

ATTACHMENT A

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Natural Resource and Water Supply Summary Tables and Figures
Line 3 Replacement Project Preferred Route

Table 1 Line 3 Replacement Project Public Waters Inventory Streams Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota					
Watershed Name	County	Approximate Milepost ^a	Kittle Name (Kittle Number)	Crossed by the Centerline	Miles Within the Corridor ^b
Middle Red	Kittson	802.00	Red River (H-026)	Yes	0.39
Middle Red	Kittson	804.00	Red River (H-026)	No	0.44
Middle Red	Kittson	806.00	Unnamed Creek (H-026-011-001)	Yes	0.86
Middle Red	Marshall	828.00	Tamarac River (H-026-019)	No	0.10
Middle Red	Marshall	829.00	Tamarac River (H-026-019)	Yes	2.09
Middle Red	Marshall	829.00	Tamarac River (H-026-019)	No	0.03
Middle Red	Marshall	829.00	Tamarac River (H-026-019)	No	0.23
Snake	Marshall	836.00	Middle River (H-026-021-004)	Yes	0.65
Snake	Marshall	843.00	Snake River (H-026-021)	Yes	0.80
Snake	Marshall	843.00	Snake River (H-026-021)	No	0.06
Snake	Marshall	847.00	Unnamed Creek (H-026-021-010)	Yes	0.41
Red Lake	Pennington	864.00	Red Lake River (H-026-030)	Yes	1.11
Red Lake	Pennington	866.00	Unnamed Creek (H-026-030-030)	Yes	0.47
Red Lake	Pennington	870.00	Unnamed Creek (H-026-030-028)	Yes	0.58
Clearwater	Red Lake	875.00	Clearwater River (H-026-030-019)	Yes	0.52
Clearwater	Clearwater	902.00	Unnamed Creek (H-026-030-019-007-007)	Yes	0.58
Clearwater	Clearwater	903.00	Unnamed Creek (H-026-030-019-007-007)	No	0.31
Clearwater	Clearwater	903.00	Unnamed Creek (H-026-030-019-007-007)	No	0.20
Clearwater	Clearwater	904.00	Lost River (H-026-030-019-007)	Yes	0.50
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005-001)	Yes	0.35
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005-001)	Yes	0.35
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005-001)	Yes	0.35
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005)	Yes	0.52
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005)	Yes	0.52
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005)	Yes	0.52
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005-001)	No	0.21
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005)	No	0.21
Clearwater	Clearwater	907.00	Unnamed Creek (H-026-030-019-007-005)	No	0.32
Clearwater	Clearwater	D913.9	Unnamed Creek (H-026-030-019-007-005-002)	No	0.16
Clearwater	Clearwater	D922.2	Clearwater River (H-026-030-019)	Yes	0.59
Clearwater	Clearwater	D924.1	Walker Brook (H-026-030-019-029)	No	0.00
Clearwater	Clearwater	D924.2	Walker Brook (H-026-030-019-029)	Yes	0.60
Clearwater	Clearwater	D925.3	Unnamed Creek (H-026-030-019-029-001)	Yes	0.41

Table 1 Line 3 Replacement Project Public Waters Inventory Streams Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota					
Watershed Name	County	Approximate Milepost ^a	Kittle Name (Kittle Number)	Crossed by the Centerline	Miles Within the Corridor ^b
Mississippi Headwaters	Clearwater	D936.9	Unnamed Stream (M-164)	Yes	0.81
Mississippi Headwaters	Clearwater	D937.2	Unnamed Stream (M-164)	No	0.04
Mississippi Headwaters	Clearwater	D937.3	Unnamed Stream (M-164)	No	0.01
Mississippi Headwaters	Clearwater	D937.8	Mississippi River (M)	No	0.06
Mississippi Headwaters	Clearwater	D937.9	Mississippi River (M)	Yes	0.29
Mississippi Headwaters	Clearwater	D937.9	Mississippi River (M)	Yes	0.29
Mississippi Headwaters	Clearwater	D937.9	Mississippi River (M)	Yes	0.29
Mississippi Headwaters	Clearwater	D938.1	Mississippi River (M)	No	0.03
Mississippi Headwaters	Clearwater	D942.6	LaSalle Creek (M-163)	No	0.29
Mississippi Headwaters	Hubbard	D942.9	LaSalle Creek (M-163)	Yes	1.03
Mississippi Headwaters	Hubbard	D943.6	LaSalle Creek (M-163)	No	0.06
Crow Wing	Hubbard	D959.1	Unnamed Creek (M-096-035-002-004-000.5)	Yes	0.31
Crow Wing	Hubbard	D960.6	Unnamed Creek (M-096-035-002)	Yes	0.41
Crow Wing	Hubbard	D971	MAJ_02036	No	0.12
Crow Wing	Hubbard	D971.1	Straight River (M-096-035-002-002)	Yes	0.46
Crow Wing	Hubbard	D973.5	Unnamed Stream (M-096-035-004)	Yes	0.48
Crow Wing	Hubbard	D978.3	Unnamed Stream (M-096-035-004)	Yes	0.54
Crow Wing	Hubbard	D980.6	Unnamed Stream (M-096-035)	Yes	0.54
Crow Wing	Hubbard	D980.7	Unnamed Stream (M-096-035-003)	No	0.16
Crow Wing	Hubbard	D981.5	Unnamed Stream (M-096-035)	No	0.13
Crow Wing	Hubbard	D982.2	Unnamed Stream (M-096-035)	Yes	0.38
Crow Wing	Wadena	D988.1	Unnamed Stream (M-096-035)	Yes	0.49
Crow Wing	Wadena	D990.2	Crow Wing River (M-096)	Yes	0.49
Pine	Cass	D1014.2	Pine River (M-106)	Yes	0.45
Pine	Cass	D1023.2	Blind Lake Creek (M-106-014-002)	Yes	0.41
Pine	Cass	D1030.7	Unnamed Stream (M-106-004-003-001)	No	0.15
Pine	Cass	D1033.4	Daggett Brook (M-106-004)	No	0.28
Pine	Cass	D1033.7	Daggett Brook (M-106-004)	No	0.32
Pine	Cass	D1033.9	Daggett Brook (M-106-004)	No	0.12
Pine	Cass	D1034.2	Daggett Brook (M-106-004)	Yes	0.47
Pine	Cass	D1034.7	Daggett Brook (M-106-004)	No	0.24
Pine	Cass	D1038.1	Spring Brook (M-106-004-002-001)	Yes	0.36
Pine	Cass	D1038.2	MAJ-070115782_A	No	0.00

Table 1 Line 3 Replacement Project Public Waters Inventory Streams Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota					
Watershed Name	County	Approximate Milepost ^a	Kittle Name (Kittle Number)	Crossed by the Centerline	Miles Within the Corridor ^b
Prairie-Willow	Cass	D1044.8	Unnamed Stream (M-117-012)	Yes	0.48
Prairie-Willow	Cass	D1046.4	Unnamed Stream (M-117-012)	No	0.31
Prairie-Willow	Aitkin	D1050.2	Unnamed Stream (M-117-012-002)	Yes	0.60
Elk-Nokasippi	Aitkin	D1064	Unnamed Stream (M-117-001)	Yes	1.23
Prairie-Willow	Aitkin	D1065.3	Willow River (M-117)	No	0.24
Prairie-Willow	Aitkin	D1065.6	Willow River (M-117)	Yes	0.67
Prairie-Willow	Aitkin	D1065.6	Willow River (M-117)	No	0.28
Prairie-Willow	Aitkin	D1069.1	Mississippi River (M)	No	0.17
Prairie-Willow	Aitkin	D1069.5	Mississippi River (M)	Yes	0.39
Prairie-Willow	Aitkin	D1078.8	Sandy River (M-120)	Yes	0.66
Kettle	Carlton	D1101.4	Kettle River, West Branch (M-050-046-035)	Yes	0.40
Kettle	Carlton	D1107.4	Heikkila Creek (M-050-046-036)	Yes	0.57
Kettle	Carlton	D1111.1	Kettle River (M-050-046)	Yes	0.52
Kettle	Carlton	D1115.6	Moose Horn River, West Fork (M-050-046-029-020)	Yes	0.47
Kettle	Carlton	D1117.1	King Creek (M-050-046-029-023)	Yes	0.37
Kettle	Carlton	D1117.7	Unnamed Stream (M-050-046-029-023-002)	No	0.19
Kettle	Carlton	D1119.3	Park Lake Creek (M-050-046-029-027)	Yes	0.78
Kettle	Carlton	D1120.5	Moose Horn River (M-050-046-029)	Yes	0.50
Beartrap-Nemadji	Carlton	D1125	Blackhoof River (S-001-003)	Yes	0.83
Beartrap-Nemadji	Carlton	D1125	Unnamed Stream (S-001-003-028)	No	0.11
Beartrap-Nemadji	Carlton	D1125.2	Unnamed Stream (S-001-003-029)	Yes	0.27
Beartrap-Nemadji	Carlton	D1136.2	Unnamed Stream (S-001.5-007)	Yes	1.05
<i>Public Waters Inventory (PWI) Stream Data Source: https://gisdata.mn.gov/dataset/water-mn-public-waters</i> ^a Mileposts for features not crossed by the centerline are interpolated based on the closest centerline milepost. ^b Total miles of PWI stream segment(s) crossed by the 2000-ft-wide corridor.					

