6.10 Lake Emily

The proposed Lake Emily facility has a capacity of 5.0 MW AC and is located in Section 24 of Kasota Township in Le Sueur County. The site is located east of the city of St. Peter, northwest of the intersection of State Highway 99 and County Road 106. Aurora anticipates that the facility will be accessed through a newly constructed access road off of State Highway 99. Preliminary plans anticipate a development area of approximately 42.4 acres within the 46.9 acres of Aurora's site control. Electricity from the facility will be delivered to Xcel Energy's Lake Emily Substation, located approximately 130 feet southwest of the facility.

The facility is located within the Minnesota and Northeastern Iowa Morainal Section of the Eastern Broadleaf Forest Province. Land cover within the preliminary development area (Table 25) is dominated by cultivated crops (100 percent). While the study area around the Lake Emily Substation is also largely agricultural, the facility location avoids the developed area of St. Peter, Minnesota River and its associated wetlands located west of the facility (Figure 43).

Table 25: Lake Emily Facility Land Cover

Land Cover	Control Area		Development Area		Study Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	-	-	-	-	1,294.0	10.3%
Developed, Open Space	-	-	-	-	311.3	2.5%
Developed, Low Intensity	0.11	0.2%	0.1	0.1%	329.7	2.6%
Developed, Medium Intensity	-	-	-	-	137.8	1.1%
Developed, High Intensity	-	-	-	-	58.5	0.5%
Barren Land	-	-	-	-	2.9	0.0%
Deciduous Forest	-	-	-	-	1,464.6	11.7%
Evergreen Forest	-	-	-	-	28.0	0.2%
Mixed Forest	-	-	-	-	0.0	0.0%
Shrub/Scrub	-	-	-	-	437.6	3.5%
Grassland Herbaceous	-	-	-	-	243.1	1.9%
Pasture/Hay	-	-	-	-	1,076.7	8.6%
Cultivated Crops	46.8	99.8%	42.3	99.9%	6,310.5	50.3%
Woody Wetlands	-	-	-	-	43.84	0.4%
Emergent Herbaceous Wetlands	-	-	-	-	815.58	6.5%
Totals	**46.9**	**100.0%**	**42.4**	**100.0%**	**12,553.8**	**100.0%**

6.10.1 Effects on Human Settlement

The proposed facility location is a cultivated parcel in a rural area with scattered residences. The nearest home is located approximately 510 feet north/northwest of the preliminary development area. Construction of the facility will not result in displacement of any homes or businesses. The location is zoned as Agricultural by Le Sueur County.

There are no recreational trails, county, state or local parks within one-half mile of the proposed facility. The Ottowa WMA, 577 acre area consisting almost entirely of marsh and shrubland on the floodplain of the Minnesota River, is located approximately 0.7 miles northwest of the facility. Construction and operation of the facility would not impact the use of nearby recreational resources.

No mitigation measures beyond those discussed in Section 5.2 are identified for the Lake Emily facility.

6.10.2 Effects on Land Based Economies

The proposed facility would remove approximately 42 acres from agricultural use. EERA staff is not aware of other solar facilities have been announced in the area of the Lake Emily facility, so there is no indication that the conversion of land from agricultural uses would be part of a cumulative reduction of available land for crops or pasture.

Approximately 28 acres (65 percent) of the developed area are considered to be prime farmland and 10 acres (24 percent) are considered to be prime farmland if drained (Table 13). Within the comparison area surrounding the Lake Emily Substation, approximately 28 percent is considered to be prime farmland and 19 percent is considered to be prime farmland if drained. The prime farmland exclusion in Minnesota Rule 7850.4400, Subpart 4 does not apply to the Lake Emily facility due to its proximity to St. Peter.

The proposed project would not impact tourism, mining or mineral extraction activity, or forest resources of economic importance.

No mitigation measures beyond those discussed in Section 5.3 are identified for the Lake Emily facility.

6.10.3 Effects on Archaeological and Historic Resources

No archaeological sites were identified in a survey of the Lake Emily facility. No mitigation measures beyond those discussed in Section 5.4 are identified for the Lake Emily facility.

6.10.4 Effects on Natural Environment

There are no rivers, streams or lakes within the area of facility site control. Field delineations performed in the summer of 2014 did not identify any wetlands in the area of land control.[124]

The preliminary design for the facility anticipates grading of approximately 27.2 acres of the site during construction.[125]

No mitigation measures beyond those discussed in Section 5.3 are identified for the Lake Emily facility.

