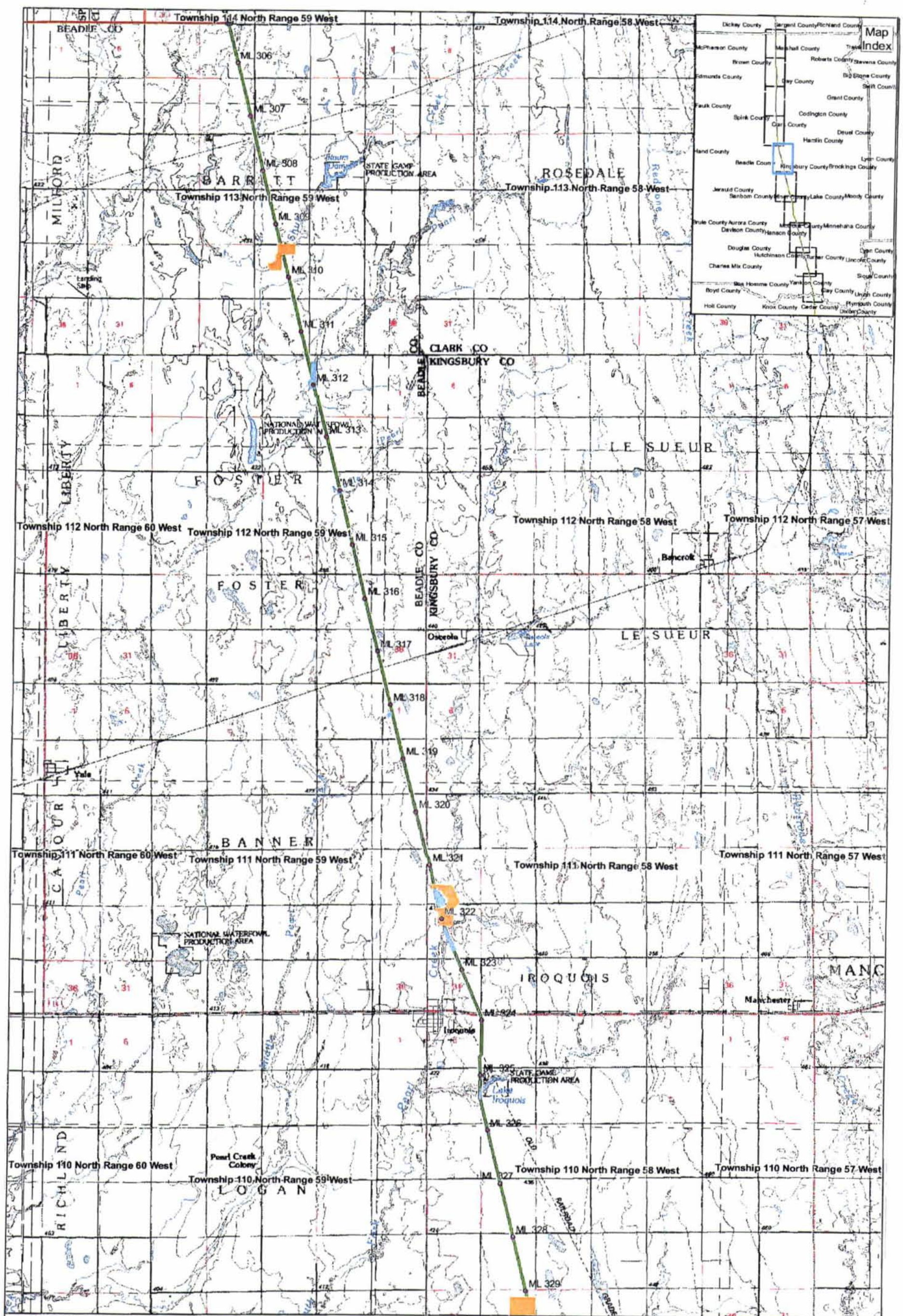

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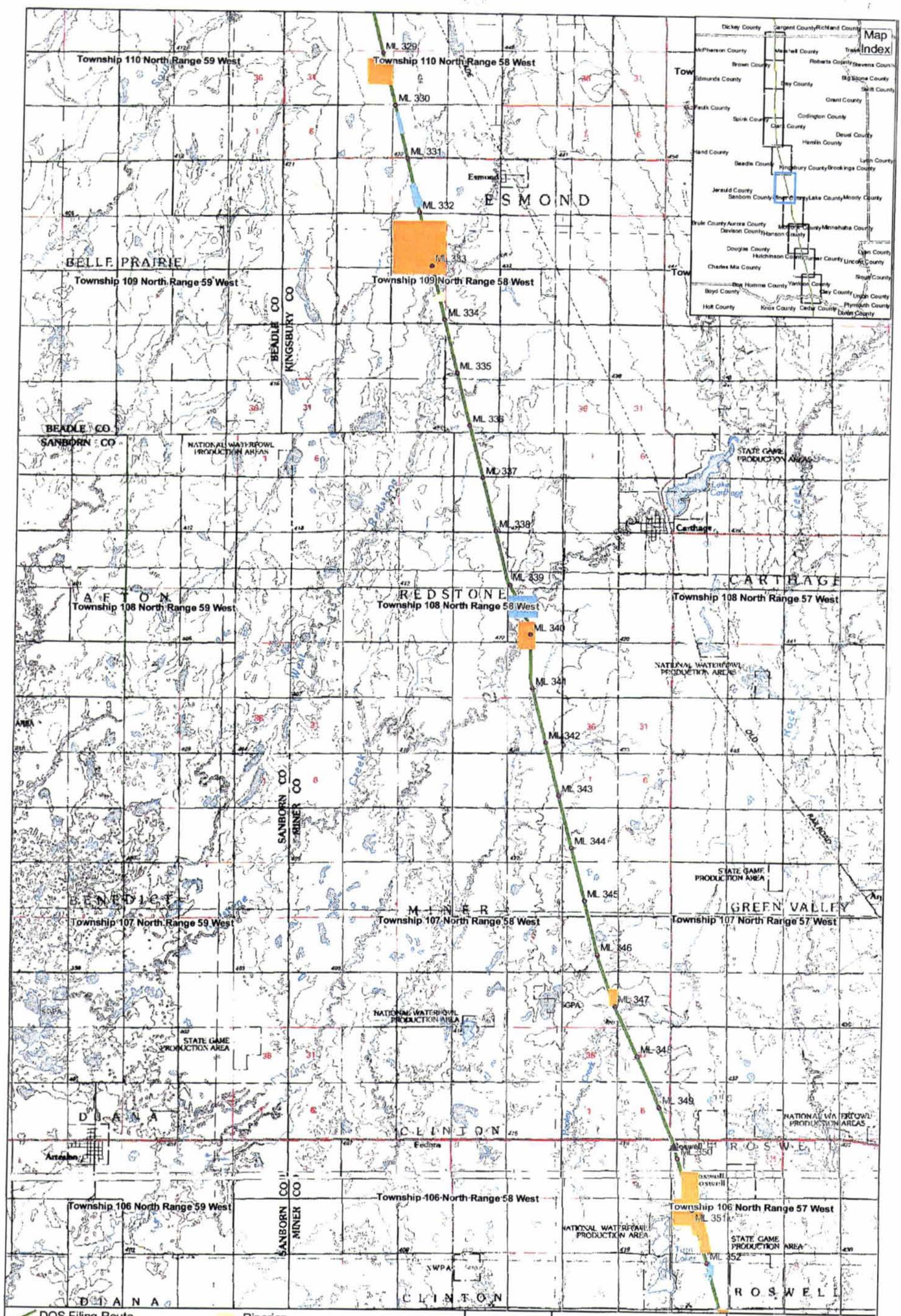

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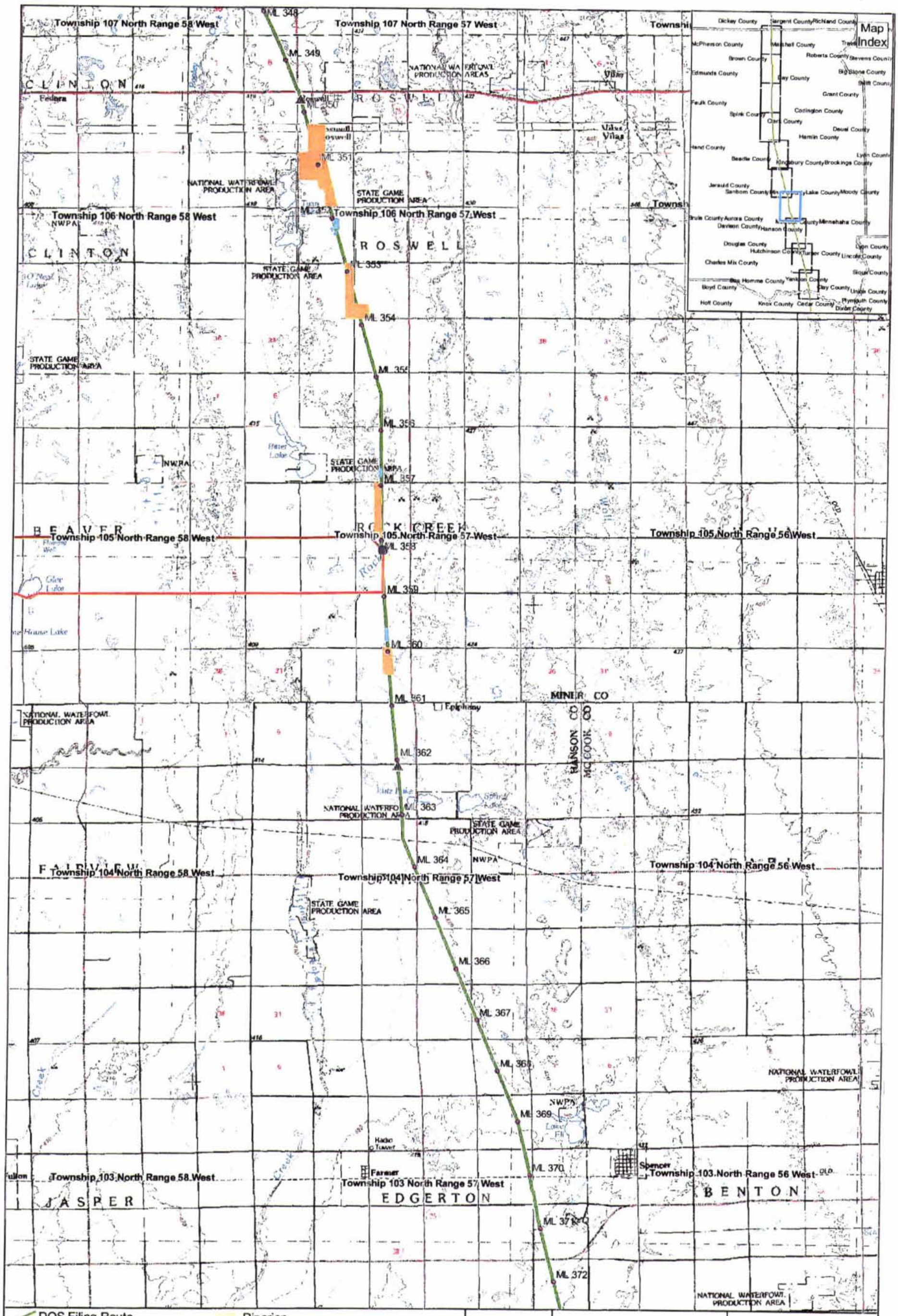

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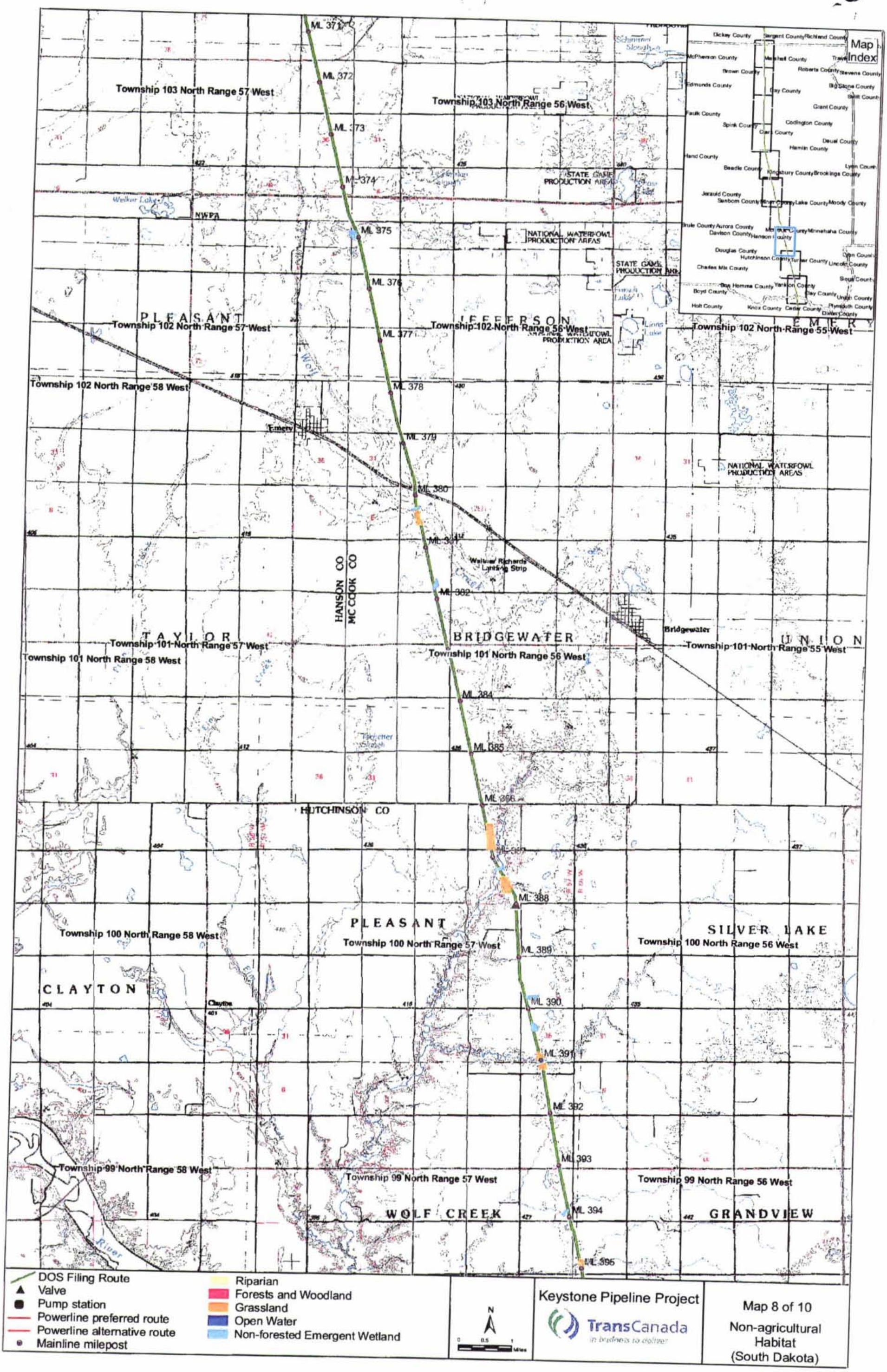

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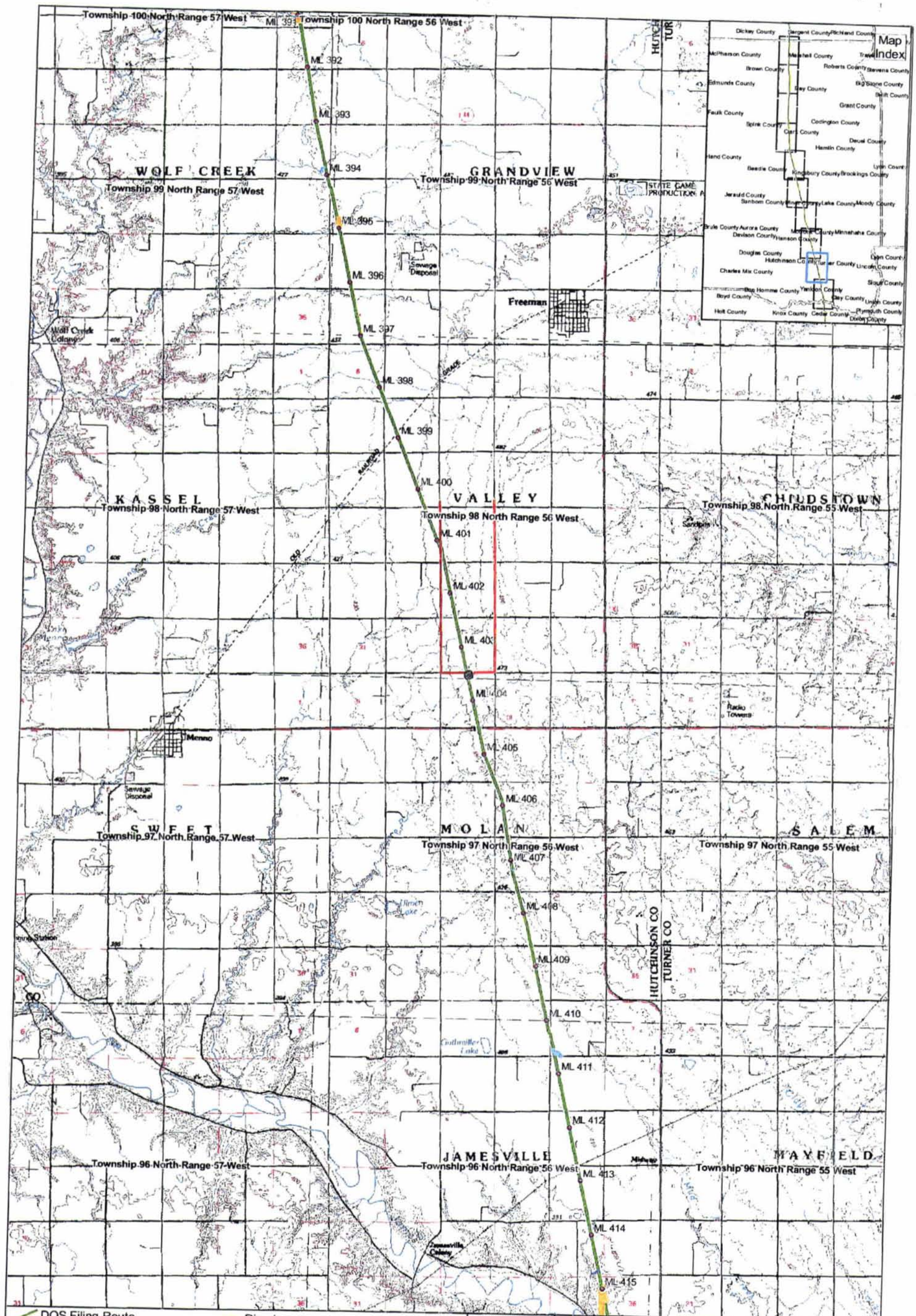