Table 2
Line 3 Replacement Project
Summary of Waterbodies Crossed by the Proposed Centerline
and within the 2,000-ft-wide Corridor in Minnesota

Watershed County	Number Crossed by the Proposed Centerline ^a				Miles Within the 2,000-ft-wide Corridor ^b			
	Perennial	Intermittent	Canal/Ditch/ Artificial Path/ Connector	Total ^c	Perennial	Intermittent	Canal/Ditch/ Artificial Path/ Connector	Total ^c
Middle Red	7	17	15	39	2.8	3.9	6.1	12.8
Kittson	2	5	9	16	0.4	0.8	3.1	4.3
Marshall	5	12	6	23	2.4	3.2	3.0	8.6
Snake	3	9	-	12	1.5	3.5	-	5.0
Marshall	3	9	-	12	1.5	3.5	-	5.0
Red Lake	5	8	19	32	1.1	2.4	7.4	10.9
Pennington	5	5	11	21	1.1	1.5	5.2	7.9
Red Lake	-	3	8	11	-	0.9	2.2	3.1
Clearwater	19	39	27	85	6.5	13.0	6.5	26.0
Red Lake	6	-	4	10	1.8	-	1.7	3.5
Polk	2	2	11	15	0.8	0.9	4.0	5.7
Clearwater	11	37	12	60	3.9	12.1	0.8	16.8
Eastern Wild Rice	-	2	-	2	-	0.1	-	0.1
Clearwater	-	2	-	2	-	0.1	-	0.1
Mississippi Headwaters	14	5	5	24	2.9	2.1	0.6	5.6
Clearwater	12	5	3	20	2.1	2.1	0.3	4.5
Hubbard	2	-	2	4	0.8	-	0.3	1.1
Crow Wing	21	2	12	35	4.7	0.9	5.3	11.0
Hubbard	19	1	5	25	3.8	0.5	1.1	5.3
Wadena	2	-	3	5	1.0	-	0.7	1.7
Cass	-	1	4	5	-	0.4	3.5	4.0
Pine	11	1	8	20	3.3	0.4	0.8	4.5
Cass	11	-	7	18	3.3	-	0.8	4.1
Crow Wing	-	1	1	2	-	0.4	0.0	0.4
Leech Lake	2	-	5	7	0.1	-	0.2	0.2
Cass	2	-	5	7	0.1	-	0.2	0.2
Prairie-Willow	22	17	31	70	5.9	5.9	5.7	17.6
Cass	3	1	6	10	0.6	0.4	0.8	1.8
Aitkin	19	16	25	60	5.3	5.5	4.9	15.7
Elk-Nokasippi	-	6	1	7	-	2.7	0.1	2.7
Aitkin	-	6	1	7	-	2.7	0.1	2.7
Kettle	9	15	4	28	3.7	3.4	1.3	8.4
Carlton	9	15	4	28	3.7	3.4	1.3	8.4
Beartrap-Nemadji	8	7	2	17	1.9	2.7	0.7	5.3
Carlton	8	7	2	17	1.9	2.7	0.7	5.3
St. Louis	1	5	-	6	0.8	1.6	-	2.3
Carlton	1	5	-	6	0.8	1.6	-	2.3
Grand Total ^c	122	133	129	384	35.1	42.6	34.6	112.3

USGS National Hydrography Dataset (NHD) Data Source: <ftp://nhdftp.usgs.gov/DataSets/Staged/States/FileGDB/HighResolution/>

a Number of NHD waterbodies crossed by the proposed centerline.

b Miles of NHD stream segment(s) crossed by the 2000-ft-wide corridor.

c Numbers may not total consistently due to rounding.

Table 3
Line 3 Replacement Project
Summary of USFWS National Wetlands Inventory Crossed by the Proposed Centerline
and within the 2,000-ft-wide Corridor in Minnesota

Watershed County	Miles Crossed by the Proposed Centerline ^a				Acres Within the 2,000-ft-wide Corridor ^b			
	PEM ^c	PFO/PSS ^c	Pond/Lake/Riverine	Total ^d	PEM ^c	PFO/PSS ^c	Pond/Lake/Riverine	Total ^d
Middle Red	0.1	<0.1	<0.1	0.1	15.9	4.2	11.8	31.9
Kittson	0.1	<0.1	<0.1	0.1	12.5	4.2	11.2	27.9
Marshall	<0.1	-	<0.1	<0.1	3.5	-	0.6	4.1
Snake	0.1	0.2	<0.1	0.4	120.5	43.9	0.6	165.0
Marshall	0.1	0.2	<0.1	0.4	120.5	43.9	0.6	165.0
Grand Marais-Red	<0.1	-	<0.1	<0.1	7.2	-	0.1	7.4
Marshall	<0.1	-	-	<0.1	6.8	-	-	6.8
Pennington	<0.1	-	<0.1	<0.1	0.4	-	0.1	0.5
Red Lake	0.4	0.2	0.1	0.7	146.4	64.0	25.3	235.7
Pennington	0.4	0.2	0.1	0.7	141.0	61.2	25.1	227.3
Red Lake	<0.1	<0.1	<0.1	<0.1	5.4	2.7	0.3	8.4
Clearwater	2.7	3.0	0.1	5.8	574.5	793.0	39.5	1407.0
Red Lake	0.6	<0.1	<0.1	0.7	123.6	25.4	18.1	167.2
Polk	1.1	0.6	<0.1	1.7	211.4	150.9	2.9	365.2
Clearwater	1.0	2.4	0.1	3.5	239.5	616.6	18.5	874.6
Eastern Wild Rice	0.5	0.9	<0.1	1.4	156.5	250.1	1.5	408.1
Clearwater	0.5	0.9	<0.1	1.4	156.5	250.1	1.5	408.1
Mississippi Headwaters	0.6	0.5	<0.1	1.1	171.9	272.5	9.9	454.3
Clearwater	0.3	0.3	<0.1	0.5	86.5	190.6	0.8	277.8
Hubbard	0.3	0.2	<0.1	0.6	85.5	81.9	9.1	176.5
Crow Wing	1.6	5.0	0.3	6.9	541.0	1384.8	142.8	2068.6
Hubbard	0.9	2.4	0.2	3.5	355.6	703.4	116.7	1175.7
Wadena	0.3	0.8	0.1	1.2	84.1	201.1	24.2	309.3
Cass	0.4	1.8	<0.1	2.2	101.3	480.3	1.9	583.5
Pine	1.5	1.8	0.2	3.6	446.9	758.8	198.9	1404.6
Cass	1.4	1.8	0.2	3.3	395.2	723.4	180.9	1299.5
Crow Wing	0.1	<0.1	0.1	0.2	51.7	35.4	18.0	105.1
Leech Lake	<0.1	<0.1	<0.1	<0.1	21.6	4.8	4.2	30.6
Cass	<0.1	<0.1	<0.1	<0.1	21.6	4.8	4.2	30.6
Prairie-Willow	3.0	8.0	0.2	11.2	904.3	2668.9	76.8	3650.0
Cass	<0.1	0.4	<0.1	0.4	15.8	148.9	16.3	181.0
Aitkin	3.0	7.6	0.2	10.7	888.5	2520.0	60.5	3469.0
Elk-Nokasippi	0.2	2.6	<0.1	2.8	101.8	596.3	4.6	702.7
Aitkin	0.2	2.6	<0.1	2.8	101.8	596.3	4.6	702.7
Kettle	2.3	5.0	<0.1	7.3	166.0	1949.3	3.5	2118.9
Aitkin	-	0.1	-	0.1	-	16.8	-	16.8
Carlton	2.3	4.9	<0.1	7.2	166.0	1932.6	3.5	2102.1
Beartrap-Nemadji	<0.1	2.6	<0.1	2.6	20.6	578.6	11.0	610.3
Carlton	<0.1	2.6	<0.1	2.6	20.6	578.6	11.0	610.3
St. Louis	<0.1	0.2	0.1	0.3	5.2	114.6	4.1	124.0
Carlton	<0.1	0.2	0.1	0.3	5.2	114.6	4.1	124.0
Grand Total ^d	13.0	30.1	1.1	44.2	3400.4	9483.8	534.7	13418.9

USFWS National Wetlands Inventory (NWI) Data Source: <http://www.fws.gov/wetlands/data/Data-Download.html>

a Total miles of NWI crossed by the proposed centerline.

b Total acres of NWI within the 2000-ft-wide corridor.

c PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested (Cowardin et al. 1979).

d Numbers may not total consistently due to rounding.

Table 3 Line 3 Replacement Project Public Waters Inventory Wetlands and Basins Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota				
Watershed	County	Type	Miles Crossed by the Centerline ^a	Acres Within the Corridor ^b
Red Lake	Pennington	Wetland	0.15	50.32
Clearwater	Clearwater	Wetland	-	2.22
		Basin	-	22.81
Eastern Wild Rice	Clearwater	Basin	0.09	33.08
Mississippi Headwaters	Hubbard	Basin	-	9.59
Crow Wing	Hubbard	Basin	0.18	94.25
		Wetland	0.15	42.50
Crow Wing	Wadena	Basin	-	0.06
Pine	Crow Wing	Wetland	-	4.70
Pine	Cass	Basin	0.18	181.37
		Wetland	0.01	15.81
Leech Lake	Cass	Basin	-	18.34
Prairie-Willow	Cass	Basin	-	15.33
Prairie-Willow	Aitkin	Basin	-	29.39
Elk-Nokasippi	Aitkin	Basin	-	10.76
Beartrap-Nemadji	Carlton	Wetland	-	14.12
Total:			0.77	544.64
<i>PWI Wetland and Basin Data Source: https://gisdata.mn.gov/dataset/water-mn-public-waters</i> a Total miles of PWI wetlands and basins crossed by the centerline. b Total acres of PWI wetlands and basins crossed by the 2000-ft-wide corridor.				

