

3.7 Wetlands and Floodplains

3.7.1 Waters of the U.S.

WUS are defined in 33 CFR Part 328.3 and include: all non-tidal waters that currently are used, or were used in the past, or may be susceptible to use in interstate commerce; all interstate waters including wetlands; all other waters such as interstate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, of which the use, degradation, or destruction could affect interstate commerce; and all impoundments of waters otherwise defined as WUS under this definition. In addition, tributaries of the previously listed waters, including arroyos and other intermittent drainages, and wetlands adjacent to the previously listed waters also are considered to be WUS.

Criteria used by the USACE to determine whether a drainage constitutes a WUS include presence of a defined bed (i.e., a linear bed in a topographic depression, which would transport surface water from a watershed); presence of defined banks (i.e., near vertical or steep-sided banks formed by erosion from flowing water); and evidence of an ordinary high water mark (i.e., indicator[s] [e.g., scoured bed, shelving, an absence of terrestrial vegetation, and recent alluvial or litter deposition] that the drainage is subject to surface water flows on an average annual basis).

WUS within the Project area may include, but are not limited to, the following: Knife River, Upper Heart River, Lower Little Missouri River, Middle Little Missouri River, Green River, Heart River, Sevenmile Creek, Missouri River (Lake Sakakawea), South Fork Green River, Beicegel Creek, Little Knife River, Spring Creek, Cherry Creek, Northfork Creek, Dry Fork Creek, and Sand Creek. A detailed discussion of surface waters including a tabular summary of the surface water features within the Project area are presented in Section 3.5, Water Resources, and **Table 3.5-1**, respectively.

3.7.2 Wetlands

As previously described, wetlands adjacent to WUS also are considered to be WUS. The term “wetland” is defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas (33 CFR 328.7[b]).” The frequency and duration of saturation may vary by geographical region, and is largely dependent upon local climatic conditions.

The USACE 1987 Wetland Delineation Manual requires a “three-parameter” approach for delineating USACE-defined wetlands (USACE 1987). Based on this approach, areas are identified as wetlands if they exhibit the following characteristics:

- The prevalence of vegetation consisting of hydrophytic species or plants that have the ability to grow in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content and depleted soil oxygen levels.
- The presence of soils that are classified as hydric or possessing characteristics that are associated with reducing soil conditions. Hydric soils are poorly drained and have a seasonal high water table within 6 inches of the surface.
- An area which is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation (usually 12.5 percent of the growing season) (USACE 1987; Wetland Training Institute, Inc. 1995). Within the Project area, an area would need to be saturated for a period of approximately 16 days to support vegetation adapted to saturated soils based on the average number of days above 32°F (i.e., 127 days*0.125) (NRCS 2002).

The USACE Wetland Delineation Manual (USACE 1987), in conjunction with the Regional Supplement to the Manual: Great Plains Region (USACE 2008) requires that under normal circumstances, all three of these conditions be met for an area to be considered a wetland under the USACE's definition. Federal mandates governing regulatory enforcement in wetlands and other WUS include Section 10 of the Rivers and Harbors Appropriation Act of 1899, Sections 401 and 404 of the CWA, as amended (33 USC 1251 *et seq.*), and Executive Order (EO) 11990, Protection of Wetlands (42 FR 26961). The loss, dredging, or filling of WUS would be regulated by the USACE under CWA Section 404, and a USACE permit would be required and obtained prior to construction. Final regulatory authority and delineation boundaries for wetlands and WUS within the Project area lie with the USACE. If wetland and riparian features are identified as potentially being jurisdictional, consultation with the Omaha District of the USACE would be conducted, a subsequent jurisdictional determination would be obtained, and permit requirements would be determined at that time.

Prior to field survey commencement, a desktop review of the National Wetland Inventory (NWI) database was completed to identify the spatial extent of hydrological features within the Project area. Based on this review, 4.8 linear miles of palustrine and lacustrine systems were identified. **Table 3.7-1** summarizes the NWI wetland data and associated linear miles of each system along the Project route. **Figures 3.7-1** through **3.7-3** illustrates the NWI-identified wetlands within the Project area.

Table 3.7-1 NWI-identified Wetlands within the Project Area

Wetland Type	Linear Miles ¹
Palustrine Emergent Wetland (PEM)	0.3
Palustrine Aquatic Bed (PAB)	<0.1
Lacustrine	4.4
Total	4.8

¹ Total discrepancies due to rounding.

Source: USFWS 2011a.

On-the-ground wetland and waterbody delineations were conducted between August 3 and October 7, 2011, within the 200- to 250-foot-wide survey corridor centered along the Project route. Subsequent wetland and waterbody delineations were conducted on May 16 and May 24, 2012, within the 200- to 250-foot-wide survey corridor centered along segments of the Project route that were realigned. In total, the following wetland and waterbody features were identified along the Project route: 18 PEM complexes, 4 PAB complexes, and 3 unclassified complexes (totaling 0.6 linear mile); 99 intermittent (totaling 1.3 linear miles) and 4 perennial waterbody crossings (totaling 2.4 linear miles) (Carlson-McCain 2011). **Table 3.7-2** summarizes the on-the-ground wetland and waterbody delineations along the Project route. **Figures 3.7-1** through **3.7-3** also illustrates the delineation results within the Project area. The associated Wetland Delineation and Waterbody Crossing Report (Carlson-McCain 2011) summarizes the scope of work, methodology, and survey results including figures, data forms, and photographs of the aforementioned features. A Request for Jurisdictional Determination letter was submitted to the USACE on May 16, 2012. A detailed waterbody crossing table is presented in Section 3.5, Water Resources, **Table 3.5-1**.

