
7.0 VEGETATION, WILDLIFE, AND FISHERIES

7.1 VEGETATION

7.1.1 Existing Vegetation Resources

As described in Section 4.0, approximately 35.7 percent of the area affected by the construction right-of-way will involve forest land consisting of deciduous, evergreen, and mixed forests. Construction in most forested areas will be adjacent to existing pipeline or other third-party rights-of-way. Approximately 37.7 percent of the area affected by the construction right-of-way will be agricultural land. This land consists of pastures or hay fields and cultivated crops such as corn, soybeans, wheat, oats, wild rice, and dry edible beans. Potatoes, sugar beets, vegetables, sod, and Christmas trees are also common crops in the counties crossed by the Project (USDA, 2007). The construction right-of-way will also affect wetlands/open water (approximately 14.4 percent), open land (approximately 12.0 percent), and developed land (less than 1 percent). The wetlands include emergent herbaceous wetlands, woody wetlands, and open water; the open land consists of maintained rights-of-way, shrub/scrub areas, grasslands, developed open space, and barren land.

7.1.2 Ecological Classifications

Based on Minnesota's Ecological Classification System (MNDNR, 2013f), the majority of the Project is located in the Laurentian Mixed Forest Province. The Project also will cross small portions of the Prairie Parkland, Tallgrass Aspen Parklands, and Eastern Broadleaf Forest Provinces (MNDNR, 1999).

Laurentian Mixed Forest Province

The preferred route will cross several sections and subsections within the Laurentian Mixed Forest Province between approximate MPs 383.0 and 600.8, as summarized in Table 7.1.2-1. Throughout this province, the most important land uses today are forestry, recreation, tourism, and (in some areas) agriculture.

Prairie Parkland Province

The preferred route will cross the Red River Prairie subsection of the Prairie Parkland Province between approximate MPs 299.9 and 323.4. The majority of this subsection is a glacial lake plain originally dominated by tallgrass prairie and wet prairie, mixed with wetlands, meandering waterways, and old beach ridges. Much of this area has been converted to agriculture and is intensively ditched.

Tallgrass Aspen Parklands Province

The preferred route will cross the Aspen Parklands subsection of the Tallgrass Aspen Parklands Province between approximate MPs 323.4 and 354.9. This subsection is part of a low, level lake plain originally occupied by extensive forested peatlands to the east and tallgrass prairie to the west. Agriculture is the dominant land use in the southern half of the subsection, though more recently extensive areas have also been cleared for farming in the northern half. There are more and larger blocks of presettlement vegetation in this subsection than in others where agriculture is widespread.

Eastern Broadleaf Forest Province

The preferred route will cross the Hardwood Hills subsection within the Eastern Broadleaf Forest Province, between approximate MPs 354.9 and 383.0. The subsection is characterized by steep slopes, high hills, and lakes and wetlands formed in glacial end moraines and outwash plains. Presettlement vegetation included prairies, aspen-oak lands, oak savannas, and mixed forests of oaks, sugar maple, basswood, and other hardwoods. Much of this subsection is now farmed.

Table 7.1.2-1 Ecological Sections and Subsections of the Laurentian Mixed Forest Province in the Sandpiper Pipeline Project Area		
Section	Subsection	Description
Northern Minnesota Drift & Lake Plains	Chippewa Plains (MPs 383.0 to 413.1 and 414.0 to 415.0)	Characterized by three large, heavily used lakes and level to gently rolling plains. Conifers once dominated the sandier portions of the subsection. Aspen is now the most common tree species, found in pure stands and also mixed with birch, maple, oak, white spruce, jack pine, and red pine.
	Pine Moraines & Outwash Plains (MPs 413.1 to 414.0 and 415.0 to 508.7)	Lakes are very common, found on end moraines and outwash plains. Till plains are also present. White and red pine formerly dominated on end moraines and till plains, while jack pine barrens and jack pine woodlands were common on well-drained outwash plains. Black spruce, tamarack, white cedar, and black ash predominated on poorly drained sites.
	St. Louis Moraines (MPs 508.7 to 517.0, 517.9 to 521.9, and 552.1 to 573.3)	Characterized by rolling to steep slopes, with end moraines the dominant landform. Northern hardwood forests were common in the southern portion, while white pine, sugar maple, basswood, and balsam fir characterized the north. Today, quaking aspen is the primary species harvested.

