BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Ellen Anderson	Chair
David C. Boyd	Commissioner
J. Dennis O'Brien	Commissioner
Phyllis A. Reha	Commissioner
Betsy Wergin	Commissioner

In the Matter of the Application for a Route Permit for the Southwest Twin Cities (Glencoe to Waconia) Transmission System Upgrade	ISSUE DATE: November 14, 2011 DOCKET NO. E-002/TL-10-249 FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING A HVTL PERMIT FOR THE SOUTHWEST TWIN CITIES 115 kV TRANSMISSION LINE UPGRADES TO THE GLENCOE-WACONIA SYSTEM

The above-captioned matter came before the Minnesota Public Utilities Commission on October 20, 2011, acting on an application by Northern States Power Company d/b/a Xcel Energy for a high-voltage transmission line (HVTL) permit to construct approximately 23 miles of 115 kilovolt (kV) transmission line in McLeod and Carver counties.

A public hearing was held on August 24, 2011, at the Clay Community Building in Norwood Young America, Minnesota. The hearing was presided over by Judge Richard Luis, Administrative Law Judge (ALJ) for the Minnesota Office of Administrative Hearings (OAH). The hearing continued until all persons who desired to speak had done so. The comment period closed on September 7, 2011, at 4:30 p.m.

STATEMENT OF ISSUE

Should the Commission find that the Environmental Assessment and the record adequately address the issues identified in the Scoping Decision? Should the Commission issue a HVTL Route Permit identifying specific routes and permit conditions for the proposed Glencoe-Waconia HVTL project?

Based upon all of the proceedings herein, the Commission makes the following:

FINDINGS OF FACT

The Applicant

1. Northern States Power Company d/b/a Xcel Energy is a Minnesota corporation with its headquarters in Minneapolis, Minnesota. Xcel Energy is a wholly-owned subsidiary of Xcel Energy Inc., a utility holding company with its headquarters in Minneapolis. Xcel Energy

provides electricity services to approximately 1.2 million customers and natural gas services to 425,000 residential, commercial and industrial customers in Minnesota. Xcel Energy Services Inc. is the service company for Xcel Energy and its personnel prepare, submit and administer regulatory applications to the Commission on behalf of Xcel Energy, including route permit applications.[1]

2. The Applicant applied for a high-voltage transmission line route permit to construct new and upgraded 115 kV single circuit and 115/69 kV double circuit transmission lines between the proposed Diamond Substation (to be owned and built by the city of Glencoe) in McLeod County and the existing structure #142 on line 0740, east of Glencoe and west of the Augusta Substation in Carver County. The application also includes the relocation and upgrading of the Plato Substation and modifications to the West Waconia Substation.[2]

Project Description

3. The project is located in McLeod and Carver counties, near the cities of Glencoe, Plato, Norwood Young America, and Cologne. The project consists of approximately 0.9 mile of new 115 kV transmission line, 1.9 miles of new 69 kV transmission line that is capable of operating as 115/69 kV double circuit line and upgrade of approximately 20.2 miles of 69 kV transmission line to 115 kV (double circuit 115/69 kV capacity) near the cities of Glencoe, Plato, Norwood Young America and Waconia located southwest of the Twin Cities metro area. The project is approximately 28 miles in total.[3]

   The Applicant proposes to do the following:

   - Construct a new 115 kV Diamond Substation in Glencoe and approximately 5 miles of new 115 kV transmission line between the existing Armstrong Substation and the new Diamond Substation (While this portion of the project is included in the certificate of need proceedings, the final route will be determined and permitted through the local review process of Minnesota Rules, part 7850.5300).

   - Upgrade approximately 4 miles of 69 kV transmission line to 115/69 kV double circuit from the proposed Diamond Substation to the existing Plato Substation.

   - Expand the existing Plato Substation to upgrade the 69 kV distribution load to 115 kV, and to install a capacitor bank on the 69 kV transmission line.

   - Upgrade approximately 10 miles of 69 kV transmission line to 115 kV capacity between the Plato Substation, the Young America Substation and the West Waconia Substation.

   - Construct approximately 1 mile of new 115 kV transmission line along Highway 5 on the west side of the city of Norwood Young America. This new segment is needed to

[1] Ex. 2 at p. 6 (Application).

[2] *Id.*

[3] *Id.*

avoid having to build the 115 kV line into the developed areas of Norwood Young America.

- Upgrade approximately 1 mile of existing 69 kV transmission to 115 kV from the existing West Waconia Substation along Highway 5.

- Construct approximately 2 miles of new 69 kV transmission line from Highway 5 to the existing Augusta 69 kV transmission line. This section would be built to double circuit standard to accommodate a 115 kV transmission line along with the proposed 69 kV line.

- Upgrade approximately 7 miles of existing 69 kV transmission line to 115 kV capacity from the Waconia Tap to just short of the Augusta Substation.

Applicant's Proposed Route

4. The proposed project measures approximately 23 miles in length and primarily follows existing transmission lines and includes modification to two substations. Xcel Energy proposes to do the following:[4]

Segment 1

Rebuild approximately 3.6 miles of existing 69 kV transmission line (Line #0771) to a 115/69 kV double circuit transmission line between the city of Glencoe's new Diamond Substation and the Plato Substation located north of the town of Plato, just west of the intersection of 122nd Street and County Highway 9. This route will begin at the Diamond Substation and proceed 2.1 miles along the south side of 110th Street, crossing Dairy Avenue at the 0.05 mile mark. It proceeds northeast along the west side of Boone Avenue, crossing to the east side at an unnamed tributary to Buffalo Creek. As Boone Avenue turns north, the line continues northeast across agricultural land to the Plato Substation, which will be relocated 250 to 500 feet southwest of the existing substation.

Segment 2

Rebuild approximately 6.4 miles of existing 69 kV transmission line (Line #0771) to a 115 kV transmission line between the Plato Substation to the intersection of State Highway 25/5 and County Highway 34. This route proceeds east from the substation along the north side of McLeod County Road 3 (122nd Street), which becomes Carver County Road 34. The route crosses to the south side of County Road 3 at Zebra Avenue and continues east on the south side of the county road. At Urban Avenue, the route deviates south from County Road 34 right of way, crossing agricultural land and a farmstead. The route crosses to the north side of County Road 34 approximately 500 feet east of County Road 33 and continues to Highway 25/5.

Segment 3

Construct approximately 0.9 miles of new 115 kV transmission line along State Highway 25/5 between the intersection of State Highway 25/5 and County Highway 34 and the intersection of State Highway 25/5 and 5th Avenue NE, located on the northeast side of

[4] Ex. 2 at pp. 8-10.

Norwood Young America. This route will be aligned along the north side of the roadway for all but the easternmost 500 feet, which crosses to the south side of Highway 25/5.

Segment 4
Rebuild approximately 3.2 miles of existing 69 kV transmission line (Line #0735) to a 115 kV transmission line between the intersection of State Highway 25/5 and 5th Avenue and intersection of State Highway 5 and County Road 51. This route extends from the southeast quadrant of Highway 25/5 and 5th Avenue northeastward on the south side of the highway. The route permit includes the Waldon Alternative Route Segment.

Segment 4.5
Construct approximately 150 feet of new 115 kV transmission line from Segments 4 into, and out of the existing West Waconia Substation. This route will be on the south side of Highway 5.

Segment 5
Rebuild approximately 1.0 mile of existing 69 kV transmission line (Line #0735) to a 115 kV transmission line between the West Waconia Substation and the intersection of Highway 5 and County Road 51. This route extends from the substation northeastward on the south side of the Highway 5.

Segment 6
Construct approximately 1.9 miles of new 115/69 kV double circuit transmission line along County Highway 51 between Highway 5 and the existing Xcel Energy 69 kV (Line #0740). The route of this segment could include either the east or west side of County Highway 51.

Segment 7
Rebuild approximately 7 miles of existing 69 kV transmission line (Line #0740) to a 115 kV transmission line between intersection of County Highway 51 and line #0740 and Structure #142 on the west side of Aue Lake. The route proceeds east from County Highway 51 through agricultural land and around the south end of Winkler Lake. East of Winkler Lake, the route continues along the south side of County Road 153. The route continues easterly as County Road 153 turns north, proceeding past the north edge of Miller Lake to the eastern termination of the project.

Plato Substation
The existing Plato substation will be re-built and expanded to accommodate the Project needs. The new Plato facility will be approximately 440 feet by 255 feet in size, and re-located approximately 250 to 500 feet southwest from the existing substation. The existing 69-12.5 kV distribution substation, along with all equipment, structures and foundations, will be removed and relocated based on landowner preference. The new substation will consist of a graded, fenced area with steel box structures and electrical equipment, including a transformer, circuit breakers, switches and a capacitor bank.

West Waconia Substation

Equipment additions at the existing West Waconia Substation will include one 115 kV circuit breaker and associated electrical equipment, such as switches, to accommodate the new 115 kV line. The proposed transmission line will tap into and out of the West Waconia Substation and require a 75 foot right-of-way.

Structure Type and Spans

5. The Applicant proposes to use steel poles with horizontal braced post insulators for the 115 kV single circuit transmission lines. Steel poles with davit arms are proposed for the 69/115 kV double circuit transmission line. Direct embedded weathering steel poles with davit arms are proposed to be used for the tangent structures if soil conditions warrant. Rock-filled culvert foundations may be required in areas with poor soils. Self-supporting weathering steel poles with davit arms on drilled pier concrete foundations are proposed to be used for all long span, angle and dead-end structures. The poles will average 60 to 105 feet in height with spans of 300 to 400 feet between poles. Horizontal post insulators will be used unless design requires longer spans beyond the capability of the insulators, in which case a braced post design will be utilized to accommodate the increased loadings.[5]

Route Width

6. The Applicant requests that the Commission approve a route width of 100 feet on each side of the existing 69 kV transmission line centerline (200 feet total route width), except for those portions (Segment 3 and Segment 6) of the project with no existing transmission line. In these areas the requested route width is 200 feet on each side of the road (County Highway 5/25 and County Highway 51, respectively) centerline for a total route width of 400 feet.[6]

Right-of-Way Placement

7. Where the transmission line route parallels existing highway rights-of-way, the transmission line ROW shall utilize the existing highway right-of-way to the maximum extent possible, consistent with the criteria in Minn. Rules, part 7850.4100, the requirements of the high voltage transmission line (HVTL) Route permit and the requirements for highways under the jurisdiction of the Minnesota Department of Transportation in accordance with Mn/DOT rules, policies, and procedures for accommodating utilities in trunk highway rights-of-way. When the line is parallel to a roadway, poles will generally be placed 5 feet within the private right-of-way adjacent to the roadway.[7]

8. Approximately 1.9 miles of new right-of-way will need to be acquired along County Highway 51 to construct Segment 6. Segment 6 involves construction of a new 69 kV transmission line which will be constructed to be 115/69 kV double circuit capable. The route of this segment

[5] Ex. 2 at pp. 22-24.

[6] Ex. 2 at p. 19.

[7] Ex. 2 at p. 25.

between Highway 5 and the existing Xcel Energy 69 kV line 0740 could be aligned along either the east or west side of County Highway 51.[8]

9. Approximately 0.9 mile of new right-of-way will also need to be acquired along Highway 25/5 to allow the new 115 kV line to bypass the Young America Substation (Segment 3). This route will follow the northwest side of Highway 25/5.[9]

Right-of-Way Width

10. The 115 kV transmission line will be built primarily with single-pole structures, which will typically require a 75 foot ROW; however, the applicant has stated that it will make reasonable attempts to work within the existing 50 foot wide ROW for the rebuild portions of the project.[10]

11. In those portions of the proposed route where there is no current transmission line to be rebuilt, Xcel Energy will require a 75-foot wide right-of-way for the transmission line.[11]

Project Schedule

12. The Applicant expects construction to begin on the Glencoe-Waconia HVTL project in late 2011 and estimates the project will be completed in 2012 with an in-service date of winter 2012. These dates may vary depending on the easement acquisition process.[12]

Project Cost

13. The Applicant estimates that the transmission line and substation modifications will cost approximately $25.6 million. Xcel Energy provides this estimate with a plus or minus 30 percent accuracy, placing the total project cost between $18 and $33 million.[13]

14. Operating and maintenance costs for the project will be nominal for several years, since the line will be new and there is minimal vegetation management required. The typical annual operating and maintenance costs for 115 kV transmission lines across Xcel Energy's Upper Midwest system area are on the order of $300 to $500 per mile of transmission right-of-way. The principal operating and maintenance cost will include inspections, which are usually done by fixed-wing aircraft and by helicopter on a regular basis.[14]

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[8] Ex. 2 at p. 24.

[9] *Id.*

[10] Ex. 2 at p. 24.

[11] Ex. 2 at p. 25.

[12] Ex.2 at p. 12.

[13] Ex. 2 at p. 13.

[14] *Id.*

Procedural History

15. On March 10, 2010, in accordance with Minn. Rules, part 7850.2800, subp. 2, the Applicant filed a letter with the Commission noticing their intent to submit a route permit application under the alternative permitting process set forth in Minn. Stat. § 216E.04 and Minn. Rules, parts 7850.2800 to 7850.3900.[15]

16. On December 10, 2010, the Applicant filed a route permit application (Application) with the Commission for the Southwest Twin Cities 115 kV Transmission Line Upgrades to the Glencoe-Waconia 69 kV System to be constructed in McLeod and Carver counties, Minnesota.[16]

17. The Applicant mailed a Notice of a Submittal of an Application for a Route Permit on December 17, 2010, to those persons whose names are on the general list maintained by the Commission for this purpose, local and regional officials, and property owners in compliance with Minn. Rules, parts 7850.3300 and 7850.2100.[17]

18. The Applicant published Notice of a Submittal of an Application for a Route Permit in the *Chanhassen Villager* (December 23, 2010), *Chaska Herald* (December 23, 2010), *Norwood Young America Times* (December 23, 2010), *Waconia Patriot* (December 23, 2010), *Watertown Carver County News* (December 23, 2010), *Glencoe Enterprise* (December 23, 2010), *Glencoe McLeod County Chronicle* (December 23, 2010), *Hutchinson Leader* (December 23, 2010) and the *Silver Lake Leader* (December 23, 2010) in compliance with Minn. Rules, parts 7850.3300 and 7850.2100, subp. 4.[18]

19. On December 30, 2010, the Energy Facility Permitting (EFP) staff of the Minnesota Department of Commerce (Department) submitted comments and recommendations to the Commission on the completeness of the Applicant's HVTL Route Permit Application. The EFP staff recommended that the Commission accept the route permit application as complete and appoint a public advisor; the establishment of an advisory task force (ATF) was not recommended. The EFP staff also took the opportunity to inform the Commission that it would be combining the environmental review in the certificate of need (CN) and routing dockets for this project in accordance with Minnesota Rules, part 7849.1900, Subpart 1.[19]

20. On January 14, 2011, the Commission accepted the application as complete and authorized the EFP staff to process the application under the alternative permitting process in Minn. Rules, parts 7850.2800 to 7850.3900. The Commission also authorized the EFP staff to name a

[15] Ex.1 (Applicant mailed notice).

[16] Ex 2 (Application).

[17] Ex. 4 (Applicant submittal documentation of mailed and published notice).