Table 3.7-2 Delineated Wetlands and Waterbodies Present within the Project Area

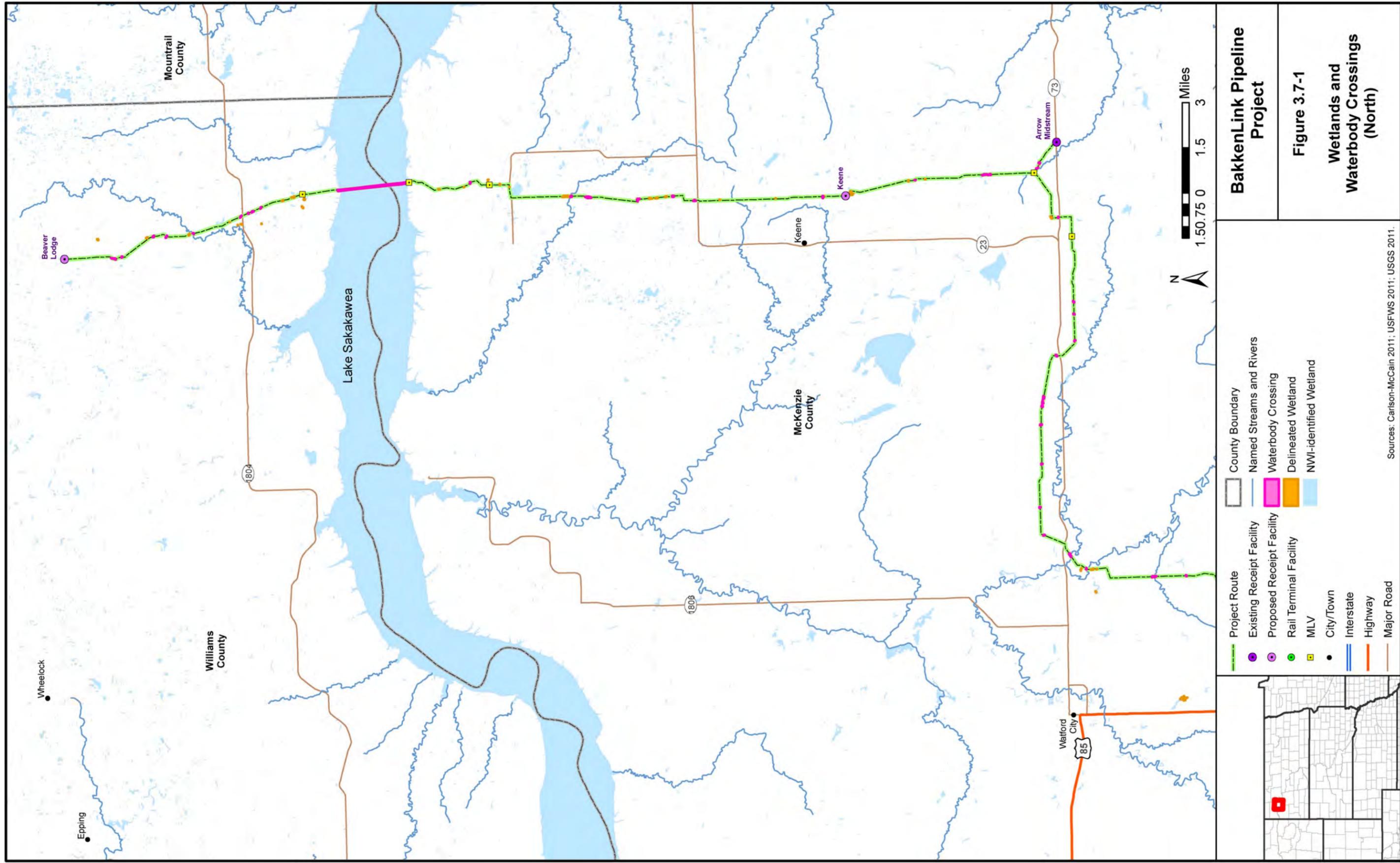
Wetland Type	Linear Miles
PEM	0.4
PAB	<0.1
Unclassified	0.1
Lacustrine	2.6
Riverine (including perennial and intermittent waterbody crossings)	1.1
Total	4.2

Source: Carlson-McCain 2011.

3.7.3 Floodplains

From a geomorphic perspective, floodplains are relatively low, flat areas of land that surround water bodies and hold overflows during flood events. Floodplains are often associated with rivers and streams, where they consist of sediments forming levels (or “terraces”) deposited at different times along the watercourse.

From a policy perspective, the Federal Emergency Management Agency (FEMA) defines a floodplain as being any land area susceptible to being inundated by waters from any source (FEMA 2005, 2001). Protection of floodplains and related resource values was established by EO 11988. Local, state, and federal agencies have additional roles and responsibilities under EO 11988 and the FEMA floodplain program, particularly with respect to potential impacts on flooding from proposed projects. In addition, regulatory programs provide rigorous guidance on the types, extent, and location of Project facilities that may be constructed within delineated floodplain boundaries. According to FEMA Flood Insurance Rate Maps, the Project area is not located within an identified floodplain (Carlson-McCain 2011).