Northern Minnesota Drift & Lake Plains	Tamarack Lowlands (MPs 517.0 to 517.9 and 521.9 to 552.1)	Defined by a glacial lake plain that lacks the well-defined beach ridges of better-known Glacial Lake Agassiz in western Minnesota. Lowland hardwoods (black ash) and lowland conifers (black spruce, tamarack, and white cedar) were originally the most common forest communities. Sedge meadows were extensive, and uplands were largely occupied by aspen-birch forests. Today much of the land is publicly owned.
Southern Superior Uplands	Glacial Lake Superior Plain (MPs 593.8 to 600.8)	A small subsection that extends into Wisconsin, coinciding with the basin of Glacial Lake Superior. Topography is level to gently rolling, except where water has cut deep valleys. Presettlement vegetation consisted of forests dominated by white spruce, white pine, and aspen-birch.
Western Superior Uplands	Mille Lacs Uplands (MPs 573.3 to 593.8)	Characterized by gently rolling till plains and drumlin fields. Dominant feature is Mille Lacs Lake. The original vegetation was a mix of maple-basswood forests in the south; conifer, hardwood, and mixed conifer-hardwood forests elsewhere; and peatland areas inhabited by sedge-fen, black spruce-sphagnum, or white cedar-black ash communities.

7.1.3 Sensitive Plant Communities

Native Plant Communities

The presence of Native Plant Communities (“NPC”) along the preferred route was evaluated using NHIS data obtained from MNDNR in April 2013. An updated review of NPCs was conducted in January 2014 for occurrences within the Project’s construction workspace and additional temporary workspace. These communities—a mixture of prairie, wetland, and forest types—are listed in Table 7.1.3-1.

NPC Code	NPC Class ^a	NPC Type/Subtype
APn81	Northern Poor Conifer Swamp	Poor Black Spruce Swamp Poor Tamarack-Black Spruce Swamp
FPn73	Northern Rich Alder Swamp	Alder (Maple-Loosestrife) Swamp
FPn82	Northern Rich Tamarack Swamp (Western Basin)	Rich Tamarack (Alder) Swamp
MHn35	Northern Mesic Hardwood Forest	n/a
WFn64	Northern Very Wet Ash Swamp	n/a
WPn53	Northern Wet Prairie	Wet Brush-Prairie (Northern)

^a Agassiz Interbeach Prairie Complex, an unclassified community, also occurs in the Project area.

In consultation with MNDNR, NDPC identified 2013 rare plant survey sites by examining NPCs and other sensitive plant communities, including Sites of Biodiversity Significance (including draft data for Clearwater, Hubbard, Cass, and Aitkin counties), designated Calcareous Fens, Minnesota Biological Survey data, Railroad Rights-of-Way Prairies, and previously unsurveyed sites that may be eligible for mapping in the MNDNR NHIS. The field protocol for rare plant surveys was developed in consultation with MNDNR. NDPC has recently revised its survey area to account for changes in the route since the last filing. In 2014, NDPC will complete early-season rare plant surveys at 17 sites and late-season rare plant surveys at 9 sites.

NDPC will continue to consult with MNDNR prior to and throughout the 2014 survey season.

Sensitive Forest Resources

As part of its early coordination review, MNDNR recommended avoidance of Old Growth (“OG”) stands; Special Management Zones (“SMZs”), which extend 330 feet around the OG perimeter; Ecologically Important Lowland Conifers (“EILCs”); Representative Sample Areas (“RSAs”); and High Conservation Value Forests (“HCVFs”) (MNDNR, 2013g). NDPC contacted MNDNR in August 2013 to obtain information on forest resources within a 2-mile-wide study area centered on the pipeline. MNDNR responded in August 2013 with further locational information on OG SMZs, OG forest stands, RSAs, HCVFs, and EILCs within the 2-mile-wide study area centered on the pipeline. In addition, MNDNR identified areas of Old Forest Management Complex (“OFMC”) within the 2-mile-wide study area and recommended that NDPC access publicly available digital data showing state forest resources for further analysis. NDPC obtained this data, conducted a review against the Project’s 120-foot-wide construction right-of-way, and sent its findings to MNDNR in late October 2013.

