in 2012, although suitable habitat was present in several areas. Some areas of potentially suitable habitat were not surveyed due to access denial.

3.8.4 Bureau of Land Management Sensitive Animals and Plants

The BLM maintains its own list of sensitive animals and plants, in order to properly manage these species to promote their conservation and reduce the likelihood and need for future listing under the ESA. The proposed Project route would traverse through approximately 45 miles of federal lands managed by the BLM in Montana. These federal lands are primarily composed of grasslands leased to farmers with livestock (see Section 3.9, Land Use, Recreation, and Visual Resources, for more information on federal lands and applicable management plans).

BLM Montana offices evaluate potential Project impacts on BLM sensitive species which includes species that have been determined, in coordination with the Montana NHP, MFWP Department, and the U.S. Forest Service, to be recommended for sensitive designation. BLM also evaluates both federal candidate species and federal delisted species within five years of delisting.

All BLM designated sensitive animals and plants with potential occurrence in Montana are also Montana designated species of concern. Additional Montana species of concern that potentially occur within the proposed Project area and that are not designated by BLM as sensitive are discussed in Appendix N, Supplemental Information for Compliance with MEPA. The BLM sensitive species that have the potential to occur within the proposed Project area include eight mammals, 29 birds, five reptiles, three amphibians, five fish (including one hybrid fish), and four plants, which are listed in Table 3.8-2, below.

Table 3.8-2 BLM Sensitive Species Potentially Occurring in the Proposed Project Area in Montana

Species	Occurrence and Habitat
Mammals	
Black-tailed prairie dog *(Cynomys ludovicianus)*	Black-tailed prairie dog colonies are generally associated with open grasslands and shrub grasslands in relatively level sites with silty clay loam, sandy clay loam or clay loam soils. See Section 3.8.3, Federally Protected, Proposed, and Candidate Species, and in Appendix H, the 2012 BA, for more information on prairie dog surveys conducted in Montana as part of black-footed ferret surveys.
Fringed bat *(Myotis thysanodes)*	This species occurs throughout Montana during mid-June to early September in roost sites include caves, mines, and buildings. They occur in a variety of habitats, from low to mid-elevation grassland, woodland, and desert habitats, up to and including spruce-fir forests.
Long-eared bat *(Myotis evotis)*	This species occurs throughout Montana and is active during mid-June to early September. Hibernacula are located in riverbreak habitat in northeast Montana. This species is found in wooded and rocky areas; roost sites include hollow trees, caves, mines and buildings.
Long-legged bat *(Myotis volans)*	This species occurs throughout Montana, and they are active during mid-June to early September. They roost in trees (under thick bark), hollow trees, buildings, caves, and abandoned mines, and hibernate in caves. They inhabit montane coniferous forest (mountain forests) and riparian habitat (habitat along rivers and streams).
Meadow jumping mouse *(Zapus hudsonius)*	This species occurs in southeastern Montana. The meadow jumping mouse inhabits dense stands of tall grass and forbs (herbaceous flowering plants) in marshy areas, riparian areas, woody draws, and grassy upland slopes. They often favor sites bordered by small streams.

Species	Occurrence and Habitat
Northern long-eared bat *(Myotis septentrionalis)*	This species occurs infrequently in the northeastern corner of Montana, although many range maps for this species do not include Montana as part of their range at all (Bat Conservation International 2012, MNHP and MFWP 2012c). Their summer roosts are typically under tree bark and in buildings, and their winter hibernacula typically include moist caves and abandoned mines. See Section 3.8.3, Federally Protected, Proposed, and Candidate Species, for more information on this species.
Swift fox *(Vulpes velox)*	This species occurs in north central Montana. This species inhabits prairie habitats with a high density of small mammals (ground squirrels or prairie dogs), and burrows in sandy soil on high ground in open prairies and along fencerows. There are several records of this species along the northern, international border of Phillips and Valley counties, and this species occurs in the grasslands in Phillips County (Fritz Prellwitz, personal communication, October 11, 2012). See Section 3.8.5, State-Protected Species, below, for more information on this species habitat requirements and potential areas of occurrence in the proposed Project area.
Townsend's big-eared bat *(Corynorhinus townsendii)*	This species occurs throughout much of Montana. They roost and hibernate in caves and mines. There are no known roosts for this species in the proposed Project area, although this species likely forages in and travels through the Project area.
Birds	
Baird's sparrow *(Ammodramus bairdii)*	This species occurs throughout central and eastern Montana, in mixed-grass prairies, alfalfa fields, and fallow cropland. The Baird's sparrow breeds in early June to late July, and nests on the ground.
Bald eagle *(Haliaeetus leucocephalus)*	This species occurs throughout Montana. They nest and roost in large trees that are near water with abundant fish and waterfowl prey. Previous surveys conducted along the proposed Project ROW identified two nest sites and three winter roosts in Montana (see Section 3.8.5. State-Protected Species, for information on bald eagle survey results).
Black-crowned night-heron *(Nycticorax nycticorax)*	This species nests and migrates throughout Montana. They inhabit shallow marshes and other types of wetlands. They nest from May to July, generally on islands that can afford them protection from predators.
Black tern *(Chlidonias niger)*	This species occurs in perennial wetlands throughout Montana. They nest low in marshes, on floating vegetation mats, muskrat houses, or on the ground near water.
Bobolink *(Dolichonyx oryzivorus)*	This species nests and migrates throughout Montana. They inhabit native and agricultural grasslands, wet meadows, and fallow fields. They nest on the ground between late April and July.
Brewer's sparrow *(Spizella breweri)*	This species nests and migrates throughout Montana, in sagebrush steppe with high shrub cover and large patch size. They nest in big sagebrush from May through July.
Burrowing owl *(Athene cunicularia)*	This species nests and migrates throughout much of Montana. They nest from March to October in open grasslands with abandoned prairie dog, ground squirrel, or badger burrows.
Chestnut-collared longspur *(Calcarius ornatus)*	This species nests throughout central and eastern Montana. They nest from May through August in native mixed-grass prairie, and in short to medium grasses that have been recently grazed or mowed.
Dickcissel *(Spiza americana)*	This species nests throughout eastern Montana from late May to August. They nest in grasses, shrubs or trees in grasslands.
Ferruginous hawk *(Buteo regalis)*	This species migrates and nests throughout Montana. They nest in mixed grass prairie with greasewood and big sagebrush, on the ground, in shrubs, on rock outcrops, and in trees. Nesting typically occurs from April through August.

Species	Occurrence and Habitat
Franklin's gull *(Leucophaeus pipixcan)*	This species migrates through Montana primarily between April and October. The few known breeding areas for this species in Montana are in Phillips, Roosevelt, and Sheridan counties. The Franklin's gull nests colonially on large prairie marsh complexes over water in emergent cattails and bulrushes.
Golden eagle *(Aquila chrysaetos)*	This species migrates, nests and winters throughout Montana. They nest from March to August on rock outcrops, cliff ledges, and trees. They forage in the prairie, in sagebrush, and in open woodlands. Eight golden nests were identified along the proposed Project route, including two in Montana and six in South Dakota.
Greater sage-grouse *(Centrocercus urophasianus)*	This species occurs year-round in east, central and southwest Montana. They inhabit sagebrush habitat at elevations ranging from 4,000 to over 9,000 ft. See Section 3.8.3.2, Federally Protected and Candidate Birds, for a more complete description of this species habitat requirements and occurrences in the proposed Project ROW.
LeConte's sparrow *(Ammodramus lecontei)*	This species breeds in the northeast and northwest corners of Montana from May to August. They nest and forage in moist meadows, marsh and bog edges in rushes, grass or sedges; they forage on insects and seeds.
Loggerhead shrike *(Lanius ludovicianus)*	This species breeds throughout most of Montana from mid-June to mid-July, in areas with a large component of shrubs and forbs.
Long-billed curlew *(Numenius americanus)*	This species breeds and migrates throughout Montana. They nest and forage in well-drained native grasslands, shrublands, and agricultural fields.
Marbled godwit *(Limosa fedoa)*	This species breeds east of continental divide and north of the Yellowstone River in Montana. They nest in short-grass prairie, pastures, marshes, and flooded plains, and forage on insects.
McCown's longspur *(Calcarius mccownii)*	This species breeds throughout Montana east of the Continental Divide. They nest and forage in short-grass prairie or heavily grazed mixed-grass prairie.
Mountain plover *(Charadrius montanus)*	This species breeds throughout central and eastern Montana, in short-grass prairies and prairie dog colonies. Most mountain plover nesting in Montana is concentrated south of the proposed Project area in southern Phillips and Valley counties (Andres and Stone 2009), but this species may nest in prairie dog towns along the Project route.
Nelson's (sharp-tailed) sparrow *(Ammodramus nelsoni)*	This species nests in Sheridan County, Montana in freshwater marshes in emergent vegetation.
Northern goshawk *(Accipiter gentilis)*	This species is a year-round Montana resident. They nest primarily in western Montana in mature conifer forests, and winter primarily in eastern Montana.
Peregrine falcon *(Falco peregrinus)*	This species is a year-round Montana resident and breeding resident April to September. They nest on ledges and cliffs, often near open habitats where they can hunt for prey.
Red-headed woodpecker *(Melanerpes erythrocephalus)*	This species breeds throughout central and eastern Montana and along the Missouri and Yellowstone rivers in May and June. They inhabit deciduous riparian forests (especially large cottonwood forests) and savannas.
Sage thrasher *(Oreoscoptes montanus)*	This species nests throughout central and eastern Montana from April through July. They nest on the ground or in sagebrush, and use sagebrush and shrubs during migration.
Sedge wren *(Cistothorus platensis)*	This species breeds in the northeast corner of Montana from May through August. They nest in wet sedge meadows and sedge marsh edges.
Sprague's pipit *(Anthus spragueii)*	This species breeds throughout central and eastern Montana from May to August. They nest on the ground in short-grass and mixed-grass prairie, wet meadows, and alkaline wetlands. See Section 3.8.3, Federally Protected, Proposed, and Candidate Species, for more information on this species habitat requirements and known/expected occurrence within the proposed Project ROW in Montana.