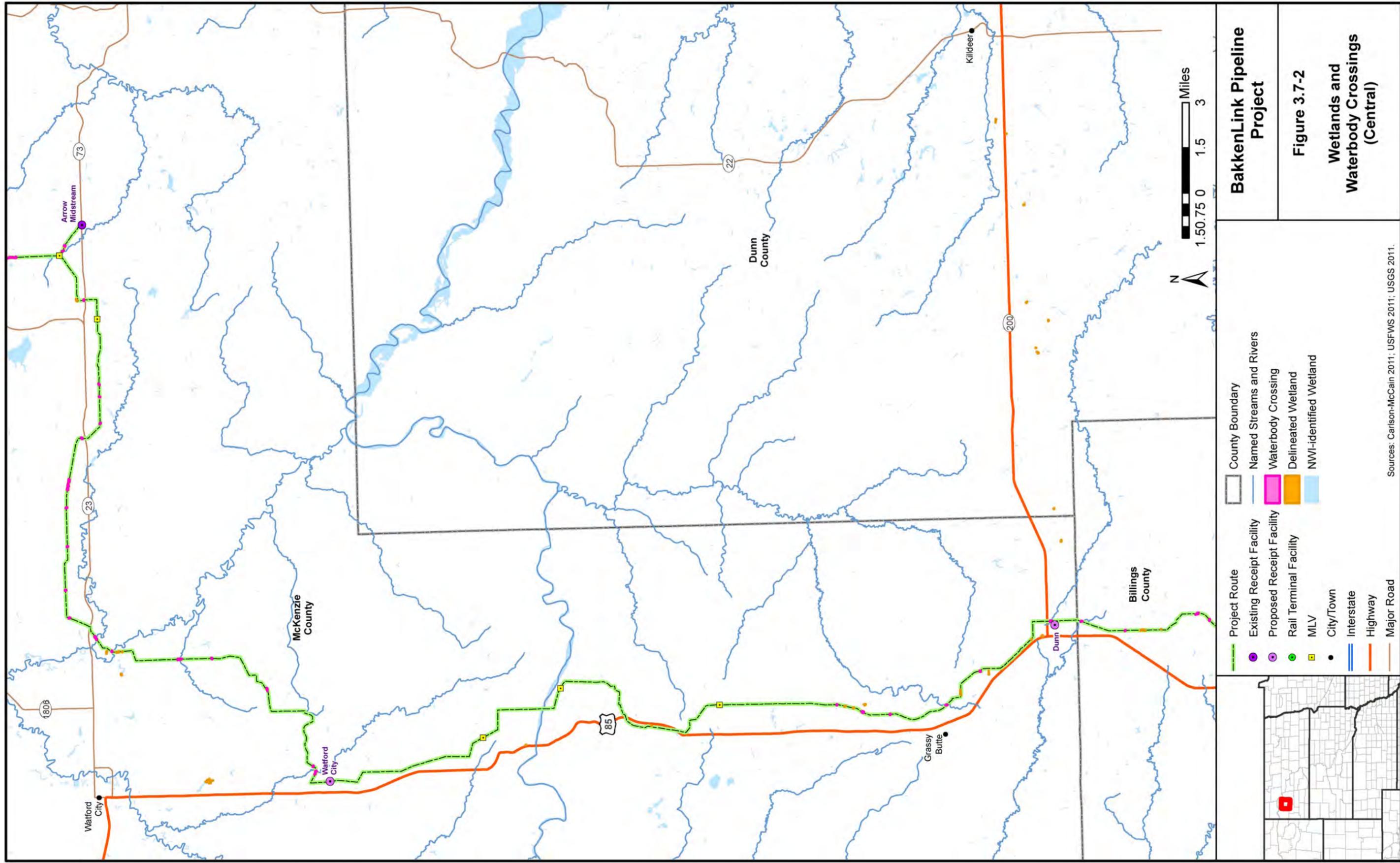


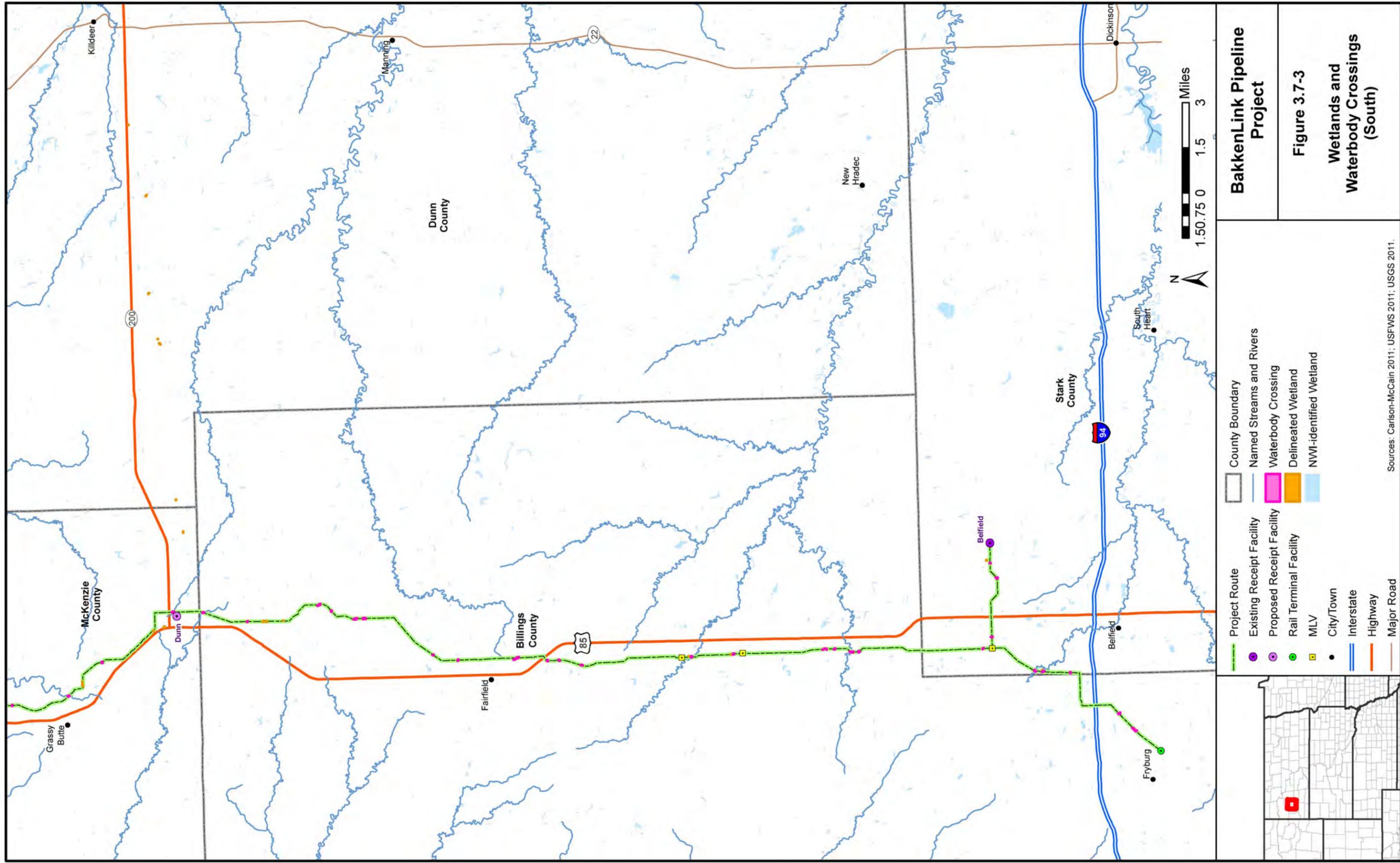
BakkenLink Pipeline Project

Figure 3.7-1

Wetlands and Waterbody Crossings (North)

Sources: Carlson-McCain 2011; USFWS 2011; USGS 2011.





BakkenLink Pipeline Project

Figure 3.7-3

Wetlands and Waterbody Crossings (South)

	Project Route		County Boundary
	Existing Receipt Facility		Named Streams and Rivers
	Proposed Receipt Facility		Waterbody Crossing
	Rail Terminal Facility		Delineated Wetland
	MLV		NWI-identified Wetland
	City/Town		
	Interstate		
	Highway		
	Major Road		

Sources: Carlson-McCain 2011; USFWS 2011; USGS 2011.

3.8 Noxious Weeds and Invasive Species

An increasing concern on both public and private lands is the introduction, spread, and proliferation of noxious weed and invasive plant species. Pursuant to the North Dakota Century Code § 4.1-47-02, a “noxious weed” is defined as “a plant propagated by either seed or vegetative parts and determined to be injurious to public health, crops, livestock, land, or other property as determined by the commissioner, county, or city weed board.” The North Dakota Department of Agriculture currently lists 11 plant species as state-designated noxious weeds. In addition to the North Dakota state-designated species, management is required for six additional county-specific species for Billings, McKenzie, and Stark counties; and 25 USFS-designated invasive species. No additional species were listed for Williams County. State and county-designated noxious weed species, and USFS-designated invasive species are listed in **Table 3.8-1**.