Through consultation with MNDNR Regional Plant Ecologists, NDPC determined that the Sandpiper 120-foot construction right-of-way is beyond the minimum SMZ and does not intersect designated OG, nor does it intersect any RSAs, EILCs, or HCVFs. However, the proposed Sandpiper 120-foot-wide construction right-of-way crosses one Old Forest Management Complex (“OFMC”) in the Hill River State Forest. MNDNR has noted that OFMC stands are open to normal timber harvest with one of the management objectives being maintenance/enhancement of older forest features. NDPC will continue to consult with MNDNR to ensure forest management objectives are met.

Other Sensitive Communities

Peatland SNAs are unique areas identified by an underlying substrate of peat organic soils that support spruce, tamarack and sedge fens and wetlands of important state significance.

The Project will not cross any Peatland SNAs or other SNAs. Calcareous fens are further discussed in section 9.2.3.

7.1.4 General Construction and Operation Impacts and Mitigation

Clearing of herbaceous vegetation during construction is anticipated to result in a short-term impact to vegetation. Active revegetation measures and rapid colonization by annual and perennial herbaceous species in the disturbed areas will restore most vegetative cover within the first growing season. Clearing of woody shrubs and trees will be the primary long-term impact on vegetation associated with the Project. Woody shrubs and trees will be allowed to recolonize the temporary construction right-of-way and extra workspaces as described in the EPP (see Appendix A). However, recolonization of disturbed areas by woody shrubs and trees will be slower than recolonization by herbaceous species. As natural succession is allowed to proceed in these areas, the early successional or forested communities present before construction will eventually reestablish. NDPC will employ best management practices to control the spread of noxious weeds and invasive plants as described in the EPP (see Appendix A).

Clearing trees in the construction right-of-way could affect undisturbed forest vegetation growing along the edges of the cleared areas. By exposing some edge trees to elevated levels of sunlight and wind, evaporation rates and the probability of tree knockdown could increase. Due to the increased light levels penetrating the previously shaded interior, shade-intolerant species will be able to grow, and the species composition of the newly created forest edge will likely change. The proposed clearing could also temporarily reduce local competition for available soil moisture and light and may allow some early successional species to become established and persist on the edge of the undisturbed areas adjacent to the site.

The Project will result in the clearing of approximately 1,524.5 acres of forest land during construction. Approximately 618.6 acres of this forest land will be maintained clear of trees for operational purposes, including facilitating aerial inspections, preserving pipeline integrity, and providing access for maintenance or emergency work in compliance with federal regulations.

Impacts on vegetation adjacent to the Project area will be minimized through adherence to soil erosion control specifications and by confining clearing activities to the approved right-of-way and extra workspaces. To prevent damage to adjacent trees, NDPC will fell trees toward the cleared right-of-way. Upon completion of construction, NDPC will revegetate disturbed areas in accordance with the EPP (see Appendix A) unless otherwise directed by landowners or land managing agencies. Timely restoration of the construction right-of-way and reseeded with an appropriate seed mix will minimize the duration of vegetative disturbance.

7.2 WILDLIFE

7.2.1 Existing Wildlife Resources

As described in Section 7.1.2, the Project will be constructed through several major ecosystems, including deciduous forest, coniferous forest, wetland, and prairie. Wildlife habitats within these ecosystems are diverse. Existing wildlife resources in the construction right-of-way are described below.

The Project will cross land that has been altered for use as hayfields, pastures, and row crop production. These agricultural fields provide limited wildlife habitat. Common mammalian species, including white-tailed deer, woodchucks, striped skunks, raccoons, weasels, Virginia opossum, and various mice and voles, use these areas for feeding and cover. Common bird species, such as European starlings, American crows, eastern meadowlarks, and house sparrows, are also typically found in agricultural fields.