Species	Occurrence and Habitat
Swainson's hawk *(Buteo swainsoni)*	This species is a summer resident and a breeder throughout Montana during April to October. They typically nest between May and September in river bottoms, woody draws and shelterbelts.
Yellow-billed cuckoo (Eastern Distinct Population Segment) *(Coccyzus americanus)*	This species nests in the southern half of Montana in June and July, in trees in riparian forests and wooded draws.
Yellow rail *(Coturnicops noveboracensis)*	This species nests in the northeast corner of Montana from May through July, in marshes and wet meadows.
Reptiles and Amphibians	
Milksnake *(Lampropeltis triangulum)*	This species occurs sporadically in central and eastern Montana. There is only one record of this species in Dawson County, near the proposed Project route. They are active from May through October, and hibernate from November to March. They inhabit sandstone bluffs, rock outcrops, grasslands, and open ponderosa pine savanna.
Snapping turtle *(Chelydra serpentina)*	This species occurs in the lower Yellowstone River basin in eastern Montana, Milk River, and Missouri River, backwaters of large rivers, reservoirs, ponds, streams with permanent water and sandy or muddy bottoms. They nest from May to June on land.
Spiny-softshell *(Apalone spinifera)*	This species occurs in the Yellowstone River Basin in Montana, in large prairie rivers, and in slow-moving streams. They are active May through September, and nest in open areas in sand, gravel, and soft soil near water.
Western hog-nosed snake *(Heterodon nasicus)*	This species occurs in central and eastern Montana along major river systems and tributaries. They are active from May through October, and inhabit sagebrush grasslands with sandy soil.
Greater short-horned lizard *(Phrynosoma hernandesi)*	This species occurs throughout central and eastern Montana. They are active from April to October, and inhabit dry open forests, grasslands and sagebrush with sunbaked soil, ridges between coulees, and limestone outcrops.
Great Plains toad *(Bufo cognatus)*	This species occurs throughout central and eastern Montana, and inhabits grasslands near glacial potholes, stock ponds, irrigation ditches, and coulees. They breed in temporary pools flooded grasslands. They are active from May to September.
Northern leopard frog *(Rana pipiens)*	This species occurs throughout central and eastern Montana. They are active from March to November, and inhabit ponds, pools in intermittent streams, and wetlands.
Plains spadefoot *(Spea bombifrons)*	This species occurs throughout central and eastern Montana. They are active from May to August, and inhabit sagebrush-grasslands with soft sandy/gravelly soils near permanent or temporary water.
Fish	
Northern redbelly dace x[a] finescale dace hybrid *(Phoxinus eos x Phoxinus neogaeus hybrid)*	This hybrid species occur in the upper Missouri River and tributaries north of Missouri River in Montana, beaver ponds, bogs and clear streams, and slow-flowing creeks and ponds. They spawn in spring and early summer, and forage on diatoms, algae, zooplankton, and insects.
Paddlefish *(Polyodon spathula)*	This species occurs in the Missouri and Yellowstone rivers in Montana, in quiet waters of large rivers or impoundments. They spawn on the gravel bars of large rivers during late spring and early summer high water.
Pearl dace *(Margariscus margarita)*	This species occurs in cool tributaries of the Missouri River including the Milk River, and Frenchman, Rock, and Willow creeks in Montana; they spawn in spring over gravel or sand.

Species	Occurrence and Habitat
Sauger *(Sander canadensis)*	Within Montana, this species is known to occur in the Missouri, Milk, and Yellowstone rivers, Frenchman Creek, and Boxelder Creek. They also occur in the muddy shallows of lakes and reservoirs. They spawn in the main stem of large tributaries with bluff pools and rocky substrates.
Sturgeon chub *(Macrhybopsis gelida)*	This species occurs in the Missouri, Yellowstone, and Powder rivers, in turbid water with moderate to strong currents over bottoms ranging from rocks and gravel to coarse sand. They spawn from June through July. Sturgeon chubs occur in the Yellowstone, Powder, and Missouri Rivers and some of their tributaries in Montana.
Plants	
Bractless blazingstar [Bractless mentzelia] *(Mentzelia nuda)*	This species occurs in Dawson and Valley counties in Montana. They occur in sandy or gravelly soil of open hills and roadsides, and typically bloom in July.
Broadbeard beardtongue [Narrowleaf Penstemon] *(Penstemon angustifolius)*	This species occurs in grasslands on hills and slopes with sandy soil, and are often abundant in blowouts or sparsely-vegetated areas. They typically bloom from May through June. It is known to occur in Dawson and Fallon counties in Montana.
Persistent-sepal yellow-cress *(Rorippa calycina)*	This species occurs in McCone County, Montana. They occur in sparsely vegetated, moist sandy to muddy banks of streams, stock ponds, and man-made reservoirs near the high water line. They typically bloom from May through July.
Prairie phlox [Plains phlox] *(Phlox andicola)*	This species occurs in Dawson County, Montana, in sandy soils in grasslands and ponderosa pine woodland, often associated with sparsely vegetated blowouts and loose sand below sandstone outcrops. They typically bloom between May and early June.

[a] Produced by breeding two animals of different species; a hybrid

3.8.5 State-Protected Species

The states of South Dakota, Nebraska, and Kansas designate endangered and threatened species, and afford state protections to these species. Montana maintains a listing of species of concern. Those species that are listed in Montana and are also protected by other states are presented here. Species listed only as Montana species of concern are discussed in Appendix N, Supplemental Information for Compliance with MEPA. The proposed route does not cross North Dakota or Kansas. However, the proposed Project includes ancillary facilities located in both of these states. North Dakota does not have a state endangered or threatened species list; instead, North Dakota considers all species listed by the ESA as threatened or endangered in North Dakota.

The proposed Project would include the construction of one pump station in Clay County, Kansas, and an existing pump station would be expanded in Butler County, Kansas, in order to transport the anticipated product volume through the associated pipeline at these locations. Thus, Kansas state-listed threatened and endangered species whose habitat and range currently or historically occurred in the proposed Project area are discussed in this section.

Protections given to animals and plants are established within the statutes for each state. Further, each state crossed by the proposed Project route maintains a comprehensive wildlife conservation strategy (including a state wildlife action plan), as charged by Congress. Wildlife action plans identify the condition of each state's wildlife and habitats (including low and declining populations), identify the challenges to these resources, and describe long-term conservation strategies. Table 3.8-3 lists state endangered and threatened species and species of concern that have been identified through consultations with state resource agencies as potentially occurring along the proposed Project route. State-protected animals and plants that

are also federally protected are discussed in Section 3.8.3, Federally Protected, Proposed, and Candidate Species. State-protected species potentially occurring along the proposed Project route include five mammals, six birds, one reptile, ten fish, one invertebrate, and two plants.

Table 3.8-3 State-Protected Animals and Plants Potentially Occurring along the Proposed Project Route

Species	Federal and BLM Status[a]	State Status and Occurrence					Comments
		MT	SD	NE	KS	ND	
Mammals							
Gray wolf *(Canis lupus)*	E					E	Western Great Lakes, Wyoming, Northern Rocky Mountains.
Black-footed ferret *(Mustela nigripes)*	E	SC	E	E	E	E	Inhabits prairie dog towns of the Central Plains grassland habitat, and feeds primarily on prairie dogs.
River otter *(Lontra canadensis)*			T	T			North America, uses aquatic and riparian habitats, burrows along shorelines, eats fish.
Swift fox *(Vulpes velox)*	BLM-S	SC	T	E			Central Plains; uses habitats with high densities of small mammal prey. Uses dens year-round, but will move frequently between dens when raising pups, as fleas can become a problem.
Northern long-eared bat *(Myotis septentrionalis)*	P BLM-S	SC					Summer roosts are typically under tree bark and in buildings and winter hibernacula typically include moist caves and abandoned mines.
Birds							
Bald eagle *(Haliaeetus leucocephalus)*	DL BLM-S	SC	T		T		North America, breeds and winters in areas near water, eats fish and waterfowl; resident and migrant populations.
Eskimo curlew *(Numenius borealis)*	E		E	E	E		Inhabit grasslands of North America (summer) and South America (winter).
Interior least tern *(Sternula antillarum)*	E	SC	E	E	E	E	Inhabit barren to sparsely vegetated sandbars along rivers, sand and gravel pits, or lake and reservoir shorelines.

Species	Federal and BLM Status[a]	State Status and Occurrence					Comments
		MT	SD	NE	KS	ND	
Peregrine falcon *(Falco peregrinus)*	DL BLM-S	SC	E				North America, nests on ledges, cliffs; eats birds, winters coastal proposed Project area, resident and migrant.
Piping plover *(Charadrius melodus)*	T	SC	T	T	T	T	Central Plains; inhabits sand and gravel bars and beaches along major rivers and around lakes, reservoirs, ponds, and alkali wetlands.
Whooping crane *(Grus americana)*	E	SC	E	E	E	E	Central United States and Canada; use a variety of habitats during migration, including a variety of croplands for feeding, and wetlands that are generally 10 acres or less for roosting. Breed in isolated marshes.
Reptiles							
Massasauga *(Sistrurus catenatus)*				T			Central United States, Great Lakes region; wet prairies, marshes, uplands; uses burrows, eats animals, short migrations.
Fish							
Blacknose shiner *(Notropis heterolepis)*			E	E			Northern United States; Keya Paha, Niobrara rivers and tributaries, Spring Creek, SD, NE; weedy lakes streams; eats insects.
Blackside darter *(Percina maculata)*					T		Central United States; clear gravel or sand bottom streams, eats insects.
Finescale dace *(Phoxinus neogaeus)*			E	T			North United States; Keya Paha, Niobrara, Main Stem Elkhorn rivers, Spring Creek, SD, NE; bogs, creeks, rivers, eats invertebrates.
Northern redbelly dace *(Phoxinus eos)*		SC	T	T			North United States; Upper Missouri River and tributaries, Frenchman Creek, Yellowstone River and tributaries east of the Powder River, MT; Keya Paha, Niobrara rivers and tributaries, Spring Creek, SD, NE; boggy lakes, streams; herbaceous.