Noxious and invasive weed surveys were conducted in August and September 2011 along the Project route. Subsequent noxious and invasive weed surveys were conducted on May 16 and May 24, 2012, along segments of the Project route that were realigned. Populations were identified and mapped within the 200-foot-wide pipeline ROW corridor for the Project route (**Figures 3.8-1** through **3.8-3**). The results of this survey effort are summarized in **Table 3.8-1**. The Noxious Weed and Aquatic Nuisance Species Control Plan (POD, Appendix VI) lists all aforementioned noxious weed species and further summarizes species distribution within the Project area based on known population records and field identified populations.

Table 3.8-1 Designated Noxious Weed and Invasive Species and Presence in the Project Area

Common Name	Scientific Name	State of North Dakota Designated Species	County Designated Species (BL-Billings; MK-McKenzie; ST-Stark)	USFS Designated Species	Identified within Project Area ^{1,2,3}
Russian knapweed	<i>Acroptilon repens</i>	X	--	X	--
Crested wheatgrass	<i>Agropyron cristatum</i>	--	--	X	X
Tall wheatgrass	<i>Agropyron elongatum</i>	--	--	X	--
Intermediate wheatgrass	<i>Agropyron intermedium</i>	--	--	X	--
Quackgrass	<i>Agropyron repens</i>	--	--	X	--
Common burdock	<i>Arctium minus</i>	--	BL, MK	--	--
Absinth wormwood	<i>Artemisia absinthium</i>	X	--	X	X
Smooth brome	<i>Bromus inermis</i>	--	--	X	X
Japanese brome	<i>Bromus japonicus</i>	--	--	X	X
Downy brome	<i>Bromus tectorum</i>	--	--	X	X
Hoary cress	<i>Cardaria draba</i>	--	BL, ST	X	--
Spiny plumeless thistle	<i>Carduus acanthoides</i>	--	--	X	--
Musk thistle	<i>Carduus nutans</i>	X	--	X	--
Diffuse knapweed	<i>Centaurea diffusa</i>	X	--	X	--
Spotted knapweed	<i>Centaurea maculosa</i>	X	--	X	--

Table 3.8-1 Designated Noxious Weed and Invasive Species and Presence in the Project Area

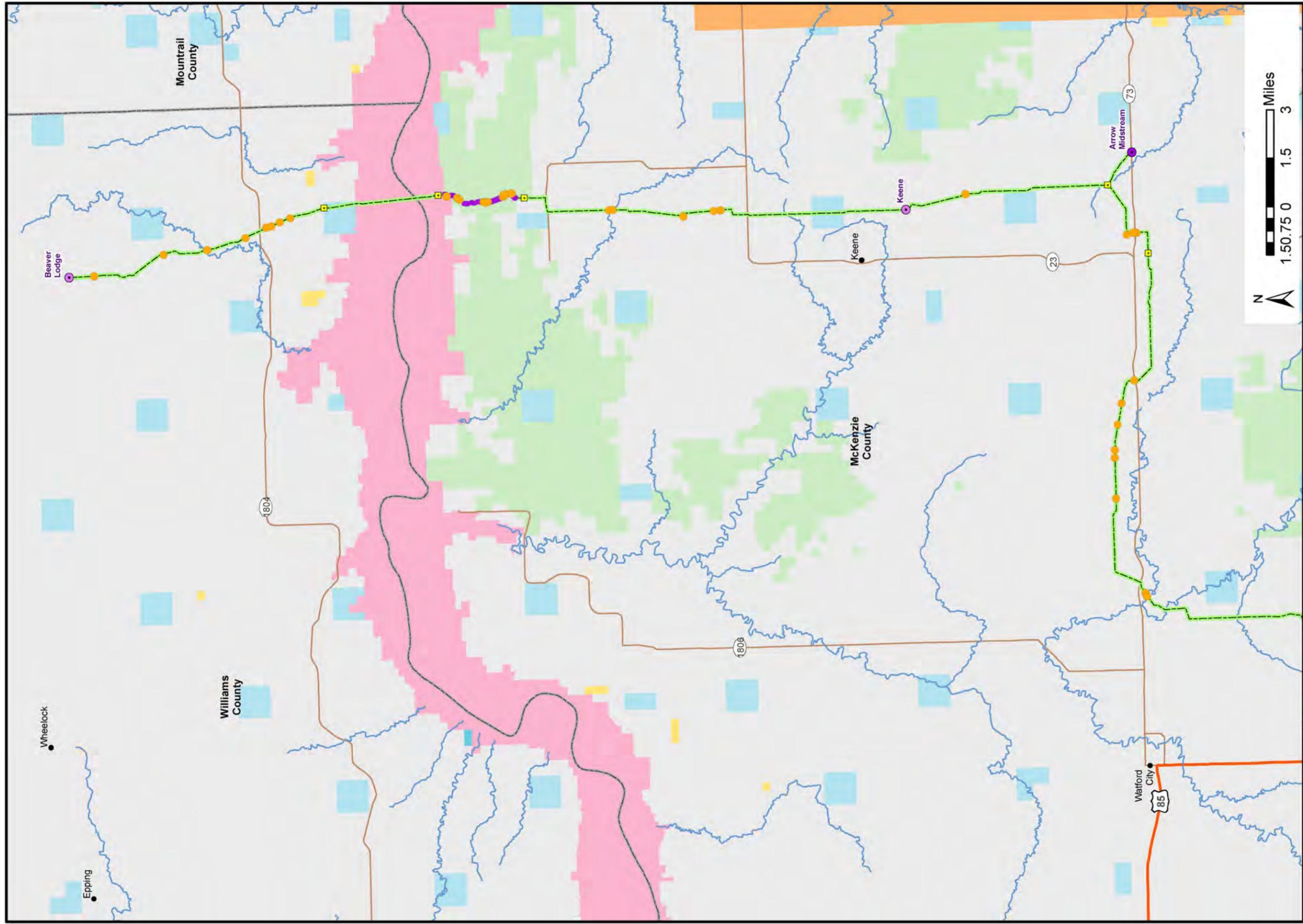
Common Name	Scientific Name	State of North Dakota Designated Species	County Designated Species (BL-Billings; MK-McKenzie; ST-Stark)	USFS Designated Species	Identified within Project Area ^{1,2,3}
Yellow starthistle	<i>Centaurea solstitialis</i>	--	--	X	--
Canada thistle	<i>Cirsium arvense</i>	X	--	X	X
Field bindweed	<i>Convolvulus arvensis</i>	--	--	X	X
Houndstongue	<i>Cynoglossum officinale</i>	--	BL, MK	X	--
Leafy spurge	<i>Euphorbia esula</i>	X	--	X	X
Baby's breath	<i>Gypsophila paniculata</i>	--	MK	--	--
Halogeton	<i>Halogeton glomeratus</i>	--	MK	X	--
Black henbane	<i>Hyoscyamus niger</i>	--	BL, MK, ST	X	X
Dalmation toadflax	<i>Linaria genistifolia</i>	X	--	--	--
Yellow toadflax	<i>Linaria vulgaris</i>	X	--	--	--
Purple loosestrife	<i>Lythrum salicaria, L. virgatum</i>	X	--	X	--
Sweet clover	<i>Melilotus</i> spp.	--	--	X	X
Kentucky bluegrass, Canada bluegrass	<i>Poa pratensis, P. compressa</i>	--	--	X	X
Sowthistle	<i>Sonchus</i> spp.	--	--	X	--
Saltcedar	<i>Tamarix chinensis, T. ramosissima</i>	X	--	--	--

¹ Noxious weed surveys were completed within the 200- to 250-foot-wide survey corridor centered along the Project route on all lands with access permission; invasive species surveys were completed only on federal lands. Additional noxious weed surveys would be completed in 2012 prior to construction upon property admission.