Forested areas affected by the Project are found primarily along the eastern portion of the preferred route. Mammalian species typical of Minnesota's deciduous forests include eastern chipmunks, black bears, snowshoe hares, gray squirrels, gray fox, porcupines, pine martens, and several species of bats. Some of these species also inhabit northern Minnesota's coniferous forests, while others, such as least chipmunks, snowshoe hares, and red squirrels, are more unique to evergreen forests. The structural diversity of forests provides a variety of habitats that can support a large number of avian species, including songbirds, game birds, and raptors.

Wetlands affected by the Project consist primarily of emergent herbaceous wetlands, woody wetlands, and open water. The emergent wetlands and open water provide habitat for a variety of aquatic wildlife, including muskrats, beavers, mink, river otters, waterfowl, wading birds, and numerous species of reptiles and amphibians. The woody wetlands provide additional habitat for terrestrial wildlife, such as white-tailed deer, moose, gray wolves, black bears, and a variety of small mammals and songbirds.

Open lands affected by the Project consist primarily of shrub/scrub areas, grasslands, developed open space, and barren land. The undeveloped, vegetated open lands likely support several species of birds, numerous small rodents, and several species of snakes. Species such as coyote, red fox, and a variety of raptors typically hunt open areas for the varied prey. Other common wildlife species that may use open areas include thirteen-lined ground squirrels, eastern cottontail rabbits, and white-tailed jackrabbits.

7.2.2 Special Wildlife Areas

Wildlife Management Areas

The Project will cross state-designated WMAs (also described in Section 11.0). The following discussion focuses on the wildlife species typically present in these areas. WMAs represent areas with high potential for wildlife production, public hunting, trapping, fishing, and other compatible recreational uses. The type of wildlife habitat in each WMA crossed by the Project is described below.

- The Crow Wing Chain WMA is a complex of lakes, wetlands, old fields, and forests (including a candidate OG northern hardwood stand) along the Crow Wing River. Half of the WMA is forested with aspen, jack pine, red pines, white pines, and oaks; the other half consists of emergent wetlands and lowland brush. Hunting options include deer, bear, small game, forest game birds, waterfowl, and wolves. Non game viewing opportunities include pileated woodpeckers, broad-winged hawks, and warblers. The Project is co-located with another third-party right-of-way as it crosses the Crow Wing Chain WMA.
- The Grayling Marsh WMA includes uplands dominated by aspen, low areas that are primarily brush and grass, and a wetland impoundment. There are good opportunities for viewing waterfowl, nesting sandhill cranes, ruffed grouse, woodcock, sharp-tailed grouse, swamp sparrows, gray catbirds, deer, bear, and wolves.
- The Lawler WMA is mostly made up of marsh and low brushy areas; the upland area is limited to a small grass field. Trapping and hunting opportunities include deer and waterfowl. Beaver, mink, deer, common yellowthroats, swamp sparrows, and alder flycatchers may be seen. The Project is co-located with another third-party right-of-way as it crosses the Lawler WMA.
- The Salo Marsh WMA is a complex of wetlands and forests dominated by aspen and balsam fir. Management emphasis is on waterfowl in the wetland areas and on deer, bear, woodcock, and ruffed grouse in the upland timber. Wildlife viewing opportunities include red-headed blackbirds, bald eagles, and grebes.

Figure 7.2.2-1 presents the preferred route as it passes through these WMAs. NDPC continues to consult with MNDNR regarding these WMA crossings.

Large Block Habitats

MNDNR recommends that, to the extent feasible, the Project avoids fragmenting large contiguous blocks of habitat of 40 or more acres (MNDNR, 2013g). According to MNDNR,