Species	Federal and BLM Status[a]	State Status and Occurrence					Comments
		MT	SD	NE	KS	ND	
Northern redbelly dace x[b] Finescale dace hybrid *(Phoxinus eos x Phoxinus neogaeus hybrid)*	BLM-S	SC					North United States; Upper Missouri River and tributaries, Frenchman Creek, Yellowstone River and tributaries east of the Powder River, MT; boggy lakes, streams; herbaceous.
Pallid sturgeon *(Scaphirhynchus albus)*	E	SC	E	E	E	E	Inhabit large, free-flowing, warm-water stream systems, where they live close to the bottom of the rivers, where there are sand and gravel bars.
Pearl dace *(Margariscus margarita)*	BLM-S	SC	T				North United States; Missouri River, Milk River, Rock Creek, Willow Creek, and Frenchman Creek, MT; Keya Paha tributaries, SD; bogs, clear streams, spawns on sand-gravel; omnivorous.
Sicklefin chub *(Macrhybopsis meeki)*		SC	E		E		Missouri River, MT, SD, NE, KS; Yellowstone, Milk rivers, MT; large warm rivers with gravel, sand; bottom feeder.
Sturgeon chub *(Macrhybopsis gelida)*	BLM-S	SC	T	E	T		Missouri River; Yellowstone and Powder Rivers, MT; Cheyenne and White rivers SD; large turbid rivers; bottom feeder.
Topeka shiner *(Notropis topeka)*	E			E	T		Occurs in portions of South Dakota, Minnesota, Kansas, Iowa, Missouri, and Nebraska, primarily in small prairie (or former prairie) streams in pools containing clear, clean water. Topeka shiner streams generally have clean gravel, rock, or sand bottoms.
Invertebrates							
American burying beetle *(Nicrophorus americanus)*	E			E	E		Inhabits grassland prairie, forest edge, and scrubland, in Arkansas, Kansas, Nebraska, Oklahoma, South Dakota, and Rhode Island.

Species	Federal and BLM Status[a]	State Status and Occurrence					Comments
		MT	SD	NE	KS	ND	
Plants							
Small white lady's slipper *(Cypripedium candidum)*				T			North Central, Northeast United States; perennial orchid, mesic-to-wet native prairie, flowers May to June.
Western prairie fringed orchid *(Platanthera praeclara)*	T			T		T	Occurs in six states (Iowa, Kansas, Minnesota, Missouri, Nebraska, and North Dakota), and may be locally extinct (extirpated) from South Dakota in tallgrass calcareous (chalky) silt loam or sub-irrigated sand prairies and may occur along ditches or roadsides, flowers May to August.

[a] (FC = Federal Candidate; DL = Federally delisted; BLM-S = BLM Sensitive; E = Endangered; T = Threatened; P = Proposed; SC = Species of Concern)

[b] Produced by breeding two animals of different species; a hybrid

The following Montana, South Dakota, North Dakota, Nebraska, and Kansas threatened, endangered, and species of special concern were considered in this Final Supplemental EIS, because their preferred habitat and range occurs or historically occurred within the proposed Project area. Note that those state threatened, endangered, and species of special concern that are also federally protected, proposed, or candidate species are not discussed in this section, because they are discussed above in Section 3.8.3, Federally Protected, Proposed, and Candidate Species. Table 3.8-3, above, provides the full list of state threatened species, endangered species, and species of special concern that were considered in this Final Supplemental EIS, including those species that are also federally listed.

3.8.5.1 Mammals

River Otter

River otters (*Lontra canadensis*) are a South Dakota and Nebraska threatened species. River otters are adaptable and use a variety of habitat types, but require aquatic habitats. Although they frequent lakes and ponds, river otters typically live in marshes and along wooded rivers and streams with sloughs and backwater areas. Otters use dens in the ground that were previously built by beavers or other animals. Denning occurs during March to September. Most river otter mortality is related to human activity. Between 1986 and 1991, 159 northern river otters were reintroduced into Nebraska by the NGPC, with the objective to restore this species (Bischof 2006). In Nebraska, accidental trapping has been the largest known mortality factor for reintroduced animals (Bischof 2006). Habitat destruction, pesticide use, and pollutants also affect the species (NGPC 2009b). River otters are likely to occur throughout the proposed Project area along large rivers. Surveys for the river otter were completed in 2012 at the crossings of the Niobrara, Elkhorn, Loup, and Platte Rivers. Suitable habitat was located but no river otters were observed.

Swift Fox

The swift fox (*Vulpes velox*) is a South Dakota threatened species, a Nebraska endangered species, a Montana species of concern, and a BLM sensitive species. Historically, swift foxes were widely distributed throughout the central Great Plains. Swift foxes use open prairie and arid plain habitats, including areas intermixed with winter wheat fields. Swift foxes are thought to have been common on the eastern plains of Montana in the early 1900s but were believed to be exterminated in the state by 1969. Reintroductions of the swift fox on the Blackfeet Indian Reservation, Fort Peck Indian Reservation, and in southern Alberta and Saskatchewan from 1983 to 1991 are likely the source of expanding populations in Montana (MNHP 2009, Foresman 2001). Swift foxes create dens within burrows. A fox may dig a burrow or use a burrow made by other animals, usually in sandy soil on high ground in open prairies, along fencerows, and occasionally in plowed fields. Individuals may use several different dens throughout the year (NatureServe 2009).

The proposed Project route crosses swift fox range in Phillips, Valley, Dawson, Prairie, and Fallon counties in Montana (Kahn et al. 1997), and suitable habitat in Fallon and McCone counties in Montana. Montana NHP data indicate that there are several records of this species occurring in northern Philips and Valley County within the last 5 years (MNHP and MFWP 2012b), and BLM has indicated that swift fox could be present near the proposed Project route in Montana; and the proposed Project route crosses several areas identified as recently occupied by swift fox. In particular, BLM expects the swift fox to occur along the proposed Project route in northern Phillips County, in the grasslands west of Frenchman Creek (Fritz Prellwitz, personal communication, October 11, 2012).

In South Dakota, the proposed Project route crosses through swift fox range in Haakon and Jones counties in South Dakota between the reintroduction sites of the Bad River Ranches (Turner Endangered Species Fund), Badlands National Park, and the Lower Brule Sioux Tribe Reservation (SDGFP 2009). In addition, there is suitable habitat for this species in Harding, Butte, Perkins, Meade, and Pennington counties in South Dakota (Kahn et al. 1997). South Dakota NHP data indicate three swift fox records in Haakon County along the proposed Project route.

Surveys for swift fox were completed in 2009 to identify potential habitat and den sites in Montana and South Dakota. Forty potential den sites were reported. Subsequent surveys were completed in 2010 at these 40 sites; neither swift fox nor swift fox sign (e.g., scat, tracks, dens) were observed at any of these locations. Surveys for swift fox would be completed in suitable habitat in Montana prior to construction per the request of MFWP. The proposed Project route would be outside of the known distribution of the swift fox in Nebraska (NGPC 2013a).

3.8.5.2 Birds

Bald Eagle

Bald eagles (*Haliaeetus leucocephalus*) occur throughout the United States and the proposed Project area. The bald eagle was previously federally protected as an endangered species under the ESA, but was delisted in 2007; it remains state-listed in South Dakota and Kansas as a threatened species. The bald eagle is also protected under both the BGEPA and the MBTA. Bald eagles are associated with riparian or lacustrine areas for foraging and nesting. They generally nest and roost in large trees or snags with open crowns in areas that are relatively free of

disturbance. Nesting territories are most often near open water with a prey base of fish and waterfowl. Bald eagles use upland areas to feed on small mammals and carrion, especially during the winter. Nests are typically within one mile of permanent water. Roost sites are an important habitat component for bald eagles and include live trees and snags that provide good visibility and that are located near nest sites or foraging areas.

Four active bald eagle nests were documented during raptor nest surveys for the proposed Project during April 2009: two in Montana (along the Yellowstone and Missouri rivers), and two in Nebraska. Five active bald eagle nests (including those previously documented) were documented during raptor nest surveys for the proposed Project during 2010, 2011, and 2012. Twelve bald eagle winter roost sites were identified during surveys for the proposed Project during February 2009. Winter roost sites were identified at three proposed river crossings in Montana (Yellowstone River, Missouri River, and Frenchman Reservoir); three proposed river crossings in South Dakota (White River, Cheyenne River, South Fork Moreau River); and six proposed river crossings in Nebraska (Platte River, Loup River, Cedar River, Dry Creek, Niobrara River, Keya Paha River). In Kansas, no bald eagles were identified during prior raptor surveys for the proposed Project. However, winter migrants occur near reservoirs and rivers throughout the state, and this species also nests in Kansas.

As with most birds, bald eagles may change their summer roosting and winter nesting locations, or expand into new locations, so absence at a location one year does not guarantee absence at that location in subsequent years. Pre-construction nest surveys would be conducted to avoid impacts to this species.

Peregrine Falcon

The peregrine falcon (*Falco peregrinus*) is a South Dakota endangered species, a Montana species of concern, and a BLM sensitive species. The peregrine falcon is a non-breeding resident, breeding resident, permanent resident, or migrant throughout the United States, primarily west of the proposed Project area, although non-breeding residents are found throughout the east and along the Gulf of Mexico coast. Two of the three recognized subspecies could occur within the proposed Project area: the American peregrine falcon (*Falco peregrinus anatum*) and the Arctic peregrine falcon (*F.p. tundrius*). Both subspecies were previously federally protected as endangered under the ESA but have been delisted. The peregrine falcon is also protected under the MBTA. The American peregrine falcon nests across interior Alaska and across Canada south to Baja California and northern Mexico. The Arctic peregrine falcon breeds on the North American tundra and winters in Latin America from Cuba and Mexico south through Central and South America and along the Gulf Coast from Florida west to eastern Mexico. Peregrine falcons use open habitats near cliffs and mountains. Nesting habitat occurs on cliffs near an adequate prey base. Aerial nest surveys were conducted in 2010, 2011, and 2012. No peregrine falcon nests were found. Pre-construction nest surveys will be conducted if construction is to occur within the nesting season.