6.10.5 Effects on Rare and Unique Natural Resources

A review of the NHIS database did not identify any documented instances of federally listed endangered or threatened species within the land control boundary of the Lake Emily facility. The NHIS database review did show records for one state-listed threatened (Blanding's Turtle (Emydoidea blandingii)) and one special concern (Small White Lady's-slipper (Cypripedium candidum)) species within one mile of the area of site control for the facility.[126]

DNR data records show that there is a state-designated calcareous fen located between one-half and one mile from the Lake Emily Facility. Calcareous fens are a rare type of wetland that supports a unique plant community, and are highly susceptible to disturbance.[127] As discussed in Section 5.5.2, excavation is expected to be well above the water table at the facility. Due to the distance between the facility and the low potential for impacts to groundwater, the potential for impacts to the calcareous fen is very low and no special mitigation measures are proposed related to the identified calcareous fen.

As described in Section 5.6, a field survey of the Lake Emily facility would identify potentially impacted rare or unique natural resources.

As described in Section 5.5, the use of wildlife friendly mesh for erosion control can reduce the potential for reptiles becoming entangled that occurs with more typical types of erosion control mesh.

Section 14.1 of the Site Permit Template requires specific recommendations for minimizing potential impacts to Blanding's Turtle.

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[124] Appendix C
[125] Application, at Appendix F
[126] Application, at p. 81, I-26
[127] DNR. *What is a Calcareous Seepage Fen?* 2011. http://files.dnr.state.mn.us/natural_resources/water/wetlands/calcareous_fen_fact_sheet_dec_2011.pdf