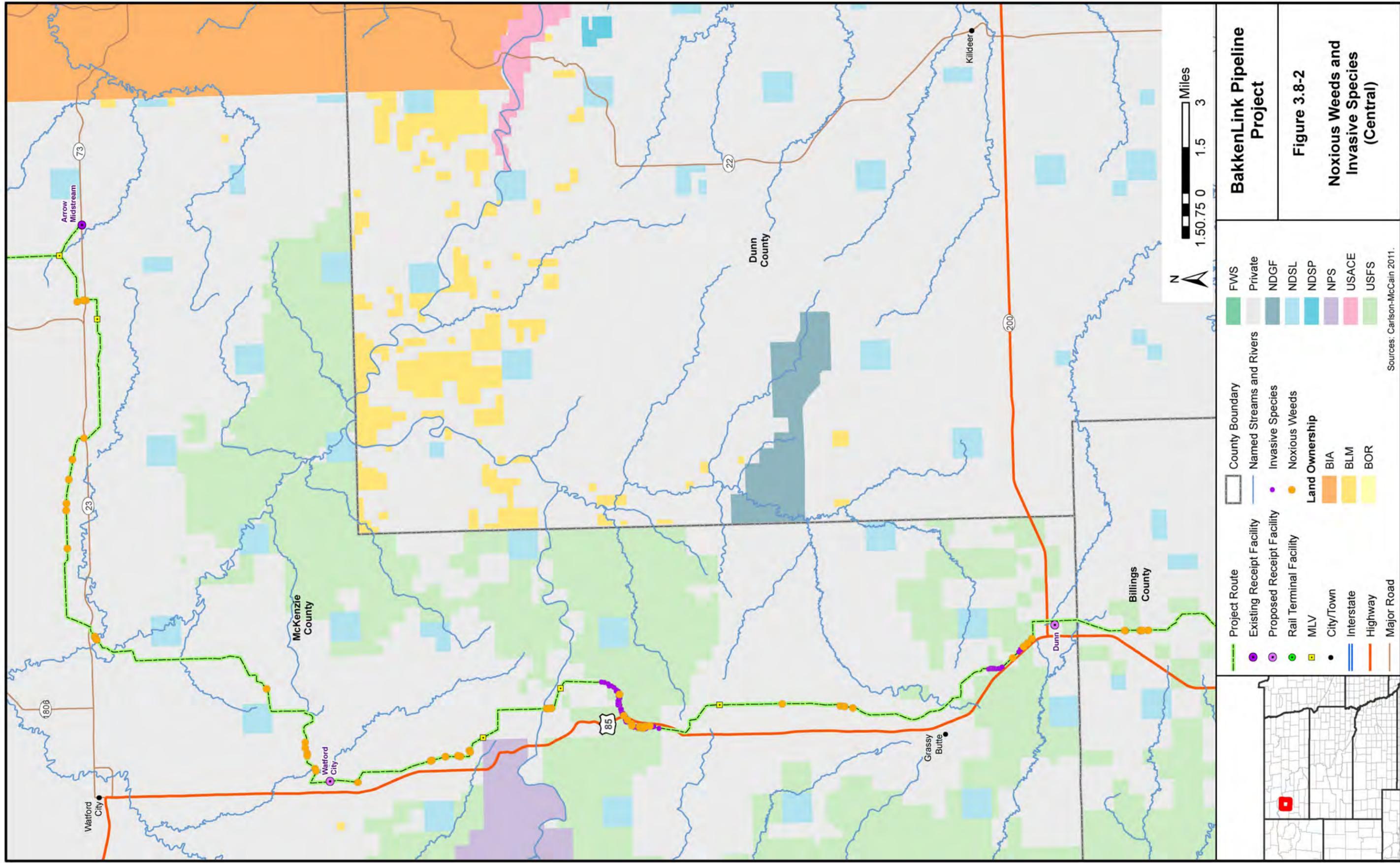
² Bull thistle (*Cirsium vulgare*) populations also were identified within the Project area; however, this species is not listed as a state, county, or USFS-designated species and, as such, was not included within the table.