3.8.5.3 Reptiles

Massasauga

The massasauga (*Sistrurus catenatus*), or pygmy rattlesnake, is state-listed as threatened in Nebraska. It lives in wet areas, including wet prairies, marshes, and low areas along rivers and lakes. In many areas, massasaugas also use adjacent uplands—including forest—during part of the year. They often hibernate in crayfish burrows, but they also may be found under logs and tree roots or in small mammal burrows. Unlike other rattlesnakes, massasaugas hibernate alone. Small mammal and crayfish burrows are used for winter hibernation. Females give birth in late July through early September. Movement within the home range occurs between suitable winter and summer habitats, sometimes spanning almost 2 miles. Most movement, however, occurs within 650 ft of their burrows. Peak activity occurs from about April or May through October. Suitable habitat is known to occur along the proposed Project route along waterbody shorelines within Jefferson County, Nebraska, in the southern portion of Nebraska.

3.8.5.4 Fish

Blacknose Shiner

The blacknose shiner (*Notropis heterolepis*) is a South Dakota and Nebraska listed endangered species. The blacknose shiner requires clean, cool, well-oxygenated streams with abundant aquatic vegetation. It is found in areas swept by currents, island heads, and sandbars, and is intolerant of turbid water and pollution. Spawning occurs in Nebraska during the last week of June and in general, from spring to midsummer. The blacknose shiner feeds on small aquatic insects, crustaceans, and algae. It serves as a host for the cylindrical papershell freshwater mussel (*Anodontoides ferussacianus*) (NatureServe 2009). The blacknose shiner is an important indicator of high water quality within pristine streams.

This minnow potentially occurs within suitable habitat in waterbodies that would be crossed by the proposed Project route in South Dakota and Nebraska. In 2009, presence/absence and habitat surveys did not detect this species, but identified two proposed Project route stream crossings with good blacknose shiner habitat in South Dakota.

Within the proposed Project area in Nebraska, this species is known to occur in Keya Paha County, which is the northernmost county in Nebraska that the proposed Project route would cross (NGPC 2013a). In 2009, in accordance with recommendations by the NGPC biologists conducted presence/absence and habitat surveys in tributaries to the Niobrara and Main Stem Elkhorn rivers in Nebraska. They did not observe blacknose shiners, but they identified four proposed stream crossings containing marginally suitable habitat and one stream crossing with good habitat for this species. However, the proposed Project route has been revised since the 2009 surveys.

In May and June 2013, surveys were conducted along the proposed Project route in Nebraska and southern South Dakota. These studies were conducted in four streams that were selected for their potential to contain suitable habitat for the blacknose shiner, as well as the finescale dace (*Phoxinus neogaeus*), northern redbelly dace (*Phoxinus eos*), and pearl dace (*Margariscus margarita*) and no species or suitable habitat was identified. Three additional streams in Nebraska, selected for their potential for suitable habitat, will be surveyed once access is granted. In addition, pre-construction surveys for this species will be conducted in Nebraska per the request of the NDEQ.

Finescale Dace

The finescale dace (*Phoxinus neogaeus*) is a South Dakota endangered and Nebraska threatened species. Populations of the finescale dace in South Dakota and Nebraska occur in small, isolated pools of water, and have been declining steadily since European settlement of this region over 100 years ago. Finescale dace can be found in sluggish, spring-fed streams with abundant vegetation and woody debris; the vegetation and cover provided by logs and brush supply shady areas for the dace to say out of the sun, ambush prey, and avoid predators. They can also occur in small spring-fed lakes and bogs (Stasiak and Cunningham 2006). Perhaps the most optimal habitat for this species is a series of beaver ponds filled with a constant supply of cool groundwater. Finescale dace spawn in early spring from April to early June.

This species is associated with Niobrara, Loup and Main Stem Elkhorn rivers in Nebraska, although their known range is west of the proposed Project route in Keya Paha, Nance, and Merrick counties (NGPC 2013a). Within Nebraska, this species was not identified in the original proposed Project area evaluated in the 2011 Final EIS, nor was suitable habitat found for this species. However, the proposed route has been revised since the 2009 surveys.

In accordance with recommendations by the SDGFP and NGPC, field surveys of waterbodies identified as potentially containing finescale dace or habitat suitable for this minnow were conducted. No finescale dace were found during fall 2009 field surveys, although two locations contained habitat suitable for this species in South Dakota. As discussed in the above section regarding the blacknose shiner, additional surveys were conducted in May and June 2013 for this species along the proposed Project route in Nebraska and southern South Dakota, and no finescale dace were observed. Additional surveys in Nebraska will be conducted once access is granted. In addition, pre-construction surveys for this species will be conducted in Nebraska per the request of the NDEQ.

Northern Redbelly Dace and Northern Redbelly Dace X Finescale Dace Hybrid[3]

The northern redbelly dace (*Phoxinus eos*) is a South Dakota and Nebraska threatened species and a Montana species of concern. In addition, the northern redbelly dace x finescale dace hybrid (*Phoxinus eos* x *Phoxinus neogaeus* hybrid) is a BLM-sensitive species and a species of concern in Montana. It prefers sluggish, spring-fed streams with abundant vegetation and woody debris (Stasiak 2006). This minnow requires a constant supply of cool spring water that maintains sufficient oxygen levels during hot and dry summer conditions. During spawning, the northern redbelly dace becomes quite colorful, reaching a maximum size of about 3 inches. In some locations in the northern United States, the northern redbelly dace hybridizes with its close

[3] Produced by breeding two animals of different species; a hybrid

relative, the finescale dace. The resulting hybrids are all females and produce female clones as offspring. The northern redbelly dace potentially occurs in: the Upper Missouri River and tributaries, including Frenchman Creek, and Yellowstone River and tributaries east of the Powder River, Montana; in tributaries of the Keya Paha River in South Dakota; and in tributaries of the Niobrara River and Main Stem Elkhorn River in Nebraska.

Surveys of stream crossings identified as potentially containing the northern redbelly dace or its habitat as identified by the SDGFP and NGPC in 2009 did not detect this minnow, although two stream crossings contained good habitat for this species in South Dakota. Within the Project area in Nebraska, this species is known to occur in Keya Paha County (NGPC 2013a). This species was not detected during 2009 surveys in streams presumed to have suitable habitat for this species. However, the proposed route has been revised since the 2009 surveys. As discussed in the above section regarding the blacknose shiner, additional surveys were conducted in May and June 2013 for this species along the proposed Project route in Nebraska and southern South Dakota and no northern redbelly dace were observed. Additional surveys in Nebraska will be conducted once access is granted. In addition, pre-construction surveys for this species will be conducted in Nebraska per the request of the NDEQ.

Pearl Dace

The pearl dace (*Margariscus margarita*) is a South Dakota threatened species, a Montana species of concern, and a BLM sensitive species. The pearl dace inhabits bog drainage streams, ponds, and small lakes, and is usually found over sand or gravel. Pearl dace spawn in clear water in weak or moderate currents (NatureServe 2009). They potentially occur in suitable habitat within the Missouri River, Milk River, Frenchman's Creek, Rock Creek, and Willow Creek in Montana and tributaries to the Keya Paha River in South Dakota that would be crossed by the proposed Project route. The pearl dace has been listed as a species of special concern in Montana and as threatened in South Dakota. Further, the BLM has listed this species as sensitive.

Surveys of waterbodies identified as potentially containing pearl dace or their habitat by the SDGFP and NGPC in 2009 found no pearl dace, although two proposed stream crossings in South Dakota contained suitable habitat. As discussed in the above section regarding the blacknose shiner, additional surveys were conducted in May and June 2013 for this species along the proposed Project route in Nebraska and southern South Dakota and no pearl dace were observed.

Blackside Darter

The blackside darter (*Percina maculata*) is a Kansas threatened species. It is a member of the perch family and potentially occurs in creeks and small to medium rivers, where it prefers quiet pools and pools with some current over gravel or sand bottoms (Page and Burr 1991). Blackside darters feed on benthic invertebrates and spawn in gravel pools greater than 1 foot deep, and they may migrate several miles between spawning and non-spawning habitats. In Kansas, it has historically occurred in Riley County, and there is designated critical habitat for this species in Wabaunsee County. The blackside darter is not expected to occur in either Clay or Butler counties, where the proposed Project pump stations would be located (KDWPT 2012).

Sicklefin Chub

The sicklefin chub (*Macrhybopsis meeki*) is a South Dakota endangered species, a Kansas endangered species, and a Montana species of concern. The sicklefin chub inhabits the shallows of warm large rivers that are continuously and heavily turbid, with strong currents over stable gravel and sand substrates (NatureServe 2009). The sicklefin chub potentially occurs in the Missouri, Milk and Yellowstone rivers in Montana and in the Cheyenne and White rivers in South Dakota. This species is not expected to be found in South Dakota along the proposed Project route (USGS 2006a). In Kansas, the sicklefin chub has historically occurred in the northeast corner of the state, east of where the proposed pump stations would be constructed/expanded as part of the proposed Project (KDWPT 2012).

Sturgeon Chub

The sturgeon chub (*Macrhybopsis gelida*) is a South Dakota and Kansas threatened species, a Nebraska endangered species, a Montana species of concern, and a BLM sensitive species. The sturgeon chub prefers large, turbid, sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents, especially at the head of islands or exposed sandbars. Sturgeon chubs occur in the Yellowstone, Powder, and Missouri Rivers and some of their tributaries in Montana, Cheyenne and White Rivers in South Dakota, and the Platte River in Nebraska. In Kansas, this species is not known to occur in Butler or Clay counties (KDWPT 2012), where the proposed Project pump stations would be located. Pre-construction surveys for state this species will be conducted in Nebraska per the request of the NDEQ.