Table 5 Line 3 Replacement Project Listed Calcareous Fens within the 2,000-ft-wide Corridor in Minnesota					
Watershed Name	County	Approximate Milepost ^a	Fen Name	Crossed by the Centerline ^b	Within the Corridor
Snake	Marshall	844.8	Viking 18	N/A	Yes
Red Lake	Pennington	853.7	Norden 18		Yes
Clearwater	Polk	894.2	Gully 30		Yes
Listed Calcareous Fens Data Source: https://gisdata.mn.gov/dataset/biota-nhis-calcareous-fens . This data set is a GIS point shapefile derived from the Natural Heritage "Biotics" Database					
a Mileposts for features not crossed by the centerline are interpolated based on the closest centerline milepost.					
b This data set contains a point for each calcareous fen; the actual calcareous fen boundary (polygon) as defined by the Minnesota Department of Natural Resources (MDNR) is not included in this data set. As such, this data set can only be used as a high level screening tool. A MDNR Fen Management Plan is expected to be required for Gully 30.					

Table 6 Line 3 Replacement Project Trout Streams Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota					
Watershed Name	County	Approximate Milepost ^a	Kittle Name (Kittle Number)	Crossed by the Centerline	Miles Within the Corridor ^b
Mississippi Headwaters	Hubbard	D942.9	LaSalle Creek (M-163)	Yes	1.05
Crow Wing	Hubbard	D971.1	Straight River (M-096-035-002-002)	Yes	0.46
Pine	Cass	D1038.1	Spring Brook (M-106-004-002-001)	Yes	0.20
Kettle	Carlton	D1117.1	King Creek (M-050-046-029-023)	Yes	0.37
Kettle	Carlton	D1117.7	Unnamed Stream (M-050-046-029-023-002)	No	0.19
Beartrap-Nemadji	Carlton	D1125	Unnamed Stream (S-001-003-027.8)	No	0.11
Beartrap-Nemadji	Carlton	D1125	Blackhoof River (S-001-003)	Yes	0.83
Beartrap-Nemadji	Carlton	D1125	Unnamed Stream (S-001-003-028)	No	0.11
Beartrap-Nemadji	Carlton	D1125.2	Unnamed Stream (S-001-003-029)	Yes	0.27
<i>Trout Stream Data Source: https://gisdata.mn.gov/dataset/env-trout-stream-designations</i> ^a Mileposts for features not crossed by the centerline are interpolated based on the closest centerline milepost. ^b Total miles of trout stream segment(s) crossed by the 2000-ft-wide corridor.					

Table 7 Sandpiper Pipeline Project Wells within the 2,000-ft-wide Corridor in Minnesota^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Middle Red	Marshall	Monitoring	92 139 290 388 434 476 519	7
		Other	431	1
Snake	Marshall	Abandoned	128 130	2
		Domestic	593	1
		Monitoring	508 517	2
Grand Marais-Red	Marshall	Domestic	365	1
Red Lake	Pennington	Domestic	361 775 825 941	4
Clearwater	Clearwater	Domestic	20 208 328 444 489 520 595 619 728 760 766 783 868 943 948 969	16
		Monitoring	45 282 820	3
		Other	360	1
	Red Lake	Domestic	848	1

Table 7
Sandpiper Pipeline Project
Wells within the 2,000-ft-wide Corridor in Minnesota^a

Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Mississippi Headwaters	Clearwater	Abandoned	159	1
		Domestic	373	3
	513			
	796			
	Hubbard	Domestic	80	9
			250	
			521	
605				
729				
		744		
		864		
		869		
		928		
	Irrigation	942	1	
Crow Wing	Cass	Domestic	325	2
		Abandoned	545	4
			5	
			35	
			170	
		Domestic	231	49
			62	
			81	
			84	
			252	
			288	
			296	
			310	
			352	
			382	
			385	
			411	
415				
436				
447				
466				
470				
512				
513				
558				
567				
568				
574				

Table 7 Sandpiper Pipeline Project Wells within the 2,000-ft-wide Corridor in Minnesota^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Crow Wing	Hubbard	Domestic	592	
			597	
			607	
			640	
			642	
			646	
			657	
			675	
			679	
			690	
			695	
			716	
			718	
			726	
			761	
			767	
			774	
			811	
			848	
			849	
			870	
			898	
			903	
			953	
			957	
			975	
			976	
		Irrigation	160	7
			215	
			293	
			357	
			406	
			497	
		Observation	914	
			349	
			456	
		Other	460	3
			181	
		Test Well	527	2
			447	
			551	
			789	4

Table 7 Sandpiper Pipeline Project Wells within the 2,000-ft-wide Corridor in Minnesota^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Crow Wing	Hubbard	Test Well	984	
	Wadena	Abandoned	550	1
		Domestic	138	4
			463	
			620	
Pine	Cass	Domestic	774	39
			108	
			189	
			190	
			253	
			295	
			336	
			349	
			451	
			520	
			534	
			540	
			575	
			615	
			667	
			686	
			702	
			708	
			714	
			778	
			779	
			784	
			823	
			829	
			832	
			861	
			866	
			883	
			891	
			899	
			901	
			935	
			960	
			962	
			970	
			970	
			972	

Table 7 Sandpiper Pipeline Project Wells within the 2,000-ft-wide Corridor in Minnesota^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Pine	Cass	Domestic	977	
			978	
			998	
		Other	979	1
		Scientific Investigation	377	1
	Crow Wing	Domestic	296	3
			553	
			927	
Leech Lake	Cass	Scientific Investigation	375	1
Prairie-Willow	Aitkin	Abandoned	801	1
		Domestic	275	23
			279	
			281	
			298	
			316	
			322	
			326	
			332	
			391	
			591	
			660	
			674	
			707	
			750	
			789	
			809	
			816	
			830	
			849	
			862	
			943	
			952	
			988	
	Cass	Domestic	728	1
Elk-Nokasippi	Aitkin	Domestic	565	4
			662	
			782	
			803	
Kettle	Carlton	Abandoned	275	1
		Domestic	251 283	16

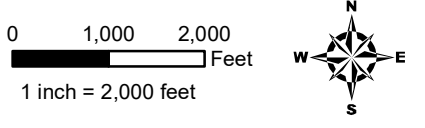
Table 7 Sandpiper Pipeline Project Wells within the 2,000-ft-wide Corridor in Minnesota^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
Kettle	Carlton	Domestic	370	
			401	
			497	
			552	
			554	
			591	
			595	
			603	
			619	
			630	
			839	
			936	
			950	
			990	
		Exploration	484 824 951	3
Beartrap-Nemadji	Carlton	Unknown	380	1
		Abandoned	929	1
		Domestic	116	19
			186	
			272	
			289	
			470	
			500	
			569	
			582	
			611	
			724	
			727	
			748	
			750	
			806	
			821	
			881	
			891	
			948	
			997	
St. Louis	Carlton	Abandoned	644 672	2
		Domestic	139	6
			304	

Table 7				
Sandpiper Pipeline Project				
Wells within the 2,000-ft-wide Corridor in Minnesota ^a				
Watershed Name	County	Well Type	Distance from Centerline (feet)	Number of Wells
St. Louis	Carlton	Domestic	339	
			866	
			894	
			959	
Source: ftp://mgssun6.mnngs.umn.edu/pub2/cwi4/cwilocs_nps.zip				
a – Municipal wells are not included in the data source.				

Table 8 Line 3 Replacement Project Drinking Water Supply Management Areas (DWSMA) and Wellhead Protection Areas (WHPA) Crossed by the Proposed Centerline and within the 2,000-ft-wide Corridor in Minnesota					
Watershed	County	Approximate Milepost ^a	Name	Miles Crossed by the Centerline ^b	Acres Within the Corridor ^c
Clearwater	Red Lake	886.0	Oklee 2 WHPA	-	40.73
			Oklee DWSMA	0.61	138.75
Crow Wing	Hubbard	D966.5	Sundsruds Court WHPA	-	0.56
			Sundsruds Court DWSMA	0.59	172.00
St. Louis/ Beartrap-Nemadji	Carlton	D1133.5	Wrenshall 1 WHPA	0.07	15.73
			Wrenshall DWSMA	0.57	138.98
DWSMA Data Source: https://gisdata.mn.gov/dataset/water-drinking-water-supply WHPA Data Source: https://gisdata.mn.gov/dataset/water-wellhead-protection-areas a Mileposts for features not crossed by the centerline are interpolated based on the closest centerline milepost. b Total miles of DWSMA and WHPA crossed by the centerline. c Total acres of DWSMA and WHPA crossed by the 2000-ft-wide corridor.					

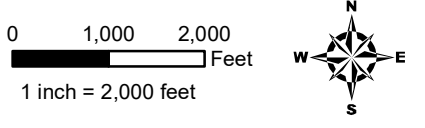
Table 9 Line 3 Replacement Project Surface Water Intakes Within the 2,000-ft-wide Corridor in Minnesota				
Watershed Name	County	Permit Type	Permit Status	Total
Middle Red	Kittson	General Permit Authorization	Inactive	4
	Marshall	General Permit Authorization	Inactive	12
		General Permit Authorization	Active	1
Snake	Marshall	General Permit Authorization	Inactive	9
		General Permit Authorization	Active	1
		Individual Permit	Inactive	2
Red Lake	Pennington	General Permit Authorization	Inactive	8
		Individual Permit	Inactive	2
	Red Lake	General Permit Authorization	Inactive	1
Clearwater	Clearwater	General Permit Authorization	Active	2
		General Permit Authorization	Inactive	35
		Individual Permit	Inactive	5
	Polk	General Permit Authorization	Inactive	3
		Individual Permit	Inactive	2
	Red Lake	General Permit Authorization	Inactive	4
		General Permit Authorization	Active	7
		Individual Permit	Inactive	2
	Clearwater	General Permit Authorization	Inactive	9
		Individual Permit	Inactive	2
Mississippi Headwaters	Clearwater	General Permit Authorization	Inactive	13
		Individual	Inactive	2
	Hubbard	General Permit Authorization	Inactive	14
Crow Wing	Cass	Individual Permit	Inactive	1