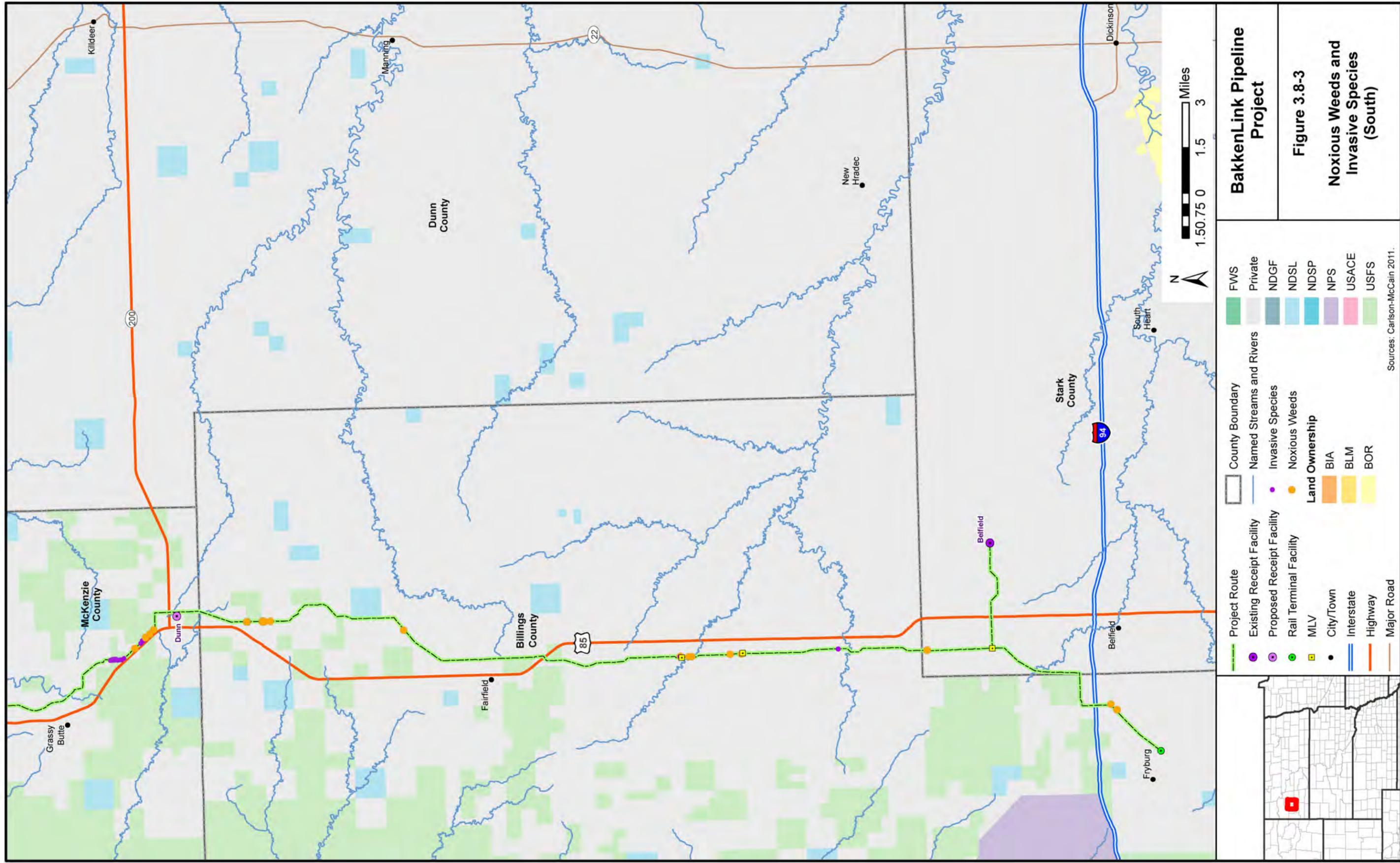
³ Populations present within the 200- to 250-foot-wide survey corridor based on the Project route centerlines dated October 4, 2011; May 6 and July, 2012.

Sources: NDDA 2011; USDA NRCS 2011.



<p>BakkenLink Pipeline Project</p>		
<p>Figure 3.8-1</p> <p>Noxious Weeds and Invasive Species (North)</p>		
<p>Project Route</p> <ul style="list-style-type: none"> Existing Receipt Facility Proposed Receipt Facility Rail Terminal Facility MLV City/Town Interstate Highway Major Road 	<p>County Boundary</p> <ul style="list-style-type: none"> Named Streams and Rivers Invasive Species Noxious Weeds <p>Land Ownership</p> <ul style="list-style-type: none"> BIA BLM BOR 	<ul style="list-style-type: none"> FWS Private NDGF NDSL NDSP NPS USACE USFS
<p>Sources: Carlson-McCain 2011.</p>		





3.9 Wildlife and Fisheries

3.9.1 Wildlife

Recreationally and Economically Important Species and Nongame Wildlife

As discussed in Section 3.6, Vegetation, the Project route would cross five habitat types, including grassland, shrubland, woodland, agricultural land, and wetland/waterbodies. The Project area consists of a semiarid rolling plain with isolated sandstone buttes, badland formations, and wetland basins. Baseline descriptions of both resident and migratory wildlife include species that have either been documented along the Project route, or those that may occur along the Project route, based on habitat associations. Wildlife species that may occur along the majority of the Project route are typical of the grassland, shrubland, woodland, and wetland communities of west-central North Dakota. A list of representative wildlife species for the project area is found in **Appendix A**.

A number of waterbodies, including major river courses as well as intermittent and perennial streams, wetlands, and floodplains occur along the Project route (Section 3.7, Wetland and Floodplains). Water sources, particularly those that maintain a reliable source of open water and provide a multi-story canopy, support a greater diversity and population density of wildlife species than other habitats in the region.

U.S. Forest Service Management Indicator Species

A Management Indicator Species (MIS) is a plant or animal species selected because its status is believed to: 1) be indicative of the status of a larger group of species; 2) be reflective of the status of a key habitat type; or 3) act as an early warning of an anticipated stressor to ecological integrity. The key characteristics of MIS are that its status and trend provide insights to the integrity of the larger ecological system to which it belongs. Species that have been selected for the LMNG include the sharp-tailed grouse, black-tailed prairie dog, and greater sage-grouse (USFS 2011a). A survey completed in 2011 did not identify any greater sage-grouse leks or black-tailed prairie dog colonies along the Project route (McCain and Associates 2011b). Surveys completed in 2011 and 2012 identified four sharp-tailed grouse leks within 0.25 mile of the Project route (Carlson-McCain 2012, 2011). The sharp-tailed grouse is presented in Section 3.9.1.2, Small Game Species.

3.9.1.1 Big Game Species

Big game species that occur in the Project region (**Appendix A**) include pronghorn, mule deer, white-tailed deer, elk, Rocky Mountain bighorn sheep, and mountain lion (Hagen et al. 2005). The Rocky Mountain bighorn sheep is a USFS Sensitive Species and is discussed in Section 3.10, Special Status Species. According to the NDGFD, habitat for big game species can be classified as primary and secondary, based on relative species abundance. Primary range refers to the area where a species is most abundant; secondary range refers to the area where a species is not as abundant, but is still present (NDGFD 2012a).

Pronghorn

Pronghorn inhabit grasslands and shrublands on flat to rolling topography, and browse on shrubs, especially sagebrush, throughout the year. During winter, pronghorn generally utilize areas of relatively high sagebrush densities and overall low snow accumulations, on south- and east-facing slopes (Fitzgerald et al. 1994). Pronghorn occur throughout the majority of the Project area. The Project route would cross approximately 93 miles of pronghorn primary range and 39 miles of pronghorn secondary range (NDGFD 2012d).

Mule Deer

Mule deer feed on a wide variety of plants including forbs, grasses, sedges, shrubs, and trees. Winter habitat for mule deer occurs in areas of relatively high sagebrush densities and overall low snow accumulation, on south- and east-facing slopes (Fitzgerald et al. 1994). Mule deer occur throughout the

majority of the Project area, inhabiting virtually all vegetation types. The Project route would cross approximately 22 miles of mule deer primary range and 110 miles of mule deer secondary range (NDGFD 2012d).

White-tailed Deer

White-tailed deer occur throughout the entire state, are considered widespread and common, inhabiting woodlands, riparian areas and agricultural lands (NDGFD 2012d). White-tailed deer feed on cultivated crops, such as corn and wheat, native forbs and grasses, as well as mushrooms, fruits, and nuts. In winter, white-tailed deer congregate in woodland habitat (Fitzgerald et al. 1994).