3.8.5.5 Plants

Small White Lady's Slipper

The small white lady's slipper (*Cypripedium candidum*) is a Nebraska threatened species. It is found in wet prairies, mesic (dry) blacksoil prairie, wet blacksoil prairie, glacial till hill prairie, sedge meadow, calcareous (chalky) fens, and glades, generally with calcareous soils. It is a medium sized perennial orchid that flowers in Nebraska from mid-May through early June. This orchid maintains a symbiotic relationship with mycorrhiza fungi which assist the plant with seed germination and seedling growth through soil moisture and nutrient uptake. The small white lady's slipper could potentially occur within suitable habitat along the proposed Project route. Several counties that the proposed Project route would cross are presumed to have occurrences of this species, including Antelope, Boyd, Holt, Keya Paha, Nance, and Merrick counties in Nebraska (NGPC 2013a).

3.8.6 Animals and Plants of Conservation Concern

This section discusses animals and plants, identified during consultations with agencies, that are of conservation concern and that potentially occur along the proposed Project route (Table 3.8-4). Many of these species are associated with woodland, wetland, or prairie habitats, which have been historically converted to agricultural use throughout the proposed Project area. The species of conservation concern have been identified and designated by federal and state wildlife management agencies after review of abundance, population trends, distribution, number of protected sites, degree of threat to survival, suitable habitat trends, degree of knowledge about the species, and species life history (MFWP 2005, Schneider et al. 2005, SDGFP 2006, Wasson

et al. 2005). These designations are intended to assist with conservation planning and maintenance of the natural heritage of each state.

Table 3.8-4 Animals and Plants of Conservation Concern Potentially Occurring along the Proposed Project ROW

Species	Occurrence and Habitat
Birds	
Golden eagle *(Aquila chrysaetos)*	Migrate, nest and winter throughout much of proposed Project area, nest March to August on rock outcrops, cliff ledges, trees; forage in prairie, sagebrush, and open woodlands on jackrabbits, ground squirrels, carrion, ungulate fawns, and small birds. Eight golden eagle nests were identified along the proposed Project route, including two in Montana and six in South Dakota.
Great blue heron *(Ardea herodias)*	Migrate, nest, and winter throughout proposed Project area; nests in large groups (rookeries) in forested wetlands riparian habitats, and freshwater and brackish marshes; eat invertebrates and fish. Several rookeries have been identified along the proposed Project route, including one in Montana and one in South Dakota. In addition, one rookery was identified along the previously proposed Project route through Nebraska, and rookeries may occur along the currently proposed route through Nebraska.
Raptors (except eagles)	Migrate, nest and winter throughout proposed Project area depending on species; nest on rock outcrops, cliff ledges, trees; forage in various habitats and small to medium size prey, and/or carrion.
Fish	
Plains topminnow *(Fundulus sciadicus)*	Missouri River drainages; clear, sandy to rocky, spring-fed streams, creeks, and medium to small rivers; in quiet pools, backwaters, overflow pools, usually near vegetation. Present at crossing at Lute Creek in SD. Suitable habitat in Lute and Buffalo Creek, Tripp County, SD; Keya Paha River, Spring Creek, Keya Paha County, NE; Elkhorn River, Holt Creek, Dry Creek, Main Stem Elkhorn River, and two unknown streams, Holt County, NE.

3.8.7 Connected Actions[4]

The proposed Project would include three connected actions: 1) the Bakken Marketlink Project; 2) the Big Bend to Witten 230-kV Transmission Line; and 3) Electrical Distribution Lines and Substations. These connected actions are described briefly here.

3.8.7.1 Bakken Marketlink Project

Construction and operation of the Bakken Marketlink Project would consist of a pipeline approximately 5 miles in length; additional piping; booster pumps; meter manifolds; and two 250,000-barrel tanks that would be used to store crude from connecting third-party pipelines and terminals. The Bakken Marketlink Project facilities would be located within private land currently used as pastureland and hayfields. The known distribution of the greater sage-grouse and interior least tern would not overlap with pipelines or storage tanks proposed under this connected action; however, potential habitat (such as sage-steppe grasslands) for the greater

[4] Connected actions are those that 1) automatically trigger other actions which may require environmental impact statements, 2) cannot or will not proceed unless other actions are taken previously or simultaneously, 3) are interdependent parts of a larger action and depend on the larger action for their justification.

sage-grouse, do occur along the 5-mile pipeline. The Bakken Marketlink facilities near Baker would not likely affect the whooping crane as this region is not within the central flyway whooping crane migration corridor. However, the Bakken Marketlink facilities would be constructed in a region used by Sprague's pipit and mountain plover. Additional federal-listed species, Montana species of concern, or BLM sensitive species may occur within the area where Bakken Marketlink Project activities would occur.

3.8.7.2 Big Bend to Witten 240-kV Transmission Line

The Big Bend to Witten 230-kV Transmission Project is located in Lyman and Tripp counties in south-central South Dakota. The project would consist of replacing the existing Big Bend-Fort Thompson No. 2 230-kV Transmission Line Turning Structure on the south side of the Big Bend Dam on Lake Sharpe; constructing a new double-circuit 230-kV transmission line for approximately 1 mile southwest of the dam; and constructing a new Lower Brule Substation south of the dam. The existing Witten Substation would be expanded immediately to the northeast to accommodate the new 230-kV connection. Federal- and South Dakota-listed species discussed above under Section 3.8.3, Federally Protected, Proposed, and Candidate Species, and Section 3.8.5, State-Protected Species, may occur where the transmission lines and associated poles/towers would be constructed. The Big Bend to Witten 230-kV Transmission Line would lie within the central flyway whooping crane migration corridor.

3.8.7.3 Electrical Distribution Lines and Substations

Multiple private power companies or cooperatives would construct distribution lines to deliver power to 20 pump stations located along the length of the proposed pipeline in the United States. These distribution lines would range in length from approximately 0.1-mile to 62 miles, with the average being 13 miles long, and are estimated to extend about 377 miles, combined. The distribution lines would range in capacity from 69 kV to 240 kV, but the majority would have a capacity of 115 kV. The lines would be strung on a single-pole and/or on H-frame wood poles.

One active bald eagle nest was identified within 1 mile of the proposed power line route to proposed Pump Station 10 in Montana in April 2012. Electrical distribution lines from some of the substations would lie within the central flyway whooping crane migration corridor. Other federal- and state-listed species discussed in Sections 3.8.2, Regulatory Framework, and 3.8.3, Federally Protected, Proposed, and Candidate Species, may occur where the electrical distribution lines and substations would be constructed under the proposed Project.

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Summary of 2011 Federally-Listed Species Searches for the Keystone XL Pipeline Project Steele City Segment (Montana, South Dakota, and Nebraska)

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July 2011

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Attachment A

Site Photos

1.0 INTRODUCTION

TransCanada Keystone Pipeline LP (Keystone) is currently in the regulatory permitting process for the proposed Keystone XL Pipeline Project (Project). The Steele City Segment of the Project encompasses the proposed pipeline and related facilities such as pump stations, transmission lines, pipe yards and contractor yards in Montana, South Dakota and Nebraska.

A potential regulatory issue that could affect the permitting process is the occurrence of species that are listed under the federal Endangered Species Act (ESA). ESA-listed species that have been identified by the United States Fish and Wildlife Service (Service) as potentially affected by the Project include:

- western prairie fringed orchid (*Platanthera praeclara*) a Threatened species,
- least tern (*Sternula antillarum*) an Endangered Species, and
- piping plover (*Charadrius melodus*) a Threatened species.

Surveys have been completed for each of these species in areas of suitable habitat along the Project in 2009, 2010, and 2011.

In addition, surveys for mountain plover (*Charadrius montanus*) were completed in 2011. The mountain plover was removed as a Candidate species on May 11, 2011. However, since the species is also listed as "Sensitive" by the Bureau of Land Management, and surveys for the species are required in the Draft Environmental Impact Statement for the Keystone XL Oil Pipeline Project (DEIS), Keystone completed surveys of potential habitat in 2011.

2.0 METHODS

Surveys were completed for each of the species listed in Section 1.0 using methods appropriate to the habitat and species. Surveys were completed by plant ecologists or wildlife biologists, as appropriate, for each species. Surveyors were experienced with each species' characteristics and habitat requirements; the primary investigators for each survey team had a minimum of 15 years of experience in completing plant and/or wildlife surveys for rare species.

2.1 Western Prairie Fringed Orchid

The western prairie fringed orchid occurs in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Wyoming. Suitable habitat includes mesic and wet prairies, although plants have been found in roadside ditches and hay meadows (Sheviak and Bowles 2003, U.S. Fish and Wildlife Service 2011). Several sites were identified as potential habitat on the Project through consultation between Keystone and the Service.

Surveys were completed between June 28 and July 2, 2011 by John Beaver of WESTECH Environmental Services, Inc. and Dr. Kay Kottas of Prairie Legacy, Inc. Mr. Beaver has over 15 years experience

surveying for rare plant species across the west. Dr. Kottas has numerous years experience conducting native prairie inventories in Nebraska as well as surveys for western prairie fringed orchid and blowout penstemon (*Penstemon haydenii*).

Prior to surveying an area, surveyors reviewed literature on the species habitat requirements and physical characteristics. Keystone also contacted the Nebraska Natural Heritage Program (NNHP) and discussed survey techniques and timing with Jerry Steinauer, the NNHP botanist. Surveyors carefully searched each area of potential habitat by slowly walking back and forth across the habitat. Surveyors searched suitable habitat from multiple directions to review each area from different light angles and to insure that plants were not missed during the initial walk through.