Table 9 Line 3 Replacement Project Surface Water Intakes Within the 2,000-ft-wide Corridor in Minnesota				
Watershed Name	County	Permit Type	Permit Status	Total
Crow Wing	Hubbard	General Permit Authorization	Inactive	20
		Individual Permit	Inactive	7
		Individual Permit	Active	16
	Wadena	Individual Permit	Active	1
Beartrap-Nemadji	Carlton	General Permit Authorization	Inactive	1
		Individual Permit	Inactive	2
St Louis	Carlton	General Permit Authorization	Inactive	1
Source Data: MNDNR Permitting and Reporting System				



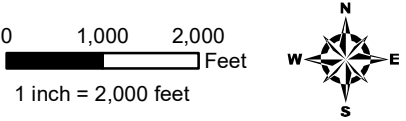
- Line 3 Replacement Milepost
- ⬢ Water Well
- ⬢ Surface Water Intake
- ⬢ Calcareous Fen
- Proposed Line 3 Replacement Pipeline
- Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ~ PWI Basin
- ~ NWI
- ~ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 1
Line 3 Replacement Project
Enbridge
Kittson County, Minnesota



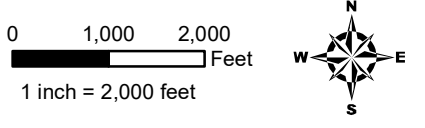
- Line 3 Replacement Milepost
- ⬢ Water Well
- ⬢ Surface Water Intake
- ⬢ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
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- ~ NHD Stream
- ⬢ PWI Basin
- ⬢ NWI
- ⬢ Watershed Boundary
- ⬢ WHPA
- ⬢ DWSMA
- ⬢ 2000 ft Line 3 Replacement Corridor
- ⬢ County Boundary

Figure 2
Line 3 Replacement Project
Enbridge
Kittson County, Minnesota



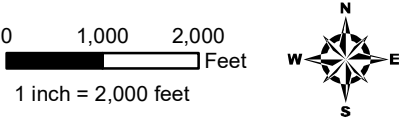
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- ⬢ NWI
- ⬢ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 3
Line 3 Replacement Project
Enbridge
Kittson County, Minnesota



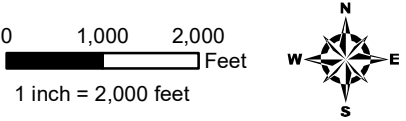
-  Line 3 Replacement Milepost
-  Water Well
-  Surface Water Intake
-  Calcareous Fen
-  Proposed Line 3 Replacement Pipeline
-  Trout Stream
-  PWI Stream
-  NHD Stream
-  PWI Basin
-  NWI
-  Watershed Boundary
-  WHPA
-  DWSMA
-  2000 ft Line 3 Replacement Corridor
-  County Boundary

Figure 4
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



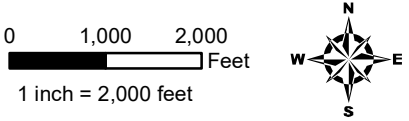
-  Line 3 Replacement Milepost
-  Water Well
-  Surface Water Intake
-  Calcareous Fen
-  Proposed Line 3 Replacement Pipeline
-  Trout Stream
-  PWI Stream
-  NHD Stream
-  PWI Basin
-  NWI
-  Watershed Boundary
-  WHPA
-  DWSMA
-  2000 ft Line 3 Replacement Corridor
-  County Boundary

Figure 5
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



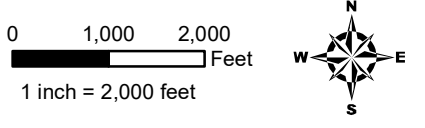
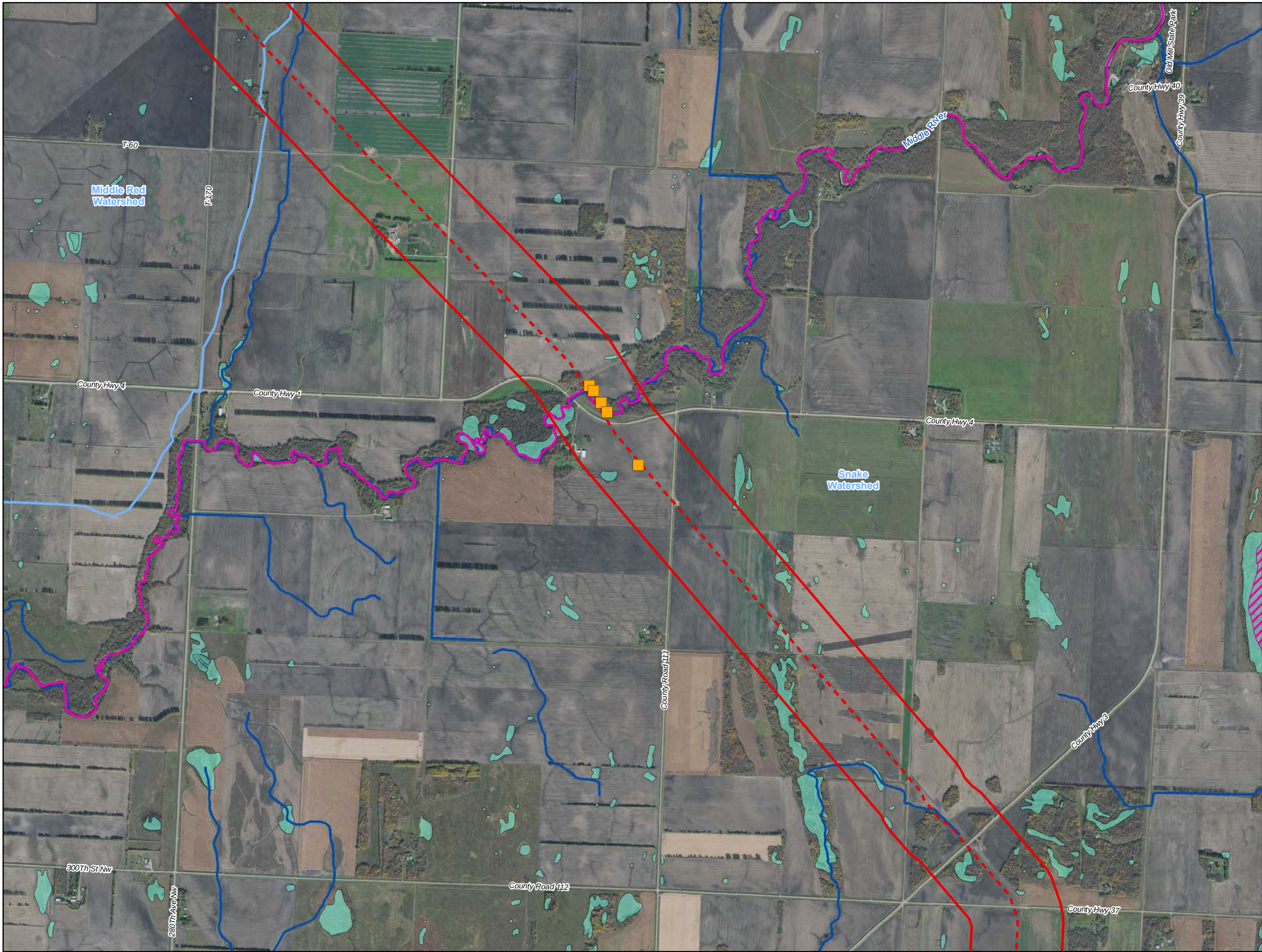
-  Line 3 Replacement Milepost
-  Water Well
-  Surface Water Intake
-  Calcareous Fen
-  Proposed Line 3 Replacement Pipeline
-  Trout Stream
-  PWI Stream
-  NHD Stream
-  PWI Basin
-  NWI
-  Watershed Boundary
-  WHPA
-  DWSMA
-  2000 ft Line 3 Replacement Corridor
-  County Boundary

Figure 6
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



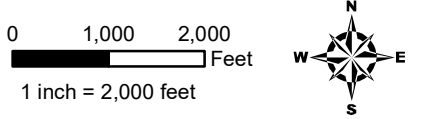
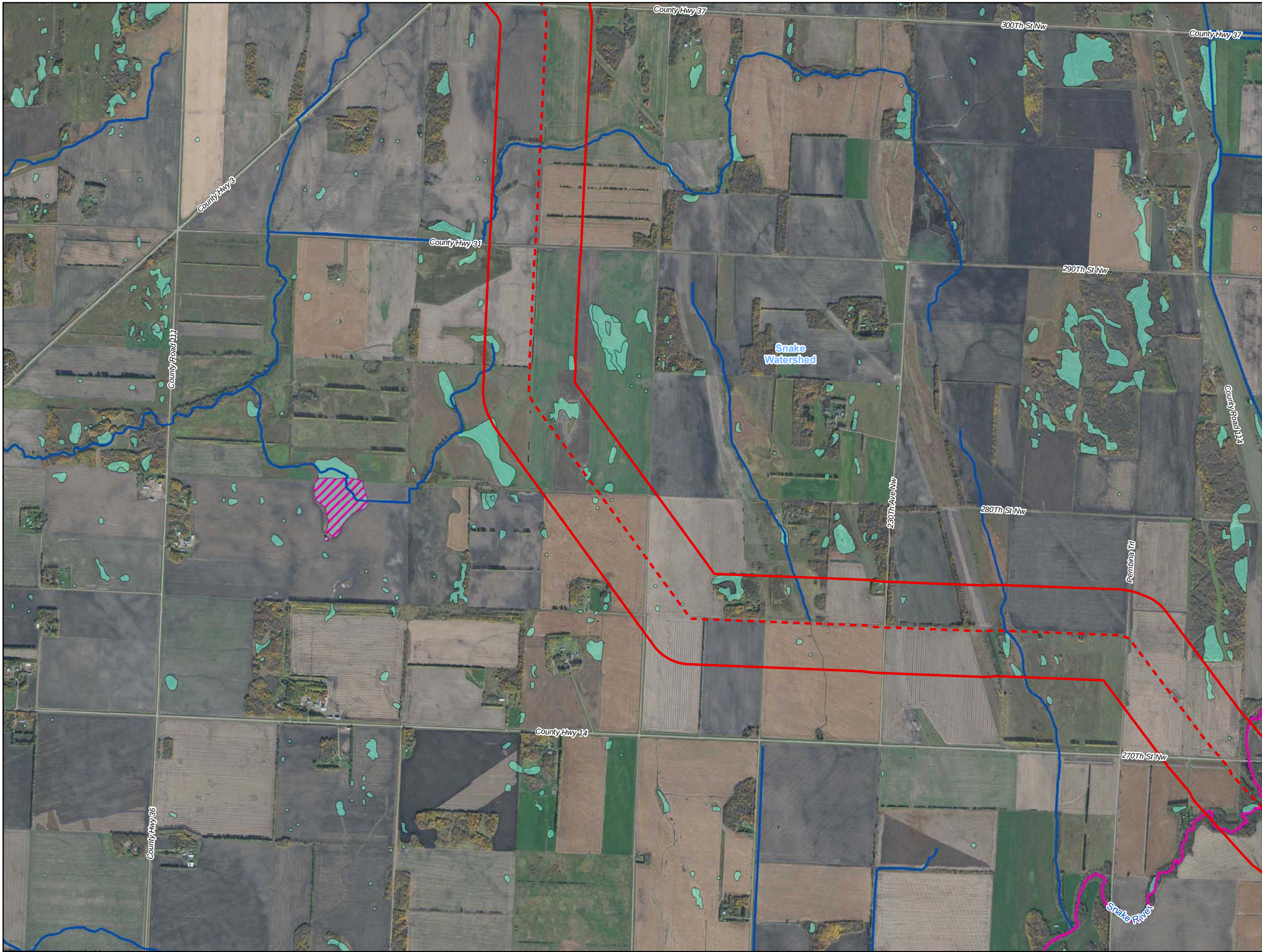
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- ◊ NWI
- ⬢ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 7
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