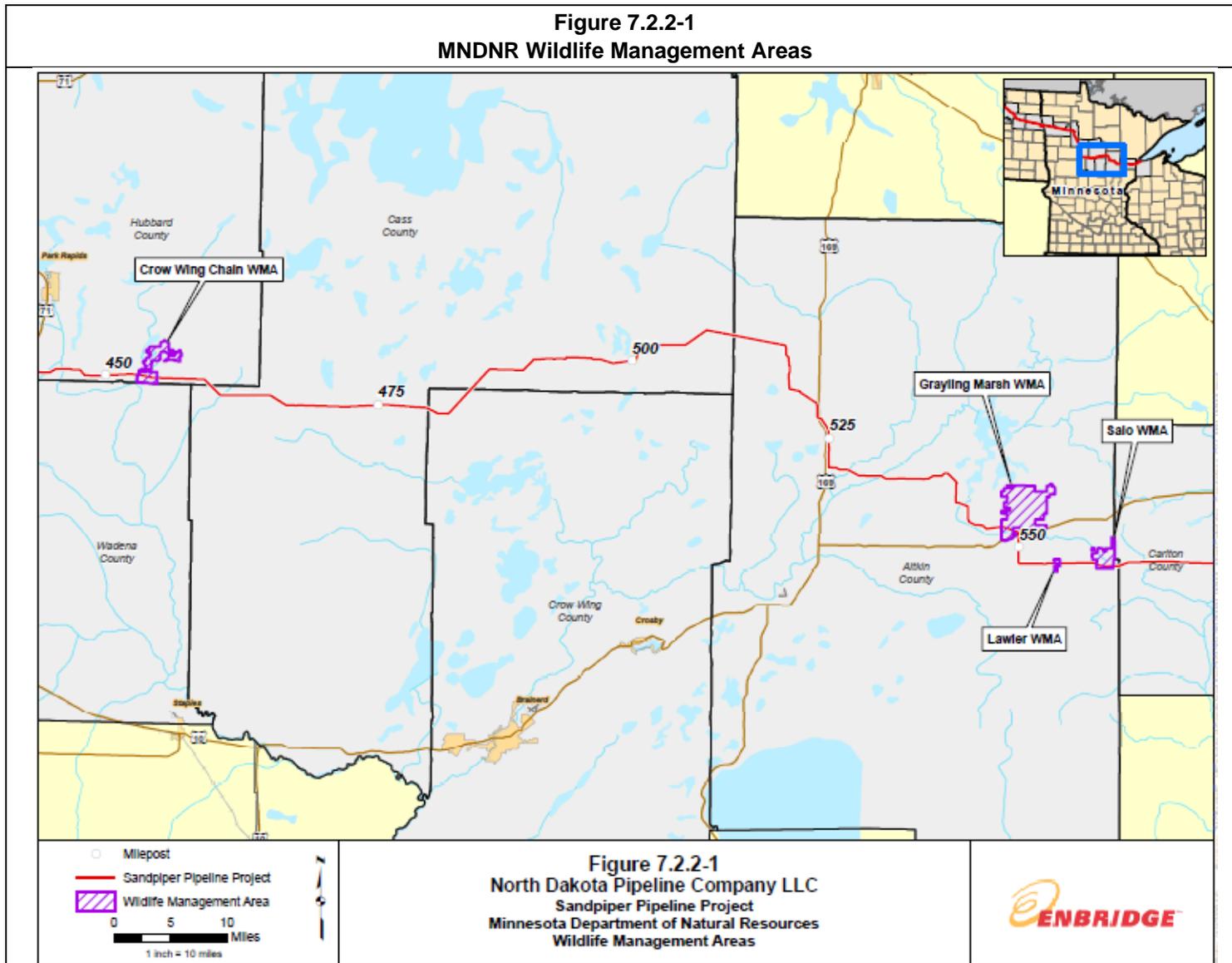
large blocks of habitat and habitat complexes (grassland, wetlands, or forest) can provide an increased diversity and abundance of wildlife, especially for area-sensitive species.