2.2 Least Tern and Piping Plover

The least tern (interior population) and piping plover occur in numerous Midwestern, Southwestern, and Western states including Montana, South Dakota, and Nebraska. The DEIS has identified several river crossings on the Project that may provide suitable habitat for either or both species. Specifically, the DEIS identified the following rivers as potential nesting habitat for these species:

- Yellowstone River (Montana) – least tern;
- Cheyenne River (South Dakota) – least tern and piping plover;
- Niobrara River (Nebraska) – least tern and piping plover;
- Loup River (Nebraska) – least tern and piping plover; and
- Platte River (Nebraska) – least tern and piping plover.

In addition to these rivers, Keystone surveyed the Missouri River crossing in Montana for least tern since this area is located within the northwestern fringe of the species range and may support nesting least tern depending on seasonal water levels (Montana Natural Heritage Program 2011).

Surveys were completed at the rivers noted above in June and/or July. Surveyors completed observations for several hours if suitable habitat was present. Observations were completed from several vantage points on the river bank with 10x42 binoculars and 80 mm 20x60 power spotting scopes.

The Missouri and Yellowstone rivers were observed on June 3 and again on July 11. Surveyors completed surveys at the Cheyenne River on June 6, and the Niobrara, Loup, and Platte rivers on July 6 and 7. Surveys were not completed in June on the Niobrara, Loup, and Platte rivers after observing conditions on the Missouri, Yellowstone, and Cheyenne rivers in June and after conferring with local Nebraska officials regarding river levels; officials indicated that the Niobrara, Loup, and Platte rivers were completely inundated in June 2011 and that sandbars and river banks were not exposed. The Missouri and Yellowstone rivers were observed again in July to determine if water had subsided to the point where suitable habitat for terns and plovers might be present.

Surveyors included John Beaver and Tom Butts of WESTECH Environmental Services, Inc. Mr. Beaver has over 15 years experience surveying for rare wildlife and plants, while Mr. Butts has over 30 years experience surveying for rare wildlife, including specific survey experience for least tern and piping plover.

2.3 Mountain Plover

Six sections of the proposed Keystone XL proposed pipeline were surveyed for mountain plover habitat and occurrence during early June, 2011. These sites had been identified as potential mountain plover habitat based on data received from the Montana Natural Heritage Program (MNHP) (MNHP 2011a) and personal communication with Montana Fish, Wildlife, and Parks (MFWP) biologists. All but one of these sites was located between the Canadian border and the Missouri River crossing southeast of Glasgow, Montana. The sixth site was located northwest of Baker, Montana. Surveyors followed mountain plover survey guidelines recommended by the Service (USFWS 2002). Surveys were completed by Tom Butts.

3.0 RESULTS

Survey results for western prairie fringed orchid sites are summarized in Table 1. Survey results for least tern and piping plover are summarized in Table 2 and survey results for mountain plover are summarized in Table 3. Site photos are provided in Attachment A.

3.1 Western prairie fringed orchid

Two western prairie fringed orchid plants were located in 2011 near MP [redacted] in Holt County, Nebraska. These plants were in the same area as the single plant that was located in 2010 on the Project and occur on the old route alignment; Keystone has since realigned the right-of-way to avoid the site. The current alignment is approximately 200 feet west of the plants. Both the new alignment and the old alignment were surveyed. No plants were located on the new alignment although suitable habitat is present. Table 1 summarizes results for all of the survey sites.

Table 1. Summary of survey results for western prairie fringed orchid. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Milepost	**County**	**Comments**
		SOUTH DAKOTA
[redacted]	Tripp	No western prairie fringed orchids were observed at the site. This located is good habitat for western prairie fringed orchid. The site consists of mesic to wet meadows dominated by mostly native prairie or wetland species. Primary species included woolly sedge, Kentucky bluegrass, prairie cordgrass, big bluestem, wild licorice, switch grass, fox sedge, wild mint, and Indian hemp. Several areas of suitable habitat were surveyed between [redacted].
[redacted]	Tripp	No western prairie fringed orchids were observed at the site. This location is poor habitat for western prairie fringed orchid. The site is generally too dry to support the species and has been heavily grazed and subject to past disturbance. Sulphur cinquefoil, a noxious weed, is present at low to moderate densities. A route variation is located west of the site. The route variation crosses better habitat for the orchid. Both the original route and the route variation were surveyed. The route variation is more mesic than the original route but has also been heavily grazed. Native species such as woolly sedge, prairie cordgrass, switchgrass, and Dudley's rush were observed on the route variation, however, substantial amounts of Kentucky bluegrass were also present. Surveys were completed between [redacted]
[redacted]	Tripp	Access to this site was denied and survey was not completed. The site was viewed from the adjacent road. Suitable habitat appeared to be present.
[redacted]	Tripp	No western prairie fringed orchids were observed at the sites. These two locations are fair habitat for western prairie fringed orchid. The site is generally too wet to support the species and has been relatively heavily grazed in the past based upon the current species composition. Leafy spurge, a noxious weed, is scattered throughout the area. Primary species included woolly sedge, Baltic rush, foxtail barley, prairie cordgrass, clustered field sedge, wild licorice, and Kentucky bluegrass. Surveys were completed in areas of potentially suitable habitat between [redacted]

Table 1. Summary of survey results for western prairie fringed orchid. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Milepost	**County**	**Comments**
[redacted]	Tripp	No western prairie fringed orchids were observed at the site. This location contains a mix of fair and good habitat for western prairie fringed orchid. Much of the area is too wet to support the species. Leafy spurge occurs in a few small populations in the area. Primary species include those previously mentioned for sites further north. Redtop was also present and common within those portions of the area that are mowed for hay – note that mowing had not occurred prior to the survey. Surveys were completed in areas of potentially suitable habitat between [redacted]
[redacted]	Tripp	No western prairie fringed orchids were observed at the site. This location is very poor habitat for western prairie fringed orchid. The site is generally too dry to support the species. One very small palustrine emergent wetland dominated by prairie cordgrass, woolly sedge, and sandbar willow was noted. The uplands surrounding this wetland are dominated by needle-and-thread and blue grama. The gradual, transitional hydrology between wetlands and uplands that appears to support the species is not present at this site. The pasture was very heavily grazed prior to survey in 2011 and appears to have been heavily grazed in previous years based on species composition. Leafy spurge is common although it had been treated with herbicide. Surveys were completed between [redacted]
[redacted]	Tripp	No western prairie fringed orchids were observed at the site. This location is relatively poor habitat for western prairie fringed orchid. The site is adjacent to Lute Creek and gradual, transitional hydrology between the wetlands and uplands is not present. Primary species at the site include shortbeak sedge, fox sedge, prairie cordgrass, Kentucky bluegrass, foxtail barley, and American plum. Surveys were completed in areas of potentially suitable habitat between [redacted]

Table 1. Summary of survey results for western prairie fringed orchid. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Milepost	**County**	**Comments**
		NEBRASKA
[redacted]	Keya Paha	No western prairie fringed orchids were observed at the sites. These locations are very discrete drainages with fair habitat for western prairie fringed orchid. The sites are wetland swales with relatively limited mesic transitions to the adjacent uplands that are dominated by non-native species such as smooth brome and alfalfa. The wetlands are dominated by prairie cordgrass, woolly sedge, foxtail barley, and Kentucky bluegrass.
[redacted]	Keya Paha	No western prairie fringed orchids were observed at the site. The survey site had been avoided by a reroute; both the original route and the reroute were surveyed for orchids. Excellent habitat for western prairie fringed orchid occurs on both the original route and the reroute. Mesic meadows between sedge and rush dominated wetlands and native upland prairie occur between [redacted] Primary species in the mesic meadows include Kentucky bluegrass, Dudley's rush, shortbeak sedge, Baltic rush, common selfheal and Indiam hemp. Surveys were completed in areas of potentially suitable habitat between [redacted]
[redacted]	Rock	Access to this site was denied and survey was not completed. The site was viewed from the adjacent road. Suitable habitat appeared to be present.
[redacted]	Rock	No western prairie fringed orchids were observed at the site. This location is fair habitat for western prairie fringed orchid. Most of the survey area is probably too wet to support the species, but some transitional habitat does occur. Primary species include redtop, Kentucky bluegrass, prairie wedgescale, and Dudley's sedge. Surveys were completed in areas of potentially suitable habitat between [redacted]

Table 1. Summary of survey results for western prairie fringed orchid. Keystone XL pipeline project, Steele City segment. 2011.

Site Approximate Milepost	County	Comments
[redacted]	Holt	Two western prairie fringed orchids were observed at the site in 2011. One plant was observed near these coordinates in 2010. Coordinates for the two plants are: [redacted] This location is excellent habitat for western prairie fringed orchid. Keystone has routed the right-of-way west of the site where the plants were observed. Both the original route and the reroute were surveyed. Excellent orchid habitat occurs on both the original route and the reroute although plants were not observed on the reroute. Substantial mesic, transitional meadows between sedge and rush wetlands and native prairie uplands occur at this site. Sulphur cinquefoil, a noxious weed, occurs in scattered populations on the native uplands at low to moderate densities. Primary species in the mesic meadows include redtop, Baltic rush, bluejoint, yarrow, and common selfheal. Surveys were completed in areas of potentially suitable habitat between [redacted]
[redacted]	Holt	No western prairie fringed orchids were observed at the site. This location supports good habitat for western prairie fringed orchid. Primary species in the mesic transitional meadow include redtop, shortbeak sedge, Baltic rush, prairie wedgescale, Dudley's rush, and awl-fruit sedge. Sureys were completed in areas of potentially suitable habitat between [redacted]

3.2 Least Tern and Piping Plover

High water due to snow melt and rain had inundated sand bars and islands on the Missouri and Yellowstone rivers in June; consequently there was not any suitable habitat at the river crossings in June 2011. Water at these rivers was also very high in July, suitable nesting habitat was not present in the vicinity of the pipeline crossings and no terns or plovers were observed. However, numerous unvegetated sandbars and banks could be present during the nesting season at these rivers in other years depending upon water levels. Habitat at the Cheyenne River was partially inundated in June, but several sandbars and unvegetated flats were visible and could have provided suitable nesting habitat for least tern and piping plover although neither species was observed.