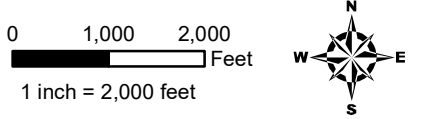
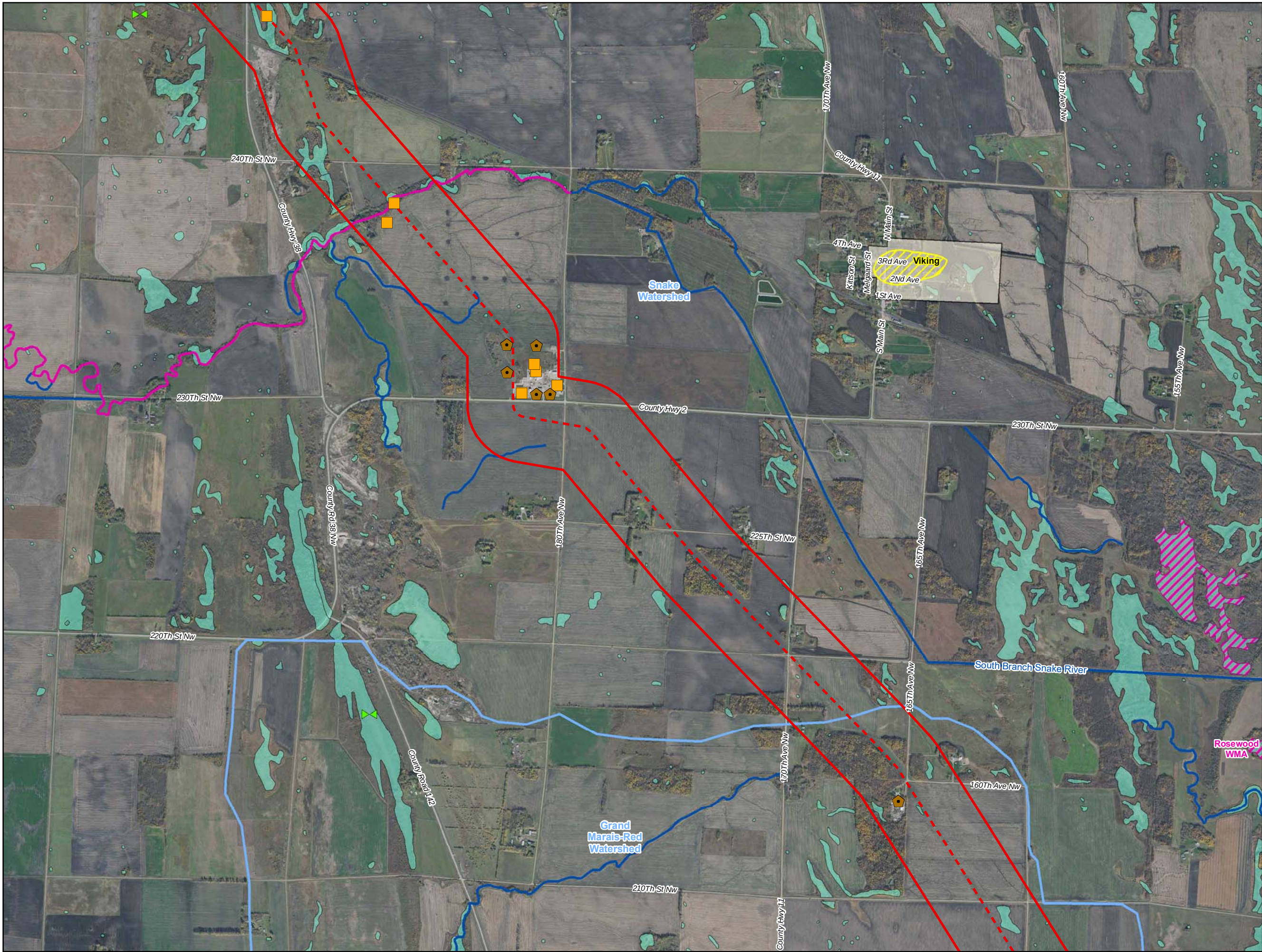
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- ⬭ NWI
- ⬭ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 8
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



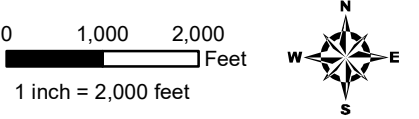
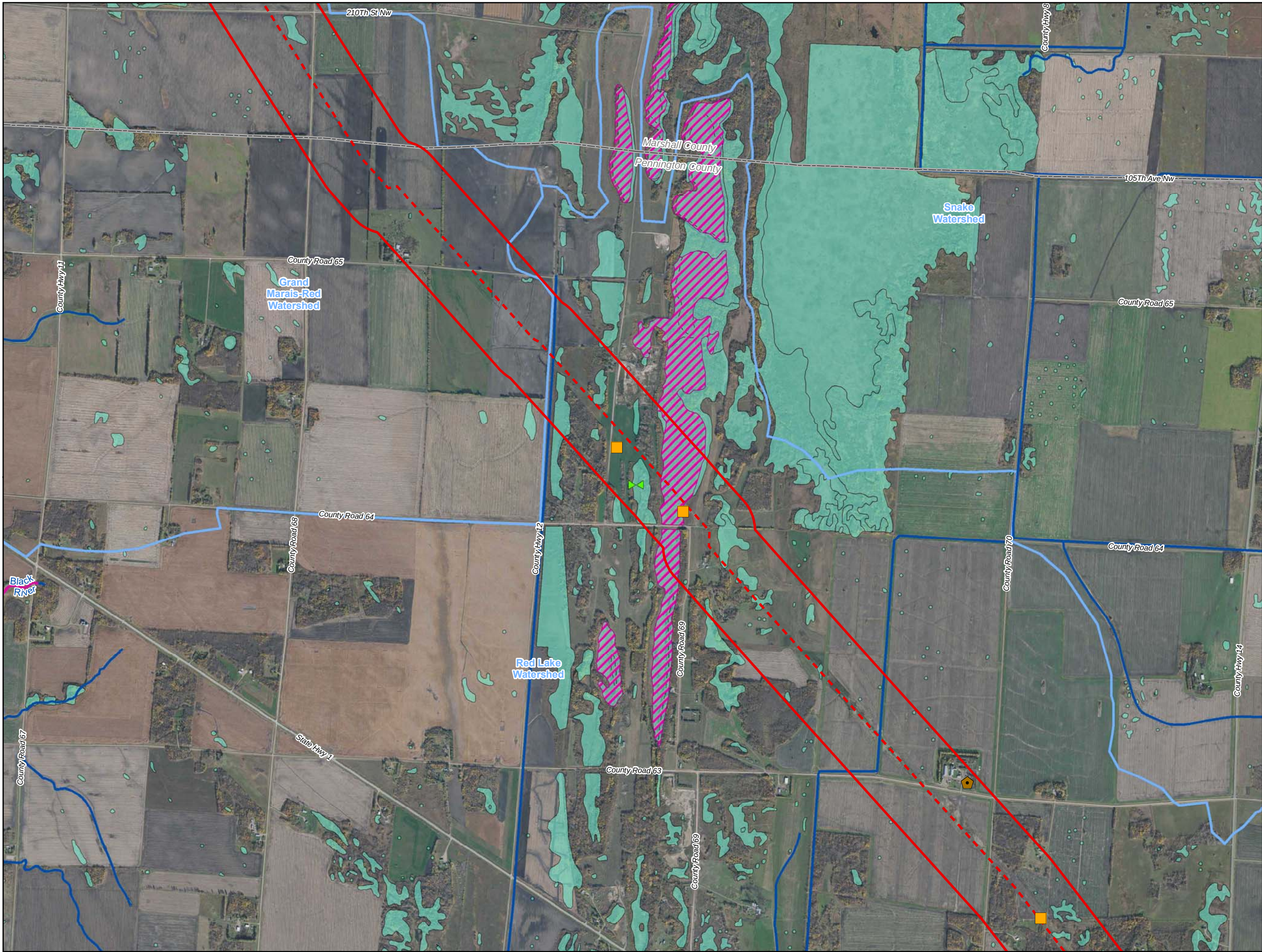
- Line 3 Replacement Milepost
- Water Well
- Surface Water Intake
- Calcareous Fen
- Proposed Line 3 Replacement Pipeline
- Trout Stream
- PWI Stream
- NHD Stream
- PWI Basin
- NWI
- Watershed Boundary
- WHPA
- DWSMA
- 2000 ft Line 3 Replacement Corridor
- County Boundary