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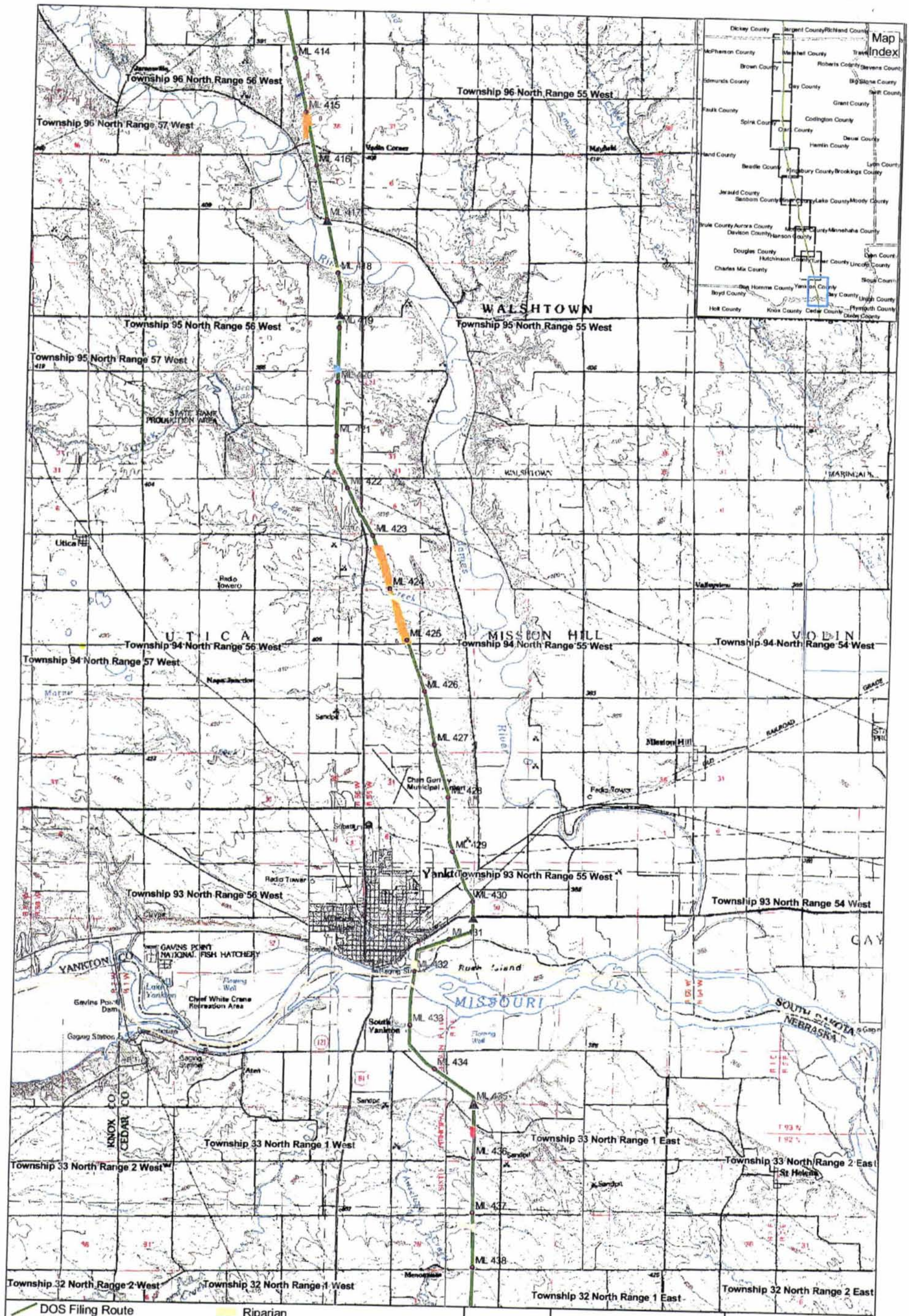

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Table 1
Nebraska Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
River otter *Lontra Canadensis*	NE-T	Key habitats are rivers, streams, lakes, ponds, marshes, estuaries, and beaver flowages, especially near waterbodies with wooded shorelines or nearby wetlands. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young.	rivers, streams, lakes, ponds, marshes, wetlands	Colfax Stanton					Colfax: 0.5 (Platte River) Stanton: 0.2 (Elkhorn River)	Colfax: 536.9 - 537.4 (Platte River) Stanton: 497.0 - 497.2 (Elkhorn River)
Bald eagle *Haliaeetus leucocephalus*	FT; NE-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites typically occur in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	riparian forests, open water	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne					Butler: 0 Cedar: 0.2 (Missouri River) Colfax: 0.5 (Lake McAllister, Platte River) Gage: 0 Jefferson: 0 Platte: 0 Saline: 0.2 (West Fork Big Blue River) Seward: 0.1 (Big Blue River) Stanton: 0.2 (Elkhorn River) Wayne: 0	Butler: N/A Cedar: 431.9 - 432.3 (Missouri River) Colfax: 535.9 (Lake McAllister); 536.9 - 537.4 (Platte River) Gage: N/A Jefferson: N/A Platte: N/A Saline: 586.7 - 587.6 (West Fork Big Blue River) Seward: 565.6 - 571.0 (Big Blue River) Stanton: 497.0 - 497.2 (Elkhorn River) Wayne: N/A
Interior least tern *Sterna antillarum athalassos*	FE; NE-E	Nesting habitat consists of sparsely vegetated sandy, gravelly, or silty, beaches and sandbars within wide, unobstructed river channels or salt flats along lake shorelines and irrigation reservoirs. Nest locations are generally away from the water's edge since nesting typically begins while river flows are high and relatively small amounts of sandy habitat is exposed. Breeding season: May 1 through August 15.	shorelines and sandbars of rivers, lakes, reservoirs	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton				*data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending*	Butler: 0 (Wetland) Cedar: 0.2 (Missouri River) Colfax: 0.5 (Lake McAllister, Platte River) Gage: 0 Jefferson: 0 (Playas) Platte: 0 Saline: 0.2 (West Fork Big Blue River) Seward: 0.2 (Big Blue River, Playas) Stanton: 0.2 (Elkhorn River, Sand pit)	Butler: 542.2-544.0; data pending Cedar: 431.9 - 432.3 (Missouri River); data pending Colfax: 535.9 (Lake McAllister); 536.9 - 537.4 (Platte River); data pending Gage: data pending Jefferson: 609.5 - 645.0 (Playas); data pending Platte: data pending Saline: 586.7 - 587.6 (West Fork Big Blue River); data pending Seward: 565.6 - 571.0 (Big Blue River); 561.0; 561.8 - 568.2; 574.8 - 575.0; 678.7; data pending Stanton: 497.0 - 497.2 (Elkhorn River); 498.0 - 499.0 (Sand pit); data pending

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project.

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Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Piping plover *Charadrius melodus*	FT; NE-T	This species inhabits open sandy areas and saline flats with little vegetation along rivers, lakes, ponds, and marshlands. It nests on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, on gravel pits along rivers, and on salt-encrusted bare areas on interior alkali ponds and lakes. Sparse clumps of grass or herbaceous vegetation are important habitat components. Breeding season: May 1 through August 15.	shorelines, sandbars, wetlands, rivers, lakes, ponds	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton (Missouri River between Yankton County, South Dakota and Cedar County, Nebraska is designated as critical habitat by USFWS)				*data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending*	Butler: 0 (Wetland) Cedar: 0.2 (Missouri River) Colfax: 0.5 (Lake McAllister, Platte River) Gage: 0 Jefferson: 0 (Playa's) Platte: 0 Saline: 0.2 (West Fork Big Blue River) Seward: 0.2 (Big Blue River, Playas) Stanton: 0.2 (Elkhorn River, Sand pit)	Butler: 542.2-544.0; data pending Cedar: 431.9 - 432.3 (Missouri River); data pending Colfax: 535.9 (Lake McAllister); 536.9 - 537.4 (Platte River); data pending Gage: data pending Jefferson: 609.5 - 645.0 (Playas); data pending Platte: data pending Saline: 586.7 - 587.6 (West Fork Big Blue River); data pending Seward: 565.6 - 571.0 (Big Blue River); 561.0; 561.8 - 568.2; 574.8 - 575.0; 678.7; data pending Stanton: 497.0 - 497.2 (Elkhorn River); 498.0 - 499.0 (Sand pit); data pending
Whooping crane *Grus americana*	FE; NE-E	During migration, this species feeds and roosts in a variety of habitats including croplands, large and small freshwater marshes, the margins of lakes and reservoirs, and submerged sandbars in rivers. Spring and Fall migration through the project regions generally occurs from February through April and from October through November, respectively.	wetlands, riparian, agriculture	Colfax Saline Seward Stanton				*data pending* *data pending* *data pending* *data pending*	Colfax: 0.5 (Lake McAllister, Platte River) Saline: 0.2 (West Fork Big Blue River) Seward: 0.1 (Big Blue River) Stanton: 0.2 (Elkhorn River)	Colfax: 535.9 (Lake McAllister); 536.9 - 537.4 (Platte River); data pending Saline: 586.7 - 587.6 (West Fork Big Blue River); data pending Seward: 565.6 - 571.0 (Big Blue River); data pending Stanton: 497.0 - 497.2 (Elkhorn River); data pending
Blacknose shiner *Notropis heterolepsis*	NE-E	This species prefers clean weedy lakes and streams.	lakes, streams	Cedar Stanton					Cedar: 0.2 (Missouri River) Stanton: 0.2 (Elkhorn River)	Cedar: 431.9-432.3 (Missouri River) Stanton: 497.0-497.2 (Elkhorn River)
Finescale dace *Phoxinus neogaeus*	NE-T	This species occurs a variety of habitats ranging from streams to bog lakes.	streams to bogs	Cedar					Cedar: 0.2 (Missouri River)	Cedar: 431.9-432.3 (Missouri River)
Lake sturgeon *Acipenser fulvescens*	NE-T	This species is generally bottom dwelling and occurs in large rivers and shallow areas of large lakes. They are most often associated with silt-free deep run and pool habitats of rivers (i.e., >5 ft deep), and generally avoid aquatic vegetation. Gravelly tributary streams of rivers and lakes serve as spawning habitat, although rocky, wave-swept areas near lake shores and islands serve as spawning habitat when preferred habitats are unavailable. Spawning period: late-spring.	large rivers and lakes, gravelly substrate	Cedar					Cedar: 0.2 (Missouri River)	Cedar: 431.9-432.3 (Missouri River)
Northern redbelly dace *Chrosomus eos*	NE-T	This species occurs a variety of habitats ranging from streams to bog lakes.	streams to bogs	Cedar					Cedar: 0.2 (Missouri River)	Cedar: 431.9-432.3 (Missouri River)

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project.

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Table 1
Nebraska Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Pallid sturgeon *Scaphirhynchus albus*	FE; NE-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	large, tubid rivers, sand substrate	Cedar Colfax					Cedar: 0.2 (Missouri River) Colfax: 0.5 (Platte River)	Cedar: 431.9-432.3 (Missouri River) Colfax: 536.9-537.4 (Platte River)
Sturgeon chub *Macrhybopsis gelida*	NE-E	This species prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at heads of islands or exposed sandbars. Spawning period: late spring to midsummer.	large sandy rivers, sand/gravel substrate	Cedar Colfax					Cedar: 0.2 (Missouri River) Colfax: 0.5 (Platte River)	Cedar: 431.9-432.3 (Missouri River) Colfax: 536.9-537.4 (Platte River)
Topeka shiner *Notropis topeka*	FE; NE-E	This species inhabits pool and run areas in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however pools are maintained by spring or groundwater percolation. The substrate of these occupied streams consist mainly of clean gravel, however bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Spawning period: late spring and summer.	small, cool, [often intermittent] prairie streams	Cedar Saline					Cedar: 0.2 (Missouri River) Saline: 0.2 (West Fork Big Blue River)	Cedar: 431.9-432.3 (Missouri River) Saline: 586.7-587.6 (West Fork Big Blue River)
Western massasauga *Sistrurus catenatus tergeminus*	FC; NE-T	This subspecies is found in open sagebrush prairie, rocky prairie hillsides, and prairie marsh habitats, usually near a water source. The snakes hibernate singly in rodent burrows. Courtship and breeding occur both in the Spring and Fall. Young are born during July or August.	sagebrush, shrubland, wetland	Gage Jefferson	Gage: 0 Jefferson: 3.4	Gage: 0 Jefferson: 0		*data pending* *data pending*		Gage: data pending Jefferson: 618.2 - 619.3, 630.2 - 633.5; data pending
Higgins eye pearly mussel *Lampsilis higginsii*	FE	Found in substrates of mud with a mixture of gravel and stones. Prefers rapidly flowing water. The exact breeding season is unknown.	fast flowing creeks and rivers, mud substrate	Cedar					Cedar: 0.2 (Missouri River)	Cedar: 431.9-432.3 (Missouri River)

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					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Scaleshell mussel *Leptodea leptodon*	FE; NE-E	Occurs in riffles with moderate to high gradients in creeks to large rivers. Typically associated with riffles, relatively strong currents, and substrate of mud, sand, or assemblages of gravel, cobble, and boulder. Restricted to rivers with relatively good water quality in stretches with stable channels. Little is known concerning the reproduction of this species.	creeks and rivers with good water quality and stable channels	Cedar					Cedar: 0.2 (Missouri River)	Cedar: 431.9-432.3 (Missouri River)
Small white lady's-slipper *Cypripedium candidum*	NE-T	This species is found in prairie habitats: mesic blacksoil prairie, wet blacksoil prairie, glacial till hill prairie, sedge meadow, calcareous fen, glade. Found on calcareous soils. Flowering occurs May-June.	wetland prairie	Butler Cedar Colfax Stanton Wayne	Butler: 0 Cedar: 4.3 Colfax: 0.8 Stanton: 1.5 Wayne: 1.3			*data pending* *data pending* *data pending* *data pending* *data pending*		Butler: data pending Cedar: 439.5-451.9; data pending Colfax: 525.8-526.6; data pending Stanton: 501.8-507.9; data pending Wayne: 473.0-476.9, 486.6-486.9; data pending
Western prairie fringed orchid *Platanthera praeclara*	FT; NE-T	Occurs in mesic upland tallgrass prairie in the southern part of its range, often in swales, and wet-mesic tallgrass prairie and sedge meadows in the northern part of its range. Also known from prairies and swales in sand dune complexes that are fed by shallow underground water. Flowers June-July.	tallgrass prairie, dune complexes	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	Butler: 0 Cedar: 4.3 Colfax: 0.8 Gage: 0 Jefferson: 3.4 Platte: 0 Saline: 0.3 Seward: 0 Stanton: 1.5 Wayne: 1.3			*data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending* *data pending*		Butler: data pending Cedar: 439.5-451.9; data pending Colfax: 525.8-526.6; data pending Gage: data pending Jefferson: 618.2-619.3, 630.2-633.5; data pending Platte: data pending Saline: 597.9-598.3; data pending Seward: data pending Stanton: 501.8 - 507.9; data pending Wayne: 473.0-476.9, 486.6-486.9; data pending

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project.

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed									
				ND		SD		NE		KS		MO		IL	
Mammals															
Gray bat *Myotis grisescens*	FE; MO-E; IL-E	This species forages primarily within forested areas along streams and lakes. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings. Maternity roosts typically are in caves with stream flow and are separate from summer bachelor roosts.	Riparian woodlands, caves											Madison	6.7
Indiana bat *Myotis sodalis*	FE; MO-E; IL-E	This species forages primarily in riparian forests and flood-plains, as well as in upland forests, low field, and pastures. Maternity roosts are located beneath loose bark of living and dead trees (especially oak and hickory *spp.*). Young are generally born in June. Winter hibernacula occur in caves and mines with 85% of this species population hibernating in Shannon, Washington, and Iron counties, MO.	Riparian woodlands, upland forests, pastures, caves									Audrain Buchanan Caldwell Carroll Chariton Clinton Lincoln Montgomery Randolph St. Charles	3.7 4.5 3.1 3.4 4.1 1.4 10.1 4.6 3.6 0.6	Bond Fayette Madison Marion	1.9 3.4 6.7 0.0
Gray wolf *Canis lupus*	FT; ND-SC	No particular habitat preference. Habitats may include: alpine, desert, conifer forest, hardwood forest, mixed forest, grasslands, savannas, shrubland/ chaparral, tundra, and woodlands.	Any	Cavalier Grnd Fks Nelson Pembina Sargent Walsh	0.0 0.0 0.2 2.9 8.4 1.7										
Fisher *Martes pennanti*	FC; ND-SC	This species inhabits upland and lowland forests, including coniferous, mixed, and deciduous forests. Fishers generally avoid areas with little forest cover or significant human disturbance and conversely prefer large areas of contiguous interior forest.	Forests and woodlands	Pembina	2.9										
Plains spotted skunk *Spilogale putorius interrupta*	SD-SC; MO-E	This species inhabits upland grassland prairie, brushy areas, cultivated land, and forests. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, hollow logs, trees, or on brushy heaps. Young are born from April to July.	Grasslands, shrublands, upland forests, agriculture edge									Chariton	17.0		
Eastern spotted skunk *Spilogale putorius*	KS-T; MO-E; SD-SC	This species prefers forest edge, prairie, brushy areas, and cultivated land, especially if rock outcrops and shrubs are present. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, brushy heaps, hollow logs, and abandoned buildings or outbuildings. Young are born in May or June.	Grasslands, shrublands, upland forests, agriculture edge							Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3	St. Charles	1.1		

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
River otter *Lontra Canadensis*	IL-E	Key habitats are rivers, streams, lakes, ponds, marshes, estuaries, and beaver flowages, especially near waterbodies with wooded shorelines or nearby wetlands. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young	rivers, streams, lakes, ponds, marshes, wetlands					Colfax Stanton	0.5 0.2					Bond Fayette	0.1 3.1
Birds															
Least bittern *Ixobrychus exilis*	MO-SC; IL-T	Nest in freshwater wetlands with dense, tall growths of emergent vegetation (particularly *Typha* spp, *Carex* spp., *Scirpus* spp., or *Phragmites australis*) interspersed with some woody vegetation and open, fresh water. In the north-central U.S., breeding and nesting may occur from May-July. Incubation lasts for 17-20 days; young usually leave nest by the 13th-15th day.	Wetlands, lakes, open water											Fayette Madison	0.0[1] 0.0[1]
Bald eagle *Haliaeetus leucocephalus*	FT; ND-SC; SD-T; NE-T; KS-T; MO-E; IL-T; OK-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites are located in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	Riparian forests, open water	Barnes Cavalier Grnd Fks Nelson Pembina Ransom Sargent Steele Walsh	0.0 0.0 0.0 0.0 0.1 0.2 0.0 0.0 0.3	Beadle Clark Day Hanson Hutchinson Kingsbury Marshall McCook Miner Yankton	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0 0.2 0.5 0.0 0.0 0.0 0.2 0.1 0.2 0.0	Brown Doniphan Marshall Nemaha	0.0 0.2 0.1 0.0	Buchanan Carroll Chariton Clinton Lincoln Montgomery St. Charles	0.2 0.0 0.7 0.0 0.2 0.0 0.3	Bond Fayette Madison	0.1 3.1 1.1
Peregrine falcon *Falco peregrinus*	IL-T; NE-SC; KS-E	This species is found over a wide variety of habitats, but are generally located near open water or marshes that support high concentration of shorebirds or waterfowl. Nest sites occur on tall steep-walled cliffs, bridges, or buildings. Preferred foraging habitat includes lakes, rivers, and wet meadows. Breeding season: April 15 to July 15.	Wetlands, lakes, open water							Brown Doniphan Marshall Nemaha	0.0[1] 0.0[1] 0.0[1] 0.0[1]			Madison	2.1[1]
Greater Prairie-chicken *Tympanuchus cupido*	MO-E; ND-SC	Prime habitat for this species includes mid-grass and tall-grass prairies bordered by open oak woodlands, oak forests, and cropland. In western Kansas, they nest in sand-sage prairie and forage in corn and wheat fields. In Missouri, nesting habitat is limited to cropland and nearby prairies mainly on the Osage Plains. Breeding season: March through July.	Shortgrass, tallgrass, upland forest, agriculture									Audrain Carroll	5.9 13		
King rail *Rallus elegans*	MO-E; NE-SC	This species inhabits fresh and brackish wetlands. King rails prefer wetlands with abundant grasses, sedges, rushes and cattails. Nest sites occur in herbaceous cover over shallow water in river floodplains. The adult King Rail molts completely after nesting and is flightless for nearly a month. Breeding season: April-June	Wetlands									Carroll Lincoln St. Charles	0.0[1] 0.0[1] 0.0[1]		