Habitat at the Niobrara, Loup, and Platte rivers in Nebraska had also been very high during June and it is unlikely that least tern or piping plover nested in the vicinity of the pipeline crossings of these rivers in 2011. Nesting habitat at the Platte River crossing is likely poor for least tern and piping plover in all years as sandbars and river banks are fully vegetated with common reedgrass (*Phragmites australis*) and sandbar willow (*Salix exigua*). Nesting habitat at the Niobrara and Loup rivers is likely present in many years on unvegetated sandbars if water levels are not too high.

Least terns and piping plovers were not observed at any river in 2011 except the Loup. A single least tern was momentarily observed foraging over the Loup River. This bird was not observed very long or with binoculars, however, based on its size, the habitat, and the lack of other tern species in the area the bird was likely a least tern. Surveyors conferred with Dr. Paul Johnsgard, Foundation Professor Emeritus of Biological Sciences at the University of Nebraska–Lincoln, and a leading bird expert in Nebraska regarding this sighting (Paul Johnsgard, personal communication July 19, 2011). Dr. Johnsgard confirmed that the bird in question was most likely a least tern. Surveyors did not observe a least tern pair or nest at the site. Table 2 summarizes the least tern and piping plover survey sites.

3.3 Mountain Plover

Mountain plovers were not observed at any of the six survey sites. The DEIS identified "bentonite flats" and black-tailed prairie dog (*Cynomys ludovicianus*) towns as potential habitat for mountain plover. No bentonite flats or black-tailed prairie dog towns occurred at any of the six survey sites. Table 3 summarizes the mountain plover survey sites.

Table 2. Summary of survey results for least tern and piping plover. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Milepost	**County(ies)**	**Comments**
		MONTANA
[redacted]	Valley/McCone	Missouri River. Area was flooded and did not have suitable nesting habitat for least tern or piping plover in June or July of 2011. No individuals of either species were observed, nor were other wading birds or shorebirds.
[redacted]	Dawson	Yellowstone River. Area was flooded and did not have suitable nesting habitat for least tern or piping plover in June or July of 2011. No individuals of either species were observed, nor were other wading birds or shorebirds. Suitable habitat would likely be present during the breeding season in years when water levels are lower.
		SOUTH DAKOTA
[redacted]	Meade/ Pennington	Cheyenne River. Area was flooded but did have some suitable nesting habitat for least tern and piping plover in June. No individuals of either species were observed, several killdeer were seen on a sandbar.
		NEBRASKA
[redacted]	Keya Paha/ Rock	Niobrara River. Excellent habitat for terns and plovers with numerous sand bars, however, this habitat was fully inundated when terns and plovers would have arrived to nest. No wading or shorebirds or any kind were observed. The only birds that were observed on or above the river were several tree swallows and one belted kingfisher.
[redacted]	Nance	Loup River. Very good exposed sand bar habitat was present within 0.25 mile of crossing. This habitat was not available early in the season when terns and plovers began nesting due to high water. One probable least tern was seen for a few seconds hunting over the river. Although the bird was only observed briefly, its size, the habitat, and the distribution of other terns in Nebraska indicate that this bird was likely a least tern. The likelihood that the bird was a least tern was confirmed by Dr. Paul Johnsgard of UN-Lincoln. Surveyors also observed numerous killdeer on the sand bars.
[redacted]	Merrick	Platte River. The crossing location of the Platte River does not support good breeding habitat for either species. Most of the sandbars are fully vegetated with sandbar willow or common reed grass. Very little exposed sand was noted. No wading or shorebirds were observed.

Table 3. Summary of survey results for mountain plover. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Mileposts	**County**	**Comments**
		MONTANA
[redacted]	Phillips	The majority of the survey site is on a gently sloping bench between two drainages. The first mile [redacted] consists of shortgrass prairie, including prairie junegrass (*Koeleria cristata*), blue grama (*Bouteloua gracilis*), threadleaf sedge (*Carex filifolia*). Some of the section is overgrazed, with prickly pear cactus (*Opuntia polycantha*), fringed sage (*Artemisia frigida*), and clubmoss (*Selaginella densa*) predominanting. Some of this area could provide suitable habitat for mountain plover although none were observed.
[redacted]	Valley	Vegetation at this site is primarily tall non-native grasses such as smooth brome (*Bromus inermis*) and crested wheatgrass (*Agropyron cristatum*) which is interspersed with some native vegetation such as prairie rose (*Rosa arkansana*), fringed sage, prairie junegrass, and western wheatgrass (*Pascopyrum smithii*). In general vegetation at this type is too tall and bare soil is not present in sufficient quantities to provide suitable habitat for mountain plover.
[redacted]	Valley	The terrain between [redacted] is primarily flat to gently sloping, dissected by two deep drainages on the western portion. The east half of this section is cropland. The habitat on the benches between [redacted] is shortgrass prairie, consisting of shorter grasses and forbs, including threadleaf sedge, blue grama, prickly pear, Sandberg's bluegrass (*Poa secunda*), and clubmoss. Some areas contain crested wheatgrass and vegetation near and in the drainages tends to be too tall to provide mountain plover habitat. Other areas within the site have been heavily grazed and could potentially provide habitat for mountain plover.
[redacted]	Valley	The terrain along this section of proposed ROW consists of a high and a low bench bisected by a moderately steep south-facing slope. The upper bench has been disturbed by a gravel pit and access trails. Most of the vegetation is crested wheatgrass or weedy vegetation. The lower bench is dominated by tall introduced grasses such as crested wheatgrass and smooth brome, a few bare areas, and silver sage (*Artemisia cana*). The vegetation along the edge of the slope consists of shorter and/or thinner grasses, forbs, and shrubs, such as prickly pear, blue grama, prairie junegrass, fringed sage, and bluebunch wheatgrass (*Pseudoroegneria spicata*). Habitat for mountain plover is poor at this site.

Table 3. Summary of survey results for mountain plover. Keystone XL pipeline project, Steele City segment. 2011.		
Site Approximate Mileposts	**County**	**Comments**
[redacted]	Valley	The terrain of this section, located between cultivated fields and a gravel road south of the Milk River, is flat to gently sloped. The vegetation is primarily smooth brome and crested wheatgrass, as well as weedy forbs and some fringed sage. This site does not provide mountain plover habitat.
[redacted]	Fallon	The survey area between [redacted] traverses gently rolling terrain, primarily sloping to the southeast. Except for the ditches between fences along the road that bisects the survey area, and within a few hundred feet of the road, all of the vegetation is native shortgrass prairie. Grasses near the road are dominated by crested wheatgrass and silver sage. Dominant grasses of the native rangeland include green needlegrass (*Nasella viridula*), blue grama, prairie junegrass, Sandberg's bluegrass, and a variety of native forbs. Habitat at the site is typically too well vegetated to provide mountain plover habitat.

4.0 SUMMARY

Keystone identified numerous sites to survey for federally-listed species along the proposed pipeline route. These sites were identified through consultation with federal and state agencies, data provided by state heritage programs, information contained in the DEIS, and previous field survey on the project.

In total, fifteen sites were surveyed for western prairie fringed orchid, two plants were found at a single site [redacted] eight sites provided good habitat for western prairie fringed orchid.

Six sites were surveyed for least tern and piping plover. A probable sighting of a single least tern was recorded at the Loup River in Nebraska. Suitable nesting habitat was present in early July at the Loup and Niobrara rivers in Nebraska although no nests or pairs of birds were observed. Suitable nesting habitat could likely be present at the Missouri, Yellowstone, Cheyenne, Niobrara, and Loup rivers if water levels are not too high when terns and plovers arrive at the sites for breeding and nesting. Suitable nesting habitat is probably not present at the Platte River crossing even if water levels are lower when terns or plovers arrive since the sandbars and river banks are heavily vegetated.

Six sites were surveyed for mountain plovers, no birds were observed. Two sites could potentially provide habitat for mountain plover, although neither of these sites provided particularly good quality mountain plover habitat.

5.0 REFERENCES

Montana Natural Heritage Program. 2011. Least tern Montana field guide. http://fieldguide.mt.gov/detail_ABNNM08100.aspx. Accessed April 8, 2011.

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Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area as seen from the adjacent parcel where access was granted.

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat a[redacted]nd surrounding area

Western prairie fringed orchid habitat at [redacted]

Western prairie fringed orchid habitat at [redacted]

Western prairie fringed orchid habitat at [redacted]

Western prairie fringed orchid habitat at [redacted]

Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat at [redacted] and surrounding area