Figure 9
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



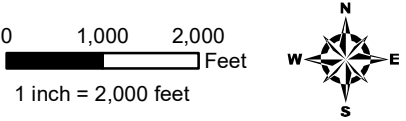
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- NWI
- ⬢ Watershed Boundary
- ▨ WHPA
- DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 11
Line 3 Replacement Project
Enbridge
Marshall County, Minnesota



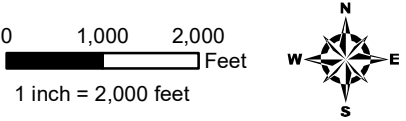
- Line 3 Replacement Milepost
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- Trout Stream
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- NHD Stream
- PWI Basin
- NWI
- Watershed Boundary
- WHPA
- DWSMA
- 2000 ft Line 3 Replacement Corridor
- County Boundary

Figure 12
Line 3 Replacement Project
Enbridge
Pennington County, Minnesota



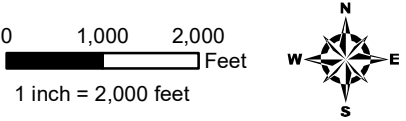
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
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- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- ◊ NWI
- ⬢ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 13
Line 3 Replacement Project
Enbridge
Pennington County, Minnesota



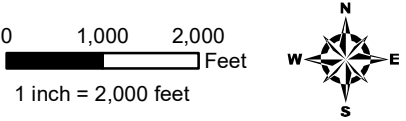
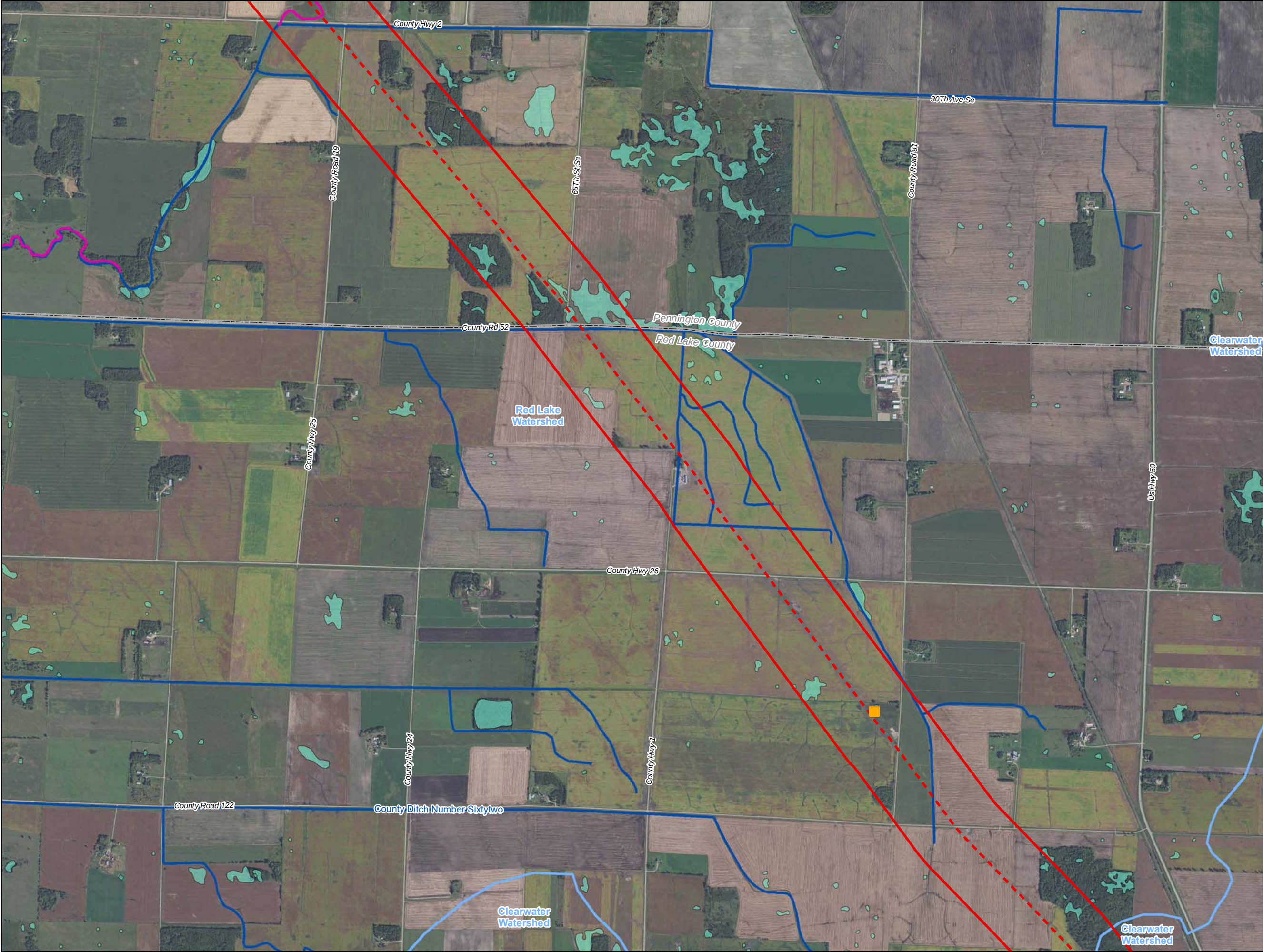
- Line 3 Replacement Milepost
- Water Well
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- Watershed Boundary
- WHPA
- DWSMA
- 2000 ft Line 3 Replacement Corridor
- County Boundary

Figure 14
Line 3 Replacement Project
Enbridge
Pennington County, Minnesota



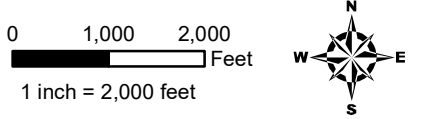
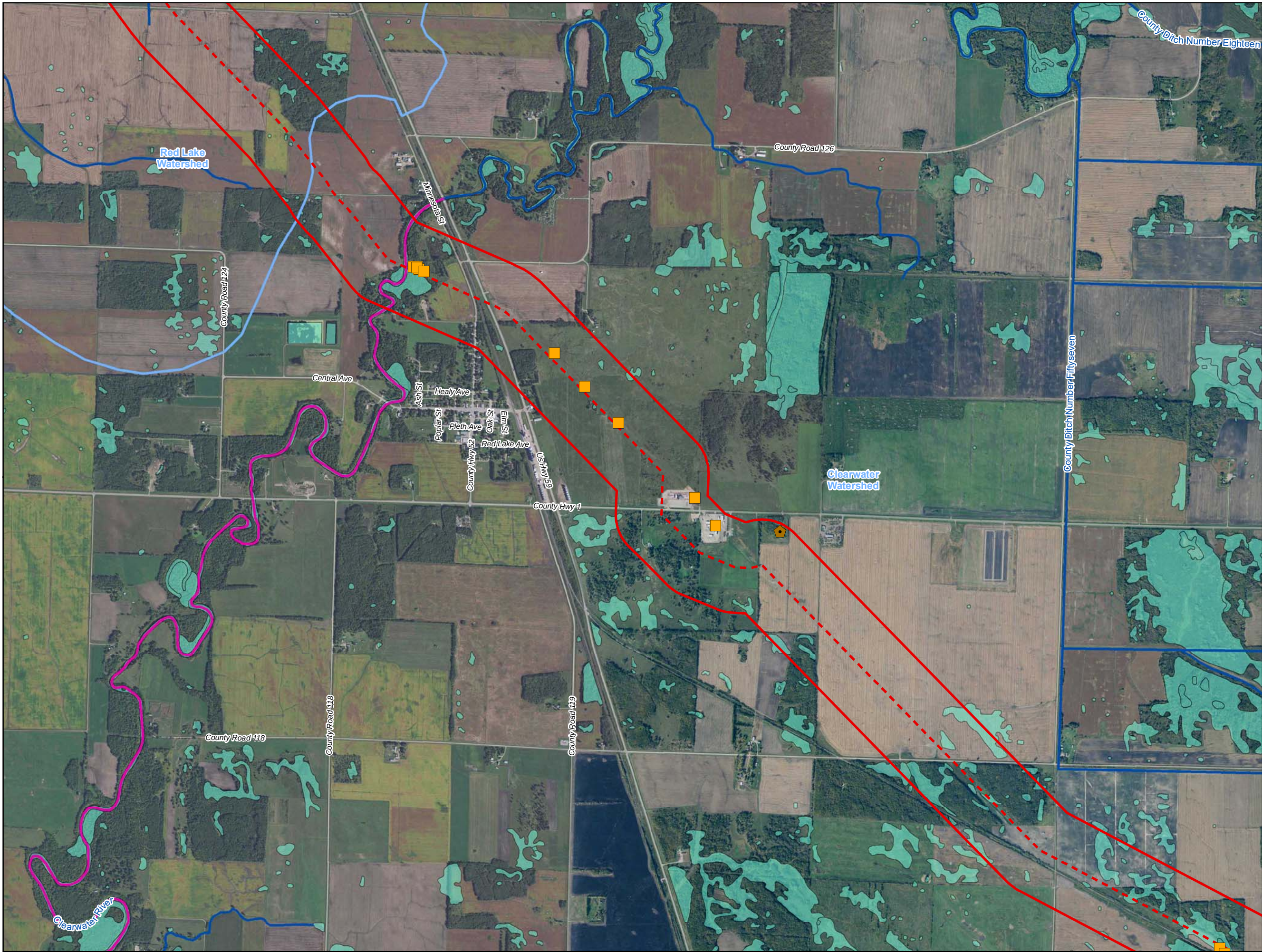
- Line 3 Replacement Milepost
- 🏠 Water Well
- 🟡 Surface Water Intake
- 🟢 Calcareous Fen
- Proposed Line 3 Replacement Pipeline
- 🟠 Trout Stream
- 🟡 PWI Stream
- 🟢 NHD Stream
- 🟡 PWI Basin
- 🟢 NWI
- 🟢 Watershed Boundary
- 🟡 WHPA
- 🟡 DWSMA
- 🔴 2000 ft Line 3 Replacement Corridor
- 🔴 County Boundary