NDPC identified contiguous blocks of grassland/herbaceous, wetland, and forested land that were 40 acres or larger and that also overlapped with the Project route. Land cover types were determined using the USGS LULC Classification System presented in Section 4 of this EIR. Approximately 75 percent of the route that crosses these contiguous areas is co-located with existing third-party rights-of-way, thereby avoiding new fragmentation of large block habitats across much of the Project. On the remaining 25 percent of the route that crosses the contiguous areas, approximately 74 percent of the large block habitats overlap with the route for less than 0.1 mile, 21 percent of the habitats overlap with the route for less than 0.2 mile, and the remaining 5 percent overlap with the route for greater than 0.2 mile. Large block habitat crossings will be restored, allowed to revegetate, and will retain their original habitat function after the pipeline is constructed according to the EPP (see Appendix A). Forested areas on the temporary right-of-way and in additional temporary workspaces will be restored to allow the natural reestablishment of forest cover; the new permanent right-of-way will be maintained in an herbaceous state.

Key Habitats

MNDNR provided NDPC with a list of Key Habitats for Minnesota's Species of Greatest Conservation Need ("SGCN") as defined by the State Wildlife Action Plan (MNDNR, 2013g). Key Habitats, defined as the habitats most important to the greatest number of SGCN, are specific to individual ecological subsections. Many of the Key Habitats provided by MNDNR overlap with the NPCs described in Section 7.1.3 and with large block habitats. Consultation with MNDNR regarding minimization of impacts to Key Habitats is ongoing.

Figure 7.2.2-1
 MNDNR Wildlife Management Areas



7.2.3 General Construction and Operation Impacts and Mitigation

Construction and operation of the Project are not expected to have a significant impact on wildlife. Temporary impacts will occur during construction due to clearing of vegetation and disturbance in the right-of-way.

Long-term impacts will be limited to a loss of forest habitat because of clearing the temporary construction right-of-way and extra workspaces that are located in forested areas. Because the Project will be generally co-located with other existing pipelines and third-party rights-of-way, construction and operation of the Project will not significantly alter the character of the landscape for the majority of the preferred route. Landscape alteration will occur in areas of the preferred route where greenfield construction will be required.

Clearing the construction right-of-way will remove vegetative cover and will cause temporary displacement of wildlife species along the preferred route. The construction right-of-way and additional temporary workspaces will remain relatively clear of vegetation until the Project is completed. Some smaller, less mobile animals such as amphibians, reptiles, and small mammals may experience direct mortality during clearing and grading activities. Larger and more mobile animals will disperse from the Project area during construction. Displaced individuals may temporarily occupy adjacent, undisturbed areas, possibly causing increased competition with other individuals in those areas. Some individuals may return to their previously occupied habitats after construction has been completed and suitable habitat has become reestablished. The intensity of construction-related disturbances will depend on the particular species and the time of year during construction.

Clearing of herbaceous and shrub communities in the open areas of the temporary right-of-way, both in upland and wetland areas, will cause a short-term impact due to the relatively quick recolonization of plant species that comprise these communities. Herbaceous cover will be seeded on disturbed areas following the completion of pipeline construction, and it is expected that pre-existing herbaceous and shrub habitats will quickly become reestablished. It is expected that the wildlife species that use these habitats will also return relatively soon after construction. NDPC will employ best management practices as described in its EPP (see Appendix A to this EIR) to limit the introduction or spread of invasive plant species.

After post-construction seeding with herbaceous species, temporary right-of-way and additional temporary workspaces in previously forested areas will be allowed to revegetate naturally with tree and shrub species common to the area. There will be medium-term impacts on wildlife that use forests, due to the conversion of previously forested habitat to herbaceous-dominated habitat on the temporary construction right-of-way. Over time, natural growth and succession will restore the temporary portion of the construction right-of-way and extra workspaces to a forested community, with wildlife typical of forest habitats returning.

Potential long-term impacts on wildlife are associated with the permanent clearing of forest vegetation. The Project will involve the permanent removal of 618.6 acres of forested habitat for the right-of-way, which will be converted to non-forest habitat for the life of the pipeline. Long-term impacts on wildlife species inhabiting undisturbed forests will be minimized in areas where the Project parallels existing, maintained rights-of-way. It is anticipated that the incremental loss of this forested habitat along the existing cleared right-of-way will not have a significant effect on wildlife species.

7.3 FISHERIES

7.3.1 Existing Fisheries Resources

Representative Fish Species

As described in Section 9.2, the Project will cross 144 waterbodies including 57 perennial streams and 87 intermittent streams. Most of these waterbodies contain warm-water fisheries, though some cold-water fisheries are also present in the area. Game fish species found in waterbodies in the vicinity of the Project are listed in Table 7.3.1-1 (MNDNR, 2013h).