[18] *Id.*

[19] Ex. 3 (EFP Comments & Recommendations Application Acceptance).

public advisor; the Commission determined that an advisory task force was not necessary at that time.[20]

21. On February 1, 2011, EFP issued and mailed a Notice of Public Information Meeting to those persons whose names are on the general list maintained by the Commission for this purpose in compliance with Minn. Rules, part 7850.3500, subp. 1, and part 7850.2300, subp. 2. EFP also sent the Notice to designated State Agency Technical Representatives.[21]

22. The Applicant on behalf of EFP published the Notice of Public Information Meeting in the *Chanhassen Villager* (February17, 2011), *Chaska Herald* (February17, 2011), *Norwood Young America Times* (February17, 2011), *Waconia Patriot* (February17, 2011), *Watertown Carver County News* (February17, 2011), *Glencoe Enterprise* (February17, 2011), *Glencoe McLeod County Chronicle* (February23, 2011), *Hutchinson Leader* (February17, 2011) and the *Silver Lake Leader* (February17, 2011) in compliance with Minn. Rules, part 7850.3500 and part 7850.2300, subp. 2.[22]

23. A hard copy of the route permit application was made available at the Glencoe Public Library, the Norwood Young America Public Library, and the Waconia Public Library.[23]

Public Information/Scoping Meeting

24. The scoping process is the first step in developing an environmental assessment (EA). The Department "shall provide the public with an opportunity to participate in the development of the scope of the environmental assessment by holding a public meeting and by soliciting public comments."[24] During the scoping process, alternative routes may be suggested for evaluation in the EA.[25]

25. In accordance with Minn. Rules, part 7850.3500, subp. 1 and 7850.2300, subp. 1 to 4, EFP staff held a public information and environmental review scoping meeting on March 1, 2011, at the Clay Community Building in Norwood Young America, Minnesota.[26]

26. The meetings included two sessions, one starting at 2:00 pm and another starting at 6:00 pm. The meeting covered and fulfilled both the CN and Routing procedural requirements. The purpose of the meeting was to provide information to the public about the proposed project, to answer questions, and to allow the public an opportunity to suggest alternatives and impacts

[20] Ex. 5 (Commission Order on Application Completeness).

[21] Ex. 6 (EFP Notice of Public Meeting).

[22] Ex. 7 (Published Notice of Public Meeting).

[23] Ex. 6 (EFP Notice of Public Meeting).

[24] Minn. Rules, part 7850.3700, subp. 2.

[25] Minn. Rules, part 7850.3700, subp. 2B.

[26] Ex. 12 (Memorandum on Scoping Decision)

that should be considered during preparation of the environmental review document. Written comments were due no later than Wednesday, March 23, 2011.[27]

27. Approximately 35 people attended the public information and scoping meetings; 13 individuals took the opportunity to speak on the record. A court reporter was present to document oral statements. Ten written comments were received.[28]

28. A variety of questions were asked and answered during the oral discussion; topics included: specifics on which lines and poles will be removed, and design/construction of any new poles; specifics on the proposed alignment; the concepts of route width and right-of-way (ROW) width; sources of power generation for this project; and timeline and milestones of the application review process.[29]

29. The major areas of concern for scoping expressed during the public comment period included: health and safety issues, property values, easement plans for deconstructed areas, compensation for easements, and flexibility in siting the final alignment.[30]

30. Alternative routes, alternative route segments and modifications to Xcel Energy's proposed alignment were discussed during the scoping meeting and in comments received during the scoping comment period.[31]

Alternative Routes and Route Segments

31. Maiser alternative route segment. Several residences located along the northwest shores of Rice Lake requested that an *alternative route segment* be considered in a portion of the proposed HVTL route (Applicant's Segment #4). The Applicant's proposal for Segment #4 consists of a rebuild of approximately 3.2 miles of existing 69 kV transmission line (Line #0735) to a 115 kV transmission line between the intersection of State Highway 5 and 5th Avenue/Tacoma Avenue to the intersection of State Highway 5 and County Road 51. The proposed route is 200 feet wide, centered on the existing alignment of the 69 kV line that extends from the southwest (State Highway 5 and 5th Avenue/Tacoma Avenue intersection) to the northeast (State Highway 5 and County Road 51 intersection) south of State Highway 5.

    The Maiser alternative route segment amends a small section of the Applicant's proposed route by locating the route along the north side of State Highway 5, beginning from just west of Rome Avenue to the West Waconia Substation, a distance of approximately 1 ¼ miles. This would allow the new 115 kV HVTL to run along the north side of State Highway 5, possibly as a double-circuit with the existing Great River Energy (GRE) 115 kV HVTL.

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[27] *Id.*

[28] *Id.*

[29] *Id.*

[30] Ex. 12 (Memorandum on Scoping Decision).

[31] *Id.*

The stated purpose of this alternative route segment is to reduce the impact (proximity to buildings, bisecting parcels) to several lakeshore lots that are squeezed between State Highway 5 and the normal high water mark of Rice Lake.[32]

This alternative route segment was carried forward into the scope of the EA.

32. Maiser alternative alignment. The residences located along the northwest shores of Rice Lake also requested that an *alternative alignment* be considered as an additional option to their request for an alternative route segment.

    The Maiser alternative alignment would require that the proposed route width be extended north, approximately 100 feet to the northern edge of State Highway 5. This expansion of the route to the north would allow the proposed alignment to be moved north, away from the residences and lakeshore property, into/along the south ROW of State Highway 5.

    The stated purpose of this alternative alignment is to reduce the impact (proximity to buildings, bisecting parcels) to several lakeshore lots that are squeezed between State Highway 5 and the normal high water mark of Rice Lake.[33]

    This alternative alignment was carried forward into the scope of the EA.

33. Waldron alternative route segment. A residence located along County Road 34 requested that an *alternative route segment* be considered in a portion of the proposed HVTL route (Applicant's Segment #2). The current proposal for the Applicant's Segment #2 consists of a rebuild of approximately 6.4 miles of existing 69 kV transmission line (Line #0771) to a 115 kV transmission line between the Plato Substation and the intersection of State Highway 25/5 and County Highway 34. The proposed route proceeds east from the substation along the north side of McLeod County Road 3 (122nd Street), which becomes Carver County Road 34. The route crosses to the south side of County Road 3 at Zebra Avenue and continues east on the south side of the county road. At Urban Avenue, the route deviates south from the County Road 34 right-of-way, crossing agricultural land and a farmstead. This deviation follows the existing 69 kV transmission line and an abandoned section of old County Road 34. The route rejoins the current County Road 34 just east of the intersection of County Road 33, where it crosses to the north side of County Road 34 and continues to State Highway 25/5.

    The Waldron alternative route segment amends a small section of the Applicant's proposed route by continuing to follow the current County Road 34, eliminating the deviation to the south, between Urban Avenue and State Highway 25/5.

    The stated purpose of this alternative route segment is to realign the HVTL with the current ROW of County Road 34, and thereby reduce the impact to several parcels that are currently divided by the existing 69 kV transmission ROW.[34]

[32] *Id.*

[33] *Id.*

This alternative route segment was carried forward into the scope of the EA.

34. Kramer alternative route (Hwy 212 alternative route). A request was submitted for an evaluation of an *alternative route* that would follow the US Highway 212 ROW from the proposed Diamond Substation to the Augusta Substation. Connection from this line to the Diamond Substation would be along Dairy Avenue and the connection between the Augusta Substation and the new line would be along County Road 43.

    The stated purpose of this alternative route is to reduce construction and maintenance costs, allow better access for maintaining the transmission line, reduce the length of the HVTL, and to move the ROW to less populated areas.[35]

35. Kramer alternative route segment (partial Hwy 212 alternative route segment). A request was submitted for an evaluation of an *alternative route segment* that would follow the US Highway 212 ROW from the Diamond Substation east to the intersection with State Highway 25. The new line would then follow the State Highway 25 ROW northeast approximately one mile, where it would join and continue along the Xcel Energy's proposed HVTL route to the Augusta Substation. Connection from this alternative line to the Diamond Substation would be along Dairy Avenue.

    The stated purpose of this alternative route is to reduce construction and maintenance costs, allow better access for maintaining the transmission line, reduce the length of the HVTL, and to move the ROW to less populated areas.[36]

36. At the request of EFP staff, Xcel Energy performed a preliminary engineering analysis on a variety of potential routes that utilize the Highway 212 corridor, including the two Kramer alternatives. This request was made to determine whether these alternatives warranted further consideration in the environmental document (i.e., inclusion in the Scoping Decision.[37]

37. The Highway 212 alternatives (including the Kramer alternatives) do not meet Xcel Energy's stated current or potential future local needs of the area, will create new impacts without eliminating the need for the current 69 kV line and cost more than the proposed transmission line upgrade.[38]

    The Highway 212 alternatives were not carried forward into the scope of the EA.

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[34] *Id.*

[35] *Id.*

[36] *Id.*

[37] *Id.*

[38] Ex. 13 Environmental Assessment at pp. 22-24.

38. The scoping decision for the environmental assessment was by the Department on April 1, 2011, filed with the Commission and made available to the public as provided in Minn. Rules, part 7850.3700, subp. 3.[39][40]

Environmental Assessment

39. The environmental assessment was filed with the Commission and made available on July 26, 2011.[41] The environmental assessment was prepared in accordance with Minn. Rules, part 7850.3700, and contained all the information required.

40. On July 26, 2011, EFP staff mailed hard copies of the EA to state and federal agency technical representatives. A hard copy of the EA was also sent to the Glencoe Public Library, the Norwood Young America Public Library, and the Waconia Public Library for public review purposes.[42]

41. On July 26, 2011, EFP mailed a combined Notice of Public Hearing and Availability of Environmental Assessment to those persons whose names are on the project contact list, local and regional officials, and property owners in compliance with Minn. Rules, part 7850.3700, subd. 6.[43]

42. The Applicant, on behalf of the EFP, published combined Notice of Public Hearing and Availability of Environmental Assessment in the *Norwood Young America Times* (August 4, 2011), *Waconia Patriot* (August 4, 2011), and the *Glencoe McLeod County Chronicle* (August 3, 2011).[44]
43. Pursuant to Minn. Rules, part 7850.3700, subp. 6, EFP published combined Notice of Public Hearing and Availability of Environmental Assessment in the *EQB Monitor* (August 1, 2011).[45]

44. The Environmental Assessment was provided to the public agencies with authority to permit or approve the proposed project and was also posted to the Commission's Energy Facilities Permitting website in accordance with Minn. Rules, part 7850.3700, subp. 6.

45. The Environmental Assessment evaluated the Applicant Proposed Route, the Maiser Alternative Route/Alignments, and the Waldron Alternative Route Segment.[46]

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[39] Ex. 12 Scoping Decision.

[40] Ex. 11 Notice of Scoping Decision.

[41] Ex. 13 Environmental Assessment.

[42] Ex. 14 Notice of Public Hearing & Availability of EA.

[43] *Id.*

[44] Ex. 15 Published Notice of Public Hearing and Availability of EA.

[45] Ex. 14 Notice of Public Hearing & Availability of EA.

[46] Ex. 13 Environmental Assessment.

Public Hearing

46. On July 26, 2011, EFP mailed a combined Notice of Public Hearing and Availability of Environmental Assessment to those persons whose names are on the project contact list, local and regional officials, and property owners in compliance with Minn. Rules, part 7850.3700, subd. 6.[47]

47. On September 15, 2010, EFP sent via Certified mail a combined Notice of Public Hearing and Availability of Environmental Assessment to chief executives of the regional development commissions, counties, organized towns, townships, and incorporated municipalities in accordance with Minn. Stat. § 216E.03, subd. 6.[48]

48. Pursuant to Minn. Stat. § 216E.03, subd. 6, the Applicant, on behalf of the EFP, published combined Notice of Public Hearing and Availability of Environmental Assessment in the *Norwood Young America Times* (August 4, 2011), *Waconia Patriot* (August 4, 2011), and the *Glencoe McLeod County Chronicle* (August 3, 2011).[49]

49. Minnesota Office of Administrative Hearings, Richard Luis, Administrative Law Judge (ALJ) presided over the public hearing conducted on August 24, 2011. The public hearing was held at the Clay Community Building in Norwood Young America, Minnesota. The ALJ provided an opportunity for members of the public to ask questions or comment on the proposed project verbally and/or to submit question/comments in writing.[50]

50. Testimony was heard from the Applicant, Northern States Power Company, a division of Xcel Energy, and four members of the public. The record closed on September 7, 2011, the last day set for receipt of written comments by mail. Valerie Herring, Esq., Briggs and Morgan, appeared on behalf of the Applicant. Bill Storm, State Planning Director, Minnesota Department of Commerce, appeared on behalf of the Department. Michael J. Kaluzniak, State Planning Director, appeared on behalf of the staff of the Minnesota Public Utilities Commission (Commission).[51]

51. Approximately 12 members of the public attended the public hearing. All persons who desired to speak were afforded a full opportunity to make a statement on the record

52. The public hearing transcript was filed by the Office of Administrative Hearings designated court reporter on September 7, 2011.[52]

[47] Ex. 14 Notice of Public Hearing & Availability of EA.

[48] *Id.*

[49] Ex. 15 Published Notice of Public Hearing and Availability of EA.

[50] Ex. 14 Notice of Public Hearing & Availability of EA.

[51] ALJ Summary Of Testimony.

[52] Public Hearing Transcript.

53. The ALJ filed the Summary of Public Comment on October 22, 2010.[53] The ALJ received post-hearing comments that elaborated on the themes expressed at the public hearing.

54. The ALJ report contains a summary of oral public comments provided at the hearing.

55. The Company's oral presentation at the hearing was led by Paul Lehman, its Manager of Regulatory Administration. The Company's routing lead person on the project, Siting and Permitting Supervisor Tim Rogers, and Srinivas Vemuri, a Transmission Planning Engineer for the company, offered oral testimony to supplement their Prefiled Written Testimony in the case.[54]

56. Mr. David Meyer, the General Manager of Glencoe Light and Power, spoke in favor of the granting of the Certificate of Need and the Line Permit. The Glencoe Light and Power Commission (Glencoe P&L), which serves the cities of Glencoe and Biscay and associated territory, is proposing to build a 115kV line in conjunction with that of the Applicant in this proceeding, NSP. Glencoe's line will begin at the city's Armstrong Substation (located on the west side of Glencoe), and travel across the community to the east side of Glencoe, ending at the proposed Diamond Substation. At that point, Xcel's line will continue for the rest of the length of the project.[55]

    The primary benefit to the city of Glencoe, if this project is approved, is that its present power source, one single electric feed purchased from Central Minnesota Municipal Power Association (CMMPA) on a straight west to east radial transmission line, will be replaced by a "loop feed" which would transmit electrical power to Glencoe from both directions.[56]

    Construction of the new Diamond Substation, which will be owned by the city of Glencoe, will help serve the anticipated growth and demand from the future development of the city of Glencoe.[57]

57. A member of the public (Loren Heupenbecker) questioned Mr. Meyer as to whether the city of Glencoe had explored other options as sources for its loop line, and Mr. Meyer declared that, to his knowledge, there were no other options because the current feed from the west side of Glencoe is on a lateral line from the western substation.[58]

58. On behalf of NSP, Paul Lehman explained that the purpose of the Glencoe-Waconia project would be to provide an upgrade in service to a number of communities on the line between the

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[53] ALJ Summary Of Testimony.