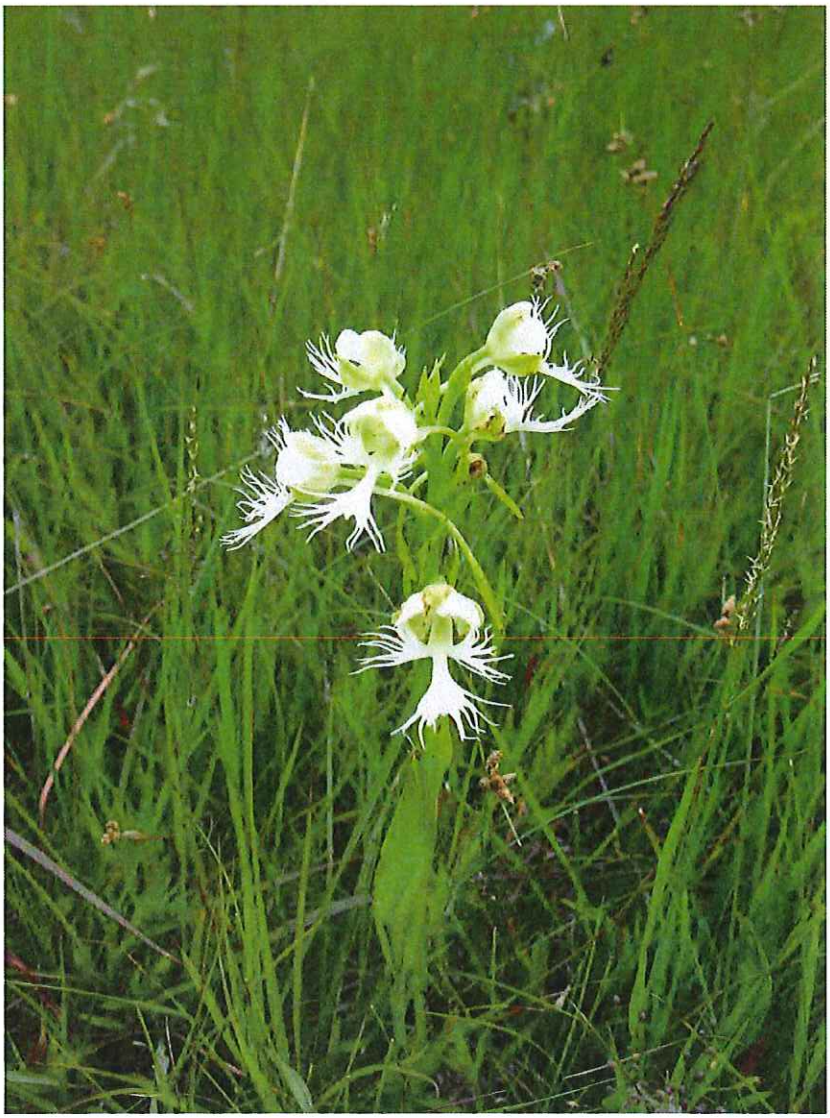
Western prairie fringed orchid habitat at [redacted] and surrounding area

Western prairie fringed orchid habitat a[redacted]nd surrounding area

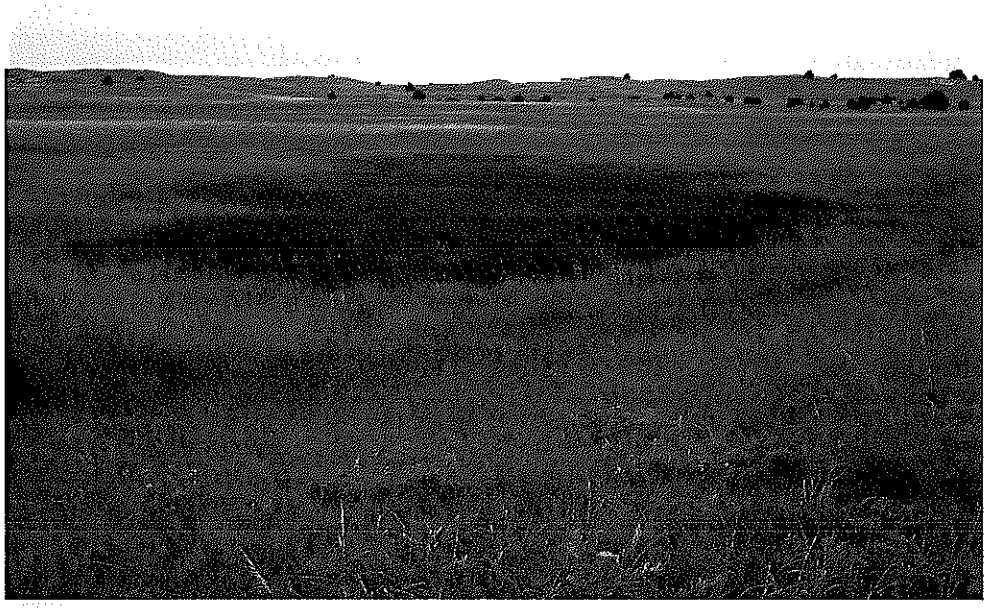
Western prairie fringed orchid habitat a[redacted]n old route where plants of western prairie fringed orchid were found.

Photo of one of the two plants of western prairie fringed orchid at [redacted]

Photo of one of the two plants of western prairie fringed orchid at [redacted]



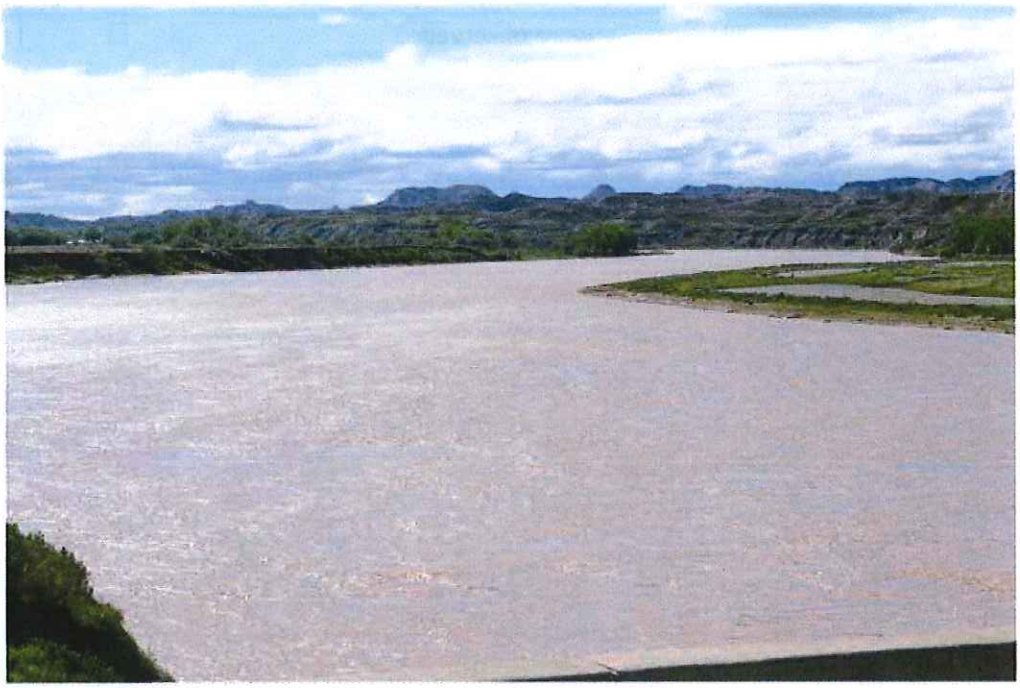
Western prairie fringed orchid habitat a[redacted]on new route where plants of western prairie fringed orchid were not found.



Western prairie fringed orchid habitat at [redacted] and surrounding area

Flooding at Missouri River [redacted] Suitable nesting habitat for least tern and piping plover was not present in 2011 at this site.

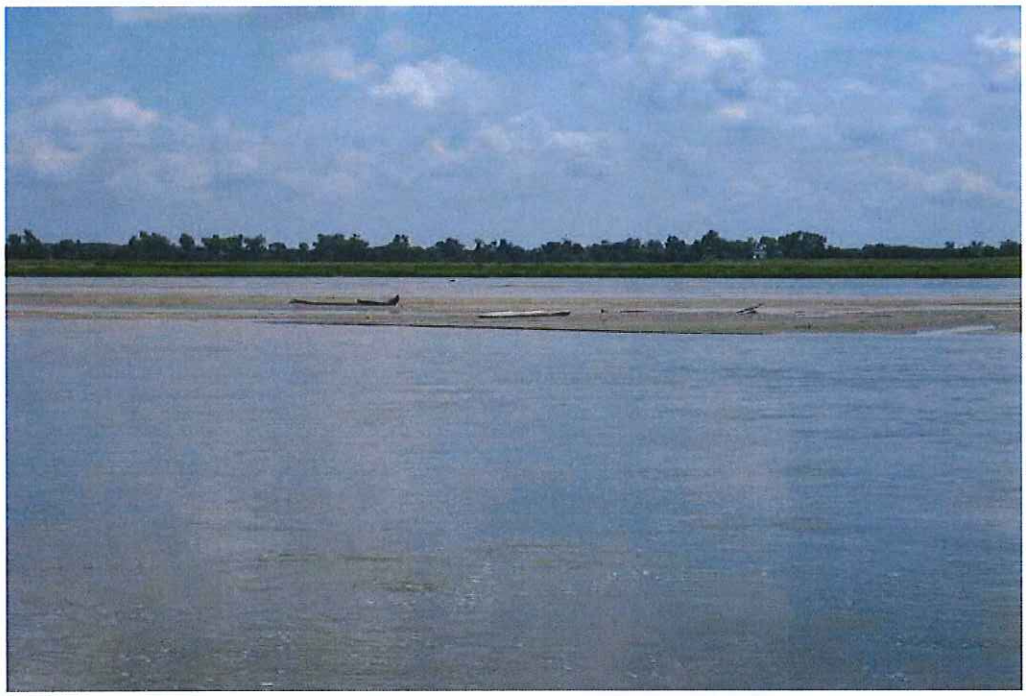
Flooding at Yellowstone River [redacted] Suitable nesting habitat for least tern and piping plover was not present in 2011 at this site.



Cheyenne River [redacted] Suitable nesting habitat was present but no least terns or piping plover were observed.

Niobrara River [redacted] Suitable nesting habitat was present but no least terns or piping plover were observed.

Loup River [redacted] Suitable nesting habitat was present and a probable sighting of a least tern was recorded.



Platte River [redacted] Suitable nesting habitat is not present in the vicinity of the pipeline crossing as the banks and sandbars are almost completely vegetated.

Mountain plover site [redacted] typical vegetation, some suitable habitat is present.

Mountain plover site [redacted] typical vegetation, suitable habitat is not present.

Mountain plover site [redacted] typical vegetation, some suitable habitat is present.

Mountain plover site [redacted] typical vegetation, suitable habitat is not present.

Mountain plover site [redacted] typical vegetation, suitable habitat is not present.

Mountain plover site [redacted] typical vegetation, suitable habitat is not present.