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Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
Whooping crane *Grus americana*	FE; ND-SC; SD-E; NE-E; OK-E; KS-E	During migration, this species feeds and roosts in a variety of habitats including croplands, large and small freshwater marshes, the margins of lakes and reservoirs, and submerged sandbars in rivers. Spring and Fall migration through the project regions generally occurs from February through April and from October through November, respectively.	Wetlands, riparian, agriculture	Barnes Cavalier Nelson	0.0[1] 0.0[1] 0.2[1]	Beadle Clark Kingsbury Yankton	0.0[1] 0.0[1] 0.0[1] 0.1[1]	Colfax Saline Seward Stanton	0.5[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]				
Snowy plover *Charadrius alexandrinus*	KS-T	This species inhabits open alkaline flats, mudflats, sandy shorelines, sandbars with little vegetation along rivers, lakes, ponds, and marshlands. Nesting often occurs on white saline flats. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds							Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.0[1] 0.0[1]				
Piping plover *Charadrius melodus*	FT; ND-SC; SD-T; NE-T; KS-T	This species inhabits open sandy areas and saline flats with little vegetation along rivers, lakes, ponds, and marshlands. It nests on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, on gravel pits along rivers, and on salt-encrusted bare areas on interior alkali ponds and lakes. Sparse clumps of grass or herbaceous vegetation are important habitat components. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds	Sargent		Clark Day Kingsbury Yankton	0.0[1] 0.0[1] 0.4[1] 0.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0[1] 0.2[1] 0.5[1] 0.0[1] 0.0[1] 0.0[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]				
Eskimo curlew *Numenius borealis*	FE; SD-E; KS-E	This species is a nearly extinct spring migrant that feeds and rests in burned-over prairies, agricultural areas, wetlands, and marshes.	Prairies, wetlands, agriculture			Clark	4.5[1]			Brown Doniphan Marshall Nemaha	4.9[1] 1.8[1] 5.6[1] 4.7[1]				
Interior least tern *Sterna antillarum athalassos*	FE; SD-E; NE-E; MO-E; OK-E; KS-E	Nesting habitat consists of sparsely vegetated sandy, gravelly, or silty beaches and sandbars within wide, unobstructed river channels or salt flats along lake shorelines and irrigation reservoirs. Nest locations are generally away from the water's edge since nesting typically begins while river flows are high and relatively small amounts of sandy habitat is exposed. Breeding season: May 1 through August 15.	Shorelines and sandbars or rivers, lakes, reservoirs			Clark Yankton	0.0[1] 0.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0[1] 0.2[1] 0.5[1] 0.0[1] 0.0[1] 0.0[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]	Chariton St. Charles	0.7[1] 0.3[1]		
Barn owl *Tyto alba*	MO-E; IL-E	This cavity-nesting species is primarily a bird of open country - residential and agricultural areas, old fields and woodland edges. Nests in buildings, tree cavities, caves, cliff crevices, and cut bank burrows Breeding season: late winter, spring, and/or early summer.	Grasslands, woodlands, agriculture									St. Charles	1.7	Fayette Marion	0.0 0.0
Loggerhead shrike *Lanius ludovicianus*	MO-SC; IL-T	This species is found in open areas with mixed shrub/brush hedgerows and scattered thorny trees. Thorny plant species (osage orange, honey locus, multiflora rose, wild crabapple) are important for impaling prey. In MO and IL, nesting peaks in late April, with a second peak in late May in MO.	Shriblands, uplands											Bond Fayette Marion	2.1 0.0 0.0

[1] Data pending: waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed						
				ND	SD	NE	KS	MO		IL	
Henslow's sparrow *Ammodramus henslowii*	KS-SC; MO-SC; IL-E	This species breeds in a variety of grassland habitats with tall, dense grass and herbaceous vegetation. Meadows, open grasslands and weedy and abandoned fields, all with wet areas, dense grass-forb mosaics and scattered small woody growths appear to be essential. Breeding season: April-July.	Grasslands, meadows, shrublands							Madison	1.6
Yellow-crownded night heron *Nyctanassa violacea*	IL-E	This species nests on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory. They use similar habitat types for nesting and roosting, avoiding areas with insufficient cover. They hunt along the shores of tidal creeks and tide pools within salt and brackish marshes dominated by salt marsh cordgrass.	wetlands, scrub-shrub thickets,							Fayette	3.4[1]
Pied-billed grebe *Podilymbus podiceps*	IL-T	This species breeds on seasonal or permanent ponds with dense stands of emergent vegetation, bays and sloughs. Uses most types of wetlands in winter.	ponds, wetlands, sloughs							Fayette	6.5[1]
Northern Harrier *Cicus cyaneus*	MO-E	This species breeds in marshes, meadows, grasslands, and cultivated fields. Perches on ground or on stumps or posts. Nests on the ground, commonly near low shrubs, in tall weeds or reeds, sometimes in bog; or on top of low bush above water, or on knoll of dry ground, or on higher shrubby ground near water, or on dry marsh vegetation.	marshes, meadows, grasslands, cultivated fields					Carroll	13.0[1]		
Fish											
Chestnut lamprey *Ichthyomyzon castaneus*	KS-T	This species is found in moderate-sized rivers and large creeks. Spawning occurs in smaller tributary streams in swift shallow riffles where the gravel is clean. Eggs are laid in a nest in the river bottom. Spawning period: spring or summer.	Rivers and creeks				Doniphan: Missouri River				
Pallid sturgeon *Scaphirhynchus albus*	FE; SD-E; NE-E; KS-E; MO-E; IL-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	Large, turbid rivers, sand substrate		Yankton: James River Missouri River	Cedar: Missouri River Colfax: Platte River	Doniphan: Missouri River	Buchanan: Missouri River St. Charles: Mississippi River		Madison: Mississippi River Fayette: Kaskaskia River	
Lake sturgeon *Acipenser fulvescens*	NE-T; MO-E; IL-E	This species is generally bottom dwelling and occurs in large rivers and shallow areas of large lakes. They are most often associated with silt-free deep run and pool habitats of rivers (i.e., >5 ft deep), and generally avoid aquatic vegetation. Gravelly tributary streams of rivers and lakes serve as spawning habitat, although rocky, wave-swept areas near lake shores and islands serve as spawning habitat when preferred habitats are unavailable. Spawning period: late-spring.	Large rivers and lakes, gravelly substrate		Yankton: Missouri River	Cedar: Missouri River		St. Charles: Mississippi River			

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Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Flathead chub *Platygobio gracilis*	KS-T	This species occurs from the Rio Grande to the Arctic Circle in small creeks and the largest rivers that have turbid fluctuating water levels and unstable sand bottoms. This species relies on flood flows to spawn successfully. Spawning occurs after water levels have subsided after peak flows, when water temperatures are warmer and substrate is more stable. Relies on flood flows to spawn successfully. Spawns after rivers have subsided following peak flow.	Creeks and rivers with turbid, fluctuating flow and sandy substrates				Nemaha: S.F. Nemaha River Doniphan: Missouri River		
Sturgeon chub *Macrhybopsis gelida*	NE-E; KS-T MO-SC SD-T	This species prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at heads of islands or exposed sandbars. Spawning period: late spring to midsummer.	Large sandy rivers, sand/gravel substrate		Yankton: Missouri River	Cedar: Missouri River Colfax County: Platte River	Doniphan: Missouri River	Buchanan: Missouri River	
Sicklefin chub *Macrhybopsis meeki*	NE-SC; KS-E MO-SC SD-E	This species requires continuously and heavily turbid waters of large rivers where it frequents areas of strong current flowing over sand or gravel substrate. Spawning period: spring (likely from late March and May).	Large turbid rivers, sand/gravel substrate		Yankton: Missouri River	Colfax: Platte River	Doniphan: Rock Creek Missouri River	Buchanan: Missouri River	
Western silvery minnow *Hybognathus* [illegible]*yritis*	KS-T; MO-SC	This species prefers protected areas in large, turbid rivers and prairie streams. In streams they are typically found in water less than one foot deep and shallow shore water heavily vegetated with emergent grasses and reeds. In protected areas of larger rivers, they move in large schools of 50 to 100 individuals along the bottom in deep, quiet water. While little is known about spawning, this species probably scatters eggs on silt substrate in quiet water.	Protected areas of rivers and streams				Nemaha: S.F. Nemaha River Doniphan: Missouri River	Buchanan: Missouri River	
Blacknose shiner *Notropis heterolepsis*	ND-SC; NE-E; MO-SC	This species prefers clean weedy lakes and streams.	Lakes, streams			Cedar: Missouri River Stanton: Elkhorn River	Doniphan: Missouri River		
Topeka shiner *Notropis topeka*	FE; SD-SC; KS-T; MO-E	This species inhabits pool and run areas in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however pools are maintained by spring or groundwater percolation. The substrate of these occupied streams consist mainly of clean gravel, however bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Spawning period: late spring and summer.	Small, cool (often intermittent) prairie streams		Miner: Wolf Creek Hanson: Wolf Creek Hutchinson: Wolf Creek Yankton: James River Missouri River	Cedar: Missouri River Saline: W.F. Big Blue River	Marshall: N. Elm Creek Doniphan: Missouri River	Clinton: Castile Creek Little Platte River Shoal Creek Caldwell: Log Creek Crush Creek Crabapple Creek	
Northern redbelly dace [illegible]*rosomus eos*	NE-T	This species occurs in a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			
[illegible]nescale dace *Phoxinus neogaeus*	NE-T	This species occurs a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Western sand darter *Ammocrypta clarum*	IL-E	This species occurs in medium and large rivers; most commonly in slight to moderate currents over sandy bottoms. It is known to inhabit areas of gravel or silt. The species has also been recorded from quiet margins of drainage canals and shallow backwaters, usually where there is enough current to keep the bottom largely free of silt. Buries in sand.	Medium to large rivers, sandy substrate						Fayette: Kaskaskia River
Reptiles									
Western fox snake *Elaphe vulpine vulpina*	MO-E	This species inhabits cultivated fields, along wooded stream valleys and in natural prairies that adjoin marshes. It is active between late April and October. Small mammal burrows and brush piles are used as den sites during winter hibernation. Mating begins in April and females lay eggs under logs or leaf litter in May or June. Young hatch in August or September.	Agriculture, riparian woodlands, prairies, wetlands					St. Charles 1.7[1]	
Smooth earth snake *Virginia valeriae*	KS-T	This species inhabits rocky hillsides in moist woodlands and woodland edges in river and stream valleys where they may be found on the slopes under leaf litter, rocks, or logs. During winter, it utilizes deep crevices on rocky hillsides. Mating begins in the spring after emergence from hibernation. Mating may also occur in the fall. Young hatch in August or September.	Riparian woodland, upland forest				Doniphan 2.4		
Eastern massasauga *Sistrurus catenatus catenatus*	FC; MO-E; IL-E	This subspecies prefers marshy and swamp areas dominated by cordgrass, sedges, and bulrushes, as well as lowland areas along river and lakes. The snakes hibernate singly in mammal burrows, crayfish burrows, and in crevices or rock piles close to water. Courtship and mating occurs in spring and young are born in late July through early September.	Wetland, riparian					Chariton 0.7[1]	
Western massasauga *Sistrurus catenatus tergeminus*	NE-T; MO-E	This subspecies is found in open sagebrush prairie, rocky prairie hillsides, and prairie marsh habitats, usually near a water source. The snakes hibernate singly in rodent burrows. Courtship and breeding occur both in the Spring and Fall. Young are born during July or August.	Sagebrush, shrubland, wetland			Gage 0.0[1] Jefferson 3.4[1]		Chariton 12.9[1]	
False map turtle *Graptemys pseudogeo-graphica*	SD-T	This species inhabits slow to swift current rivers and streams, river sloughs, oxbow lakes, ponds, impoundments, and backwaters. They are devoted baskers, often resting just below the surface on submerged branches from fallen trees and projecting logs.	Rivers, streams, sloughs, ponds, backwaters, impoundments		Yankton 0.1				
Kirtland's snake *Clonophis kirtlandi*	IL-T	This species inhabits prairie wetlands, wet meadows, and grassy edges of creeks, ditches, and ponds, usually in association with crayfish burrows. It also has been found in damp habitat remnants in vacant lots of urban settings. Secretive and nocturnal, it shelters beneath logs and surface debris, or in crayfish burrows, by day.	Wetlands						Fayette 0.0[1]

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Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed									
				ND		SD		NE		KS		MO		IL	
Amphibians															
Illinois chorus frog *Pseudacris strecheri illino*	IL-T	Sand prairies and remnants such as sandy agricultural fields and waste areas. Burrows in sand and emerges after heavy, early spring rains to breed in nearby flooded fields, ditches, and other vernal ponds	Sand prairies											Madison	0.6
Invertebrates															
Dakota skipper *Hesperia dacotae*	FC; SD-SC, ND-SC	This species is considered an obligate of undisturbed native prairie. The butterfly inhabits wet lowland prairie dominated by bluestem grasses and dry upland prairie dominated by mixed bluestem and needle stem grasses. Both habitat types contain an abundance of flowering plants and have alkaline soils. Adults emerge in mid-June to early July, and mate during a flight period that lasts for about three weeks.	Lowland and upland prairie	Barnes Ransom Sargent	0.0 0.0 8.4	Clark Day Marshall Yankton	4.5 6.7 5.1 2.1								
American burying beetle *Nicrophorous americanus*	FE; KS-E	This species inhabits upland grasslands or near the edge of grassland/forest. Sandy/clay loam soils and food (carrion) availability are also important. The species appears to prefer loose soil in which to bury carrion. Reproduction occurs from late April through mid August. Reproductive activity includes the burial of a carcass, building of a chamber, and laying eggs.	Grasslands, upland forests							Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3				
[illegible]leshell mussel *[illegible]eptodea leptodon*	FE; SD-SC; NE-E	Occurs in riffles with moderate to high gradients in creeks to large rivers. Typically associated with riffles, relatively strong currents, and substrate of mud, sand, or assemblages of gravel, cobble, and boulder. Restricted to rivers with relatively good water quality in stretches with stable channels. Little is known concerning the reproduction of this species.	Creeks and rivers with good water quality and stable channels			Yankton	0.2	Cedar	0.2						
Higgins' eye pearlymussel *Lampsilis higginsi*	FE; SD-SC	Found in substrates of mud with a mixture of gravel and stones. Prefers rapidly flowing water. The exact breeding season is unknown.	Fast flowing creeks and rivers, mud substrate			Yankton	0.2	Cedar	0.2						
Winged mapleleaf *Quadrula gragosa*	FE; SD-SC	The species is found in riffles with clean gravel, sand, or rubble bottoms.	Rivers, streams			Yankton	0.1								
Plants															
Decurrent false aster *Boltonia decurrens*	FT; MO-E; IL-T	The species grows in open muddy bottomlands and is dependent upon disturbance from cyclical flooding to maintain the habitat suitable for its survival. Historically, it was found on the shores of lakes and the banks of streams. Currently, it is most common in disturbed lowland areas where human-caused disturbance provides adequate habitat. Flowers: July-October.	Riparian floodplains and muddy bottomlands subject to flooding									St. Charles	0.0[1]	Madison	2.0[1]
Small white lady's-slipper *Cypripedium candidum*	NE-T	This species is found in wetland prairie habitats: mesic blacksoil prairie, wet blacksoil prairie, glacial till hill prairie, sedge meadow, calcareous fen, glade. Found on calcareous soils. Flowering occurs May-June.	Wetland prairie					Butler Cedar Colfax Stanton Wayne	0.0[1] 4.3[1] 0.8[1] 1.5[1] 1.3[1]						

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Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
Eastern prairie fringed orchid *Platanthera leucophaea*	FT; IL-E	Mesic-wet calcareous tallgrass sand or silt loam prairie. May also be found in open graminoid portions of lake margins, sedge, meadows, and marshes, wet prairie or open swamps, or bogs and shores. Flowering begins late June to early July. Flowers do not appear annually.	Mesic-wet tallgrass prairie											Bond Fayette Madison Marion	0.0[1] 0.0[1] 0.0[1] 0.0[1]
Western prairie fringed orchid *Platanthera praeclara*	FT; ND-SC; SD-SC; NE-T	Occurs in mesic upland tallgrass prairie in the southern part of its range, often in swales, and wet-mesic tallgrass prairie and sedge meadows in the northern part of its range. Also known from prairies and swales in sand dune complexes that are fed by shallow underground water. Flowers June-July.	Tallgrass prairie, dune complexes	Ransom	0.0	Clark Day Yankton	4.5[1] 6.7[1] 2.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0[1] 4.3[1] 0.8[1] 0.0[1] 3.4[1] 0.0[1] 0.3[1] 0.0[1] 1.5[1] 1.3[1]						
Prairie bush-clover *Lespedeza leptostachya*	FT; IL-E	In Illinois, this species is generally found on dry gravel prairies and dry-mesic prairies It is often found on north-facing prairie slopes. On these slopes, it typically occurs either in thin soil at the margins of rocks or in gravelly loamy soil. Flowers in July, August.	Prairie											Bond Fayette Madison Marion	0.8 0.0 0.6 0.0
Running buffalo ·ver *.iolium stoloniferum*	FE; MO-E	This species is commonly found in areas of rich soils in the ecotone between open forest and prairie; and moist, partially shaded woodlands- sometimes along stream or river terraces. Also found in areas disturbed by grazing or mowing. This species historically grew along bison trails. Flowers: April-June.	Riparian areas, woodland/prairie ecotones									Lincoln	11.7[1]		
Royal Catchfly *Silene regia*	IL-E	This species is found in habitats that include mesic black soil prairies, openings in upland forests, savannas, scrubby barrens, and open areas along roadsides and railroads	Prairies, upland forests, savannas, open roadsides											Madison	1.6
Prairie Spiderwort *Tradescantia bracteata*	IL-T	Common spiderwort likes sandy soils and seems to be most abundant where grazing is light to moderate. Dry typical prairie and dry sand prairies	Grazed prairies, sandy soils											Madison	0.6
Spring Ladies' Tresses *Spiranthes vernalis*	IL-E	This species is typically found in upland dry to mesic forests, dry to mesic prairies, and successional cultured fields.	Upland/mesic forests											Madison	2.0[1]

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change

Table 3
Nebraska Special Status Species Listed by County and Habitat Type

County	Grassland	Forests And Woodlands	Riparian	Emergent Wetland	Open Water
Butler	Small White Lady's Slipper, Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Small White Lady's Slipper, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover
Cedar	Small White Lady's Slipper, Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Small White Lady's Slipper, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover, Blacknose Shiner, Finescale Dace, Lake Sturgeon, Northern Redbelly Dace, Pallid Sturgeon, Sturgeon Chub, Topeka Shiner, Higgins Eye Pearly Mussel, Scaleshell Mussel
Colfax	Small White Lady's Slipper, Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Whooping Crane, Small White Lady's Slipper, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover, Whooping Crane, River Otter, Pallid Sturgeon, Sturgeon Chub
Gage	Western Massasauga, Western Prairie Fringed Orchid	Western Massasauga		Interior Least Tern, Piping Plover, Western Massasauga, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover
Jefferson	Western Massasauga, Western Prairie Fringed Orchid	Western Massasauga		Interior Least Tern, Piping Plover, Western Massasauga, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover
Platte	Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover
Saline	Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Whooping Crane, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Whooping Crane, Piping Plover, Topeka Shiner
Seward	Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Whooping Crane, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Whooping Crane, Piping Plover
Stanton	Small White Lady's Slipper, Western Prairie Fringed Orchid			Interior Least Tern, Piping Plover, Whooping Crane, Small White Lady's Slipper, Western Prairie Fringed Orchid	Bald Eagle, Interior Least Tern, Piping Plover, Whooping Crane, River Otter, Blacknose Shiner
Wayne	Small White Lady's Slipper, Western Prairie Fringed Orchid			Small White Lady's Slipper, Western Prairie Fringed Orchid	Bald Eagle