Elk

Elk occur in a variety of habitats in the Project area including woodlands, shrublands, grasslands, and agricultural areas. The Project route would cross approximately 110 miles of elk primary range (NDGFD 2012d). Elk feed on grasses, forbs, and shrubs; the percentages vary seasonally. Elk have a considerable impact on aspen stands by browsing on twigs, bark, and seedlings (Fitzgerald et al. 1994).

Mountain Lion

The mountain lion occurs in the Project area in McKenzie County (Fecske unknown date). Mountain lions inhabit a variety of ecosystems, but are most common in rocky foothills, canyons, woodlands, and shrublands. They feed primarily on deer, but also would take elk, Rocky Mountain bighorn sheep, smaller mammals, and livestock (Fitzgerald et al. 1994).

3.9.1.2 Small Game Species

Small game species that occur in the Project area include upland game birds, furbearers, waterfowl, and small mammals (**Appendix A**).

Upland Game Birds

Upland game birds that occur in the Project area include sharp-tailed grouse, gray (Hungarian) partridge, wild turkey, ring-necked pheasant, and mourning dove. Sharp-tailed grouse, gray partridge, ring-necked pheasant, and mourning dove occur in a variety of grassland, shrubland, riparian, and agricultural habitats. Wild turkeys occur throughout the Project area in woodland habitat (NDGFD 2012c; Stokes and Stokes 1996). The Project area is located within gray partridge, wild turkey, and ring-necked pheasant primary ranges. Mourning doves are considered widespread and common in the Project area (NDGFD 2012c).

The sharp-tailed grouse is a USFS MIS. Ground surveys were conducted for sharp-tailed grouse leks on April 14 and 18, 2012, as well as April 21, 27, and 28, 2011. **Table 3.9-1** presents a summary of active sharp-tailed grouse leks within 0.25 mile of the Project route.

Furbearers

Furbearers that occur along the Project route include beaver, raccoon, striped skunk, muskrat, mink, long-tailed weasel, short-tailed weasel, badger, bobcat, coyote, and red fox (NDGFD 2012d). These species have wide distributions in North Dakota and are found within all habitat types present in the Project area.

Waterfowl

Numerous species of waterfowl nest in, and migrate through, the Project area, utilizing the wetland/waterbody habitats present there. Common waterfowl species in the Project area include Canada goose, mallard, green-winged teal, northern pintail, gadwall, and American wigeon. Other common summer residents include blue-winged teal, cinnamon teal, northern shoveler, redhead, and ring-necked duck (Stokes and Stokes 1996).

Table 3.9-1 Sharp-tailed Grouse Leks

Species	Habitat Association	Potential for Occurrence within the Project Area	Milepost	Distance to Centerline (feet)	Survey Year	Status	Land Owner	County
Sharp-tailed grouse	Grassland	High. Four active sharp-tailed grouse leks occur within 0.25 mile of the centerline (Carlson-McCain 2012, 2011).	13.15	290	2011	Active	USFS	McKenzie
			13.37	622	2011, 2012	Active	USFS	McKenzie
			72.73	739	2011, 2012	Active	USFS	McKenzie
			95.88	932	2011	Active	Private	Billings

Sources: Carlson-McCain 2012, 2011; USFS 2011a.

Small Game Mammals

Small game mammals likely to occur in the Project area include fox squirrel and eastern cottontail (NDGFD 2012c). Fox squirrels occur in riparian and woodland vegetation communities within the Project area. Eastern cottontails occur in a variety of habitat types, but are most common in brushy areas such as shelterbelts and old farmsteads (Firtzgerald et al. 1994).

3.9.1.3 Nongame Species

A diversity of nongame species (e.g., small mammals, raptors, passerines, amphibians, and reptiles) occupies a variety of trophic levels and habitat types in the Project area (**Appendix A**). Common nongame wildlife species include small mammals, such as bats, voles, gophers, prairie dogs, woodrats, and mice. These small mammals provide a substantial prey base for predators in the Project area, including larger mammals (coyote, badger, bobcat), raptors (eagles, hawks, accipiters, owls), and reptiles (snakes). A number of bat species also occur in the Project area, including long-legged myotis, long-eared myotis, and western small-footed myotis (Hagen et al. 2005).

Raptors and Other Migratory Birds

Nongame birds encompass a variety of passerine and raptor species, including migratory bird species that are protected under the Migratory Bird Treaty Act (16 USC 703-711) and EO 13186 (66 FR 3853) (**Appendix A**).

Raptor species that occur in the Project area as residents or migrants include eagles (bald and golden eagles); hawks (e.g., red-tailed hawk, Swainson's hawk, ferruginous hawk); falcons (e.g., prairie falcon, American kestrel); accipiters (e.g., Cooper's hawk, sharp-shinned hawk); owls (e.g., great-horned owl, burrowing owl, long-eared owl, short-eared owl); and northern harrier (Stokes and Stokes 1996).

Aerial raptor surveys were conducted on April 13 and 14, 2012, to identify occupied territories or active nest sites. Records from the NDGFD, North Dakota Parks and Recreation Department Heritage Inventory, USFWS, and USFS were reviewed to determine the locations and status of previously observed and recorded raptor nests and sharp-tailed grouse leks. Transects were generally spaced 0.25 mile on either side of the Project route. Nests for which the status could not be determined from the air were revisited and observed from the ground on April 18, 2012, to determine or confirm nest status (Carlson-McCain 2011).

Aerial surveys focused on cliff nesters (e.g., golden eagle, prairie falcon) and species that commonly nest in deciduous trees or on promontory points (e.g., red-tailed hawk, Swainson's hawk, ferruginous hawk, great-horned owl). The aerial surveys did not concentrate on cavity nesters (e.g., American kestrel), ground nesters (e.g., northern harrier), sub-terranean nesters (e.g., burrowing owl), or most conifer nesters (e.g., accipiters), based on visibility limitations from the aircraft.

Based on the results of the 2012 raptor nest survey, a total of 19 active nest sites were identified within 0.5 mile of the Project route. Of these nests, 11 were occupied by red-tailed hawks, three by Swainson's hawks, two by great horned owls, and three historic raptor nests were occupied by Canada geese. In addition, 19 historic nests were located and determined to be inactive in 2012. **Table 3.9-2** presents the survey results.