[54] *Id.*

[55] *Id.*

[56] *Id.*

[57] ALJ Summary of Testimony.

[58] *Id.*

two larger communities, including Norwood Young America. The Company wants to assure that it can maintain reliable and adequate service of electricity to its customers.[59]

59. Mr. Timothy Rogers testified about the general scope of the project, explaining that it has been divided into seven segments.[60]

Mr. Rogers testified about alternative suggestions for the line and why the Company accepted, modified, or rejected them. Specifically, Mr. Rogers talked about the Waldron Alternative suggestion, found in Segment Four of the project, relating to the location of the power line supporting structures outside the right-of-way along the south side of County Road 34. Mr. Rogers declared that the Waldron alternative "Makes sense to us and Xcel supports this alternative."

Mr. Rogers also explained why the Company was unable to agree with the proposed options presented in the "Maiser Alternatives". The Maiser Alternative Option 1 recommends rebuilding the line on the north side of Highway 5 between Rome Avenue and the West Waconia Substation.

Mr. Rogers explained that the Maiser Alternative Option 1 would create a "pinch point" at the location of a commercial building that distributes veterinary supplies, such that there would not be enough room to go between the building and the existing power line (owned by Great River Energy) along Highway 5.

The Maiser Alternative Option 2 requested that the proposed transmission line be constructed as a double-circuit line with the existing GRE 115 kV HVTL located on the north side of TH 5. Mr. Rogers explained that the Company cannot support this option because of the additional expense and complications/difficulties for the electrical system in handling simultaneous outages associated with the 69 kV and GRE's 115 kV line.

The Maiser Alternative Option 3 also asked for the Company to look at adjusting the site of the proposed line slightly to the north at another location, while staying on the south side of Highway 5. Mr. Rogers explained that the Company cannot support this option because of the conflict with Minnesota Department of Transportation's planned expanded right-of-way on the south side of Highway 5.

In addition to Mr. Rogers's presentation on routing, Mr. Srinivas Vemuri explained his prefiled testimony that described "minor" changes that Xcel is proposing to its operating voltage and configuration for two segments of the proposed project, and the reasons for those changes. The purpose of the changes is to accommodate an additional load expected near the city of Chaska that is coming online sooner than expected, such that it was not foreseen at the time of the original application in this case. Comments from the city of Chaska include an announcement that United Health Group is developing a new data center in Chaska that is anticipated to have a peak demand of 20 megawatts, which will significantly increase the required load in the

[59] *Id.*

[60] *Id.*

Chaska area. The increased load will require additional improvements to the transmission facilities in and around Chaska. Specifically the new data center will require upgrading several Chaska area 69kV transmission lines to 115kV capacity, and the proposed modifications to the Glencoe-Waconia Project are necessary to be compatible with the transmission facility upgrades near Chaska.

60. Richard Stolz, a property owner in the City of Norwood Young America, expressed concern about the precise meaning of the Company's plans to "retire "transmission line poles on land that it owns, which poles will no longer be necessary for the newer transmission system it plans to build. When asked whether the Company's plan to "retire" the poles which no longer would be used meant to remove them, Mr.Rogers explained that "retired" meant that the power line structures, including conductors, would remain in place but that the Company would take down the wiring and cut the flow of power between the poles.[61]

61. The Company's project includes two areas near the existing Young America Substation where an existing kV transmission line will be "deconstructed." The first area of deconstruction for 69kV poles extends from the intersection of the common portion of Highways 25 and 5 and County Road 34 to the Young America Substation, approximately one-half block north of and parallel to First Street NW.[62]

62. Mr. Stolz asked about whether the existing 69kV transmission structures located on his property could be removed after the line was deconstructed. During the hearing, Mr. Rogers told Mr. Stolz he believes the structures on the Stolz property would remain in place.[63]

63. In his post-hearing submission, Mr. Rogers stated that "After further examination and consultation with the transmission engineer for this Project, it is my understanding that the structures on Mr. Stolz's property would be removed as these structures do not support a distribution circuit."[64]

The Company proposes to remove all existing 69kV transmission structures that do not support distribution circuits. To clarify, if an existing 69kV transmission structure has distribution underbuild (distribution lines running underneath the transmission line), then the structure will remain in place but would be "topped off"(the top portion of the pole that held the transmission conductors would be removed).

Mr. Rogers noted in his post-hearing submission also that, if the Public Utilities Commission chooses to include the Waldron Alternative Route Segment in the route, which would move the 115 kV line closer to County Road 34, the existing 69 kV structures along old County Road 34 would be removed if such structures do not support any distribution circuits.

[61] *Id.*

[62] *Id.*

[63] *Id.*

[64] *Id.*

64. Mr. Loren Huepenbecker expressed concerns about possible safety issues associated with proposed high voltage transmission lines being in close proximity to a truck storing flammable material, which he parks on his land that is in the vicinity of the proposed transmission line route. The Huepenbecker property is on the east side of Carver County Road 51, along a proposed 115/69 kV double-circuit portion of new transmission line.[65]

65. In his post-hearing submission, Mr. Rogers noted that the Company has experience in constructing and operating transmission lines near tanks storing flammable materials and has built and operated such facilities safely. While the Company does not believe that there are any safety concerns associated with the proximity of Mr. Huepenbecker's truck to the proposed transmission lines, the Company's proposed alignment along that section of the route is along the west side of County Road 51, the opposite side of the highway from Mr. Huepenbecker's property.[66]

66. Mr. Lowell Noeldner owns farm property outside of Cologne, Minnesota, which property is along County Road 51 South between State Highway 5 and the community of Bongards.[67]

67. Mr. Noeldner is concerned that the Company will run its power poles along Highway 51 in a position where the digging necessary to put the structures in place would cut or otherwise damage the tiling system that drains his fields. Mr. Noeldner's tiles lie approximately three to four feet underground anddrain an area that would otherwise be a swamp, absent the tiling system. The Company's placement of structures to support the new 115kV transmission line would involve digging approximately eight to ten feet below the surface of the ground in order to provide proper support for the structures.[68]

    Mr. Noeldner's property runs along the east side of County Road 51. The west side of Highway 51 at that point already is occupied by a distribution line, and Mr.Noeldner wonders whether the two lines can be combined on structures that would be built away from his property.

68. In response to Mr. Noeldner, Mr. Rogers noted that it would be difficult to under build distribution lines on the transmission line already constructed on the west side of Highway 51, which was a major reason why the Company plans to build on the east side.[69]

69. Brian Meilke of Xcel noted that the Company's officials had talked to Mr.Noeldner at the scoping meeting conducted earlier in this matter, and had gotten "some idea" where Mr. Noeldner's tiles are located. Mr. Mielke noted also that the Company was trying to obtain and interpret aerial maps of the general locations of tiling in the project area, in hopes of obtaining photographs where tiles are physically visible at the ground surface. He noted also that if the tiles are damaged the Company is "absolutely responsible." For example, if crops are flooded

[65] *Id.*

[66] *Id.*

[67] *Id.*

[68] *Id.*

[69] *Id.*

out as a result of a broken tile, the landowner or renters of the farmland will be reimbursed for the lost crops and the Company will pay for fixing the damaged tile. Mr. Noeldner was skeptical that farmers would be reimbursed fairly.[70]

70. Two state agencies filed written comments, the Minnesota Department of Transportation (MnDOT) and the Minnesota Department of Natural Resources (MnDNR).[71]

71. MnDOT's primary concern is the safety of the transportation system and effectiveness of any operations or maintenance of the state trunk highway system, including any additional costs that may be imposed on the state trunk highway fund as a result of locating the proposed HVTL.[72]

72. MnDOT notes that the Environmental Assessment (EA) in this matter describes the coordination that must occur in locations where the HVTL is planned to intersect with public highways, and that MnDOT plans to make improvements to Trunk Highway 5, County Road 34 and some city streets near Norwood Young America. MnDOT intends to implement its Utility Accommodation Policy to determine whether and where to issue permits to Xcel in places where proposed intersections of state highways and the power line project will occur.

73. The Department of Transportation notes that, in determining the final route for the HVTL, it is important to leave as much space as possible in locations where future highway improvement projects are anticipated to minimize the risk that more public funds will be needed in the future to relocate the new HVTL. Each pole location will need to be assessed for considerations such as highway clear zone impact, and impacts on visibility or drainage requirements, so MnDOT cautions that the route should be sufficiently wide to preserve flexibility for the Transportation Department to work with the Applicant to determine appropriate specific locations for each pole.

    In specific, the MnDOT is concerned particularly with the alternative alignment proposed in the Maiser Alternative, which would move the power line closer to Highway 5 than an existing 69kV line. That move would likely cause the new line to occupy the same location as a future expansion area for widening Trunk Highway 5. In addition, the Maiser Option does not include the cost to the public involved with relocation of the HVTL as part of a highway expansion project, should a widening of highway right-of-way occur at that point along Highway 5. The MnDOT cautions that, in order for the Minnesota Public Utilities Commission to make a fully-informed selection based on all the pros and cons of various alternatives, such as the Maiser proposal, the costs involved in such a relocation need to be recognized and evaluated.

74. The MnDNR noted that it had filed a letter with the Department of Commerce during the earlier stages of this proceeding (on March 23, 2011) requesting modification of some of the proposed swan diverter locations. From MnDNR records, the Department of Natural Resources

[70] *Id.*

[71] *Id.*

[72] *Id.*

notes also that no coordination yet has occurred with the Company or the Department of Commerce regarding recommended adjustments to those swan diverter locations.[73]

In areas where construction sites would need to be regraded so that all surfaces drain naturally and would be left in conditions that would facilitate natural revegetation, the DNR recommends specific restoration of native vegetation in those areas. Its letter notes that bare soil should not be included as an option, because it may result in erosion or the introduction of invasive plant species.

The DNR is concerned also that details are lacking about what specific vegetation maintenance would include, especially regarding methods of maintenance. The DNR continues to recommend an analysis of minimization of forestry impacts near waterways due to any clearing that may result in construction of the proposed power lines.

The MnDNR notes that the Route Permit Application indicates 61 poles (estimated) will be placed within wetlands. The MnDNR believes the Applicant should avoid impacts to wetlands where and when feasible by spanning or through alignment adjustments, and that further analysis should include a more detailed discussion on pole placements, both within the existing transmission line corridor and the new line route. Other potential impacts such as avian collisions or invasive species should also be considered in these more sensitive areas, especially if large wetland complexes would-be crossed by the route. Also, the MnDNR is concerned about whether or not data from the Natural Heritage Information System (NHIS) has been updated.

The MnDNR notes also that it will be issuing, if necessary, Licenses to Cross Public Lands and Waters.

The MnDNR is concerned also that the listing of the location of all possible gravel pits in the area is incomplete.

Environmental Assessment

75. In the route permit application, the Applicant identified a Proposed Route of approximately 23 miles. The proposed route is divided into seven segments, five of which are a rebuild of the existing Glencoe to Waconia 69 kV system to 115 kV. Two of the segments (segment 3 and segment 6) would require new right-of-way, totaling 2.8 miles.[74]

76. The Energy Facility Permitting staff of the Department of Commerce elected to combine its environmental review responsibilities under the Certificate of Need process with the environmental review procedures under the HVTL Route Permit procedures (Minnesota Rules, part 7849.1900, Subpart 1) for the Southwest Twin Cities 115 kV Transmission Line Upgrades

[73] *Id.*

[74] Ex. 2 (Application).

to the Glencoes – Waconia 69 kV System project. The result was a single environmental review document, an Environmental Assessment.[75]

The environmental assessment addressed the issues required in Minnesota Rules, part 7849.1500, subpart 1 and Minnesota Rules, part 7850.3700, subpart 4, and as determined in the Scoping Decision of April 1, 2011.

77. Through the Scoping process two alternative route segments/alignment modifications were identified for evaluation in the environmental assessment; the two alternatives were named the Maiser Alternative and the Waldron Alternative.[76]

Socioeconomic and Cultural Values

78. There will be short-term impacts to community services as a result of construction activity and an influx of contractor employees during construction of the various segments of the project. Both utility personnel and contractors will be used for construction activities. The communities near the project should experience short-term positive economic impacts through the use of the hotels, restaurants and other services by the various workers.[77]

79. There is no indication that any minority or low-income population is concentrated in any one area of the project, or that the transmission line would cross through an area occupied primarily by any minority group.[78]

80. One of the first concerns of many residents near existing or proposed transmission lines is how that proximity could affect the value of their property. In the matter of property values, potential impact would typically be a negotiated settlement in an easement agreement between the Applicant and the landowner. In this case, the incremental differences between properties with the existing 69 kV and the same properties with the proposed 115 kV HVTL would be difficult to discern.[79]

Displacement

81. The proposed project maximizes the use of existing transmission line corridors – the proposed route uses existing transmission rights-of-way for all but approximately 2.8 miles of its length. The use of existing transmission line corridors was an important factor for this project because using existing corridors reduces transmission line proliferation and new impacts to residences. There is no structure along the route of this project that would require relocation. Displacement of residential homes or businesses is not anticipated.[80]

[75] Ex. 13 Environmental Assessment.

[76] Ex. 12 Memorandum on Scoping Decision & Scoping Decision.

[77] Ex. 13 at p. 26-27 (EA).

[78] *Id.*

[79] Ex. 13 at pp. 26-27.

[80] *Id.*at pp. 29-30 (EA).

Noise

82. The Minnesota Pollution Control Agency (MPCA) has established standards for the regulation of noise levels.[81]

83. For residential, commercial and industrial land, the MPCA noise limits are 60-65 A-weighted decibel (dBA) during the daytime and 50-55 dBA during the nighttime.[82]

84. The project consists of a 115 kV transmission line and a 115/69 kV double circuit transmission line. Computer modeling performed by Xcel Energy using the BPA 1977 software under the worst case wet conditions scenario indicated that the audible L5 and L50 noise levels (discussed below) measured at the edge of the 100 wide right-of-way (50 feet from centerline) would be at 19.6 and 16.8 dBA, respectively, well below the MPCA nighttime L50 limit of 50 dBA for Noise Area Classification 1. [83]

85. Transformer "hum" is the dominant noise source at substations. Transformer hum is caused by magnetostrictive forces within the core of the transformer. These magnetic forces cause the core laminations to expand and contract, creating vibration and sound at a frequency of 100Hz (twice the a.c. mains frequency), and at multiples of 100Hz (harmonics). Typically, the noise level does not vary with transformer load, as the core is magnetically saturated and cannot produce any more noise. [84]

86. The nearest occupied homes to the West Waconia and Plato Substations are located 800 feet northwest and 115 feet southeast of the substations, respectively. It would be very unlikely that substation noise would be audible at these homes.[85]

87. The Applicant has stated that the substations will be designed and constructed to comply with state noise standards established by the Minnesota Pollution Control Agency. [86]

88. Short-term exceedance of daytime noise standards associated with initial construction of all routes is expected to occur during daytime hours as the result of heavy equipment operation and increased vehicle traffic associated with the transport of construction materials and personnel to and from the work area. The short-term exceedance of daytime noise standards would be intermittent and temporary in nature. Minnesota nighttime noise level standards will not be exceeded.[87]

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[81] *Id*.

[82] Minn. Rules, part 7030.0400; *id.* at pp 30-31.

[83] Ex. 13 at pp. 31-32 (EA).