Table 7.3.1-1 Game Fish Species in the Sandpiper Pipeline Project Area	
Warm-Water Game Fish	Cold-Water Game Fish
Bass (largemouth, rock, smallmouth)	Brook trout
Bullhead (black, brown, yellow)	Rainbow trout
Catfish (channel)	
Crappie (black)	
Muskellunge	
Perch (yellow)	
Pike (northern)	
Sunfish (bluegill, green, hybrid, pumpkinseed)	
Walleye	

Designated Trout Streams

The preferred route will cross five MNDNR designated trout streams, along with four unnamed trout stream tributaries (see Table 7.3.1-2). NDPC is exploring methods for crossing these streams that will minimize impacts to the resource. NDPC will continue to work with Regional Assessment Ecologists from the MNDNR to plan these crossings and to identify other sensitive fisheries crossed by the Project.

Table 7.3.1-2 Trout Stream Locations along the Sandpiper Pipeline Project Area		
County	Waterbody Name	Approximate Milepost
Hubbard	LaSalle Creek	408.4
	Straight River	436.3
Cass	Spring Brook	503.5
Carlton	King Creek	578.9
	Unnamed Stream (tributary to Blackhoof River)	586.7
	Blackhoof River	586.7
	Unnamed Stream (tributary to Blackhoof River)	586.7
	Unnamed Stream (tributary to Blackhoof River)	586.8
	Unnamed Stream (tributary to Blackhoof River)	586.8

Aquatic Management Areas

MNDNR provided NDPC with a list of five AMAs in proximity to the Project. AMAs represent lakes, rivers, streams, and adjacent areas that are critical for fish and other aquatic life and compatible recreational uses. Of the five AMAs listed, the Project will cross two, the Spire Valley Hatchery and LaSalle Creek AMAs. These crossings are further described in Section 11.1.2.

7.3.2 General Construction and Operation Impacts and Mitigation

Installation of the pipeline across streams may temporarily impact movement of fish upstream and downstream of crossing sites due to disturbances associated with construction. The physical disturbance of the streambed may temporarily displace adult fish and may dislodge other aquatic organisms. Some mortality of less mobile organisms, such as small fish and invertebrates, may occur within the trenching area. Aquatic plants, woody debris, and boulders that provide in-stream fish habitat will also be removed during trenching. Noise disturbances upstream and downstream of the sites will deter fish that may otherwise inhabit the area. These disturbances will be temporary and are not expected to significantly affect fisheries resources.

Sediment loads may temporarily increase downstream during open-cut stream crossings. These increased loads may temporarily affect the more sensitive fish eggs, fish fry, and invertebrates inhabiting the downstream area. In a review of 27 case studies of open-cut pipeline water crossings, Reid and Anderson (1999) found that adverse effects on fish and fish habitat were not consistently documented. Where adverse effects did occur, the effects

were short-term, and recovery generally occurred within a year of construction. The crossings will be completed as quickly as possible, and the suspended sediment levels will return to pre-construction levels after in-stream work is completed.

Most streambank vegetation will be removed across the right-of-way during construction. After construction, an area over the pipeline will be maintained in an herbaceous state, and trees that are located near the pipeline will be cut and removed from the right-of-way. Changes in the light and temperature characteristics of some streams may affect the behavioral patterns of fish, including spawning and feeding activities, at the pipeline crossing locations. The maintained streambanks, however, are not wide enough to have a significant impact on general temperature and light conditions of the streams crossed by this Project.

To minimize the potential for adverse impacts on the fisheries at river and stream crossings, NDPC will implement erosion and sediment control measures specified in the EPP (see Appendix A) and limit the duration of construction in these waterbodies.