Figure 15
Line 3 Replacement Project
Enbridge
Pennington County, Minnesota



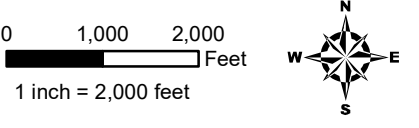
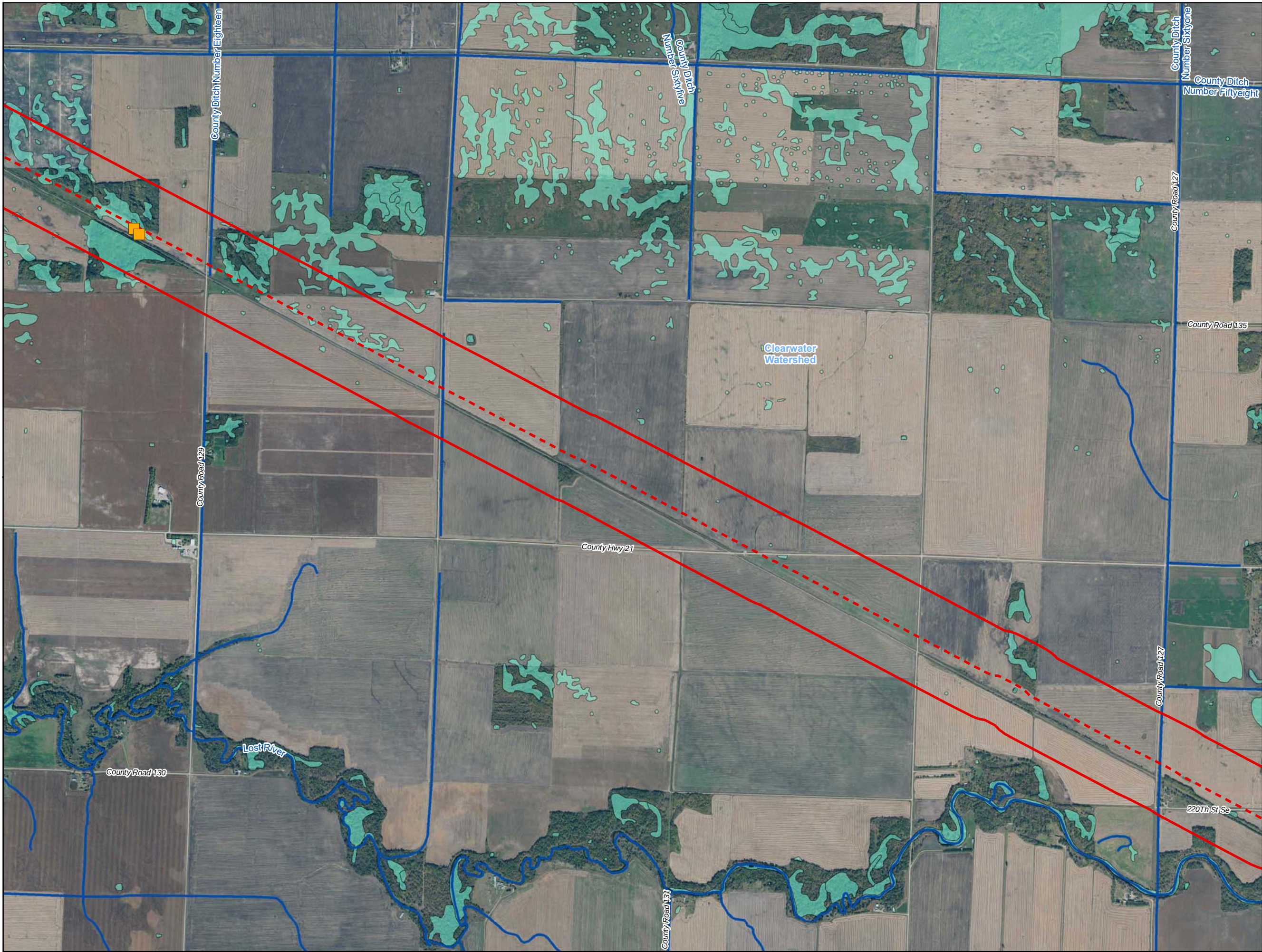
- Line 3 Replacement Milepost
- 🏠 Water Well
- 🟠 Surface Water Intake
- 🌿 Calcareous Fen
- Proposed Line 3 Replacement Pipeline
- 🟡 Trout Stream
- 🟡 PWI Stream
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- 🟡 PWI Basin
- 🟡 NWI
- 🟡 Watershed Boundary
- 🟡 WHPA
- 🟡 DWSMA
- 🟡 2000 ft Line 3 Replacement Corridor
- 🟡 County Boundary

Figure 16
Line 3 Replacement Project
Enbridge
Red Lake County, Minnesota



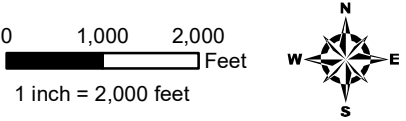
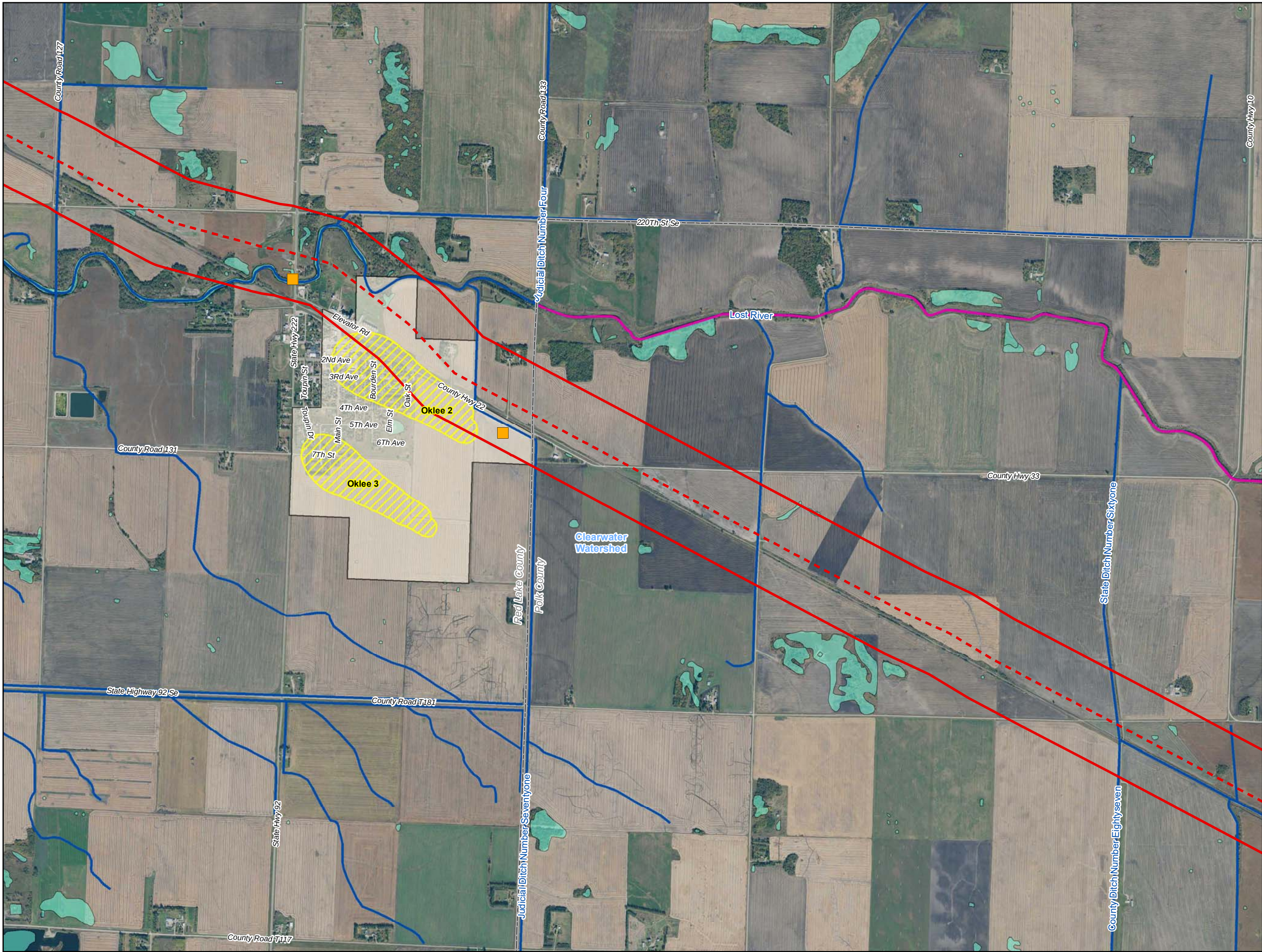
- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
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- ▨ PWI Basin
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- ▨ WHPA
- DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 17
Line 3 Replacement Project
Enbridge
Red Lake County, Minnesota