[84] *Id.*

[85] *Id.*

[86] *Id.*

[87] *Id.*

Aesthetics

89. Because the proposed project will mainly follow existing 69 kV transmission line routes, the project will have nominal effects on the visual and aesthetic character of the area. The proposed structures for the 115/69 kV double circuit lines will be similar to the other 115/69 kV transmission lines used on the Xcel Energy system. The structures will be about 60 to 105 feet tall and will have an average span of 325 feet. A maximum span of 400 feet will be used between the structures, which will still keep the conductor within the right-of-way under blowout conditions. The usual right-of-way required for these types of structures is 75 feet wide. The existing transmission line structures vary in height between 50 to 90 feet. By comparison, the proposed transmission line structures will generally be slightly taller, ranging from 60 to 105 feet in height. The overall spacing of the poles will be comparable to the current layout, which varies greatly by engineering and land use constraints.[88]

90. Although the transmission line would be visible throughout most of its length, it is not incompatible with its setting amongst existing transmission lines, public transportation corridors and residential development along the route.[89]

Public Health and Safety

91. The Applicant will ensure that all safety requirements meet NESC standards during the construction and operation of the proposed transmission line and associated facilities[90]

92. The project will be designed and constructed in compliance with local, state, NESC and Xcel Energy standards regarding clearance to the ground, clearance to crossing utilities, strength of materials and right-of-way widths.[91]

93. The project will be equipped with protective devices to safeguard the public in the event of an accident. The protective equipment is designed to de-energize the transmission line should such an event occur.[92] In addition, the associated facilities will be properly fenced and accessible only by authorized personnel.

94. The issue of electric and magnetic fields was discussed in the environmental assessment.[93] A number of national and international health agencies (the Minnesota Department of Health, the World Health Organization, the National Institute of Environmental Health Sciences) have concluded in their research that there is insufficient evidence to prove a connection between

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[88] Ex. 13 at pp. 34-35 (EA).

[89] *Id.*

[90] *Id.*

[91] *Id.*

[92] *Id.*

[93] Ex. 13 at pp. 35-46 (EA).

electric and magnetic field exposures and health effects. Research has not been able to establish a cause and effect relationship between exposure to magnetic fields and human disease, nor a plausible biological mechanism by which exposure to electric and magnetic fields could cause disease.[94] The maximum magnetic field for this project, as calculated by the Applicant, would be 27.58/45.97 (2015 average/peak values) milligauss, one meter above the ground and directly below the line.[95] No Minnesota regulations have been established pertaining to magnetic fields from high-voltage transmission lines.

95. The absence of any demonstrated impact by magnetic field exposure supports the conclusion that there is no demonstrated impact on human health and safety. No adverse effects from electric fields and magnetic fields on health are expected for persons living or working at locations along or near the proposed project.[96]

96. Transmission lines (alternate current or AC) can induce "stray" voltage on nearby conductive objects. When the electric-magnetic field of a transmission line is within range of a nearby conductive object, a voltage may be induced on the object. The magnitude of the voltage depends on the weather conditions, the objects ability to collect an electric charge (capacitance), and vary with the object's shape, size, orientation and location, object to ground resistance.[97]

97. If a voltage is induced on an object insulated from the ground and a person touches the object, a small current (induced current or stray voltage) would pass through their body to the ground. This current may produce a spark discharge or mild shock to the individual. This type of stray voltage occurs most often on long fences and distribution lines built under transmission. Proper grounding of metal objects under the transmission line is the best method of avoiding these shocks. Most shocks from induced current are considered more of a nuisance than a danger. The Minnesota Public Utilities Commission electric field limit of 8 kV/m was designed to prevent serious hazard from shocks due to induced voltage under transmission lines. The NESC sets an induced current limit of five milliamps(mA) for objects under transmission lines.[98]

98. Stray voltage describes any case of elevated potential, but more precise terminology gives an indication of the source of the voltage.[99]
Neutral to earth voltage (NEV) specifically refers a condition that can occur on the electric service entrances to structures from distribution lines. More precisely, stray voltage is a voltage that exists between the neutral wire of the service entrance and grounded objects in buildings such as barns and milking parlors.

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[94] *Id.*

[95] *Id.*

[96] *Id.* at pp. 35-46 (EA).

[97] *Id.*

[98] *Id.*

[99] *Id.*

HVTLs carry power at a high voltage from generating plants to substations. At the substation, the voltage is lowered for distribution and distribution lines delivery power to consumers (homes, businesses, and industry). Power distribution lines may cause NEV stray voltage on electric service entrances to structures. Transmission lines do not create NEV stray voltage as they do not directly connect to businesses or residences.

99. The quality of the farm/structure wiring system has the largest single influence on contact voltage. Stray voltage (NEV) sources can be reduced in three fundamental ways: reduce the current flow on the neutral system; reduce the resistance of the neutral system; or improve the grounding of the neutral system. Making good electrical connections and making sure that these connections are maintained by the proper choice of wiring materials for wet and corrosive locations will reduce the resistance of the grounded neutral system and thereby reduce NEV levels.[100]

100. Appropriate measures will be taken by the Applicant during transmission line design, construction, and operation to prevent the potential for any stray voltage problems from this project. As a condition of the permit, all fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, will be grounded to the extent necessary to limit the induced short circuit current between ground and the object and to comply with the ground fault conditions specified in the NESC.[101]

Recreation

101. Recreational opportunities in McLeod and Carver counties include hiking, biking, canoeing, boating, fishing, camping, equestrian riding, swimming, hunting, snowmobiling and nature observation.[102]

102. There are no state or national forests or parks, national wildlife refuges, federal waterfowl production areas, state trails, scientific and natural areas, wildlife management areas, or county parks present within the proposed route.[103]

103. The HVTL will be visible from Tiger Lake, Braunworth Lake, Hydes Lake, Rice Lake, Winkler Lake, Miller Lake and Aue Lake, however direct impact to these resources is not expected. The transmission line would not impact any new areas not already affected by existing transmission lines along designated public lands and, therefore, no mitigation is necessary or proposed.[104]

Land-based Economies

[100] *Id.*

[101] *Id.*

[102] Ex. 13 at p. 35 (EA).

[103] *Id.*

[104] Ex. 13 at p. 35 (EA).

104. Construction and maintenance of the project will result in permanent and temporary impacts to farmland such as soil compaction and crop damage. Construction of new transmission structures and removal of existing structures will require repeated access to structure locations to install foundations, structures and conductors. Equipment used in this process includes drill rigs, concrete trucks, backhoes, cranes, boom trucks and assorted small vehicles.[105]

105. Permanent impacts will occur as a result of structure placement along the route centerline. Construction activities associated with the project will temporarily access an area of agricultural land estimated at 156 acres. After installation, the majority of the right-of-way easement would be available for agricultural uses.[106]

106. No long-term impacts are anticipated to the agricultural economy from the project. During construction, temporary impacts such as soil compaction and crop damages within the ROW may occur. Mitigative measures would include: the movement of crews and equipment would be limited to the right-of-way to the greatest extent possible. If movement outside of the right-of-way is necessary during construction and maintenance, the Applicant would contact the property owner and obtain permission, and any damages would be resolved by restoration or compensation to the landowner; damage to ditches, tile drains, terraces, roads and other features of the land would be corrected by the Applicant, the land and facilities would be restored as nearly as practicable to their original conditions; construction would be scheduled during periods when agricultural activities will be minimally affected or the landowner will be compensated accordingly; fences, gates and similar improvements that are removed or damaged would be promptly repaired or replaced, temporary fencing will be utilized if agreed to with landowners for situations such as animals that may require it.[107]

107. The existing 69 kV transmission line crosses through forested lands in the project area. When routing a transmission line through a forested area, the transmission line right-of-way must be properly cleared of vegetation per NESC standards.

Clearing for access would be limited to only those trees necessary to permit the passage of equipment, and will generally correspond to the transmission right-of-way. Native shrubs and other small-growing vegetation that will not interfere with the safe operation of the transmission line can be allowed to reestablish in the right-of-way.[108] Tree clearing will be limited to the transmission right-of-way and areas that impact safe operation of the transmission facilities, and will be a condition of the route permit. The Applicant has stated that it will work with landowners to identify issues related to the transmission line such as distance from existing structures, tree clearing, and other aesthetic concerns. Landowners will

[105] *Id.* at pp. 47-49 (EA).

[106] *Id.*

[107] *Id.*

[108] *Id.*

be compensated for the removal of mature yard trees through easement negotiations, if necessary.[109]

108. Because the route follows existing ROW for much of its length, clearing of trees would be minimal. Impacts to forested areas and shelterbelts along the rebuild portion of the route would be incidental, and would be limited to the amount necessary to permit safe and reliable operation of the transmission line. Due to safety concerns, any trees that would grow taller than 15 feet within the ROW would need to be removed beneath overhead lines. Additionally, a 10-foot radius around each structure would be kept free of woody vegetation.[110]

109. According to the Minnesota Department of Transportation (MnDOT) county pit maps for Carver and McLeod counties, there are gravel pits, rock quarries and commercial aggregate sources in the vicinity of the project. Of these, the closest is an inactive gravel pit located approximately 1.5 miles south of the west end of the project, west of the Glencoe Municipal Airport. Because no existing gravel and rock resources are being utilized within the project area, no impacts are anticipated. Unknown resources that may exist along the proposed route would be situated in close proximity to existing utility and roadway ROW, making development unlikely.[111]

110. The project would be constructed in the existing ROW and the number of transmission line poles may be reduced. Any potential aggregate resources in the ROW would have already been impacted in terms of their availability for development. Therefore, there would be no additional impacts on potential aggregate resources in the project area.[112]

Land Use

111. Land use in the project area is primarily agriculture and undeveloped/open-space, with the exception of the portions that are proposed to be deconstructed in the city of Norwood Young America, which has residential and commercial land use.[113]

112. There are approximately 2.8 miles of new right-of-way (new line construction) required for the SWTC Glencoe-Waconia rebuild project. The closest commercial business to the portion of the project with new line construction is located approximately 190 feet from the line. This structure is located on the northern end of Norwood Young America between Central Avenue N. and State Highway 25. State Highway 25 separates the two features (see Figure 19, segment 3 in the EA). The closest urban residence to the new line construction is located on the northwest side of Norwood Young America and is approximately 141 feet from the proposed line with State Highway 25 separating the two features (see Figure 19, segment 3 in

[109] Ex. 2 at pp. 26-29.

[110] Ex. 13 at pp. 47-49 (EA).

[111] *Id.*

[112] *Id.*

[113] *Id.* at pp. 50-52 (EA).

the EA). The closest rural residence is located approximately 65 feet from the proposed line at a residence in Benton Township in the southwest quadrant of the intersection of County Highway 51 and 114th Street as indicated on Figure 22, segment 6 in the EA). The closest farmstead residence is located approximately 55 feet from the proposed line at a residence in Benton Township which is approximately 1,000 feet north of the previously mentioned rural residence.[114]

113. There is approximately 20.2 miles of rebuild transmission line (existing ROW) in the SWTC Glencoe-Waconia rebuild project The closest commercial business to the portion of the project where there will be a transmission line rebuild is located approximately 200 feet from the line. This structure is east of the intersection of State Highway 5 and 106th Street (see Figure 22, segment 5 in the EA). The proposed transmission line rebuilds are not near any urban areas or residences. The closest farmstead residence to a rebuild segment is located approximately 18 feet from the line (conductor) at a property (PID number 010110300, located at 11025 County Road 153) in Benton Township at the southwest quadrant of the intersection of State Highway 284 and County Road 153 (see Figure 23, segment 7 in the EA). This would place the structure within the new ROW (easement) should this alignment be approved. The closest rural residence (PID number 110111400 at 15680 County Road 34) to the rebuild line (conductor) is approximately 27 feet at a residence located in the northwest quadrant of the intersection of County Highway 34 and State Highway 25 in Young America Township (see Figure 18, segment 2 in the EA). This would place the structure within the new ROW (easement) should this alignment be approved.[115]

114. The project would be design to meet or exceed the clearance standards provided in NESC Section 232 for a 115 kV transmission line, which require a 9' 1'' horizontal distance between the conductor and a building; a 15' 1'' vertical distance between the conductor and a roof/balcony accessible by people; and a 20' 1'' vertical distance between the conductor and a roadway or parking lot.[116]

Public Services

115. Public services and utilities are generally defined as services provided by government entities including hospitals, fire and police departments, schools, roads and highways, public parks, and water supply. Utilities also include private wells, septic systems and other utilities.

116. McLeod County is planning for safety upgrade work on County Road 3 within the next five years. Where the project intersects County Road 3, pole locations are being coordinated with county staff so that they will not impede the pending alterations; no significant conflicts are anticipated.[117]

[114] Ex. 13 at pp. 50-52 (EA).

[115] *Id.*

[116] *Id.*

[117] *Id.* at pp. 52-54 (EA).

117. The Carver County regional study reviewed potential expansion of Township Highway 5, and was completed in partnership with Victoria, Waconia, Chanhassen and Norwood Young America (*Carver County Public Works Department,* 2009). This study did not identify any improvements or realignments within the project area that would impact the proposed route/alignment.[118]

The potential expansion of Trunk Highway 5 in the vicinity of Rice Lake would conflict with the two Maiser Alternative Route/alignment modifications on the south side of TH 5.[119]

118. MnDOT has adopted a formal policy and procedures for accommodation of utilities on the highway rights-of-way (Utility Accommodation Policy); given this policy Xcel energy believes that the planned expansion would prohibit the development of the Maiser Alternative Option 3 on the south side of TH 5.[120]

Archaeological and Historic Resources

119. Thirty archaeological sites and 23 inventoried historic architectural properties located within one mile of the project. Of the 30 archaeological sites, 27 consist of prehistoric artifacts scatters, two are single artifact finds, and one is a historical documentation record of an abandoned townsite. Two of the previously recorded artifact scatters are Considered Eligible Findings (CEF) by the SHPO due to the potential of these archaeological sites to contain significant information regarding the prehistoric occupation of the region. The eligibility of the remaining inventoried archaeological sites for inclusion on the National Register of Historic Places (NRHP) is unevaluated.[121]

120. All of the 53 cultural resource properties identified are located outside the 75 foot transmission line right-of-way and will not experience direct impacts resulting from the construction of this Project. The two NRHP listed properties and the three CEF properties are, on average, one-half mile distant from the proposed project. Further, the existing and proposed transmission route in proximity to the listed or eligible properties will consist of transmission line rebuild. The proposed construction will constitute the replacement of pre-existing features and not create new indirect visual impacts. This also applies to the 48 remaining, unevaluated properties.[122]

121. There are no anticipated physical impacts to previously identified historic properties, and it is likely that physical impacts to any additional properties identified during corridor survey can be avoided. Visual impacts to identified and unidentified historic architectural properties are not anticipated.[123] Should a specific impact be identified during field/survey/construction

[118] *Id.*

[119] *Id.*

[120] *Id.*

[121] Ex. 13 at pp. 54-56 (EA).