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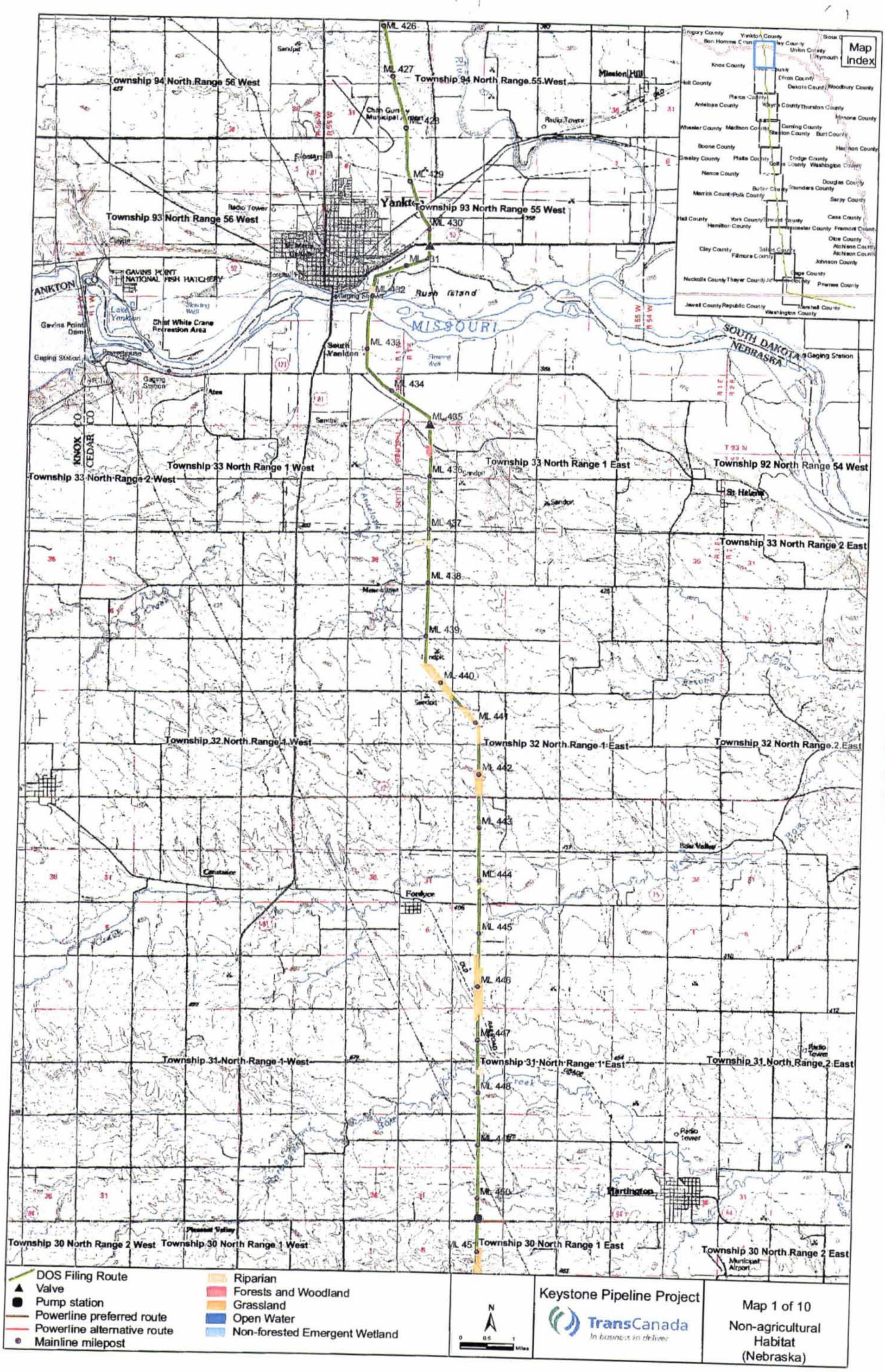

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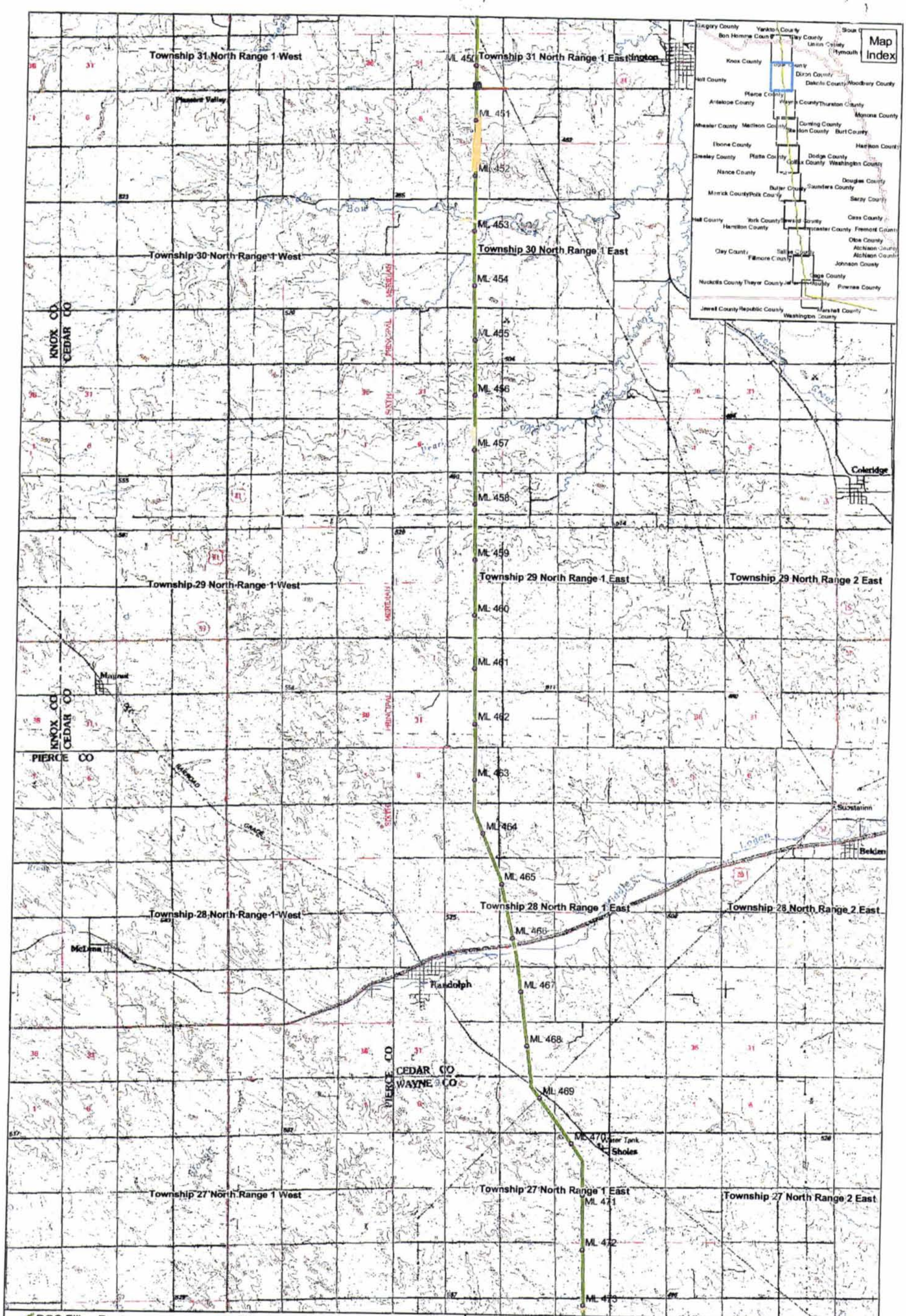

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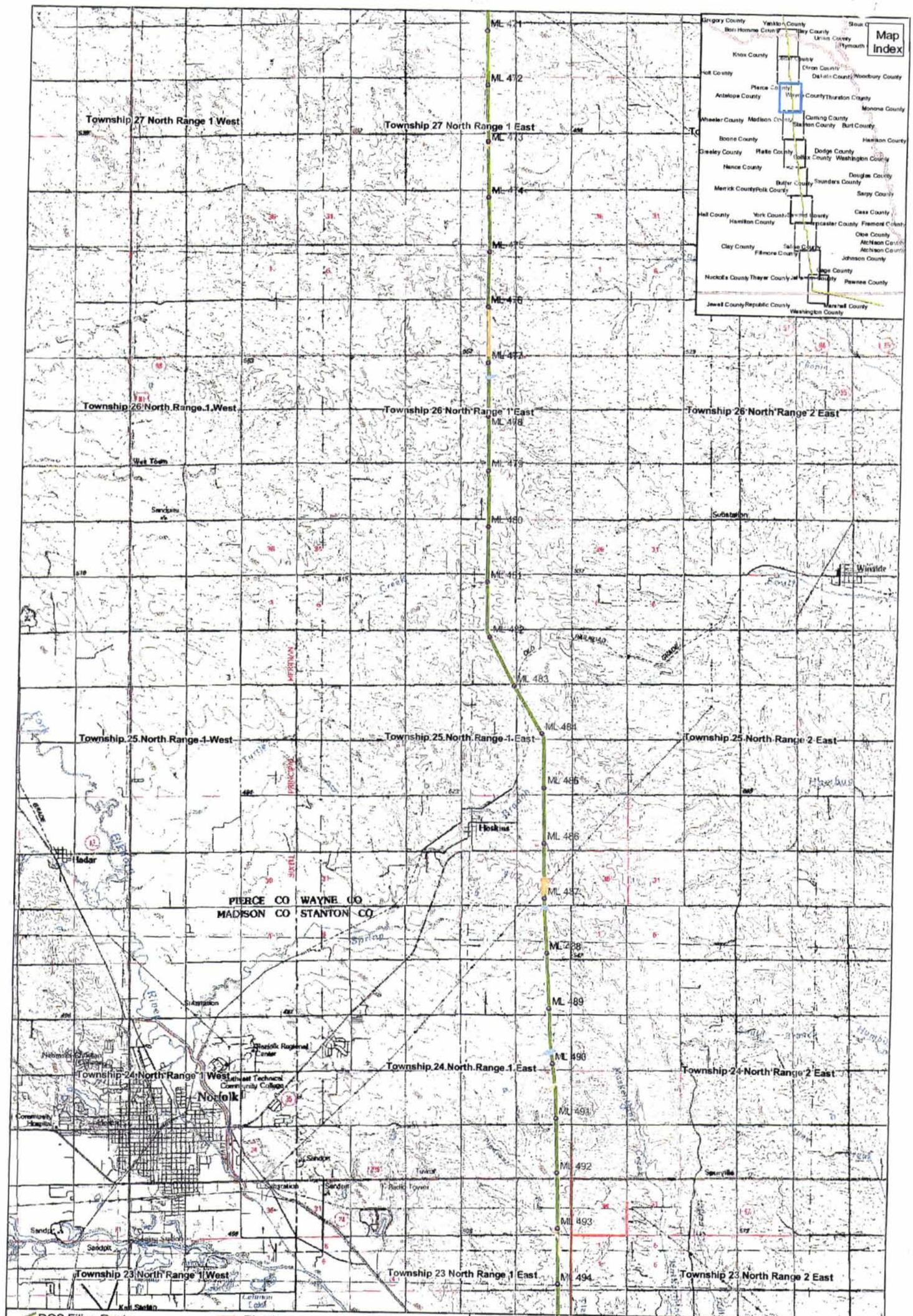

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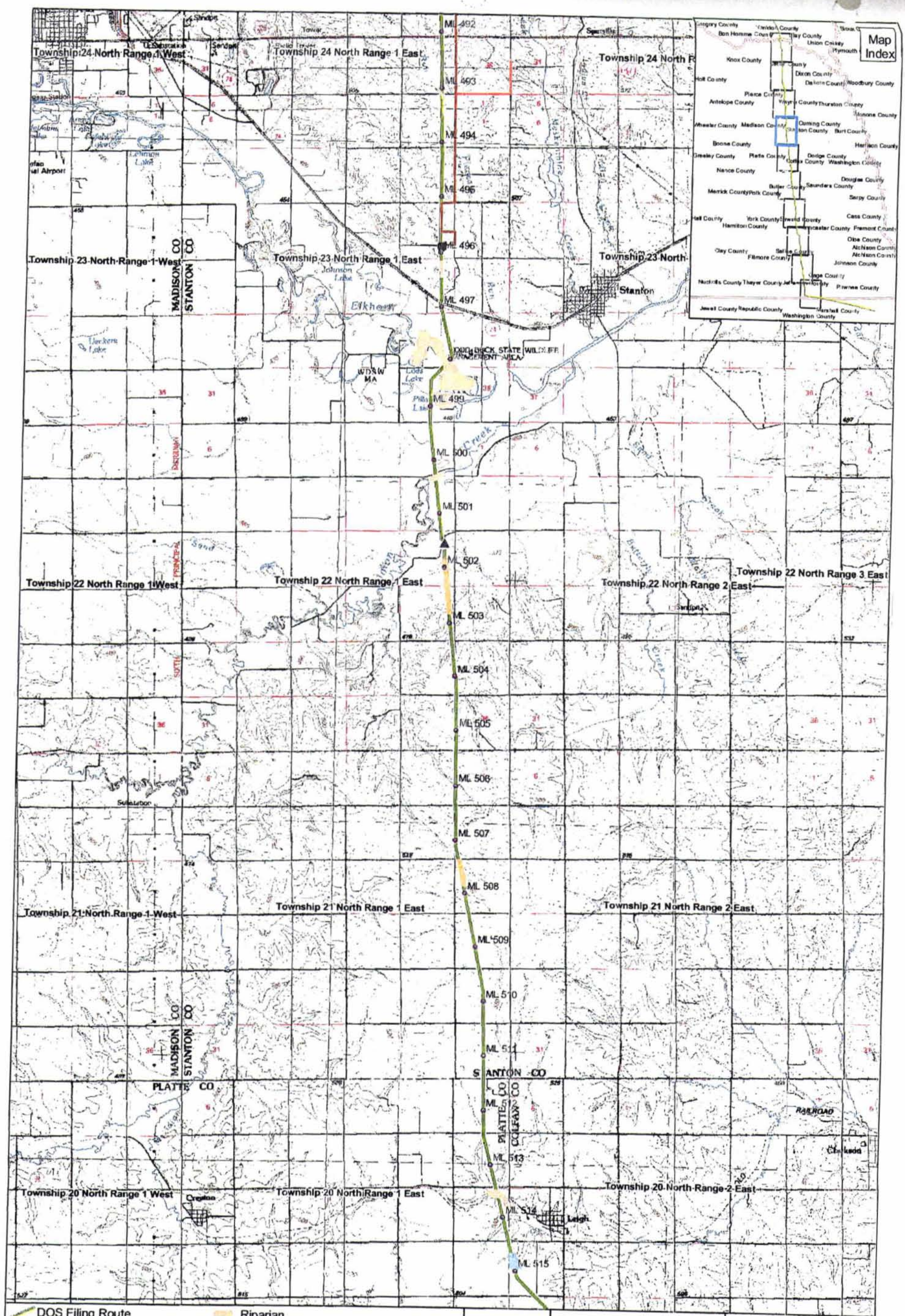

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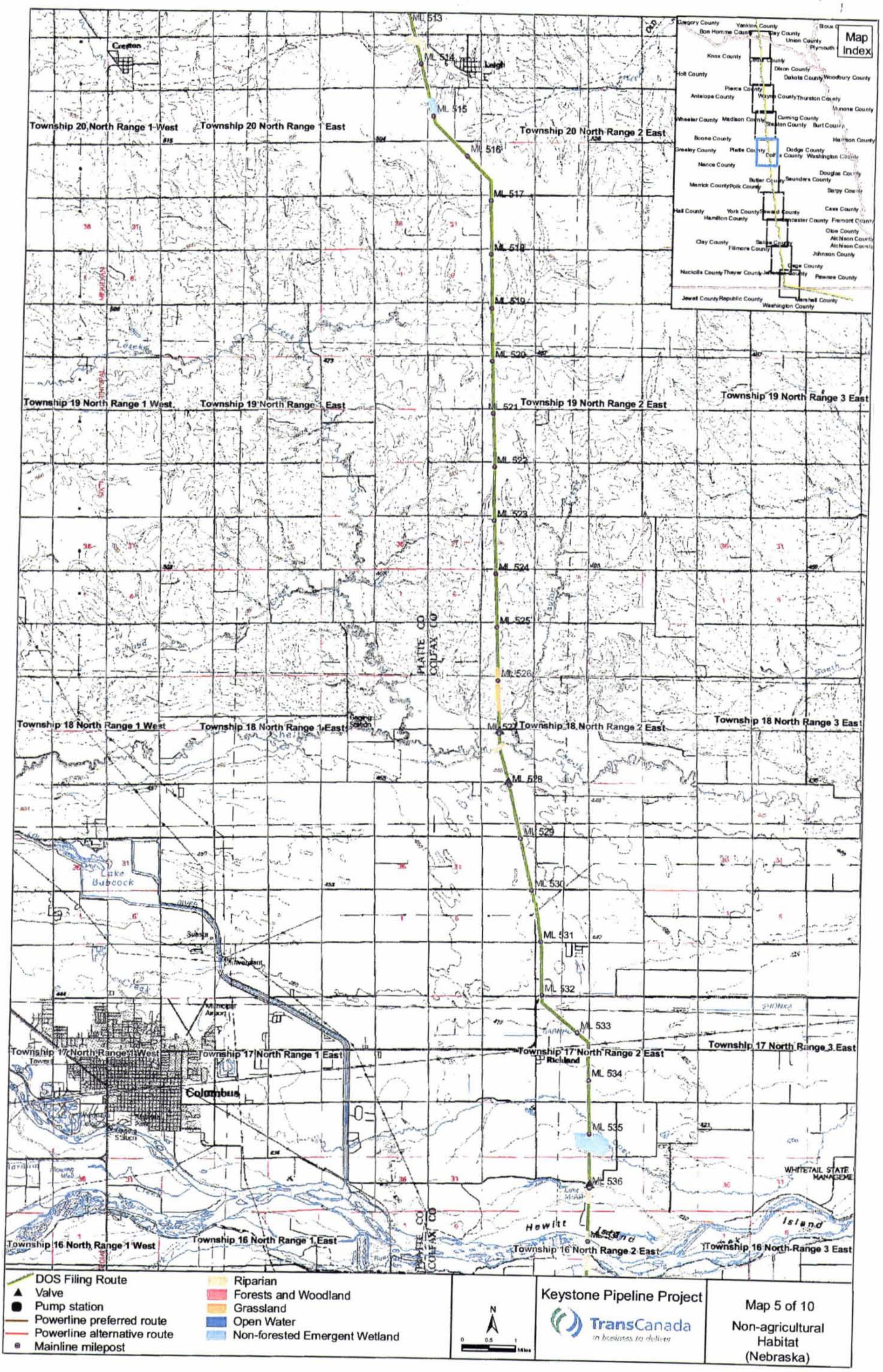