7.4 THREATENED AND ENDANGERED SPECIES

NDPC initiated consultation in early 2013 with the Midwest Region Ecological Services Field Office ("Region 3") of the United States Fish and Wildlife Service ("USFWS") for the Minnesota portion of the Project. The initial consultation letter included a list of federally endangered, threatened, and candidate species that may occur in the Project area in Minnesota. The letter also requested discussions with USFWS to ensure that NDPC considered recommendations regarding the federal Endangered Species Act ("ESA"), Migratory Bird Treaty Act ("MBTA"), and Bald and Golden Eagle Protection Act ("BGEPA") during Project planning. NDPC discussed initial recommendations with USFWS staff over the phone and received an email in April 2013 with information on federally listed species in the state.

Also in April 2013, the Mountain Prairie Region Ecological Services Field Office ("Region 6") of the USFWS, whom NDPC had been consulting with for the North Dakota portion of the Project, advised NDPC that it would assume the overall USFWS lead for the entire Project, including the Minnesota portion. Region 6 further stated that consultation and project-specific communications with the USFWS regarding ESA Section 7 consultation could not proceed until a lead federal permitting agency was established for the Project. Therefore, the 2013 ESA species survey protocols and field surveys conducted by NDPC were based on informal information exchanges between NDPC and the USFWS Regions 3 and 6 Ecological Services Field Offices between April and December 2013, or publicly available information.

In November 2013, NDPC met with representatives from the U.S. Army Corps of Engineers ("USACE") who had now assumed the role of the lead federal agency for the Project, and representatives from USFWS Regions 3 and 6. Region 3 was now designated as the lead USFWS region for the Project, and Section 7 informal consultation under the ESA had been

initiated between the USACE and USFWS. In December 2013, NDPC met again with USFWS Regions 3 and 6, and USACE representatives to discuss federally protected species that occur in the vicinity of the Project and compliance with the ESA, MBTA, and BGEPA. Informal consultations with USACE and USFWS will continue in 2014.

NDPC also initiated consultation with the MNDNR Endangered Species Review Coordinator in early 2013 to understand the potential presence of threatened and endangered species in the vicinity of the Project. NDPC conducted a review of Minnesota NHIS data provided by the MNDNR in April 2013. Table 7.4.1-1 shows NHIS records of threatened or endangered species that occur within a 2-mile-wide study area and that have Element Occurrences within the 2-mile-wide study area that are less than 20 years old, in accordance with MNDNR recommendations in the handout entitled “Determining Potential Impacts to Rare Features” (dated March 2006 and provided to NDPC with NHIS data).

Table 7.4.1-1 Element Occurrences in Minnesota’s Natural Heritage Information System for Threatened and Endangered Species		
ZOOLOGICAL RECORDS		
Species	Status	County
Blanding’s Turtle (<i>Emydoidea blandingii</i>)	threatened (state)	Cass
Henslow’s Sparrow (<i>Ammodramus henslowii</i>)	endangered (state)	Red Lake
BOTANICAL RECORDS		
Lanceleaf Grapefern (<i>Botrychium lanceolatum</i>)	threatened (state)	Carlton
Butternut (<i>Juglans cinerea</i>)	endangered (state) ^a	Cass
Oake’s Pondweed (<i>Potamogeton oakesianus</i>)	endangered (state) ^a	Cass
^a Revised status as of August 19, 2013.		

Although there are no NHIS occurrences of Dakota skipper (*Hesperia dacotae*) in the Project area NDPC consulted with USFWS and MNDNR on a grassland/native prairie habitat assessment in 2013. Similarly, although there are no known occurrences of threatened or endangered mussel species within 2 miles upstream or downstream of any Project waterbody crossings, NDPC has consulted with MNDNR on a mussel habitat assessment. As noted in Section 7.1.3, NDPC also has been consulting with MNDNR regarding rare plant surveys. NDPC will continue to consult with MNDNR regarding ongoing habitat assessments and field surveys as they relate to the potential presence of threatened and endangered species in the vicinity of the Project.

7.4.1 General Construction and Operation Impacts and Mitigation

NDPC will continue to consult with USFWS and MNDNR on the status of mitigation strategies for special-status species. If any of these species are identified in the construction right-of-way during surveys, NDPC will work with these agencies to develop mitigation plans to avoid or minimize impacts on the potentially affected species.