[122] *Id.*

[123] *Id.*

activities, Xcel Energy will consult with SHPO on the appropriate course of action, as noted in the proposed route permit.[124]

Air Quality

122. There is minimal air quality impacts associated with transmission line operation. The only potential air emissions from a transmission line result from corona. Corona can produce ozone and oxides of nitrogen in the air surrounding the conductor. Corona consists of the breakdown or ionization of air in a few centimeters or less immediately surrounding conductors. For 115/115 kV double-circuit, 115 kV single-circuit and 161 kV single-circuit transmission lines, the conductor gradient surface is usually below the air breakdown level.[125]

123. Calculations done for a 345 kV project showed that the maximum one hour concentration during foul weather (worst case) would be 0.0007 ppm ozone. This is well below both the federal (0.075 ppm 8 hour) and state standards (0.08 ppm 8 hour) for ozone.[126]

124. Construction of the project will result in temporary air quality impacts caused by, among other things, construction-vehicle emissions and fugitive dust from right-of-way clearing. The Applicant will implement the appropriate dust control measures, as required.[127]

Water Quality and Water Resources

125. Various large wetland complexes and small isolated wetlands are located through the project area, although a higher concentration of wetlands exists near the midsection of the proposed transmission route near Norwood Young America. Many of these wetlands are adjacent to the various lakes that lie in close proximity to the project.[128]

126. In total, 69 separate wetlands consisting of 14 different wetland types were identified within the 200 foot wide proposed routes for rebuild and retired segments and the 400 foot wide proposed routes for new construction segments. Overall, the 200 and 400 foot wide transmission line routes of the existing line and line to be retired extends approximately 23.8 miles and encompasses approximately 658 acres, of which approximately 56.5 acres (8.6 percent) are wetlands (see Figures 3 through 9). Based on average spacing figures it is anticipated that approximately 455 transmission poles will be necessary to complete the proposed construction. Of these, 49 will be required for new transmission line construction. It is estimated that 61 of these poles will fall within wetlands; 12 of which will be associated with new transmission line construction.[129]

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[124] Ex. 2 at p. 61 (Application).

[125] Ex. 13 at pp. 56-57 (EA).

[126] *Id.*

[127] *Id.*

[128] *Id.*at pp. 58-61 (EA).

[129] *Id.*

127. The proposed transmission line rebuild will have minor, mostly short term effects on surface water resources. Most potential effects on surface waters will be related to reconstruction of the transmission line across wetlands proximal to the existing transmission corridor. The project may require wetland and water resource approvals from the U.S. Army Corps of Engineers (USCOE), MnDNR, Carver County, and McLeod County.[130]

128. Indirect impacts could include sedimentation reaching surface waters during construction due to ground disturbance by excavation, grading, construction traffic, and dewatering of holes drilled for transmission structures. These impacts will be avoided and minimized using appropriate sediment control practices and best management practices (BMPs).[131]

129. Disturbed areas of one acre or more (proposed substation) will be regulated by a National Pollutant Discharge Elimination System (NPDES) permit and Stormwater Pollution Prevention Plan prepared for the project. Mitigation under the NPDES permit includes implementation of the Stormwater Pollution Prevention Plan with the appropriate erosion control methods developed specifically for the site. The Minnesota Pollution Control Agency (MPCA) issues combined NPDES/State Disposal System permits for construction sites, industrial facilities and municipal storm sewer systems. Compliance with the MPCA stormwater program will be a condition of the route permit.[132]

Flora

130. Land cover in the project area consists of cropland, grassland, wetland, and small areas of woodland and residential/industrial development. Cropland consists of primarily corn and soybeans. Grasslands are dominated primarily by smooth brome, Kentucky bluegrass, red clover, alfalfa, and goldenrod. Reed canary grass, cattail, cottonwood, sandbar willow, and sedges are the primary species in wetlands. Native grassland is relatively scarce in the project area. Transmission line construction impacts to trees and woodlands will be minimized because the transmission line rebuild will follow existing right-of-way. Areas where new transmission line construction is planned are primarily agricultural.[133]

131. The project would be built along the existing 69 kV transmission line ROW; no new ROW would be cleared in forested areas along the rebuild portions. New construction would be in agricultural areas (Segments 3 and 6) of the project.[134]

132. Permanent impacts would be minor since the transmission line would be constructed on an existing utility ROW. Temporary impacts may occur due to activities associated with pole

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[130] *Id.*

[131] Ex. 13 at pp. 58-61 (EA).

[132] *Id.*

[133] Ex. 13 at pp. 61-62 (EA).

[134] *Id.*

construction, including minor vegetative clearing for excavation, leveling and heavy equipment traffic.[135]

133. Sound water and soil conservation practices will be maintained during construction and operation of the project to protect topsoil and adjacent water resources, and minimize soil erosion. Areas disturbed due to construction activities would be restored to pre-construction contours. In non-cultivated areas, reseeding would occur in a timely manner using a seed mix certified to be free of noxious weeds.[136]

Fauna

134. The croplands, grasslands, wetlands, and woodlands in the area provide habitat for a variety of wildlife. Wildlife and other organisms that inhabit the Project Area include small mammals such as mice, voles, and ground squirrels; large mammals such as white-tailed deer; waterfowl and other water birds like pelicans and egrets, songbirds, raptors, upland game birds; and reptiles/amphibians such as frogs, salamanders, snakes, and turtles.[137]

135. Wildlife that resides within the construction zone will be temporarily displaced to adjacent habitats during the construction process.[138]

136. The reconstructed transmission line may affect raptors, waterfowl and other bird species. Birds have the potential to collide with all elevated structures, including power lines. Avian collisions with transmission lines can occur in proximity to agricultural fields that serve as feeding areas, wetlands and water features, and along riparian corridors that may be used during migration.[139]

137. The MnDNR has expressed a desire to be consulted with by the Applicant during final design on the need, type and placement of swan flight diverters.[140]

138. The electrocution of large birds, such as raptors, is more commonly associated with small distribution lines than large transmission lines. Electrocution occurs when birds with large wingspans come in contact with two conductors or a conductor and a grounding device. Utility transmission and distribution line design standards provide adequate spacing to eliminate the risk of raptor electrocution and will minimize potential avian impacts of the proposed project.[141]

Rare and Unique Natural Resources

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[135] *Id.*

[136] *Id.*

[137] Ex. 13 at pp. 62-63 (EA).

[138] *Id.*

[139] *Id.*

[140] ALJ Summary of Testimony (Letter from Jamie Schrenzel, MnDNR.

[141] Ex. 13 at pp. 62-63 (EA).

139. There are seven known occurrences of rare or unique resources identified within 1.5 miles of the project area. These resources were identified using the MnDNR Natural Heritage Database (October 2009). These occurrences include four vertebrate species, two native plant communities of undetermined class, and one colonial waterbird nesting area. Three of the seven records are located within 0.5 mile of the project: the American Bittern, Bald Eagle and a native plant community of an undetermined class.[142]

140. The MnDNR has expressed a desire to see an updated Natural Heritage Database review before final design on the proposed project area.[143]

141. In general, impacts to rare and unique natural resources would be avoided because the project is a rebuild of an existing line along most of the route. The area of new HVTL construction would occur in an agricultural area where native species are not likely to occur.[144]

Comparison of Alternative Route Segments/Alignments

142. Alternative routes, alternative route segments and modifications to Xcel Energy's proposed alignment were discussed during the scoping meeting and in comments received during the scoping comment period. Two alternative route segments/alignment modifications were carried from the scoping process into the environmental review; they are the Waldron Alternative and the Maiser Alternatives.[145]

143. The Waldron alternative route segment amends a small portion (in Segment 2) of the Applicant's proposed route by re-aligning the ROW so that it continues along the south side of County Road 34, eliminating the ROW's deviation to the south, between Urban Avenue and State Highway 25/5.[146]

144. The re-alignment of the transmission line would relocate the ROW through the same five parcels in which the 69 kV line currently passes through; no new landowners would be impacted. Moving the line to each parcel's northern boundary with the ROW for County Road 34 will increase the distance of the line from residences and decrease the area of deciduous forest impacted; the potential impact to wetlands would increase from approximately 0.18 acres to approximately 0.77 acres.[147]

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[142] Ex. 13 at pp. 63-64 (EA).

[143] Ex. 10 Public Comments on Scope.

[144] Ex. 13 at pp. 63-64 (EA).

[145] Ex. 13 at pp. 22-24 (EA).

[146] *Id.*

[147] Ex. 13 at pp. 66-71 (EA).

145. Xcel Energy supports the Waldron Alternative Route Segment to the proposed route in Segment 2.[148]

146. The Maiser Alternatives modify the proposed route in Segment 4, where the existing 69 kV transmission line passes between Hydes Lake and Rice Lake; the Maiser Alternatives include three options.[149]

147. Option 1 would modify the proposed route by relocating the new 115 kV HVTL to the north side of Trunk Highway (TH) 5, north of and parallel to GRE's existing 115 kV transmission line.[150]

Option 1 would require 50 feet of new ROW. This additional ROW would impact seven parcels; five of which are developed. There is a pinch point distance of 39 feet between a veterinary office (parcel ID 095100180) and the existing GRE line. This distance of 39 feet is not wide enough to fit the new fifty foot ROW for the 115 kV line north of the GRE line and south of the veterinary office.[151]

148. Option 2 consists of constructing Xcel Energy's new 115 kV transmission line as a double-circuit configuration with the existing GRE 115 kV transmission, which parallels the north side of TH 5. The new 115 kV line would utilize GRE's existing ROW, replacing the structures with double-circuit tower designs.[152]

149. GRE's current ROW is 60 feet; the double-circuit configuration would require a ROW width of 75 feet, resulting in the need for an additional 15 feet of ROW for this option. Components of this option would include: 3 additional heavy angle corner structures to cross the highway; 10 double circuit structures, 800 feet of additional conductor, 4,000 feet of additional shield wire, new insulators for the GRE line, and the removal of the GRE structures and transfer of the GRE conductors. The estimated additional cost for this option is $670,000.00.[153]

150. Xcel Energy stated that it could not support the Maiser Alternative Route Segment Option 1 or 2 due to the restricted space along the north side of TH 5 in Segment 4 and additional cost and complications associated with outages of the 69 kV and GRE 115 kV lines.[154]

151. Option 3 consists of an alignment modification within Xcel Energy's proposed HVTL route which would shift the proposed alignment approximately 100 feet to the north, to run along the current edge of the southern road ROW for TH 5.[155]

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[148] ALJ Summary of Testimony.

[149] Ex. 13 at pp. 22-24 (EA).

[150] *Id.*

[151] Ex. 13 at pp. 66-71 (EA).

[152] *Id.*at pp. 22-24 (EA).

[153] *Id.* at pp. 66-71 (EA).

[154] ALJ Summary of Testimony.

152. Trunk Highway 5 runs in a southwest-northeast direction between TH 7 and TH 212 in Carver County. At present, TH 5 is a four-lane divided arterial from I-494 to TH 41; however, just west of TH 41 it is a two-lane, undivided arterial that extends through Victoria and Waconia until it connects with TH 212 in Norwood Young America, a distance of 20 miles.[156]

The *Trunk Highway 5 Corridor Study: From TH41 to TH212*, was undertaken by Carver County and the cities of Victoria and Waconia, in collaboration with MnDOT and the communities along the corridor, in an effort to guide future planning and improvements along TH 5 from TH 41 in Chanhassen to TH 212 in Norwood Young America. A as result of this study MnDOT desires to preserve land along the southern ROW of TH 5 for future expansion. The current concept would extend the TH 5 ROW 90 feet to the south. This would place the TH 5 ROW 16 feet north of Xcel Energy's current 69 kV line, which is the proposed ROW for the new 115 kV HVTL.[157]

153. Xcel Energy stated that it could not support the Maiser Alternative Route Segment Option 3 due to the conflict with the MnDOT and the TH 5 expansion.[158]

Unavoidable Impacts

154. The Glencoe-Waconia Transmission line rebuild project would have no significant unavoidable adverse impacts. It would not have the same level of impacts that are usually associated with the construction of new transmission line due to the fact that it is a rebuild of an existing line. As the project is a mostly a rebuild, the bulk of the new impacts would be related to those short term impacts that are associated with the construction of the transmission line project. The long term impacts of the transmission line, those related to land and visual impacts, have already been realized with the existing line.[159]

155. Operating the transmission line at the higher voltage level of 115 kV would also not result in a significant environmental impact. In addition, the significant ROW sharing associated with this project would further mitigate the direct impacts associated with the construction of the new line.[160]

156. There are few commitments of resources associated with this project that are irreversible and irretrievable, but those that do exist are primarily related to construction. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a

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[155] Ex. 13 at pp. 22-24 (EA).

[156] *Id.* at pp. 66-71 (EA).

[157] Ex. 13 at pp. 66-71 (EA).

[158] ALJ Summary of Testimony.

[159] Ex. 13 at p. 66-71 (EA).

[160] *Id.*

reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action. Construction resources that would be used include aggregate resources, concrete, steel, and hydrocarbon fuel.[161]

Requirements of Statute and Rule

157. Minn. Stat. § 216B.243, subd. 2, states that no large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission. Minn. Stat. § 216B.2421, subd. 2(3) defines a "large energy facility" as any high voltage transmission line with a capacity of 100 kV or more with more than ten miles of length or that crosses a state line.

158. Minn. Stat. § 216E.03, subd. 7, and Minn. Rules, part 7850.4100 provide considerations in designating sites and routes and determining whether to issue a permit for a large electric power generating plant or a high-voltage transmission line.

Based on the Findings of Fact, the Commission makes the following:

CONCLUSIONS OF LAW

1. Any of the foregoing Findings more properly designated as Conclusions of Law are hereby adopted as such.

2. The Commission has jurisdiction over the subject matter of this proceeding pursuant to Minn. Stat. § 216E.03, subd. 2.

3. The Project qualifies for review under the alternative permitting process of Minn. Stat. § 216E.04 and Minn. Rules, part 7850.2800.

4. The Applicant, the Department and the Commission have complied with all procedural requirements required by law.

5. The EFP has completed an Environmental Assessment on this project as required by Minn. Stat. § 216E.04, subd. 5, and Minn. Rules, part 7850.3700.

6. The Commission has considered all the pertinent factors relative to its determination of whether a route permit should be approved as required by Minn. Stat. § 216E.03, subd. 7, and Minn. Rules, part 7850.4100.

7. The conditions included in the route permit are reasonable and appropriate.

Based on the Findings of Fact, Conclusions of Law contained herein and the entire record of this proceeding, the Commission hereby makes the following:

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[161] *Id.*

ORDER

1. A route permit is hereby issued to Northern States Power Company d/b/a Xcel Energy to construct approximately 0.9 mile of new 115 kilovolt transmission line, 1.9 miles of new 69 kV transmission line that is capable of operating as 115/69 kV double circuit line and upgrade approximately 20.2 miles of 69 kV transmission line to 115 kV or double circuit 115/69 kV capacity (approximately 23 miles total) near the cities of Glencoe, Plato, Norwood Young America and Waconia located southwest of the Twin Cities metro area. Approximately 3.6 miles of the total proposed project miles will consist of 115/69 kV double circuit transmission line.

   The Commission approves a route width of 100 feet on each side of the route centerline of the existing 69 kV facilities (200 feet total width), except along project route segments involving the construction of proposed new transmission lines where a route width of 200 feet on each side of the road centerline (400 feet total width) is approved.

   The route permit includes the relocation and upgrade of the Plato Substation and upgrading of the West Waconia Substation.