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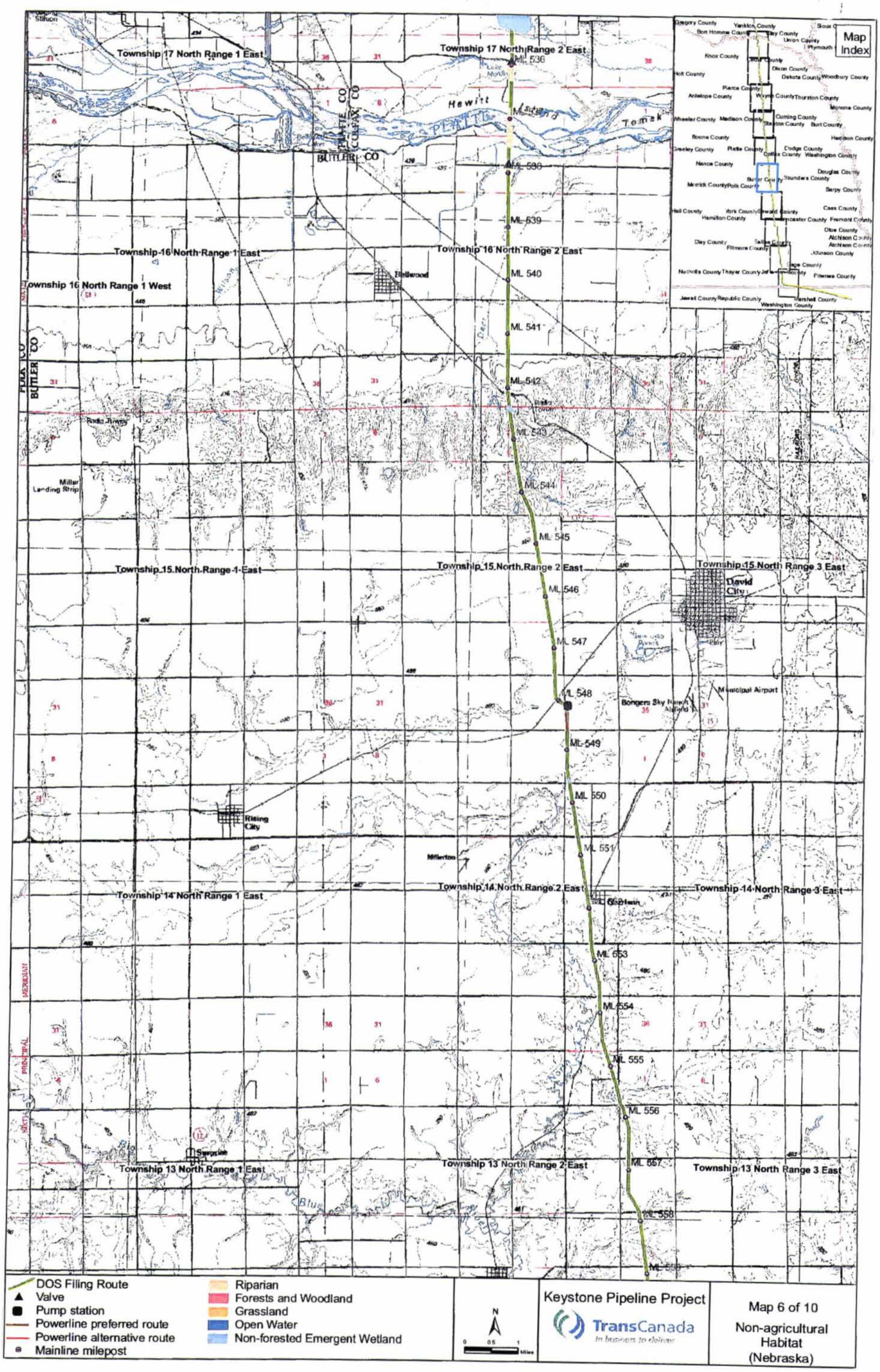

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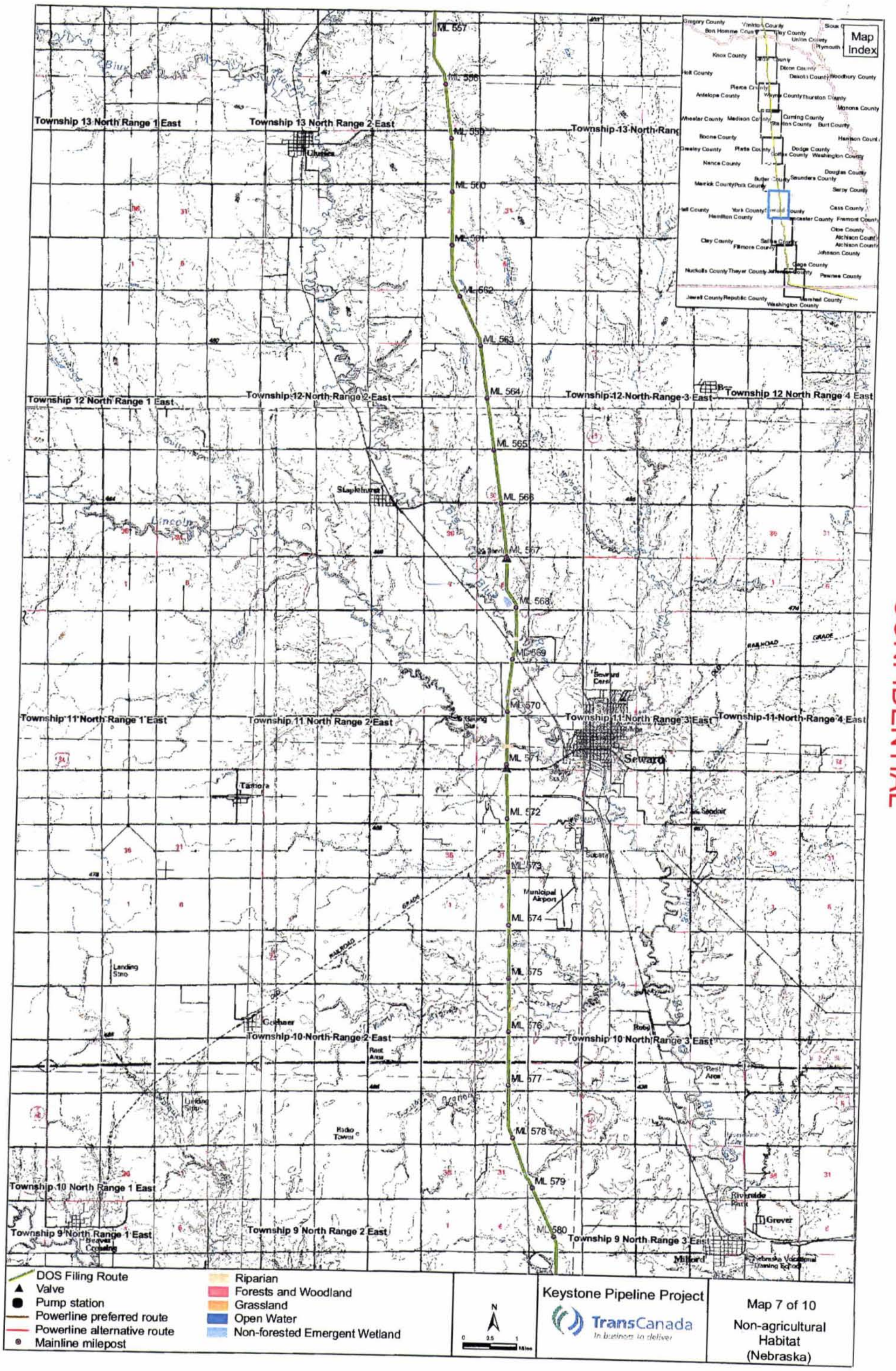

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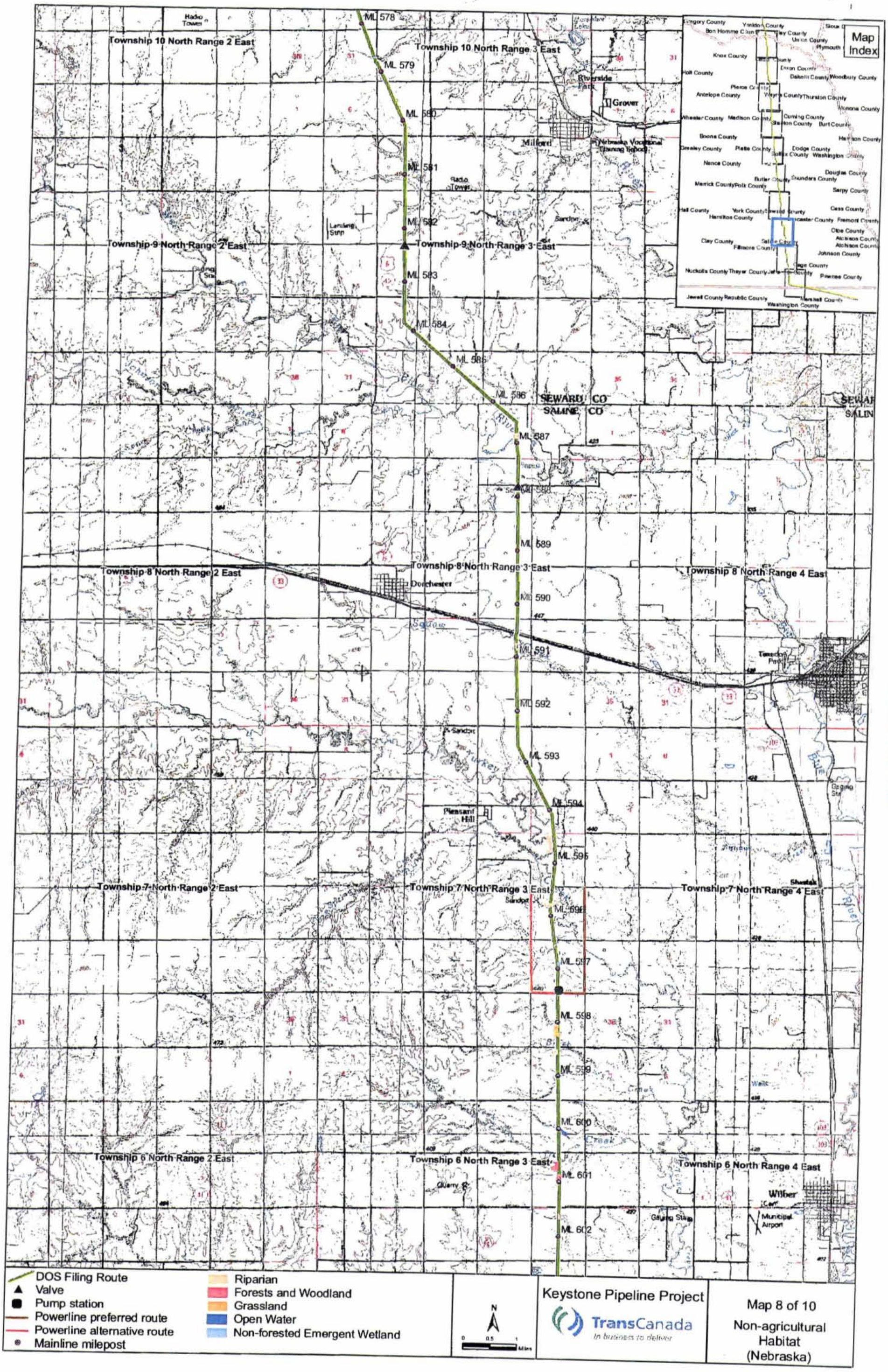

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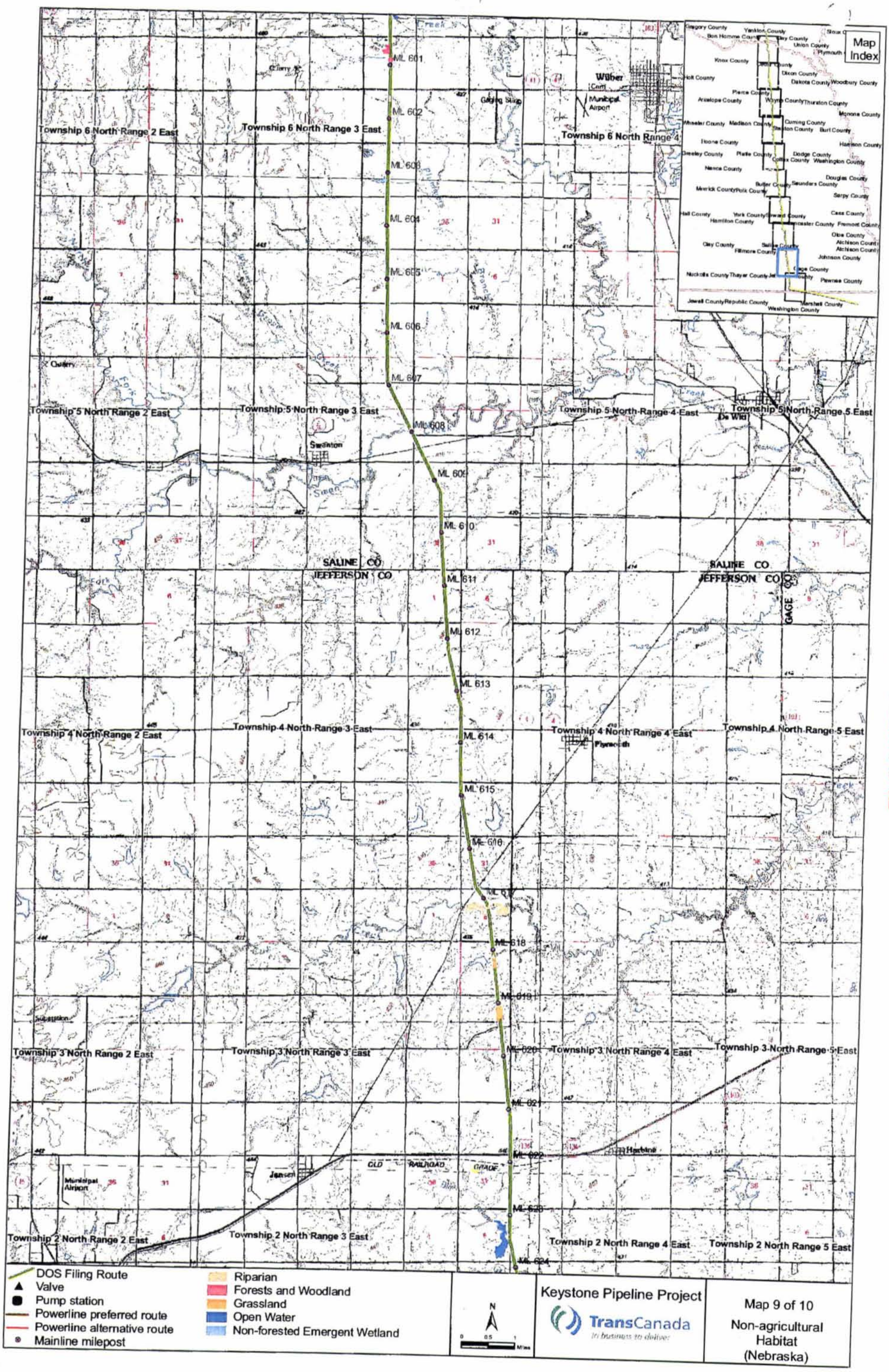

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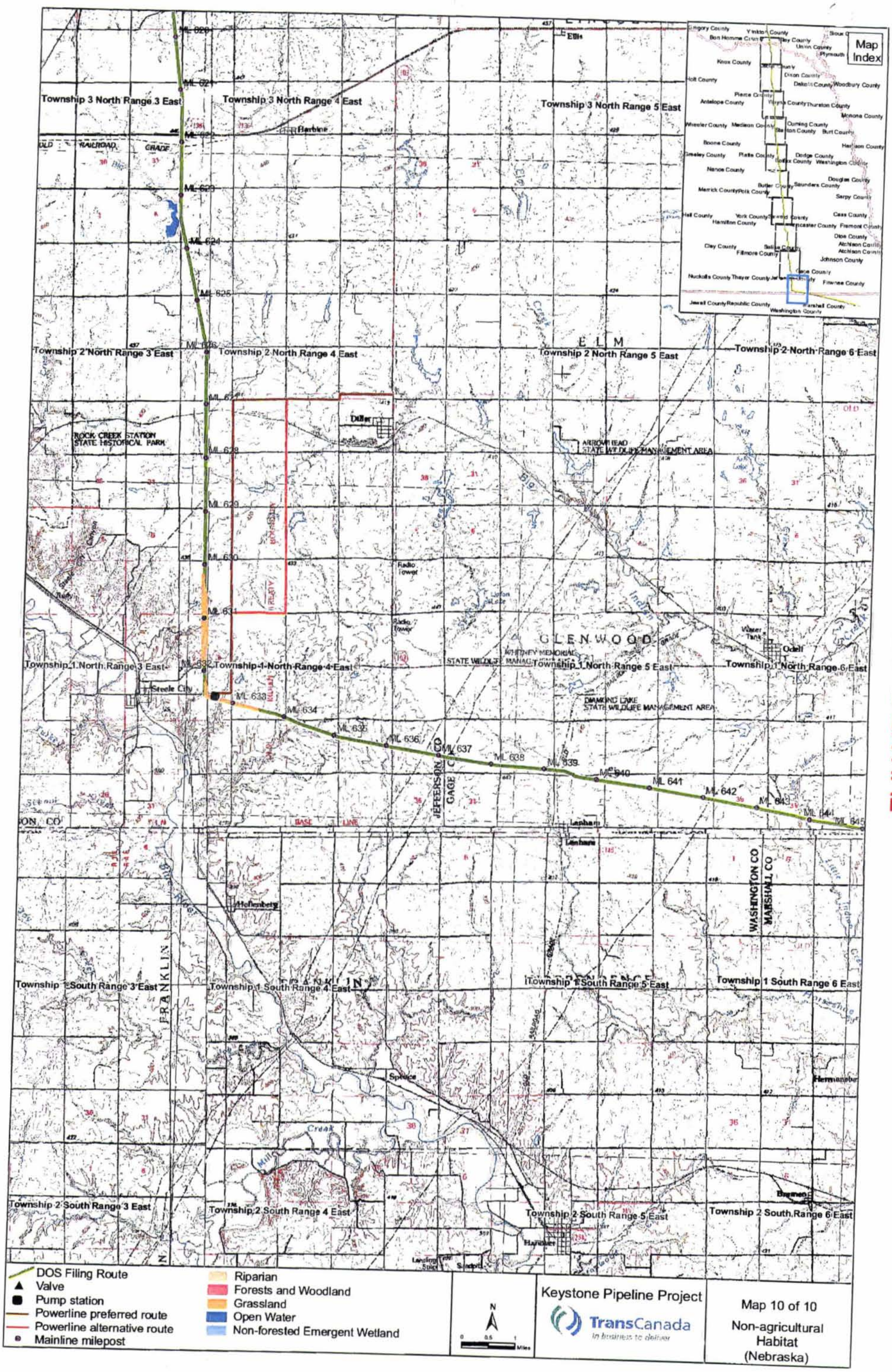

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Table 1
Kansas Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Eastern spotted skunk *Spilogale putorius*	KS-T	This species prefer forest edge and upland grassland prairie, especially if rock outcrops and shrubs are present. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, brushy heaps, hollow logs, and abandoned buildings or outbuildings. Young are born in May or June.	upland forests, grasslands, shrublands, agriculture edge	Brown Doniphan Marshall Nemaha	Brown: 4.9 Doniphan: 1.8 Marshall: 5.6 Nemaha: 4.7	Brown: 3.0 Doniphan: 2.4 Marshall: 1.3 Nemaha: 0.6				Brown: 699.2-722.9 Doniphan: 724.3-742.7 Marshall: 645.9-672.7 Nemaha: 675.6-695.6
Bald eagle *Haliaeetus leucocephalus*	FT; KS-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites typically occur in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	riparian forests/ open water	Brown Doniphan Marshall Nemaha					Brown: 0 Doniphan: 0.2 (Missouri River) Marshall: 0.1 (Big Blue River) Nemaha: 0	Brown: N/A Doniphan: 743.4 (Missouri River) Marshall: 653.7 (Big Blue River) Nemaha: N/A
Eskimo curlew *Numenius borealis*	FE; KS-E	This species is a rare spring migrant that feeds and rests in burned-over prairies, agricultural areas, wetlands, and marshes.	praires, wetlands, agriculture	Brown Doniphan Marshall Nemaha	Brown: 4.9 Doniphan: 1.8 Marshall: 5.6 Nemaha: 4.7			*data pending* *data pending* *data pending* *data pending*		Brown: 699.5-720.2; data pending Doniphan: 724.3-737.2; data pending Marshall: 647.4-672.7; data pending Nemaha: 675.6-695.6; data pending
Interior least tern *Sterna antillarum athalassos*	FE; KS-E	Nesting habitat consists of sparsely vegetated sandy, gravelly, or silty, beaches and sandbars within wide, unobstructed river channels or salt flats along lake shorelines and irrigation reservoirs. Nest locations are generally away from the water's edge since nesting typically begins while river flows are high and relatively small amounts of sandy habitat is exposed. Breeding season: May 1 through August 15.	shorelines and sandbars of rivers, lakes, reservoirs	Brown Doniphan Marshall Nemaha				*data pending* *data pending* *data pending* *data pending*	Brown: 0 Doniphan: 0.2 (Missouri River) Marshall: 0.1 (Big Blue River) Nemaha: 0	Brown: data pending Doniphan: 743.4 (Missouri River) Marshall: 653.7(Big Blue River) Nemaha: data pending
Peregrine falcon *Falco peregrinus*	KS-E	This species is found over a wide variety of habitats, but are generally located near open water or marshes that support high concentration of shorebirds or waterfowl. Nest sites occur on tall steep-walled cliffs, bridges, or buildings. Preferred foraging habitat includes lakes, rivers, and wet meadows. Breeding season: April 15 to July 15.	wetlands, lakes, open water	Brown Doniphan Marshall Nemaha			Brown: 0 Doniphan: 0.2 Marshall: 0.1 Nemaha: 0	*data pending* *data pending* *data pending* *data pending*		Brown: data pending Doniphan: 743.3-743.6 Marshall: 653.4-653.5 Nemaha: data pending