Migratory Birds

Migratory birds are considered integral to natural communities and act as environmental indicators based on their sensitivity to environmental changes caused by human activities. A variety of passerines occur in the Project area throughout the year; however, they are most abundant during the spring/fall migration, as well as during the breeding season (February 1 through July 15). Representative bird species that occur in the Project area include killdeer, common nighthawk, eastern kingbird, western kingbird, eastern bluebird,

common yellowthroat, clay-colored sparrow, vesper sparrow, lark sparrow, western meadowlark, Say's phoebe, horned lark, barn swallow, black-billed magpie, common raven, and lark bunting (Stokes and Stokes 1996).

Special status bird species that may occur in the Project area are discussed in Section 3.10, Special Status Species.

Table 3.9-2 2012 Raptor Nest Survey Results (Aerial and Ground)

Milepost	Species	Status	Distance to Route (feet)	County
0.88	Unknown (Historic)	Unoccupied	308	Stark
2.46	Unknown (Historic)	Unoccupied	608	Williams
3.99	Canada Goose (in old raptor nest)	Active	1,929	Williams
5.70	Swainson's Hawk	Active	1,519	Williams
13.77	Red-tailed Hawk	Active	773	McKenzie
27.20	Red-tailed Hawk	Active	528	McKenzie
27.20	Red-tailed Hawk	Active	623	McKenzie
27.20	Unknown (Historic)	Unoccupied	1,138	McKenzie
30.07	Unknown (Historic)	Unoccupied	444	McKenzie
30.59	Unknown (Historic)	Unoccupied	2,329	McKenzie
34.59	Swainson's Hawk	Active	2945	McKenzie
37.25	Red-tailed Hawk	Active	1,023	McKenzie
39.52	Red-tailed Hawk	Active	1,008	McKenzie
40.71	Red-tailed Hawk	Active	216	McKenzie
40.93	Red-tailed Hawk	Active	1,358	McKenzie
41.51	Swainson's Hawk	Active	2,299	McKenzie
41.66	Unknown (Historic)	Unoccupied	251	McKenzie
42.17	Unknown (Historic)	Unoccupied	1,626	McKenzie
44.65	Unknown (Historic)	Unoccupied	1,256	McKenzie
45.15	Unknown (Historic)	Unoccupied	1,409	McKenzie
51.58	Unknown (Historic)	Unoccupied	1,215	McKenzie
54.74	Unknown (Historic)	Unoccupied	930	McKenzie
58.80	Red-tailed Hawk	Active	62	McKenzie
62.83	Unknown (Historic)	Unoccupied	807	McKenzie
66.19	Unknown (Historic)	Unoccupied	306	McKenzie
72.13	Red-tailed Hawk	Active	1,704	McKenzie
79.44	Unknown (Historic)	Unoccupied	2,051	McKenzie
85.04	Unknown (Historic)	Unoccupied	1,610	McKenzie

Table 3.9-2 2012 Raptor Nest Survey Results (Aerial and Ground)

Milepost	Species	Status	Distance to Route (feet)	County
93.21	Canada Goose (in old raptor nest)	Active	1,516	Billings
93.31	Unknown (Historic)	Unoccupied	607	Billings
94.70	Unknown (Historic)	Unoccupied	2,190	Billings
94.96	Canada Goose (in old raptor nest)	Active	1,785	Billings
99.71	Unknown (Historic)	Unoccupied	1,967	Billings
101.85	Red-tailed Hawk	Active	947	Billings
102.01	Unknown (Historic)	Unoccupied	888	Billings
107.48	Great Horned Owl	Active	183	Billings
118.30	Great Horned Owl	Active	672	Stark
124.90	Red-tailed Hawk	Active	429	Billings

Source: Carlson-McCain 2012.

3.9.1.4 Reptiles

Representative reptile species that could occur within the Project area (**Appendix A**) include the short-horned lizard, common snapping turtle, and western hognose snake (USGS 2006b).

3.9.2 Fisheries

3.9.2.1 Habitat

Aquatic habitat in the Project area includes streams, wetlands, ponds, rivers, and lakes. Most of the habitat consists of intermittent and ephemeral streams, which provide water only during spring run-off and seasonal storm events. The most significant perennial waterbodies crossed by the Project are the Missouri River course through Lake Sakakawea, Cherry Creek, Little Missouri River, Northfork Creek, Green River, and South Fork Green River. Aquatic species found in the Project area (**Appendix A**) are typical of the perennial and intermittent waterbodies found in the wetland communities of west-central North Dakota.

3.9.2.2 Aquatic Communities

Aquatic biological resources are defined as fish and invertebrate communities that inhabit perennial streams and pond/lake environments. The description of aquatic communities focuses on important fisheries, which are defined as species with recreational or commercial value or threatened, endangered, or sensitive status (i.e., special status). This section describes recreationally or commercially important fisheries that occur at, or immediately downstream of, the proposed crossings. Special status aquatic species are discussed in Section 3.10, Special Status Species. The Project area for aquatic resources includes the perennial streams, rivers, and ponds/lakes that would be crossed by the Project route.

Invertebrate communities in waterbodies in the Project area include worms, immature and adult insect groups, shellfish, and other forms of aquatic life. The composition can vary depending on flowing or standing water and other physical characteristics of the waterbody. They represent important food sources for fish and also are used as indicators of water quality conditions. For the purpose of describing aquatic resources, it is assumed that invertebrates are present in all waterbodies crossed by the Project route.

3.9.2.3 Fish

The Project would cross six perennial streams and numerous intermittent streams (Section 3.5, Water Resources). The Project route would cross several streams that are classified as valuable fisheries including the Missouri River (Lake Sakakawea), Little Missouri River, South Fork Green and Green rivers, as well as Cherry Creek.

Game fish include a variety of warm water and coolwater species such as walleye, perch, paddlefish, Chinook salmon, crappie, catfish, bluegill, sauger, northern pike, bass, sturgeon, and trout (NDGFD 2012b). Native non-game species include flathead chub, sturgeon chub, and northern redbelly dace (Hagen et al. 2005).

3.9.2.4 Amphibians

Potential habitat for amphibians includes perennial and intermittent stream reaches, wetlands, and ephemeral ponds. Common species found in the Project area (**Appendix A**) include the eastern plains spadefoot, Canadian toad, Great Plains Toad, Woodhouse's toad, northern leopard frog, western chorus frog, wood frog, and tiger salamander (USGS 2006b).

3.9.2.5 Aquatic Nuisance Species

A nuisance species is an introduced species (plant or animal) that threatens the diversity or abundance of native species or the ecological stability of infested waters. Aquatic nuisance species can be introduced accidentally or purposely. The NDGFD (2012e,f) identifies the following as aquatic nuisance species:

Plants:

- Eurasian water-milfoil
- Curly-leaf pondweed

Animals:

- Zebra mussel
- New Zealand mudsnail
- Common carp
- Silver carp
- Rudd
- Ruffle
- Goby
- Northern snakehead
- Spiny water flea
- Hooked-tail water flea