2. The route permit includes the Waldron Alternative Route Segment as put forth in the HVTL Route Permit.

3. The route permit shall be issued in the form attached hereto, with a map showing the approved route.

4. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

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STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR CONSTRUCTION OF A HIGH VOLTAGE TRANSMISSION LINE AND SUBSTATION

IN MCLEOD AND CARVER COUNTIES

ISSUED TO NORTHERN STATES POWER COMANY

PUC DOCKET No. E-002/TL-10-249

In accordance with the requirements of Minnesota Statutes Chapter 216E.03 and Minnesota Rules Chapter 7850, this route permit is hereby issued to:

NORTHERN STATES POWER COMPANY

Northern States Power Company d/b/a Xcel Energy is authorized by this route permit to construct approximately 23 miles of 115 kilovolt (kV) high voltage transmission lines (HVTL) and to up-grade and relocate the existing Plato substation in McLeod and Carver Counties in the State of Minnesota.

The transmission line and substation project shall be built within the routes identified in this permit and as portrayed on the attached, official route maps, and in compliance with the conditions specified in this permit.

Approved and adopted this 14th day of November 2011

BY ORDER OF THE COMMISSION

Burl W. Haar,
Executive Secretary

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I. ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Northern States Power Company d/b/a Xcel Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E.03 and Minnesota Rules Chapter 7850. This permit authorizes the Permittee to build approximately 23 miles of 115 kV transmission line and the modification/relocation of the existing Plato substation in McLeod and Carver Counties.

II. PROJECT DESCRIPTION

Permittee is authorized to construct the Southwest Twin Cities 115 kV Transmission Line Upgrade to the Glencoe-Waconia 69 kV System as described below:

The project consists of approximately 0.9 mile of new 115 kilovolt (kV) transmission line, 1.9 miles of new 69 kV transmission line that is capable of operating as 115/69 kV double circuit line and upgrade approximately 20.2 miles of 69 kV transmission line to 115 kV (double circuit 115/69 kV capacity) near the cities of Glencoe, Plato, Norwood Young America and Waconia located southwest of the Twin Cities metro area. The project is approximately 23 miles in total.

The Permittee may construct the following facilities:

- Upgrade approximately 4 miles of 69 kV transmission line to 115/69 kV double circuit from the proposed Diamond Substation to the existing Plato Substation.
- Expand and relocate the existing Plato Substation to upgrade the 69 kV distribution load to 115 kV, and to install a capacitor bank on the 69 kV transmission line.
- Upgrade approximately 10 miles of 69 kV transmission line to 115 kV capacity between the Plato Substation, the Young America Substation and the West Waconia Substation.
- Construct approximately 1 mile of new 115 kV transmission line along Highway 5 on the west side of the city of Norwood Young America. This new segment is needed to avoid having to build the 115 kV line into the developed areas of Norwood Young America.
- Upgrade approximately 1 mile of existing 69 kV transmission to 115 kV from the existing West Waconia Substation along Highway 5.
- Construct approximately 2 miles of new 69 kV transmission line from Highway 5 to the existing Augusta 69 kV transmission line. This section would be built to double circuit standard to accommodate a future 115 kV transmission line along with the proposed 69 kV line.

- Upgrade approximately 7 miles of existing 69 kV transmission line to 115 kV capacity from the Waconia Tap to just short of the Augusta Substation.

III. DESIGNATED ROUTE

The approved route is shown on the aerial photos attached to this permit and described follows:

Segment 1
Rebuild approximately 3.6 miles of existing 69 kV transmission line (Line #0771) to a 115/69 kV double circuit transmission line between the city of Glencoe's new Diamond Substation and the Plato Substation located north of the town of Plato, just west of the intersection of 122nd Street and County Highway 9. This route will begin at the Diamond Substation and proceed 2.1 miles along the south side of 110th Street, crossing Dairy Avenue at the 0.05 mile mark. It proceeds northeast along the west side of Boone Avenue, crossing to the east side at an unnamed tributary to Buffalo Creek. As Boone Avenue turns north, the line continues northeast across agricultural land to the Plato Substation, which will be relocated 250 to 500 feet southwest of the existing substation.

Segment 2
Rebuild approximately 6.4 miles of existing 69 kV transmission line (Line #0771) to a 115 kV transmission line between the Plato Substation to the intersection of State Highway 25/5 and County Highway 34. This route proceeds east from the substation along the north side of McLeod County Road 3 (122nd Street), which becomes Carver County Road 34. The route crosses to the south side of County Road 3 at Zebra Avenue and continues east on the south side of the county road.

The ***Waldron Alternative Route Segment*** begins in the vicinity of Urban Avenue. Instead of the proposed deviation south from the County Road 34 right of way, crossing agricultural land and a farmstead, the proposed route is hereby modified to eliminate the deviation from County Road 34. The new 115 kV transmission line will parallel the south ROW of County Road 34, between areas near Urban Avenue and County Highway 33.

Segment 3
Construct approximately 0.9 miles of new 115 kV transmission line along State Highway 25/5 between the intersection of State Highway 25/5 and County Highway 34 and the intersection of State Highway 25/5 and 5th Avenue NE, located on the northeast side of Norwood Young America. This route will be aligned along the north side of the roadway for all but the easternmost 500 feet, which crosses to the south side of Highway 25/5.

Segment 4
Rebuild approximately 3.2 miles of existing 69 kV transmission line (Line #0735) to a 115 kV transmission line between the intersection of State Highway 25/5 and 5th Avenue and intersection of State Highway 5 and County Road 51. This route extends from the southeast quadrant of Highway 25/5 and 5th Avenue northeastward on the south side of the highway.

Segment 4.5
Construct approximately 150 feet of new 115 kV transmission line from Segments 4 into, and out of the existing West Waconia Substation. This route will be on the south side of Highway 5.

Segment 5
Rebuild approximately 1.0 mile of existing 69 kV transmission line (Line #0735) to a 115 kV transmission line between the West Waconia Substation and the intersection of Highway 5 and County Road 51. This route extends from the substation northeastward on the south side of the Highway 5.

Segment 6
Construct approximately 1.9 miles of new 115/69 kV double circuit transmission line along County Highway 51 between Highway 5 and the existing Xcel Energy 69 kV (Line #0740). The route of this segment could include either the east or west side of County Highway 51. This segment will be initially operated at 69 kV.

Segment 7
Rebuild approximately 7 miles of existing 69 kV transmission line (Line #0740) to a 115 kV transmission line between intersection of County Highway 51 and line #0740 and Structure #142 on the west side of Aue Lake. The route proceeds east from County Highway 51 through agricultural land and around the south end of Winkler Lake. East of Winkler Lake, the route continues along the south side of County Road 153. The route continues easterly as County Road 153 turns north, proceeding past the north edge of Miller Lake to the eastern termination of the project.

A. Route Width and Alignment. The width of the designated route is 100 feet on each side of the existing 69 kV transmission line centerline (200 feet total route width), except for those portions (Segment 3 and Segment 6) of the project with no existing transmission line. In these areas the designated route width is 200 feet on each side of the road (County Highway 5/25 and County Highway 51, respectively) centerline for a total route width of 400 feet.

The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized below. This width will provide the Permittee with the flexibility to do minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions.

The designated route identifies an anticipated alignment that minimizes the overall potential impacts relating to the factors identified in Minn. Rule 7850.4100, as evaluated in the environmental review and permitting processes. This alignment matches, to the extent practical, the current alignment of the existing 69 kV line, except for those portions (Segment 3 and Segment 6) of the project with no existing transmission line. As such, this permit anticipates that the actual right-of-way will generally conform to this alignment unless changes are requested by individual landowners or unforeseen

conditions are encountered, or are otherwise provided for by this permit. Any alignment modifications within this designated route shall be located to have comparable overall impacts relative to the factors in Minn. Rule 7850.4100 as does the alignment identified in this permit, and shall be specifically identified and documented in and approved as part of the Plan and Profile submitted pursuant to Part IV.A., of this permit.

Route width variations outside the designated route may be allowed for the Permittee to overcome potential site specific constraints. These constraints may arise from any of the following:

1. Unforeseen circumstances encountered during the detailed engineering and design process.
2. Federal or state agency requirements.
3. Existing infrastructure within the transmission line route, including but not limited to roadways, railroads, natural gas and liquid pipelines, high voltage electric transmission lines, or sewer and water lines.
4. Planned infrastructure improvements identified by state agencies and LGUs and made part of the record during the proceeding for this permit.

Any alignment modifications arising from these site specific constraints that would result in right-of-way placement outside the designated route shall be located to have comparable overall impacts relative to the factors in Minn. Rule 7850.4100 as does the alignment identified in this permit and also shall be specifically identified and documented in and approved as part of the Plan and Profile submitted pursuant to Part IV.A. of this permit.

B. Right-of-Way Placement. Where the transmission line route parallels existing highway rights-of-way, the transmission line ROW shall occupy and utilize the existing highway right-of-way to the maximum extent possible, consistent with the criteria in Minn. Rule 7850.4100, the other requirements of this permit and the requirements for highways under the jurisdiction of the Minnesota Department of Transportation in accordance with Mn/DOT rules, policies, and procedures for accommodating utilities in trunk highway rights-of-way.

Approximately 1.9 miles of new right-of-way will need to be acquired along County Highway 51 to construct Segment 6. Segment 6 involves construction of a new 69 kV transmission line which will be constructed to be 115/69 kV double circuit capable. The route of this segment between Highway 5 and the existing Xcel Energy 69 kV line 0740 could be aligned along either the east or west side of County Highway 51.

Approximately 0.9 mile of new right-of-way will also need to be acquired along Highway 25/5 to allow the new 115 kV line to bypass the Young America Substation (Segment 3). This route will follow the northwest side of Highway 25/5.

C. Right-of-Way Width. The 115 kV transmission line will be built primarily with single-pole structures, which will typically require a 75 foot ROW; however, the

applicant will make reasonable attempts to work within the existing 50 foot wide ROW for the rebuild portions of the project. Single-pole structures will range in height from 60 to 105 feet and will be placed between 300 to 400 feet apart. Permittee shall locate the poles as close to property division lines as reasonably possible.

IV. GENERAL CONDITIONS

The Permittees shall comply with the following general conditions during construction of the transmission line and associated facilities and the life of this permit.

A. Plan and Profile. At least 20 calendar days before right-of-way preparation for construction begins, the Permittees shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, cleanup, and restoration for the transmission line.

The Permittees may not commence construction until the 20 days has expired or until the Commission has advised the Permittees in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittees intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittees shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

B. Construction Practices.

1. Application. The Permittees shall follow those specific construction practices and material specifications described in the Minnesota Power and Nashwauk Public Utilities Commission Application to the Public Utilities Commission for a Route Permit, dated April 8, 2009, and as described in the environmental impact statement and findings of fact, unless this permit establishes a different requirement, in which case this permit shall prevail.

2. Field Representative. At least 10 days prior to commencing construction, the Permittees shall advise the Commission in writing of the person or persons designated to be the field representative for the Permittees with the responsibility to oversee compliance with the conditions of this permit during construction. The field representative's address, phone number, and emergency phone number shall be provided to the Commission and shall be made available to affected landowners, residents, public officials and other interested persons.
The Permittees may change the field representative at any time upon written notice to the Commission.

3. Local Governments. The Permittees shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

4. Cleanup. All waste and scrap that is the product of construction shall be removed from the area and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5. Vegetation Removal in the Right-of-Way. The Permittees shall minimize the number of trees to be removed in selecting the right-of-way. As part of construction, low growing brush or tree species are allowable within and at the outer limits of the easement area. Taller tree species that endanger the safe and reliable operation of the transmission facility need to be removed. To the extent practical, low growing vegetation that will not pose a threat to the transmission facility or impede construction should remain in the easement area. Should removal of vegetation require herbicide application, the permittee will coordinate with the Minnesota Department of Natural Resources (DNR) to avoid the potential of directly or indirectly affecting native prairie and rare plant species.

6. Erosion Control. The Permittees shall implement reasonable measures to minimize runoff during construction and shall promptly plant or seed, erect silt fences, and/or use erosion control blankets in non-agricultural areas that were disturbed where structures are installed. All areas disturbed during construction of the facilities will be returned to their pre-construction condition; bare soil must not be left in any disturbed areas.

7. Temporary Work Space. The Permittees shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way.

8. Restoration. The Permittees shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittees shall advise the Commission in writing of the completion of such activities. The Permittees shall compensate landowners for any yard/landscape, crop damage, soil compaction, or other that may occur during construction.

9. Notice of Permit. The Permittees shall inform all employees, contractors, and other persons involved in the transmission line construction of the terms and conditions of this permit.

C. Periodic Status Reports. Upon request, the Permittees shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittees need not report more frequently than quarterly.

D. Complaint Procedure. Prior to the start of construction, the Permittees shall submit to the Commission, the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements set forth in the complaint procedures attached to this permit.

E. Notification to Landowners. The Permittees shall provide all affected landowners with a copy of this permit and the complaints procedures at the time of the first contact with the landowners after issuance of this permit.

The Permittees shall contact landowners prior to entering the property or conducting maintenance along the route and avoid maintenance practices, particularly the use of fertilizer, herbicides, or pesticides, inconsistent with the landowner's or tenant's use of the land.

The Permittees shall work with landowners to locate the high voltage transmission lines to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads.

F. Completion of Construction.

1. Notification to Commission. At least three days before the line is to be placed into service, the Permittees shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

2. As-Builts. Upon request of the Commission, the Permittees shall submit copies of all the final as-built plans and specifications developed during the project.

3. GPS Data. Within 60 days after completion of construction, the Permittees shall submit to the Commission, in the format requested by the Commission, geo-spatial information (GIS compatible maps, GPS coordinates, etc.) for all above ground structures associated with the transmission lines, each switch, and each substation connected.

G. Electrical Performance Standards.

1. Grounding. The Permittees shall design, construct, and operate the transmission line in a manner that the maximum induced steady-state short-circuit current shall be limited to five milliamperes, root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line

and to comply with the ground fault conditions specified in the National Electric Safety Code.

2. Electric Field. The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

3. Interference with Communication Devices. If interference with radio or television, satellite or other communication devices is caused by the presence or operation of the transmission line, the Permittees shall take whatever action is prudently feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

H. Other Requirements.

1. Applicable Codes. The Permittees shall comply with applicable requirements of the National Electric Safety Code including clearances to ground, clearance to crossing utilities, clearance to buildings, right-of-way widths, erecting power poles, and stringing of transmission line conductors. The transmission line facility will also meet the North American Electric Reliability Corporation's (NERC) reliability standards

2. Other Permits. The Permittees shall comply with all applicable state rules and statutes. The Permittees shall obtain all required local, state and federal permits for the project and comply with the conditions of these permits. A list of the required permits is included in the route permit application and the environmental impact statement. The Permittees shall submit a copy of such permits to the Commission upon request.

3. Pre-emption. Pursuant to Minnesota Statutes 216E.10, subdivisions 1 and 2, this route permit shall be the sole route approval required to be obtained by the Permittees and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

J. Delay in Construction. If the Permittees have not commenced construction or improvement of the route within four years after the date of issuance of this permit, the Commission shall consider suspension of the permit in accordance with Minnesota Rule 7850.4700.