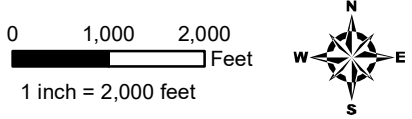
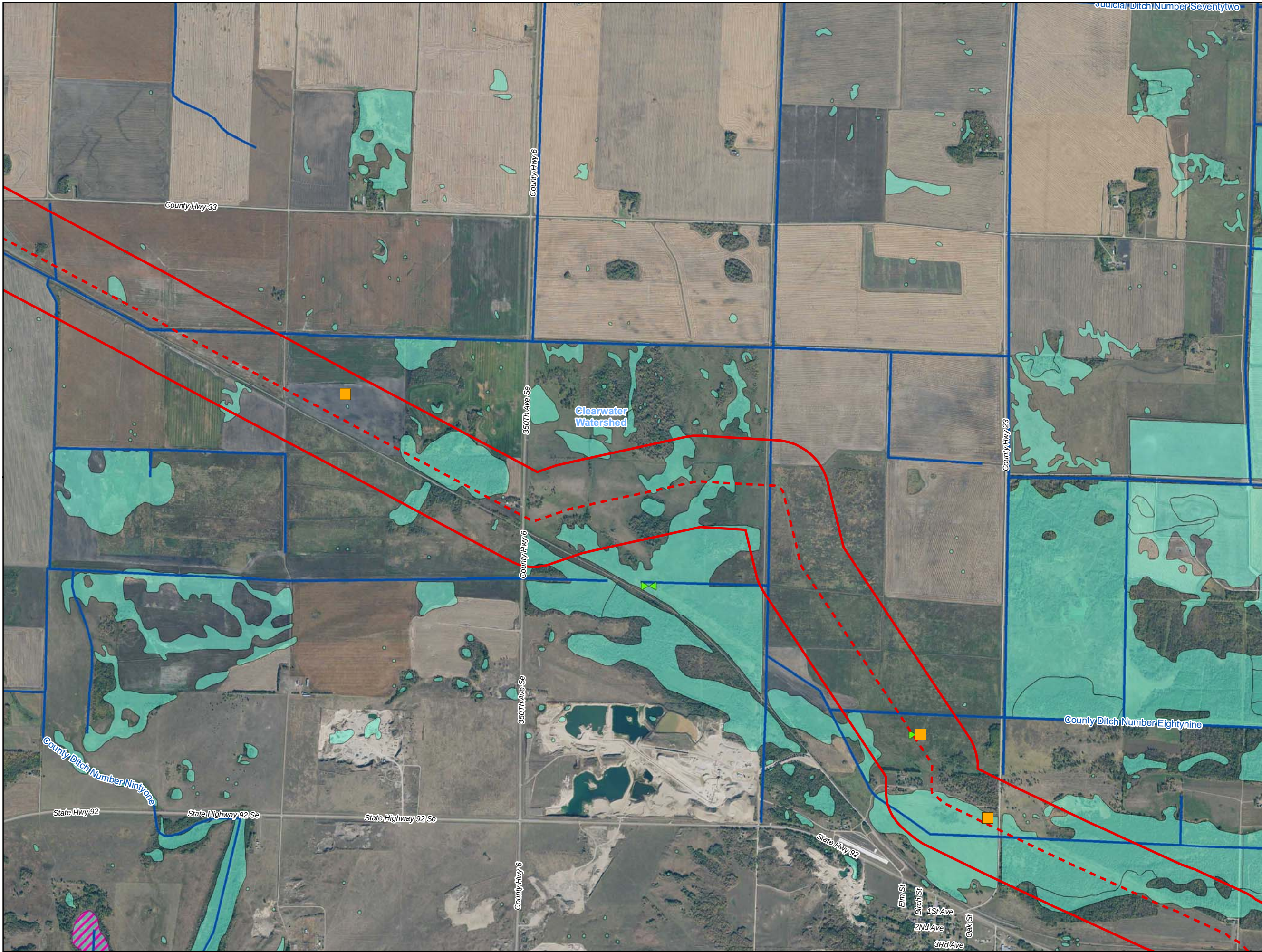
-  Line 3 Replacement Milepost
-  Water Well
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-  Calcareous Fen
-  Proposed Line 3 Replacement Pipeline
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-  Watershed Boundary
-  WHPA
-  DWSMA
-  2000 ft Line 3 Replacement Corridor
-  County Boundary

Figure 18
Line 3 Replacement Project
Enbridge
Red Lake County, Minnesota



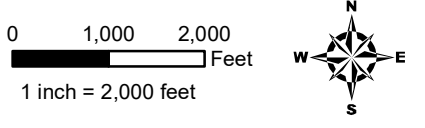
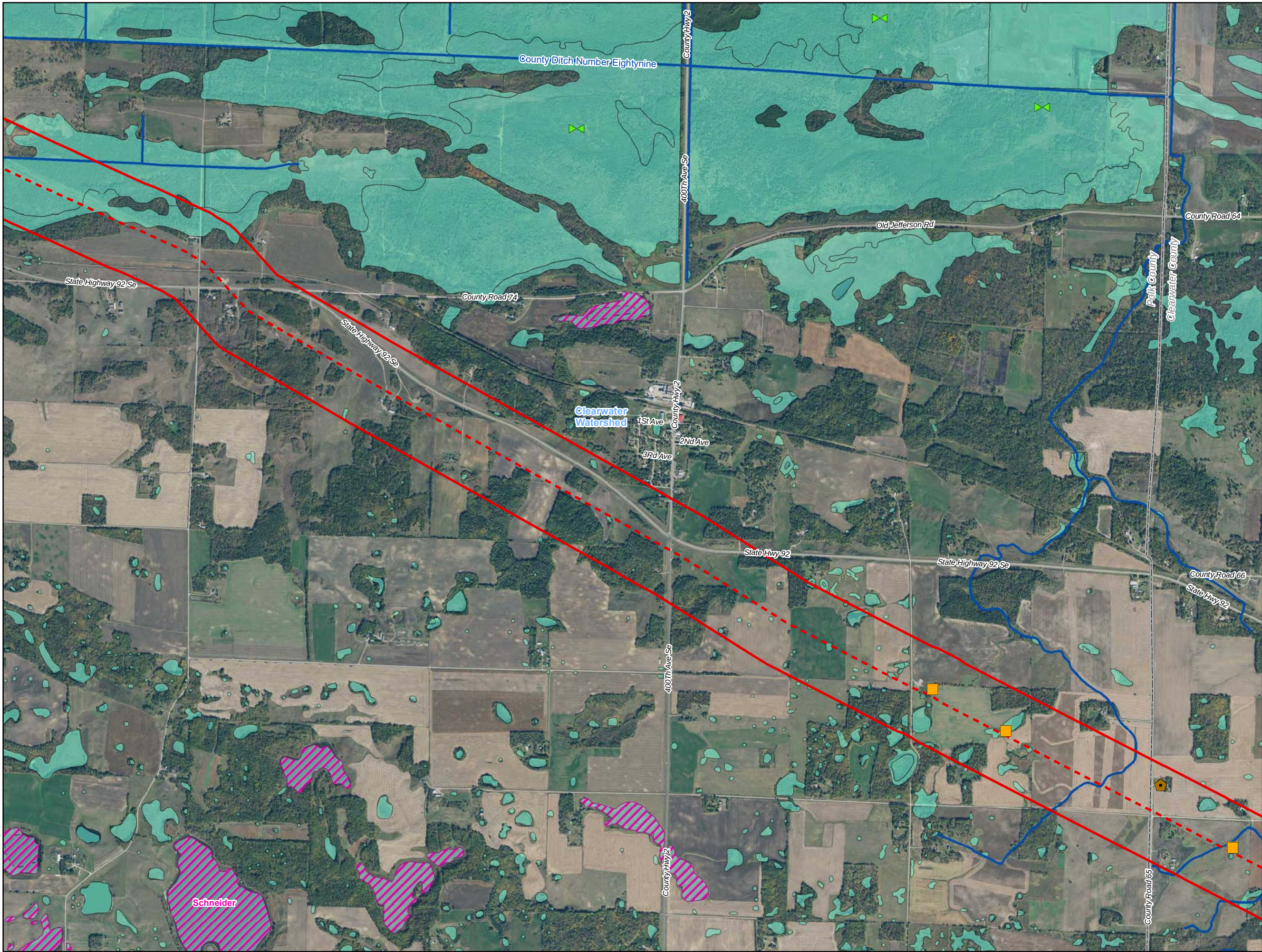
- Line 3 Replacement Milepost
- 🏠 Water Well
- 🟠 Surface Water Intake
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- 🟡 Trout Stream
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- 🟢 NWI
- 🟢 Watershed Boundary
- 🟡 WHPA
- 🟡 DWSMA
- 🔴 2000 ft Line 3 Replacement Corridor
- 🔴 County Boundary

Figure 19
Line 3 Replacement Project
Enbridge
Red Lake County, Minnesota



- Line 3 Replacement Milepost
- ⬢ Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- ◊ NWI
- ◊ Watershed Boundary
- ▨ WHPA
- ▨ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 20
Line 3 Replacement Project
Enbridge
Polk County, Minnesota



- Line 3 Replacement Milepost
- Water Well
- Surface Water Intake
- ✕ Calcareous Fen
- - - Proposed Line 3 Replacement Pipeline
- - - Trout Stream
- ~ PWI Stream
- ~ NHD Stream
- ▨ PWI Basin
- NWI
- ▭ Watershed Boundary
- ▨ WHPA
- ▭ DWSMA
- ▭ 2000 ft Line 3 Replacement Corridor
- ▭ County Boundary

Figure 21
Line 3 Replacement Project
Enbridge
Polk County, Minnesota