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project

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Table 1
Kansas Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Piping plover *Charadrius melodus*	FT; KS-T	This species inhabits open sandy areas and saline flats with little vegetation along rivers, lakes, ponds, and marshlands. It nests on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, on gravel pits along rivers, and on salt-encrusted bare areas on interior alkali ponds and lakes. Sparse clumps of grass or herbaceous vegetation are important habitat components. Breeding season: May 1 through August 15.	shorelines, sandbars, wetlands, rivers, lakes, ponds	Brown Doniphan Marshall Nemaha				*data pending* *data pending* *data pending* *data pending*	Brown: 0 Doniphan: 0.2 (Missouri River) Marshall: 0.1 (Big Blue River) Nemaha: 0	Brown: data pending Doniphan: 743.4 (Missouri River) Marshall: 653.7(Big Blue River) Nemaha: data pending
Snowy plover *Charadrius alexandrinus*	KS-T	This species inhabits open alkaline flats, mudflats, sandy shorelines, sandbars with little vegetation along rivers, lakes, ponds, and marshlands. Nesting often occurs on white saline flats. Breeding season: May 1 through August 15.	shorelines, sandbars, wetlands, rivers, lakes, ponds	Brown Doniphan Marshall Nemaha				*data pending* *data pending* *data pending* *data pending*	Brown: 0 Doniphan: 0.2 (Missouri River) Marshall: 0.1 (Big Blue River) Nemaha: 0	Brown: data pending Doniphan: 743.4 (Missouri River) Marshall: 653.7(Big Blue River) Nemaha: data pending
Whooping crane *Grus americana*	FE; KS-E	During migration, this species feeds and roosts in a variety of habitats including croplands, large and small freshwater marshes, the margins of lakes and reservoirs, and submerged sandbars in rivers. Spring and Fall migration through the project regions generally occurs from February through April and from October through November, respectively.	wetlands, riparian, agriculture	Marshall				*data pending*	Marshall: 0.1 (Big Blue River)	Marshall: 646.1-673.9 (Big Blue River)
Chestnut lamprey *Ichthyomyzon castaneus*	KS-T	This species is found in moderate-sized rivers and large creeks. Spawning occurs in smaller tributary streams in swift shallow riffles where the gravel is clean. Eggs are laid in a nest in the river bottom. Spawning period: spring or summer.	rivers and creeks	Doniphan					Doniphan: 0.2 (Missouri River)	Doniphan: 743.4 (Missouri River)
Flathead chub *Platygobio gracilis*	KS-T	This species occurs from the Rio Grande to the Arctic Circle in small creeks and the largest rivers that have turbid fluctuating water levels and unstable sand bottoms. This species relies on flood flows to spawn successfully. Spawning occurs after water levels have subsided after peak flows, when water temperatures are warmer and substrate is more stable. Relies on flood flows to spawn successfully. Spawns after rivers have subsided following peak flow.	creeks and rivers with turbid, fluctuating flow and sandy substrates	Nemaha Doniphan					Nemaha: South Fork Nemaha River Doniphan: 0.2 (Missouri River)	Nemaha: 684.7 (South Fork Nemaha River) Doniphan: 743.3 (Missouri River)

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project

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Table 1
Kansas Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Pallid sturgeon *Scaphirhynchus albus*	FE; KS-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	large, tubid rivers, sand substrate	Doniphan					Donihpan: 0.2 (Missouri River)	Doniphan: 743.4 (Missouri River)
Sicklefin chub *Macrhybopsis meeki*	KS-E	This species requires continuously and heavily turbid waters of large rivers where it frequents areas of strong current flowing over sand or gravel substrate. Spawning period: spring (likely from late March and May).	large turbid rivers, sand/gravel substrate	Doniphan					Doniphan: 0.1 (Rock Creek), 0.2 (Missouri River)	Doniphan: 735.6 (Rock Creek), 743.3 (Missouri River)
Sturgeon chub *Macrhybopsis gelida*	KS-T	This species prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at heads of islands or exposed sandbars. Spawning period: late spring to midsummer.	large sandy rivers, sand/gravel substrate	Doniphan					Doniphan: 0.2 (Missouri River)	Doniphan: 743.4 (Missouri River)
Topeka shiner *Notropis topeka*	FE; KS-T / CH	This species inhabits pool and run areas in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however pools are maintained by spring or groundwater percolation. The substrate of these occupied streams consist mainly of clean gravel, however bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Spawning period: late spring and summer.	small, cool, [often intermittent] prairie streams	Marshall Dohiphan					Marshall: 0.3 (North Elm Creek) Doniphan: 0.2 (Missouri River)	Marshall: 654.0, 653.4, 661.7 (North Elm Creek) Doniphan: 743.4 (Missouri River)
Western silvery minnow *Hybognathus argyritis*	KS-T	This species prefers protected areas in large, turbid rivers and prairie streams. In streams they are typically found in water less than one foot deep and shallow shore water heavily vegetated with emergent grasses and reeds. In protected areas of larger rivers, they move in large schools of 50 to 100 individuals along the bottom in deep, quiet water. While little is known about spawning, this species probably scatters eggs on silt substrate in quiet water.	protected areas of rivers and streams	Nemaha Brown Doniphan					Nemaha: 0.1 (South Fork Nemaha River) Brown: 0.1 (Middle Fork Wolf River) Doniphan: 0.2 (Missouri River)	Nemaha: 684.7 (South Fork Nemaha River) Brown: 715.4 (Middle Fork Wolf River) Doniphan: 743.3 (Missouri River)
Smooth earth snake *Virginia valeriae*	KS-T	This species inhabits rocky hillsides in moist woodlands and woodland edges in river and stream valleys where they may be found on the slopes under leaf litter, rocks, or logs. During winter, it utilizes deep crevices on rocky hillsides. Mating begins in the spring after emergence from hibernation. Mating may also occur in the fall. Young hatch in August or September.	riparian woodland, upland forest	Doniphan		Doniphan: 2.4				Doniphan: 732.8-742.7

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Table 1
Kansas Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
American burying beetle *Nicrophorous americanus*	FE; KS-E	This species inhabits upland grasslands or near the edge of grassland/forest. Sandy/clay loam soils and food (carrion) availability are also important. The species appears to prefer loose soil in which to bury carrion. Reproduction occurs from late April through mid August. Reproductive activity includes the burial of a carcass, building of a chamber, and laying eggs.	grasslands, upland forest	Brown Doniphan Marshall Nemaha	Brown: 4.9 Doniphan: 1.8 Marshall: 5.6 Nemaha: 4.7	Brown: 3.0 Doniphan: 2.4 Marshall: 1.3 Nemaha: 0.6				Brown: 699.2-722.9 Doniphan: 724.3-742.7 Marshall: 645.9-672.7 Nemaha: 675.6--695.6

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed by project

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed							
				ND		SD	NE	KS		MO		IL	
Mammals													
Gray bat *Myotis grisescens*	FE; MO-E; IL-E	This species forages primarily within forested areas along streams and lakes. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings. Maternity roosts typically are in caves with stream flow and are separate from summer bachelor roosts.	Riparian woodlands, caves									Madison	6.7
Indiana bat *Myotis sodalis*	FE; MO-E; IL-E	This species forages primarily in riparian forests and flood-plains, as well as in upland forests, low field, and pastures. Maternity roosts are located beneath loose bark of living and dead trees (especially oak and hickory *spp.*). Young are generally born in June. Winter hibernacula occur in caves and mines with 85% of this species population hibernating in Shannon, Washington, and Iron counties, MO.	Riparian woodlands, upland forests, pastures, caves							Audrain Buchanan Caldwell Carroll Chariton Clinton Lincoln Montgomery Randolph St. Charles	3.7 4.5 3.1 3.4 4.1 1.4 10.1 4.6 3.6 0.6	Bond Fayette Madison Marion	1.9 3.4 6.7 0.0
Gray wolf *Canis lupus*	FT; ND-SC	No particular habitat preference. Habitats may include: alpine, desert, conifer forest, hardwood forest, mixed forest, grasslands, savannas, shrubland/ chaparral, tundra, and woodlands.	Any	Cavalier Grnd Fks Nelson Pembina Sargent Walsh	0.0 0.0 0.2 2.9 8.4 1.7								
Fisher *Martes pennanti*	FC; ND-SC	This species inhabits upland and lowland forests, including coniferous, mixed, and deciduous forests. Fishers generally avoid areas with little forest cover or significant human disturbance and conversely prefer large areas of contiguous interior forest.	Forests and woodlands	Pembina	2.9								
Plains spotted skunk *Spilogale putorius interrupta*	SD-SC; MO-E	This species inhabits upland grassland prairie, brushy areas, cultivated land, and forests. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, hollow logs, trees, or on brushy heaps. Young are born from April to July.	Grasslands, shrublands, upland forests, agriculture edge							Chariton	17.0		
Eastern spotted skunk *Spilogale putorius*	KS-T; MO-E; SD-SC	This species prefers forest edge, prairie, brushy areas, and cultivated land, especially if rock outcrops and shrubs are present. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, brushy heaps, hollow logs, and abandoned buildings or outbuildings. Young are born in May or June.	Grasslands, shrublands, upland forests, agriculture edge					Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3	St. Charles	1.1		

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Table 2
Keystone Special Status Species
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Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
River otter *Lontra Canadensis*	IL-E	Key habitats are rivers, streams, lakes, ponds, marshes, estuaries, and beaver flowages, especially near waterbodies with wooded shorelines or nearby wetlands. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young	rivers, streams, lakes, ponds, marshes, wetlands					Colfax Stanton	0.5 0.2					Bond Fayette	0.1 3.1
Birds															
Least bittern *Ixobrychus exilis*	MO-SC; IL-T	Nest in freshwater wetlands with dense, tall growths of emergent vegetation (particularly *Typha* spp, *Carex* spp., *Scirpus* spp., or *Phragmites australis*) interspersed with some woody vegetation and open, fresh water. In the north-central U.S., breeding and nesting may occur from May-July. Incubation lasts for 17-20 days; young usually leave nest by the 13th-15th day.	Wetlands, lakes, open water											Fayette Madison	0.0[1] 0.0[1]
Bald eagle *Haliaeetus leucocephalus*	FT; ND-SC; SD-T; NE-T; KS-T; MO-E; IL-T; OK-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites are located in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	Riparian forests, open water	Barnes Cavalier Grnd Fks Nelson Pembina Ransom Sargent Steele Walsh	0.0 0.0 0.0 0.0 0.1 0.2 0.0 0.0 0.3	Beadle Clark Day Hanson Hutchinson Kingsbury Marshall McCook Miner Yankton	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0 0.2 0.5 0.0 0.0 0.0 0.2 0.1 0.2 0.0	Brown Doniphan Marshall Nemaha	0.0 0.2 0.1 0.0	Buchanan Carroll Chariton Clinton Lincoln Montgomery St. Charles	0.2 0.0 0.7 0.0 0.2 0.0 0.3	Bond Fayette Madison	0.1 3.1 1.1
Peregrine falcon *Falco peregrinus*	IL-T; NE-SC; KS-E	This species is found over a wide variety of habitats, but are generally located near open water or marshes that support high concentration of shorebirds or waterfowl. Nest sites occur on tall steep-walled cliffs, bridges, or buildings. Preferred foraging habitat includes lakes, rivers, and wet meadows. Breeding season: April 15 to July 15.	Wetlands, lakes, open water							Brown Doniphan Marshall Nemaha	0.0[1] 0.0[1] 0.0[1] 0.0[1]			Madison	2.1[1]
Greater Prairie-chicken *Tympanuchus cupido*	MO-E; ND-SC	Prime habitat for this species includes mid-grass and tall-grass prairies bordered by open oak woodlands, oak forests, and cropland. In western Kansas, they nest in sand-sage prairie and forage in corn and wheat fields. In Missouri, nesting habitat is limited to cropland and nearby prairies mainly on the Osage Plains. Breeding season: March through July.	Shortgrass, tallgrass, upland forest, agriculture									Audrain Carroll	5.9 13		
King rail *Rallus elegans*	MO-E; NE-SC	This species inhabits fresh and brackish wetlands. King rails prefer wetlands with abundant grasses, sedges, rushes and cattails. Nest sites occur in herbaceous cover over shallow water in river floodplains. The adult King Rail molts completely after nesting and is flightless for nearly a month. Breeding season: April-June	Wetlands									Carroll Lincoln St. Charles	0.0[1] 0.0[1] 0.0[1]		

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Table 2
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Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
Whooping crane *Grus americana*	FE; ND-SC; SD-E; NE-E; OK-E; KS-E	During migration, this species feeds and roosts in a variety of habitats including croplands, large and small freshwater marshes, the margins of lakes and reservoirs, and submerged sandbars in rivers. Spring and Fall migration through the project regions generally occurs from February through April and from October through November, respectively.	Wetlands, riparian, agriculture	Barnes Cavalier Nelson	0.0[1] 0.0[1] 0.2[1]	Beadle Clark Kingsbury Yankton	0.0[1] 0.0[1] 0.0[1] 0.1[1]	Colfax Saline Seward Stanton	0.5[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]				
Snowy plover *Charadrius alexandrinus*	KS-T	This species inhabits open alkaline flats, mudflats, sandy shorelines, sandbars with little vegetation along rivers, lakes, ponds, and marshlands. Nesting often occurs on white saline flats. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds							Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.0[1] 0.0[1]				
Piping plover *Charadrius melodus*	FT; ND-SC; SD-T; NE-T; KS-T	This species inhabits open sandy areas and saline flats with little vegetation along rivers, lakes, ponds, and marshlands. It nests on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, on gravel pits along rivers, and on salt-encrusted bare areas on interior alkali ponds and lakes. Sparse clumps of grass or herbaceous vegetation are important habitat components. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds	Sargent		Clark Day Kingsbury Yankton	0.0[1] 0.0[1] 0.4[1] 0.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0[1] 0.2[1] 0.5[1] 0.0[1] 0.0[1] 0.0[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]				
Eskimo curlew *Numenius borealis*	FE; SD-E; KS-E	This species is a nearly extinct spring migrant that feeds and rests in burned-over prairies, agricultural areas, wetlands, and marshes.	Prairies, wetlands, agriculture			Clark	4.5[1]			Brown Doniphan Marshall Nemaha	4.9[1] 1.8[1] 5.6[1] 4.7[1]				
Interior least tern *Sterna antillarum athalassos*	FE; SD-E; NE-E; MO-E; OK-E; KS-E	Nesting habitat consists of sparsely vegetated sandy, gravelly, or silty beaches and sandbars within wide, unobstructed river channels or salt flats along lake shorelines and irrigation reservoirs. Nest locations are generally away from the water's edge since nesting typically begins while river flows are high and relatively small amounts of sandy habitat is exposed. Breeding season: May 1 through August 15.	Shorelines and sandbars or rivers, lakes, reservoirs			Clark Yankton	0.0[1] 0.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0[1] 0.2[1] 0.5[1] 0.0[1] 0.0[1] 0.0[1] 0.2[1] 0.1[1] 0.2[1]	Brown Doniphan Marshall Nemaha	0.0[1] 0.2[1] 0.1[1] 0.0[1]	Chariton St. Charles	0.7[1] 0.3[1]		
Barn owl *Tyto alba*	MO-E; IL-E	This cavity-nesting species is primarily a bird of open country - residential and agricultural areas, old fields and woodland edges. Nests in buildings, tree cavities, caves, cliff crevices, and cut bank burrows Breeding season: late winter, spring, and/or early summer.	Grasslands, woodlands, agriculture									St. Charles	1.7	Fayette Marion	0.0 0.0
Loggerhead shrike *Lanius ludovicianus*	MO-SC; IL-T	This species is found in open areas with mixed shrub/brush hedgerows and scattered thorny trees. Thorny plant species (osage orange, honey locus, multiflora rose, wild crabapple) are important for impaling prey. In MO and IL, nesting peaks in late April, with a second peak in late May in MO.	Shriblands, uplands											Bond Fayette Marion	2.1 0.0 0.0

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Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Henslow's sparrow *Ammodramus henslowii*	KS-SC; MO-SC; IL-E	This species breeds in a variety of grassland habitats with tall, dense grass and herbaceous vegetation. Meadows, open grasslands and weedy and abandoned fields, all with wet areas, dense grass-forb mosaics and scattered small woody growths appear to be essential. Breeding season: April-July.	Grasslands, meadows, shrublands						Madison 1.6
Yellow-crownded night heron *Nyctanassa violacea*	IL-E	This species nests on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory. They use similar habitat types for nesting and roosting, avoiding areas with insufficient cover. They hunt along the shores of tidal creeks and tide pools within salt and brackish marshes dominated by salt marsh cordgrass.	wetlands, scrub-shrub thickets,						Fayette 3.4[1]
Pied-billed grebe *Podilymbus podiceps*	IL-T	This species breeds on seasonal or permanent ponds with dense stands of emergent vegetation, bays and sloughs. Uses most types of wetlands in winter.	ponds, wetlands, sloughs						Fayette 6.5[1]
Northern Harrier *Cicus cyaneus*	MO-E	This species breeds in marshes, meadows, grasslands, and cultivated fields. Perches on ground or on stumps or posts. Nests on the ground, commonly near low shrubs, in tall weeds or reeds, sometimes in bog; or on top of low bush above water, or on knoll of dry ground, or on higher shrubby ground near water, or on dry marsh vegetation.	marshes, meadows, grasslands, cultivated fields					Carroll 13.0[1]	
Fish									
Chestnut lamprey *Ichthyomyzon castaneus*	KS-T	This species is found in moderate-sized rivers and large creeks. Spawning occurs in smaller tributary streams in swift shallow riffles where the gravel is clean. Eggs are laid in a nest in the river bottom. Spawning period: spring or summer.	Rivers and creeks				Doniphan: Missouri River		
Pallid sturgeon *Scaphirhynchus albus*	FE; SD-E; NE-E; KS-E; MO-E; IL-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	Large, turbid rivers, sand substrate		Yankton: James River Missouri River	Cedar: Missouri River Colfax: Platte River	Doniphan: Missouri River	Buchanan: Missouri River St. Charles: Mississippi River	Madison: Mississippi River Fayette: Kaskaskia River
Lake sturgeon *Acipenser fulvescens*	NE-T; MO-E; IL-E	This species is generally bottom dwelling and occurs in large rivers and shallow areas of large lakes. They are most often associated with silt-free deep run and pool habitats of rivers (i.e., >5 ft deep), and generally avoid aquatic vegetation. Gravelly tributary streams of rivers and lakes serve as spawning habitat, although rocky, wave-swept areas near lake shores and islands serve as spawning habitat when preferred habitats are unavailable. Spawning period: late-spring.	Large rivers and lakes, gravelly substrate		Yankton: Missouri River	Cedar: Missouri River		St. Charles: Mississippi River	

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Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Flathead chub *Platygobio gracilis*	KS-T	This species occurs from the Rio Grande to the Arctic Circle in small creeks and the largest rivers that have turbid fluctuating water levels and unstable sand bottoms. This species relies on flood flows to spawn successfully. Spawning occurs after water levels have subsided after peak flows, when water temperatures are warmer and substrate is more stable. Relies on flood flows to spawn successfully. Spawns after rivers have subsided following peak flow.	Creeks and rivers with turbid, fluctuating flow and sandy substrates				Nemaha: S.F. Nemaha River Doniphan: Missouri River		
Sturgeon chub *Macrhybopsis gelida*	NE-E; KS-T MO-SC SD-T	This species prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at heads of islands or exposed sandbars. Spawning period: late spring to midsummer.	Large sandy rivers, sand/gravel substrate		Yankton: Missouri River	Cedar: Missouri River Colfax County: Platte River	Doniphan: Missouri River	Buchanan: Missouri River	
Sicklefin chub *Macrhybopsis meeki*	NE-SC; KS-E MO-SC SD-E	This species requires continuously and heavily turbid waters of large rivers where it frequents areas of strong current flowing over sand or gravel substrate. Spawning period: spring (likely from late March and May).	Large turbid rivers, sand/gravel substrate		Yankton: Missouri River	Colfax: Platte River	Doniphan: Rock Creek Missouri River	Buchanan: Missouri River	
Western silvery minnow *Hybognathus yritis*	KS-T; MO-SC	This species prefers protected areas in large, turbid rivers and prairie streams. In streams they are typically found in water less than one foot deep and shallow shore water heavily vegetated with emergent grasses and reeds. In protected areas of larger rivers, they move in large schools of 50 to 100 individuals along the bottom in deep, quiet water. While little is known about spawning, this species probably scatters eggs on silt substrate in quiet water.	Protected areas of rivers and streams				Nemaha: S.F. Nemaha River Doniphan: Missouri River	Buchanan: Missouri River	
Blacknose shiner *Notropis heterolepsis*	ND-SC; NE-E; MO-SC	This species prefers clean weedy lakes and streams.	Lakes, streams			Cedar: Missouri River Stanton: Elkhorn River	Doniphan: Missouri River		
Topeka shiner *Notropis topeka*	FE; SD-SC; KS-T; MO-E	This species inhabits pool and run areas in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however pools are maintained by spring or groundwater percolation. The substrate of these occupied streams consist mainly of clean gravel, however bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Spawning period: late spring and summer.	Small, cool (often intermittent) prairie streams		Miner: Wolf Creek Hanson: Wolf Creek Hutchinson: Wolf Creek Yankton: James River Missouri River	Cedar: Missouri River Saline: W.F. Big Blue River	Marshall: N. Elm Creek Doniphan: Missouri River	Clinton: Castile Creek Little Platte River Shoal Creek Caldwell: Log Creek Crush Creek Crabapple Creek	
Northern redbelly dace *rosomus eos*	NE-T	This species occurs in a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			
nescale dace *Phoxinus neogaeus*	NE-T	This species occurs a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			

[1] Data pending: waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change.