V. SPECIAL CONDITIONS.

1. **Wetlands/Water Resources.** The permittee will minimize potential impacts to wetland areas by locating structures outside of wetlands and adjacent to these resource areas when feasible and spanning all surface flows. Unavoidable

wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. The permittee will use construction mats or perform construction during frozen conditions to minimize disturbance and compaction of wetlands and riparian areas during construction. Soil excavated from the wetlands and riparian areas will be contained and not placed back into the wetland or riparian area. Silt fencing or other erosion control measures will be used to prevent sedimentation when working near wetlands and watercourses. Areas disturbed by construction activities will be restored to pre-construction conditions (soil horizons, contours, vegetation, etc.). Where waterways must be crossed to pull in the new conductors and shield wires, workers may walk across, use boats, or drive equipment across ice in the winter.

Conditions provided in the MPCA NPDES permit, and the DNR license to cross public lands and waters will also be followed.

If construction activities will result in the disturbance of one acre or more of soils, a National Pollutant Discharge Elimination System stormwater permit from the Minnesota Pollution Control Agency will be required. Standard erosion control measures outlined in Minnesota Pollution Control Agency guidance and best management practices regarding sediment control practice during construction. These practices include, but are not limited to, protecting storm drain inlets, use of silt fences, protecting exposed soil, immediately stabilizing restored soil, controlling temporary soil stockpiles, and controlling vehicle tracking.

2. **Swan Flight Diverters**. The applicants, in consultation with the MDNR (Ecological Services), will determine the need for, type of and location of Swan Flight Diverters (SFD) along the approved route.

3. **Areas of Deconstruction of 69 kV Line**. In those areas where the existing 69 kV line is to be deconstructed, the former 69 kV transmission line structures (i.e., poles/towers) that do not support a distribution circuit will be removed. If an existing 69 kV transmission structure has distribution underbuild, then the structure will remain in place, but would be "topped off" (the top portion of the pole that held the transmission conductors would be removed).

4. **Natural Resource Heritage Information System.** The applicants will conduct a second review of the Natural Resource Heritage Information System data to determine if any significant new information, relative to the approved HVTL route, has been added to the system since the original review was completed in October 2009.

5. **Archaeological Condition**. The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when installing the high-voltage transmission line on the approved route. In the event that a resource is encountered, the SHPO should be contacted and consulted; the nature of the resource should be identified; and a determination should be made on the

eligibility for listing in the National Register of Historic Places. Where feasible, avoidance of the resource is required.

VI. PERMIT AMENDMENT

The general conditions in Section IV may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittees. The Commission may amend the conditions after affording the Permittees and interested persons such process as is required.

VII. TRANSFER OF PERMIT

The Permittees may request at any time that the Commission transfer this permit to another person or entity. The Permittees shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittees can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittees, the new Permittees, and interested persons such process as is required.

VIII. REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minnesota Rules part 7850.5100 to revoke or suspend the permit.

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COMPLIANCE FILING PROCEDURE
FOR PERMITTED ENERGY FACILITIES

1. Purpose

To establish a uniform and timely method of submitting information required by the Commission energy facility permits.

2. Scope and Applicability

This procedure encompasses all compliance filings required by permit.

3. Definitions

Compliance Filing – A sending (filing) of information to the Commission, where the information is required by a Commission site or route permit.

4. Responsibilities

A) The Permittees shall eFile all compliance filings with Dr. Burl Haar, Executive Secretary, Public Utilities Commission, through the Department of Commerce (DOC) eDocket system. The system is located on the DOC website: https://www.edockets.state.mn.us/EFiling/home.jsp

General instructions are provided on the website. Permittees must register on the website to eFile documents.

B) All filings must have a cover sheet that includes:
1) Date
2) Name of submitter / Permittees
3) Type of Permit (Site or Route)
4) Project Location
5) Project Docket Number
6) Permit Section Under Which the Filing is Made
7) Short Description of the Filing

Filings that are graphic intensive (e.g., maps, plan and profile) must, in addition to being eFiled, be submitted as paper copies and on CD. Copies and CDs should be sent to: 1) Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN, 55101-2147, and 2) Department of Commerce, Energy Facility Permitting, 85 7th Place East, Suite 500, St. Paul, MN, 55101-2198.

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PERMIT COMPLIANCE FILINGS[1]

PERMITTEES: Xcel Energy
PERMIT TYPE: HVTL Route Permit
PROJECT LOCATION: MeLeod and Carver counties
PUC DOCKET NUMBER: E002/TL-10-249

Filing Number	Permit Section	Description	Due Date
1	Section IV.B.2	Contact information for field representative	10 days prior to construction
2	Section IV.A.	Plan and profile of right-of-way	20 days before ROW preparation or construction
3	Section IV.F	Notice of completion and date of placement in service	Three days prior to energizing
4	Section IV.F.3	Provide As-built and GPS information	Within 60 days of construction
5	Section V.2	Provide documentation of consultation with MDNR, on need, type and location of SFD along the approved route.	Prior to submittal of the Plan and profile of right-of-way (Item 3)
6	Section V.4	Provide documentation of a current review of the Natural Resource Heritage Information System date for the approved HVTL route.	Prior to submittal of the Plan and profile of right-of-way (Item 3)

[1] This compilation of permit compliance filings is provided for the convenience of the permittees and the PUC. However, it is not a substitute for the permit; the language of the permit controls.

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COMPLAINT HANDLING PROCEDURES FOR HIGH VOLTAGE TRANSMISSION LINES

A. Purpose:

To establish a uniform and timely method of reporting complaints received by the Permittees concerning Permit conditions for site preparation, construction, cleanup and restoration, operation and resolution of such complaints.

B. Scope:

This document describes Complaint reporting procedures and frequency.

C. Applicability:

The procedures shall be used for all complaints received by the Permittees and all complaints received by the Commission under Minn. Rule 7829.1500 or 7829.1700 relevant to this Permit.

D. Definitions:

Complaint: A verbal or written statement presented to the Permittees by a person expressing dissatisfaction or concern regarding site preparation, cleanup or restoration or other HVTL and associated facilities route permit conditions. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint: A written Complaint alleging a violation of a specific Route Permit condition that, if substantiated, could result in Permit modification or suspension pursuant to the applicable regulations.

Unresolved Complaint: A Complaint which, despite the good faith efforts of the Permittees and a person(s), remains to both or one of the parties unresolved or unsatisfactorily resolved.

Person: An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

E. Complaint Documentation and Processing:

1. The Permittees shall document all Complaints by maintaining a record of all applicable information concerning the Complaint, including the following:

a. Name of complainant, address, phone number, and e-mail address.

b. Precise property description or parcel number.
c. Name of Permittees representative receiving Complaint and date of receipt.
d. Nature of Complaint and the applicable Route Permit conditions(s).
e. Activities undertaken to resolve the Complaint.
f. Final disposition of the Complaint.

2. The Permittees shall designate an individual to summarize Complaints for substantial to the Commission. This person's name, phone number and e-mail address shall accompany all complaint submittals.

3. A Person presenting the Complaint should to the extent possible, include the following information in their communications:

a. Name, address, phone number, and e-mail address.
b. Date
c. Tract or parcel
d. Whether the complaint relates to (1) a Route Permit matter, (2) a HVTL and associated facility issue, or (3) a compliance issue.

F. Reporting Requirements:

The Permittees shall report all complaints to the Commission according to the following schedule:

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to HVTL Permit Compliance, 1-800-657-3794, or by e-mail to: DOC.energypermitcompliance@state.mn.us, or. Voice messages are acceptable.

Monthly Reports: By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be Filed to Dr. Burl W. Haar, Executive Secretary, Public Utilities Commission, using the Minnesota Department of Commerce eDocket system (see eFiling instructions attached to this permit).

If no Complaints were received during the preceding month, the Permittees shall submit (eFile) a summary indicating that no complaints were received.

G. Complaints Received by the Commission or OES:

Complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the Permittees.

H. Commission Process for Unresolved Complaints:

Initial Screening: Commission staff shall perform an initial evaluation of unresolved Complaints submitted to the Commission. Complaints raising substantial HVTL Route Permit issues shall be processed and resolved by the Commission. Staff shall notify Permittees and appropriate person(s) if it determines that the Complaint is a Substantial Complaint. With respect to such Complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the Staff notification. Staff shall present Briefing Papers to the Commission, which shall resolve the Complaint within twenty days of submission of the Briefing Papers.

I. Permittees Contacts for Complaints:

Mailing Address: Complaints filed by mail shall be sent to:

ATTN: Mr. Timothy G. Rogers
Supervisor, Siting and Routing
Xcel Energy
414 Nicollet Mall, MP-8A
Minneapolis, MN 55401

Tel: (612) 330-1955

Email: timothy.g.rogers@xcelenergy.com

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HVTL ROUTE MAPS

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

- Waldron Alternative
- Xcel Energy Proposed Route Width (200ft)
- Xcel Energy Proposed Rebuild
- Overhead Transmission Line
- Existing Transmission Lines
- Stream/River
- NWI Wetlands

N
W E
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0 400 Feet

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

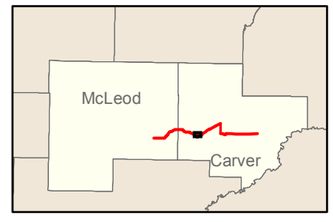

Figure 15 - Waldron Alternative Proposed HVTL Route

Segment 2

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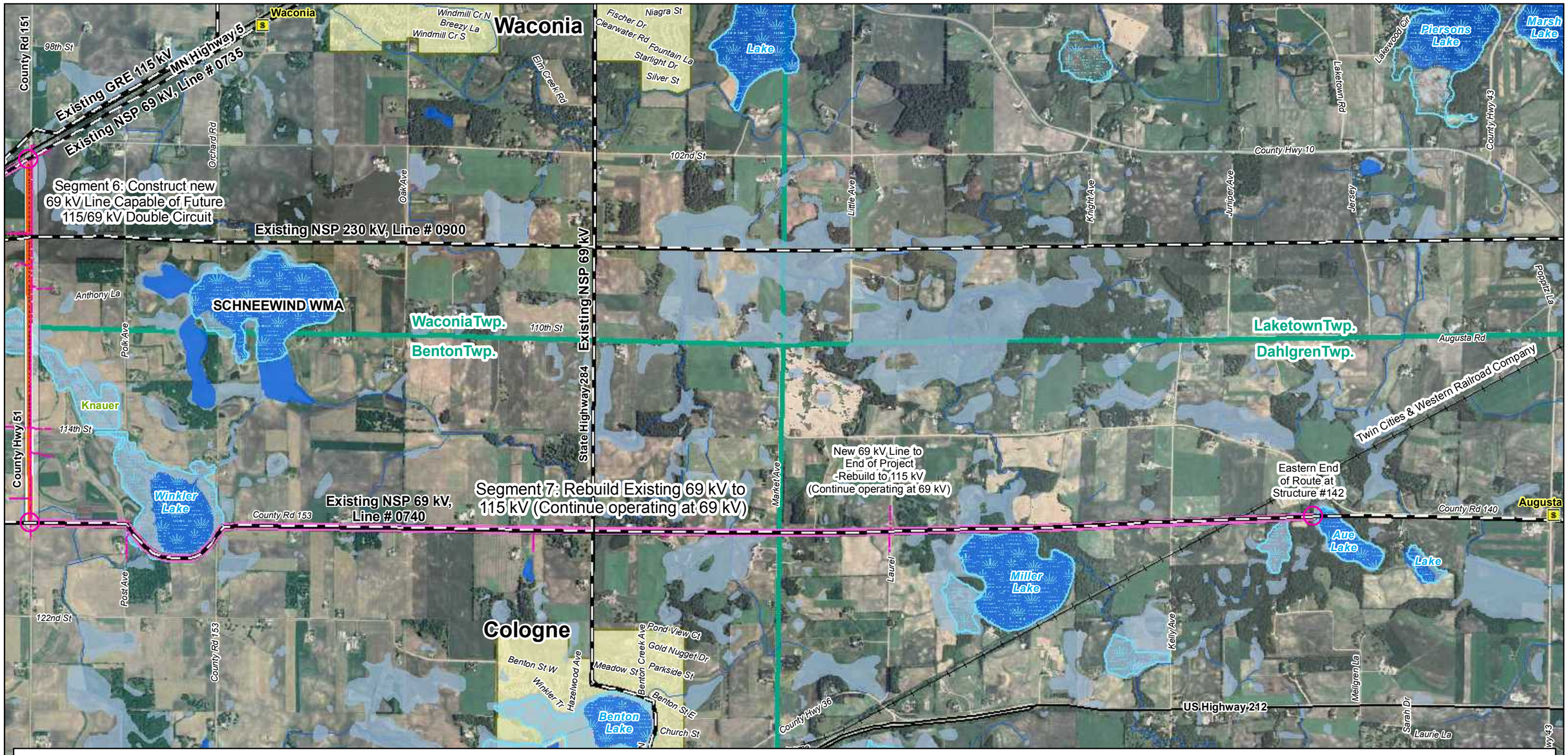

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

N
W E
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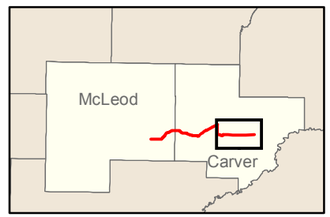
0 0.25 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).



- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

Figure 10
Proposed HVTL Route
Segment 7

Map Document: (P:/20091075/gis/RPA/West_Section/110511/20091075Wpro\p02B_Segment7gv.mxd)
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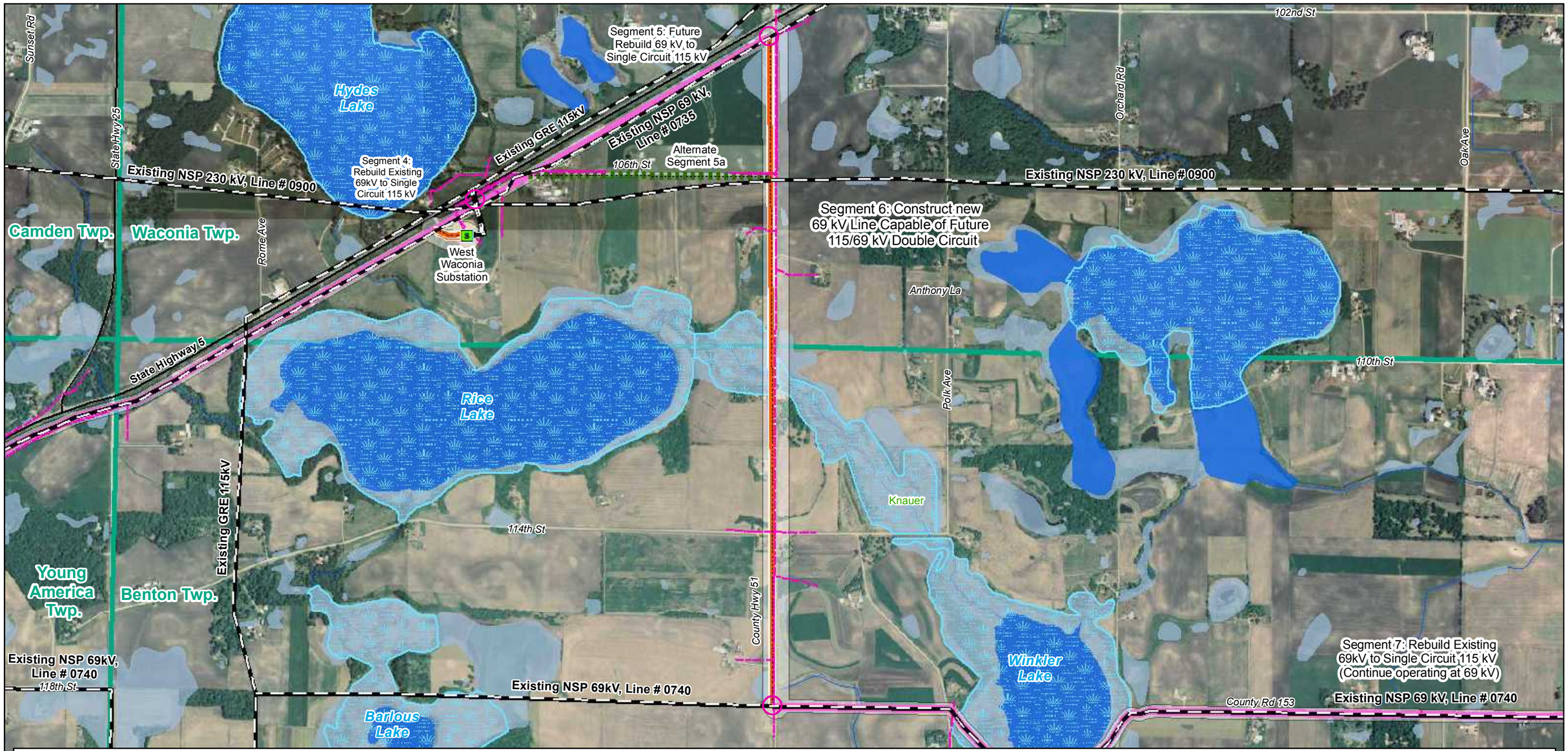