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Western sand darter *Ammocrypta clarum*	IL-E	This species occurs in medium and large rivers; most commonly in slight to moderate currents over sandy bottoms. It is known to inhabit areas of gravel or silt. The species has also been recorded from quiet margins of drainage canals and shallow backwaters, usually where there is enough current to keep the bottom largely free of silt. Buries in sand.	Medium to large rivers, sandy substrate						Fayette: Kaskaskia River
Reptiles									
Western fox snake *Elaphe vulpine vulpina*	MO-E	This species inhabits cultivated fields, along wooded stream valleys and in natural prairies that adjoin marshes. It is active between late April and October. Small mammal burrows and brush piles are used as den sites during winter hibernation. Mating begins in April and females lay eggs under logs or leaf litter in May or June. Young hatch in August or September.	Agriculture, riparian woodlands, prairies, wetlands					St. Charles 1.7[1]	
Smooth earth snake *Virginia valeriae*	KS-T	This species inhabits rocky hillsides in moist woodlands and woodland edges in river and stream valleys where they may be found on the slopes under leaf litter, rocks, or logs. During winter, it utilizes deep crevices on rocky hillsides. Mating begins in the spring after emergence from hibernation. Mating may also occur in the fall. Young hatch in August or September.	Riparian woodland, upland forest				Doniphan 2.4		
Eastern massasauga *Sistrurus catenatus catenatus*	FC; MO-E; IL-E	This subspecies prefers marshy and swamp areas dominated by cordgrass, sedges, and bulrushes, as well as lowland areas along river and lakes. The snakes hibernate singly in mammal burrows, crayfish burrows, and in crevices or rock piles close to water. Courtship and mating occurs in spring and young are born in late July through early September.	Wetland, riparian					Chariton 0.7[1]	
Western massasauga *Sistrurus catenatus tergeminus*	NE-T; MO-E	This subspecies is found in open sagebrush prairie, rocky prairie hillsides, and prairie marsh habitats, usually near a water source. The snakes hibernate singly in rodent burrows. Courtship and breeding occur both in the Spring and Fall. Young are born during July or August.	Sagebrush, shrubland, wetland			Gage 0.0[1] Jefferson 3.4[1]		Chariton 12.9[1]	
False map turtle *Graptemys pseudogeo-graphica*	SD-T	This species inhabits slow to swift current rivers and streams, river sloughs, oxbow lakes, ponds, impoundments, and backwaters. They are devoted baskers, often resting just below the surface on submerged branches from fallen trees and projecting logs.	Rivers, streams, sloughs, ponds, backwaters, impoundments		Yankton 0.1				
Kirtland's snake *Clonophis kirtlandi*	IL-T	This species inhabits prairie wetlands, wet meadows, and grassy edges of creeks, ditches, and ponds, usually in association with crayfish burrows. It also has been found in damp habitat remnants in vacant lots of urban settings. Secretive and nocturnal, it shelters beneath logs and surface debris, or in crayfish burrows, by day.	Wetlands						Fayette 0.0[1]

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change.

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed									
				ND		SD		NE		KS		MO		IL	
Amphibians															
Illinois chorus frog *Pseudacris streckeri illino*	IL-T	Sand prairies and remnants such as sandy agricultural fields and waste areas. Burrows in sand and emerges after heavy, early spring rains to breed in nearby flooded fields, ditches, and other vernal ponds	Sand prairies											Madison	0.6
Invertebrates															
Dakota skipper *Hesperia dacotae*	FC; SD-SC, ND-SC	This species is considered an obligate of undisturbed native prairie. The butterfly inhabits wet lowland prairie dominated by bluestem grasses and dry upland prairie dominated by mixed bluestem and needle stem grasses. Both habitat types contain an abundance of flowering plants and have alkaline soils. Adults emerge in mid-June to early July, and mate during a flight period that lasts for about three weeks.	Lowland and upland prairie	Barnes Ransom Sargent	0.0 0.0 8.4	Clark Day Marshall Yankton	4.5 6.7 5.1 2.1								
American burying beetle *Nicrophorous americanus*	FE; KS-E	This species inhabits upland grasslands or near the edge of grassland/forest. Sandy/clay loam soils and food (carrion) availability are also important. The species appears to prefer loose soil in which to bury carrion. Reproduction occurs from late April through mid August. Reproductive activity includes the burial of a carcass, building of a chamber, and laying eggs.	Grasslands, upland forests							Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3				
Paleshell mussel *Leptodea leptodon*	FE; SD-SC; NE-E	Occurs in riffles with moderate to high gradients in creeks to large rivers. Typically associated with riffles, relatively strong currents, and substrate of mud, sand, or assemblages of gravel, cobble, and boulder. Restricted to rivers with relatively good water quality in stretches with stable channels. Little is known concerning the reproduction of this species.	Creeks and rivers with good water quality and stable channels			Yankton	0.2	Cedar	0.2						
Higgins' eye pearlymussel *Lampsilis higginsi*	FE; SD-SC	Found in substrates of mud with a mixture of gravel and stones. Prefers rapidly flowing water. The exact breeding season is unknown.	Fast flowing creeks and rivers, mud substrate			Yankton	0.2	Cedar	0.2						
Winged mapleleaf *Quadrula gragosa*	FE; SD-SC	The species is found in riffles with clean gravel, sand, or rubble bottoms.	Rivers, streams			Yankton	0.1								
Plants															
Decurrent false aster *Boltonia decurrens*	FT; MO-E; IL-T	The species grows in open muddy bottomlands and is dependent upon disturbance from cyclical flooding to maintain the habitat suitable for its survival. Historically, it was found on the shores of lakes and the banks of streams. Currently, it is most common in disturbed lowland areas where human-caused disturbance provides adequate habitat. Flowers: July-October.	Riparian floodplains and muddy bottomlands subject to flooding									St. Charles	0.0[1]	Madison	2.0[1]
Small white lady's-slipper *Cypripedium candidum*	NE-T	This species is found in wetland prairie habitats: mesic blacksoil prairie, wet blacksoil prairie, glacial till hill prairie, sedge meadow, calcareous fen, glade. Found on calcareous soils. Flowering occurs May-June.	Wetland prairie					Butler Cedar Colfax Stanton Wayne	0.0[1] 4.3[1] 0.8[1] 1.5[1] 1.3[1]						

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change.

Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed									
				ND		SD		NE		KS	MO		IL	
Eastern prairie fringed orchid *Platanthera leucophaea*	FT; IL-E	Mesic-wet calcareous tallgrass sand or silt loam prairie. May also be found in open graminoid portions of lake margins, sedge, meadows, and marshes, wet prairie or open swamps, or bogs and shores. Flowering begins late June to early July. Flowers do not appear annually.	Mesic-wet tallgrass prairie									Bond Fayette Madison Marion	0.0[1] 0.0[1] 0.0[1] 0.0[1]
Western prairie fringed orchid *Platanthera praeclara*	FT; ND-SC; SD-SC; NE-T	Occurs in mesic upland tallgrass prairie in the southern part of its range, often in swales, and wet-mesic tallgrass prairie and sedge meadows in the northern part of its range. Also known from prairies and swales in sand dune complexes that are fed by shallow underground water. Flowers June-July.	Tallgrass prairie, dune complexes	Ransom	0.0	Clark Day Yankton	4.5[1] 6.7[1] 2.1[1]	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0[1] 4.3[1] 0.8[1] 0.0[1] 3.4[1] 0.0[1] 0.3[1] 0.0[1] 1.5[1] 1.3[1]				
Prairie bush-clover *Lespedeza leptostachya*	FT; IL-E	In Illinois, this species is generally found on dry gravel prairies and dry-mesic prairies It is often found on north-facing prairie slopes. On these slopes, it typically occurs either in thin soil at the margins of rocks or in gravelly loamy soil. Flowers in July, August.	Prairie									Bond Fayette Madison Marion	0.8 0.0 0.6 0.0
Running buffalo ver *.iolium stoloniferum*	FE; MO-E	This species is commonly found in areas of rich soils in the ecotone between open forest and prairie; and moist, partially shaded woodlands- sometimes along stream or river terraces. Also found in areas disturbed by grazing or mowing. This species historically grew along bison trails. Flowers: April-June.	Riparian areas, woodland/prairie ecotones								Lincoln	11.7[1]	
Royal Catchfly *Silene regia*	IL-E	This species is found in habitats that include mesic black soil prairies, openings in upland forests, savannas, scrubby barrens, and open areas along roadsides and railroads	Prairies, upland forests, savannas, open roadsides									Madison	1.6
Prairie Spiderwort *Tradescantia bracteata*	IL-T	Common spiderwort likes sandy soils and seems to be most abundant where grazing is light to moderate. Dry typical prairie and dry sand prairies	Grazed prairies, sandy soils									Madison	0.6
Spring Ladies' Tresses *Spiranthes vernalis*	IL-E	This species is typically found in upland dry to mesic forests, dry to mesic prairies, and successional cultured fields.	Upland/mesic forests									Madison	2.0[1]

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change.

Table 3
Kansas Special Status Species Listed By County and Habitat Type

County	Grassland	Forests And Woodlands	Riparian	Emergent Wetland	Open Water
Brown	Eastern Spotted Skunk, Eskimo Curlew	Eastern Spotted Skunk	Peregrine Falcon	Eskimo Curlew, Interior Least Tern, Peregrine Falcon, Piping Plover, Snowy Plover	Bald Eagle, Interior Least Tern, Piping Plover, Snowy Plover
Doniphan	Eastern Spotted Skunk, Eskimo Curlew	Eastern Spotted Skunk	Peregrine Falcon	Eskimo Curlew,*Interior Least Tern, Peregrine Falcon, Piping Plover, Snowy Plover	Bald Eagle, Interior Least Tern, Piping Plover, Snowy Plover, Chestnut Lamprey, Flathead Chub, Pallid Sturgeon, Sicklefin Chub, Sturgeon Chub, Topeka Shiner
Marshall	Eastern Spotted Skunk, Eskimo Curlew	Eastern Spotted Skunk	Peregrine Falcon	Eskimo Curlew, Interior Least Tern,*Peregrine Falcon, Piping Plover, Snowy Plover, Whooping Crane	Bald Eagle, Interior Least Tern, Piping Plover, Snowy Plover, Topeka Shiner
Nemaha	Eastern Spotted Skunk, Eskimo Curlew	Eastern Spotted Skunk	Peregrine Falcon	Eskimo Curlew, Interior Least Tern, Peregrine Falcon, Piping Plover, Snowy Plover	Bald Eagle, Interior Least Tern, Piping Plover, Snowy Plover, Flathead Chub, Topeka Shiner

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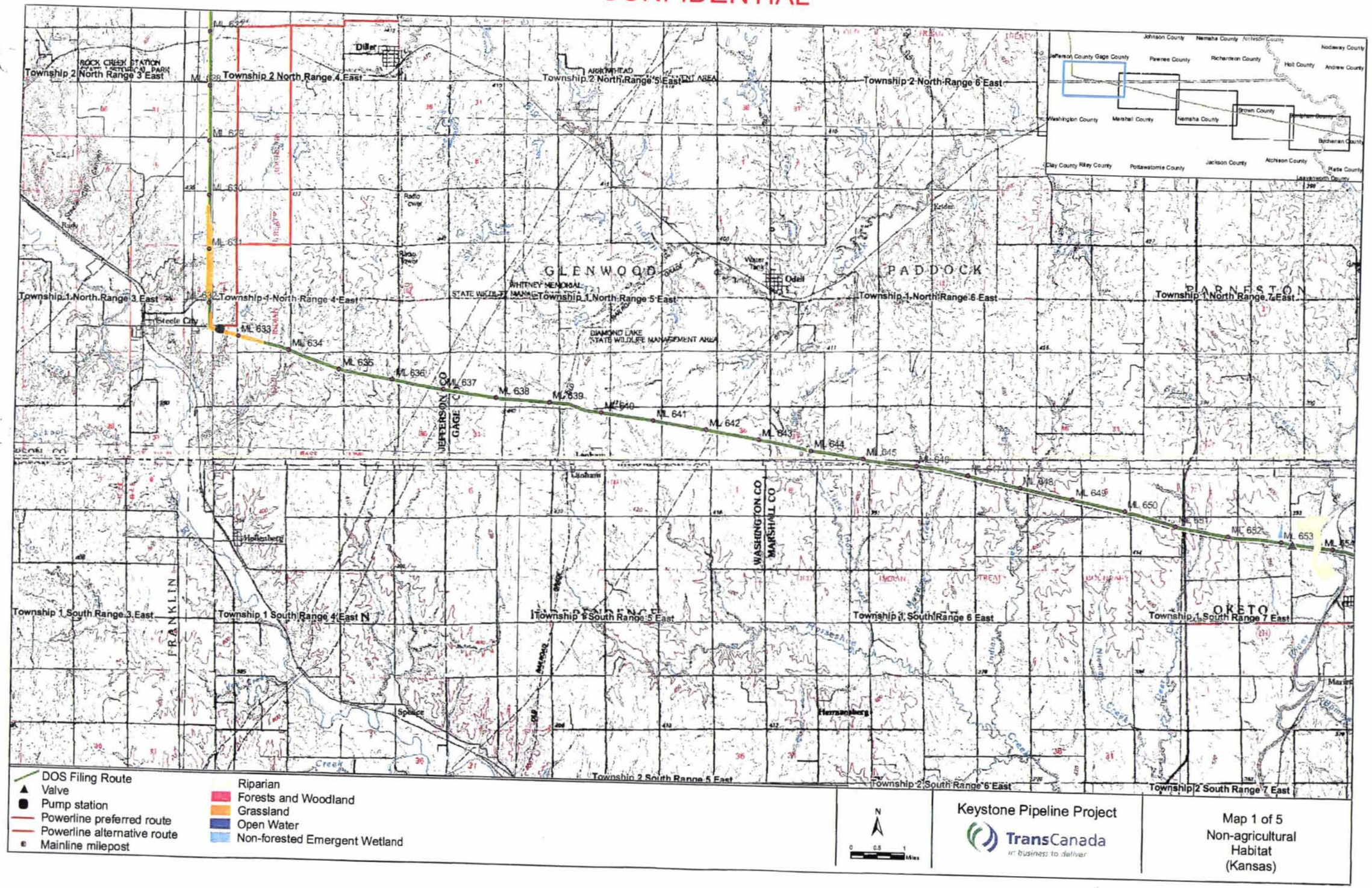

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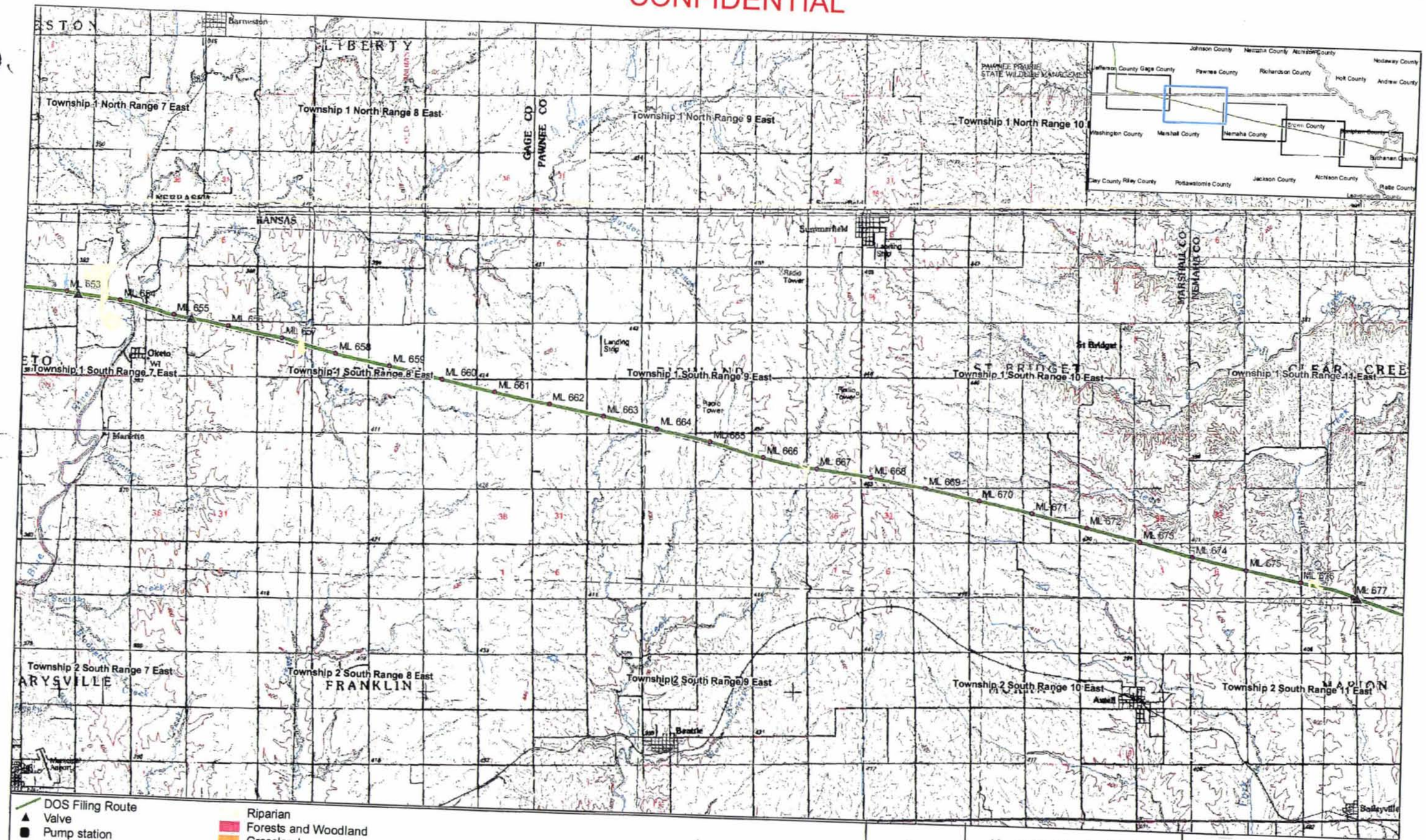

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Map 2 of 5
Non-agricultural
Habitat
(Kansas)

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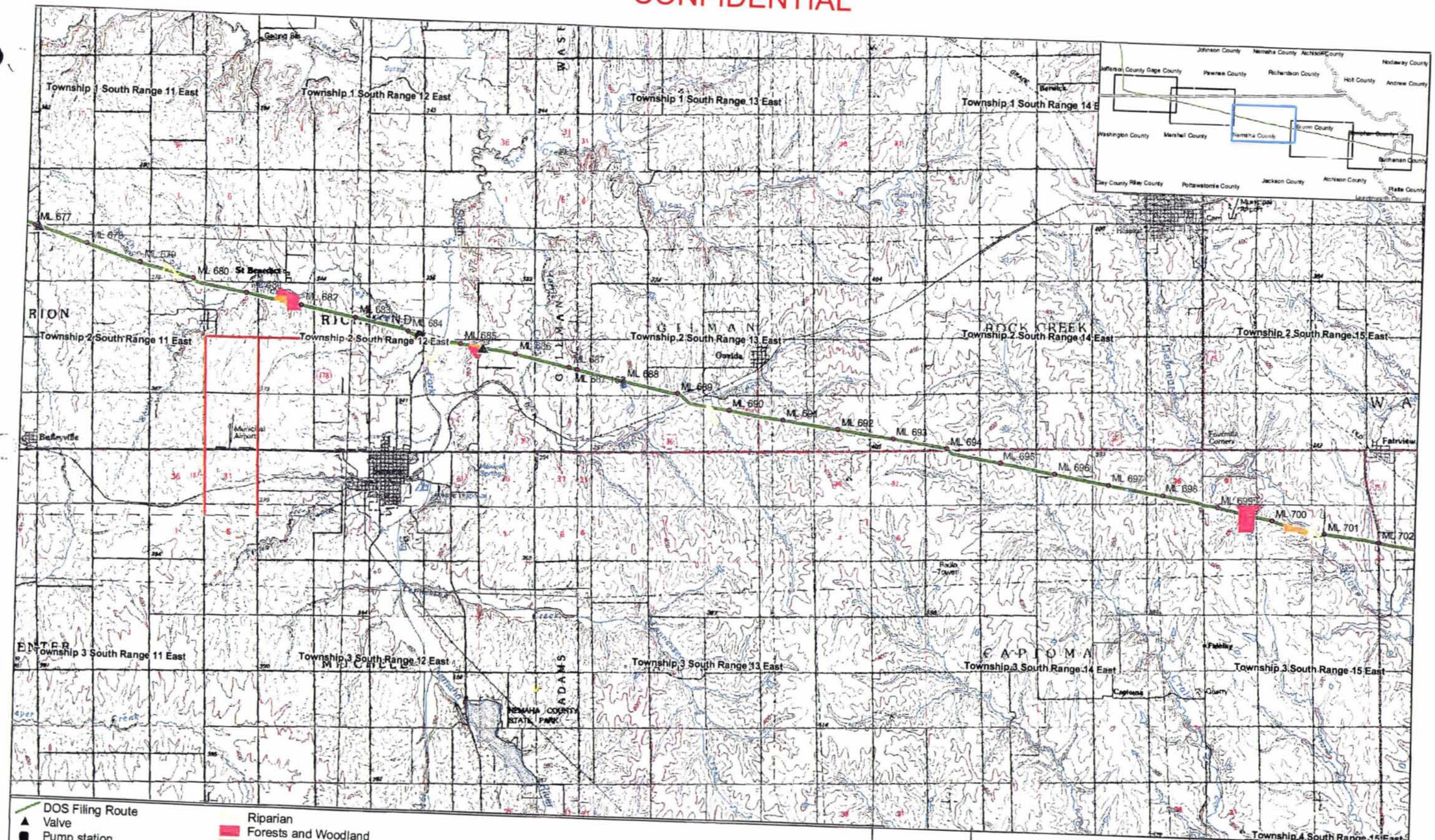

DOS Filing Route
Valve
Pump station
Powerline preferred route
Powerline alternative route
Mainline milepost

Riparian
Forests and Woodland
Grassland
Open Water
Non-forested Emergent Wetland

N

0 0.5 1 Miles

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Map 3 of 5
Non-agricultural Habitat (Kansas)

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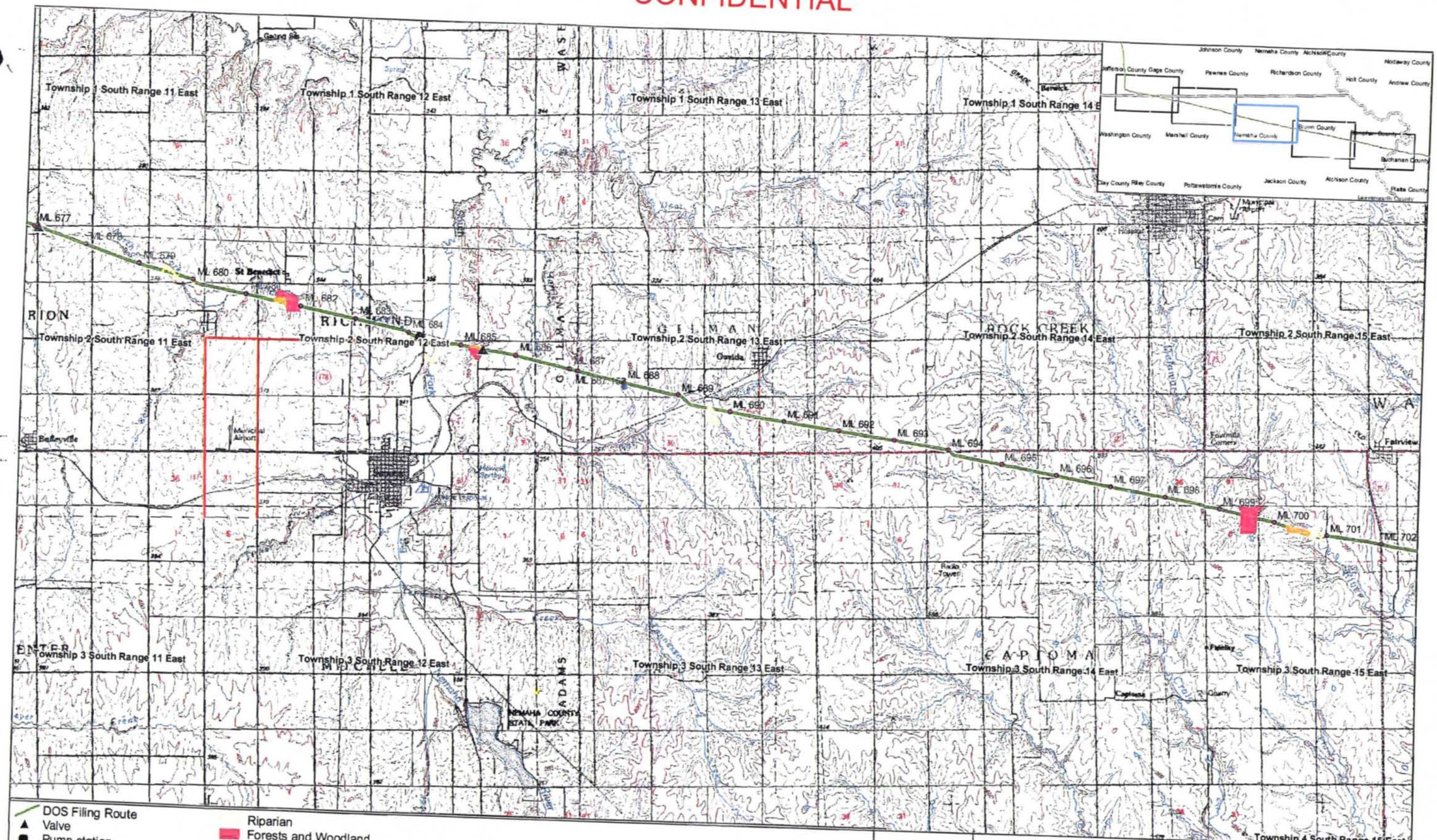

DOS Filing Route
Valve
Pump station
Powerline preferred route
Powerline alternative route
Mainline milepost

Riparian
Forests and Woodland
Grassland
Open Water
Non-forested Emergent Wetland

N

0 0.5 1 Miles

Keystone Pipeline Project

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Map 3 of 5
Non-agricultural
Habitat
(Kansas)

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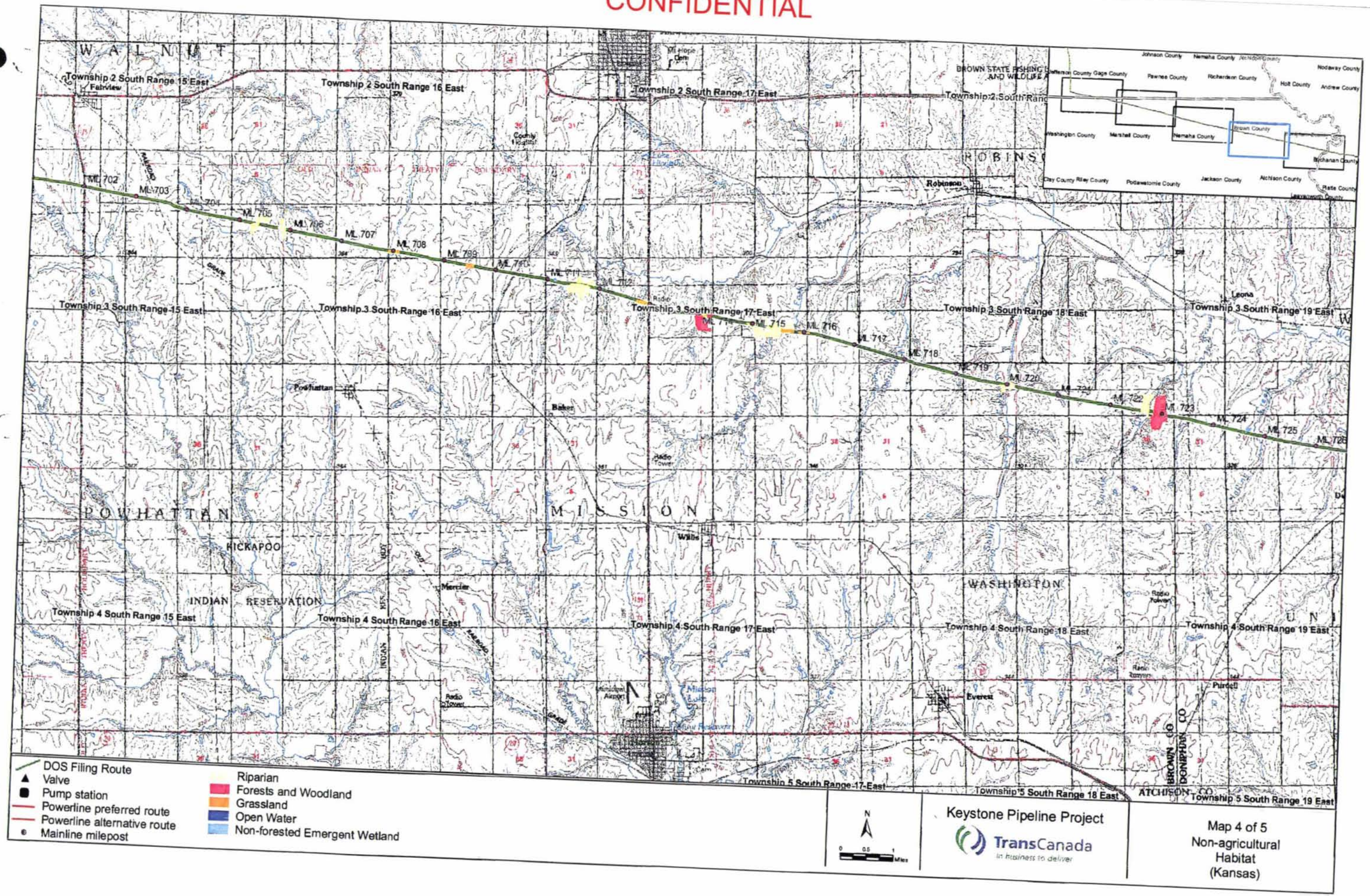

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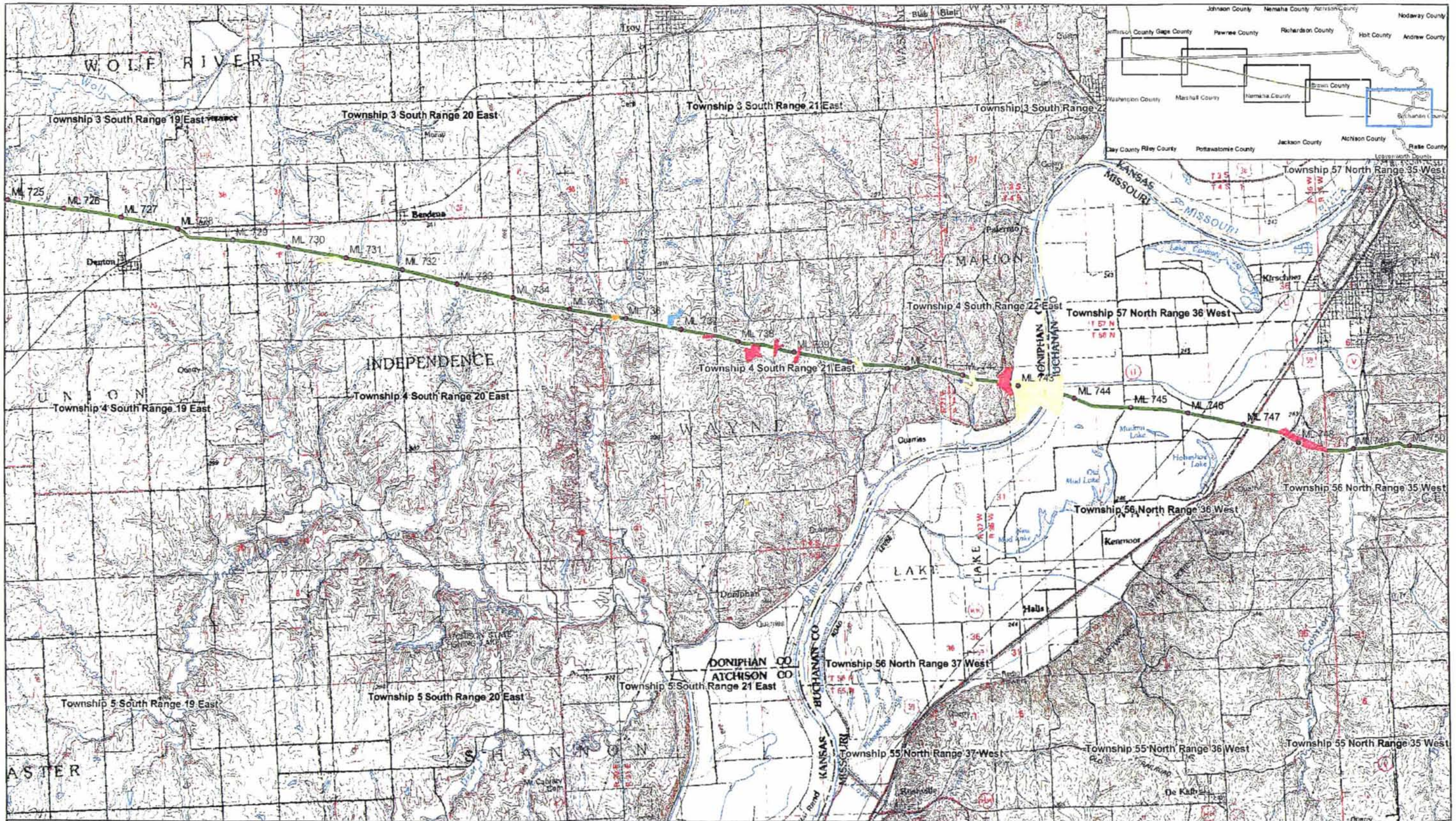

DOS Filing Route
Valve
Pump station
Powerline preferred route
Powerline alternative route
Mainline milepost

Riparian
Forests and Woodland
Grassland
Open Water
Non-forested Emergent Wetland

N

0 0.5 1 Miles

Keystone Pipeline Project

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Map 5 of 5
Non-agricultural
Habitat
(Kansas)

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Table 1
Missouri Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi)[1]	Open Water (mi) (habitat crossed or within 0.5 mi)	
Eastern spotted skunk *Spilogale putorius*	MO-E	This species prefer forest edge and upland grassland prairie, especially if rock outcrops and shrubs are present. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, brushy heaps, hollow logs, and abandoned buildings or outbuildings. Young are born in May or June.	upland forests, grasslands, shrublands, agriculture edge	St.Charles	St. Charles: 1.1	St. Charles: 0				St. Charles: 997.9-998.0, 1010.8-1013.4
Gray bat *Myotis grisescens*	FE; MO-E	This species forages primarily within forested areas along streams and lakes. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings. Maternity roosts typically are in caves with stream flow and are separate from summer bachelor roosts.	riparian woodlands, caves	St. Charles		St. Charles: 0	St. Charles: 0.6			St. Charles: 977.0-984.8, 991.2-991.3, 1016.6-1016.7
Indiana bat *Myotis sodalis*	FE; MO-E	This species forages primarily in riparian forests and flood-plains, as well as in upland forests, low field, and pastures. Maternity roosts are located beneath loose bark of living and dead trees (especially oak and hickory *spp*.). Young are generally born in June. Winter hibernacula occur in caves and mines with 85% of this species population hibernating in Shannon, Washington, and Iron counties, MO.	riparian woodlands, upland forests, pastures, caves	Audrain Buchanan Caldwell Carroll Chariton Clinton Lincoln Montgomery Randolph St.Charles		Audrain: 0.4 Buchanan: 4.3 Caldwell: 3.1 Carroll: 3.3 Chariton: 4.1 Clinton: 1.4 Lincoln: 2.0 Montgomery: 1.9 Randolph: 3.6 St.Charles: 0	Audrain: 3.4 Buchanan: 0.2 Caldwell: 0 Carroll: 0.1 Chariton: 0 Clinton: 0 Lincoln: 8.2 Montgomery: 2.7 Randolph: 0 St.Charles: 0.6			Audrain: 890.2-927.4 Buchanan: 743.4-761.3, Caldwell: 788.9-804.8 Carroll: 810.1-835.3 Chariton: 836.3-866.7 Clinton: 766.4-784.3 Lincoln: 949.1-976.2 Montgomery: 934.0-948.7 Randolph: 869.6-889.1 St. Charles: 977.0-984.8, 991.2-991.3, 1016.6-1016.7
Plains spotted skunk *Spilogale putorius interrupta*	MO-E	This species inhabits upland grassland prairie, brushy areas, cultivated land, and forests. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, hollow logs, trees, or on brushy heaps. Young are born from April to July.	grasslands, shrublands, upland forests, agriculture edge	Chariton	Chariton: 12.9	Chariton: 4.1				Chariton: 836.3-866.7

[1] Data pending; waiting on completion of wetland/waterbody surveys to determine total wetland habitat crossed.