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

N W E S

0 0.25 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

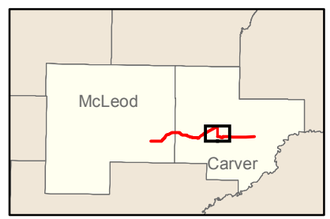

Figure 9
Proposed HVTL Route
Segment 6

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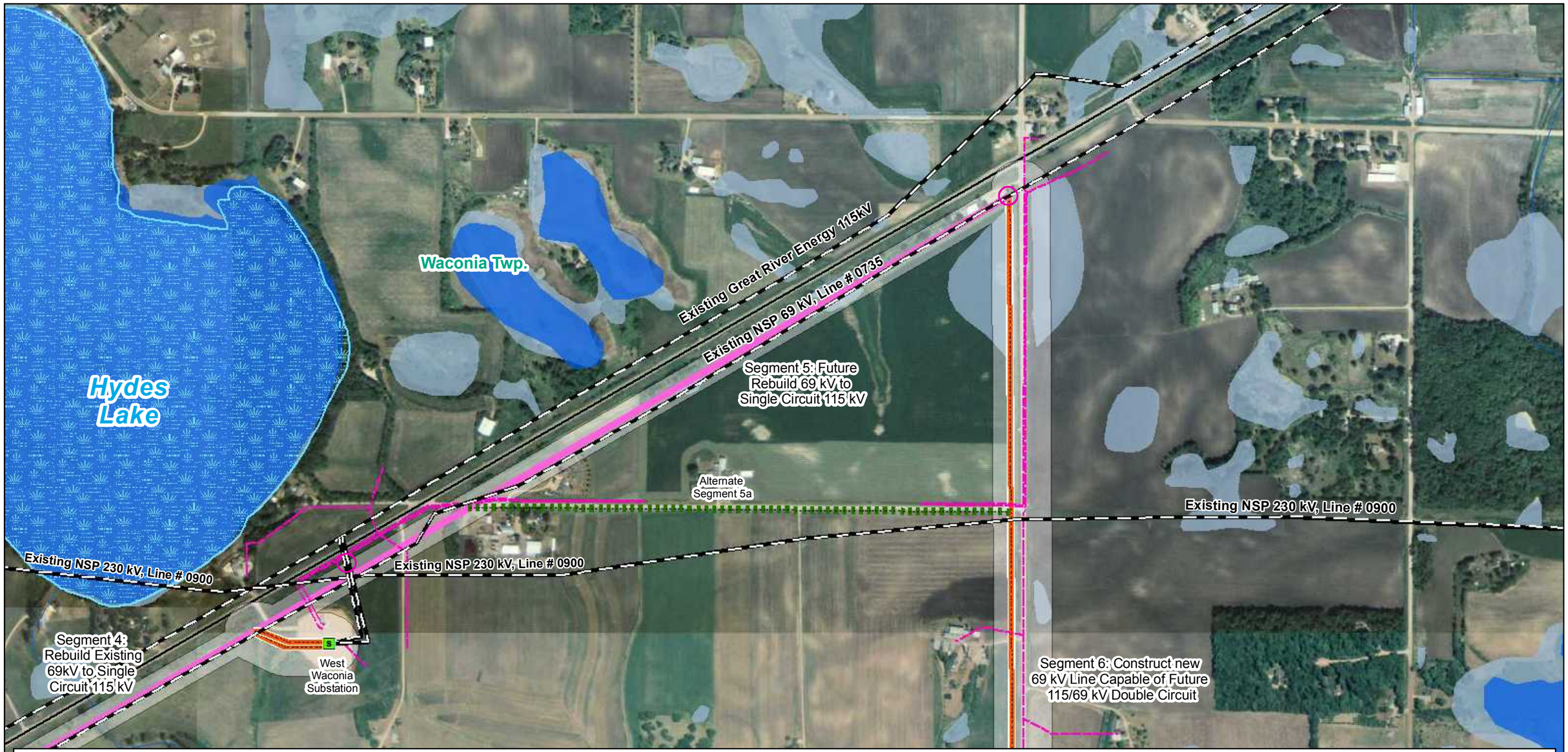

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

N
W E
S

0 0.1 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

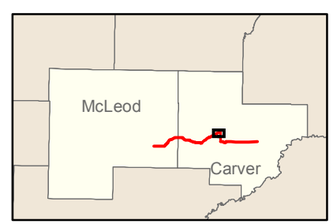

Figure 8
Proposed HVTL Route
Segment 5

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Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

N W E S

0 0.1 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

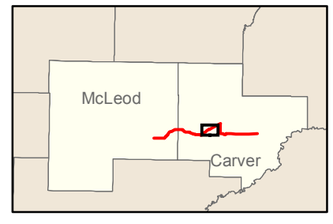

Figure 7
Proposed HVTL Route
Segment 4

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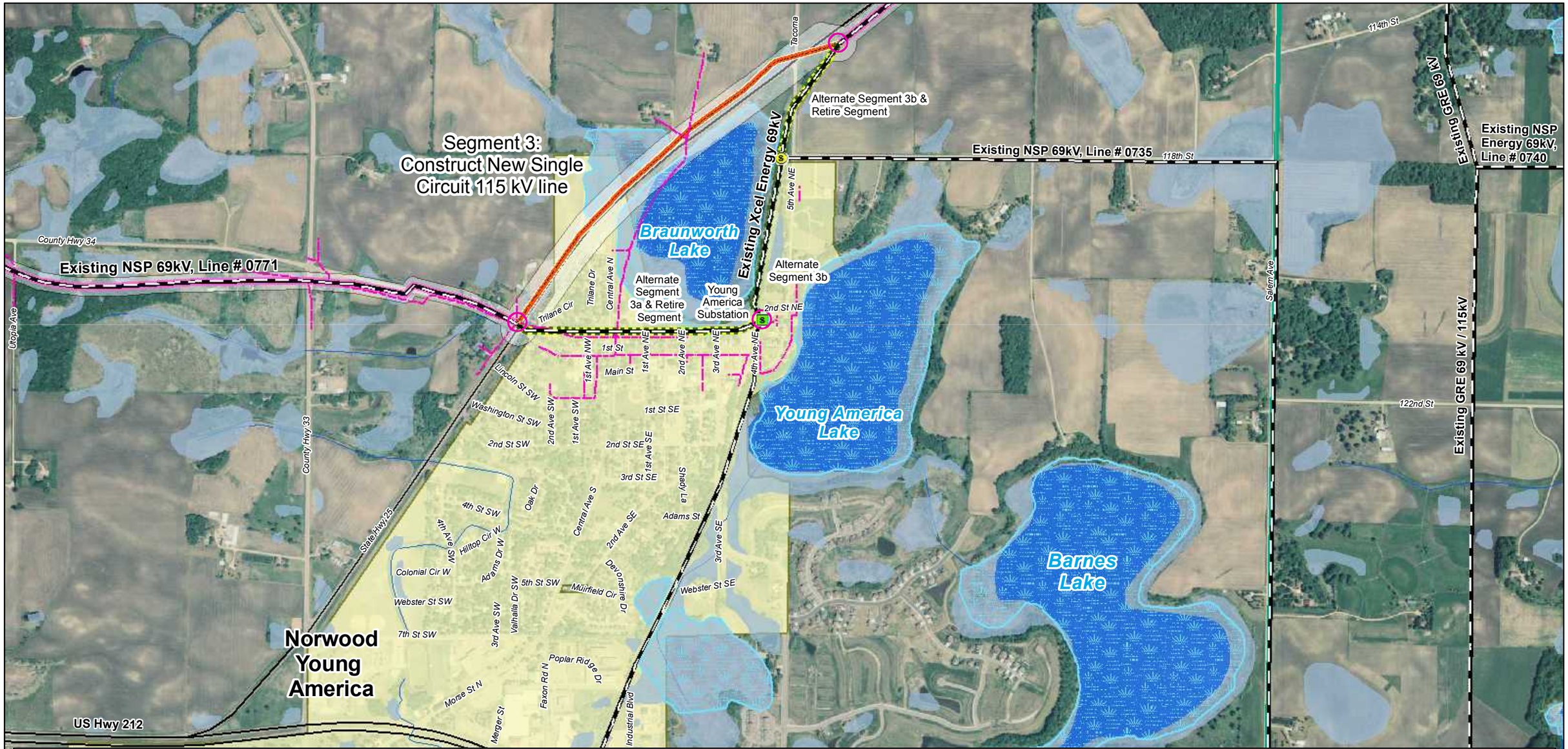

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

N
W E
S

0 0.1 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

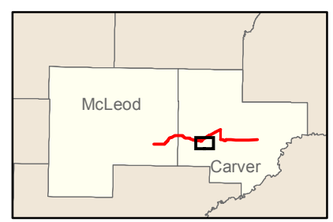

Figure 6
Proposed HVTL Route
Segment 3

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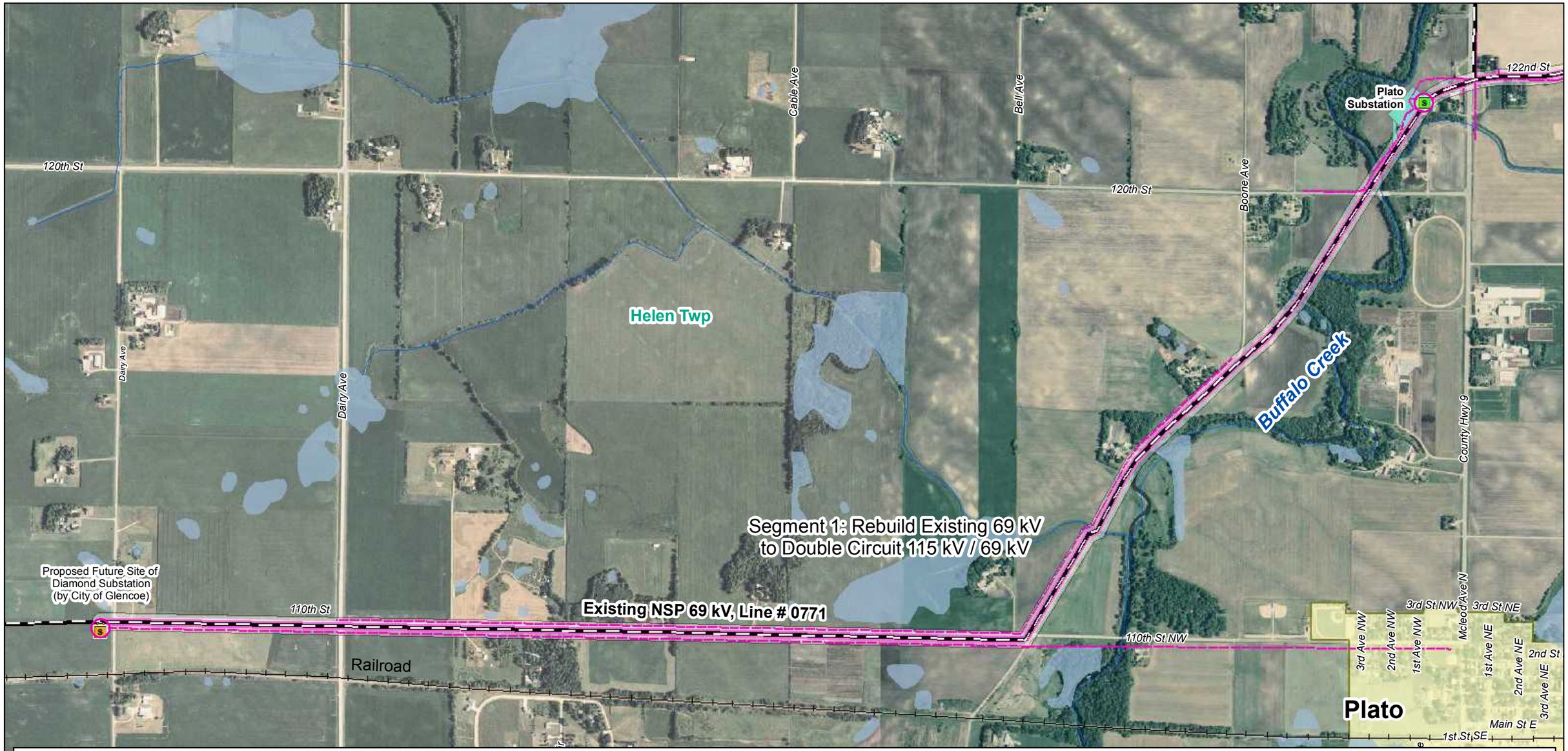

Proposed Xcel Energy Southwest Twins Cities Glencoe - Waconia Transmission Line Rebuild Project

Greater SW Minneapolis Metro, Minnesota

- Rebuild
- New Transmission Line Route
- Retire Existing Line
- Alternate Routes
- Existing Transmission Lines
- OH Primary
- Xcel Substations
- City of Glencoe Proposed Substation
- Segment Start and End Locations
- Switch
- Substations/Taps
- Proposed Route Width (200ft & 400ft)
- General Area of Plato Substation Upgrade

Hydrography

- NWI Wetlands (within 2 miles)
- Lakes
- Public Water Inventory
- Stream/River

Base

- Counties
- Municipalities
- Township
- Highway
- Railroad

N W E S

0 0.25 Miles

Data Source(s): MN LMIC Imagery (2008), MNDNR PWI (2008), MNDOT (2004), USGS NHD (2008), USFWS NWI (1997), ESRI Transportation (2009), Xcel (2010).

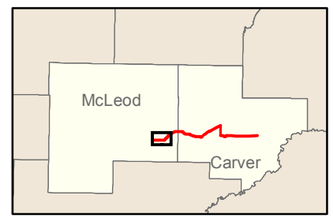

Figure 4
Proposed HVTL Route
Segment 1

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