Figure 42: Lake Emily Project Detail

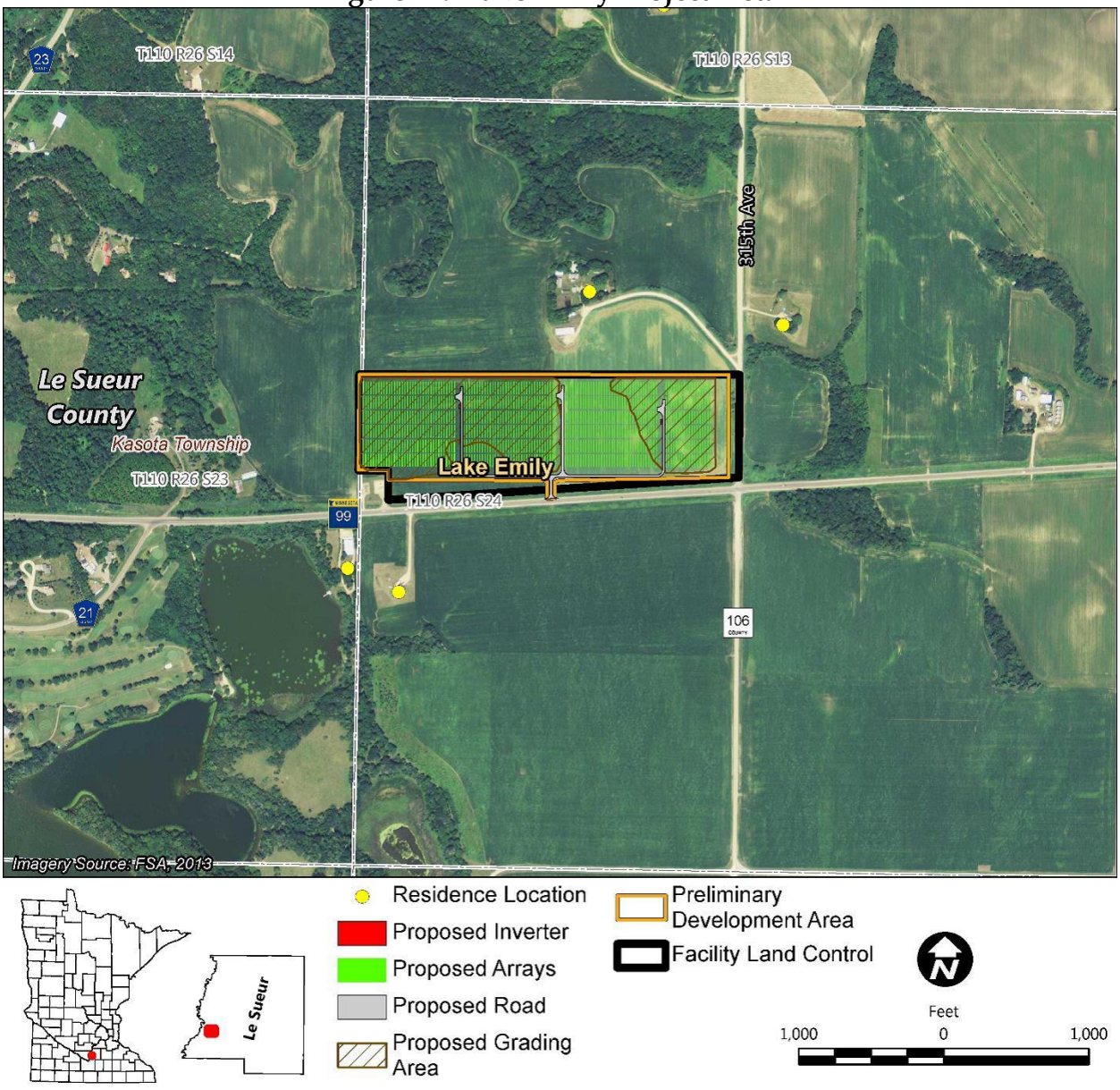

Figure 43: Lake Emily Land Cover Overview

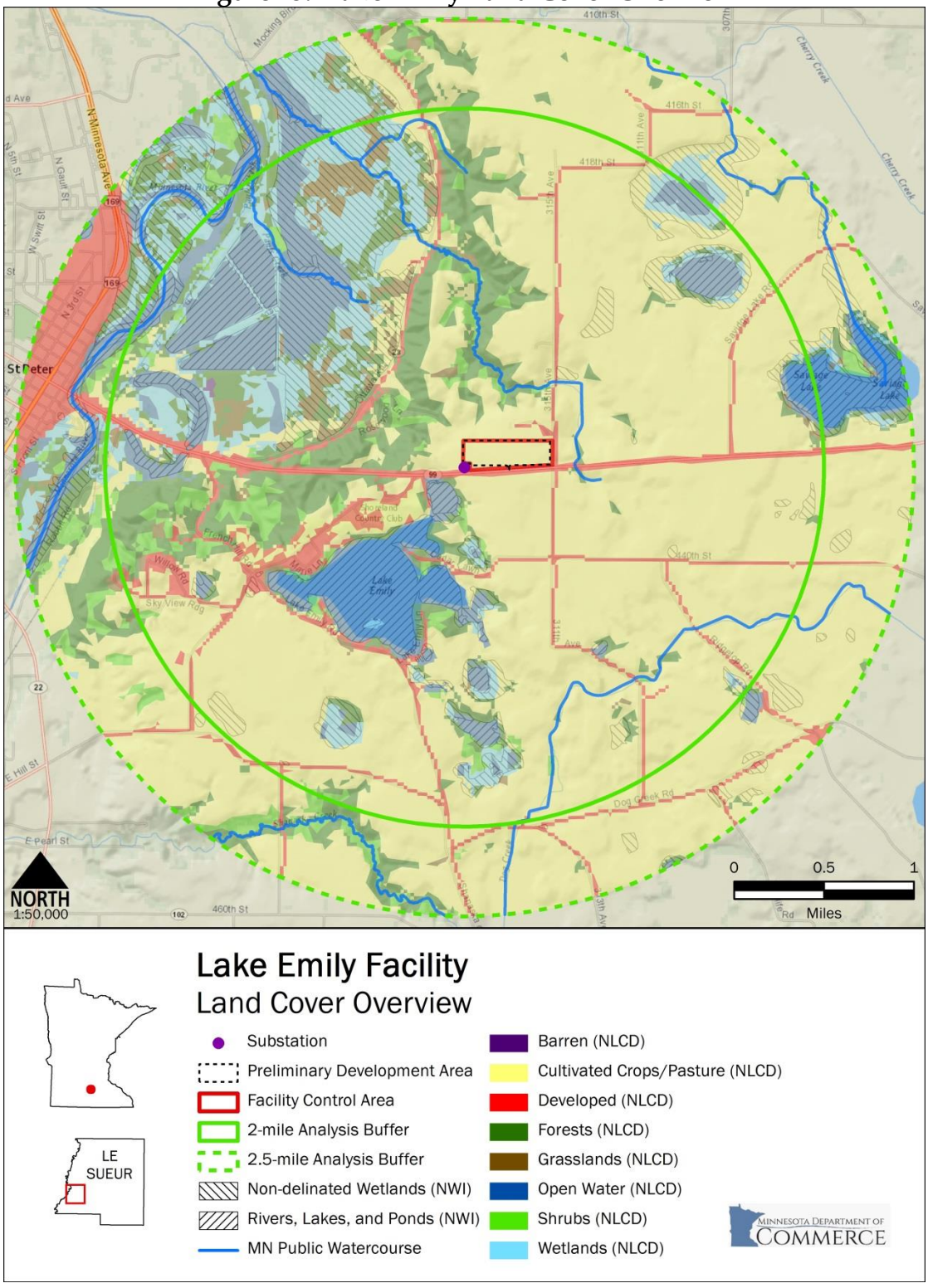

Figure 44: Lake Emily Generally Incompatible Areas

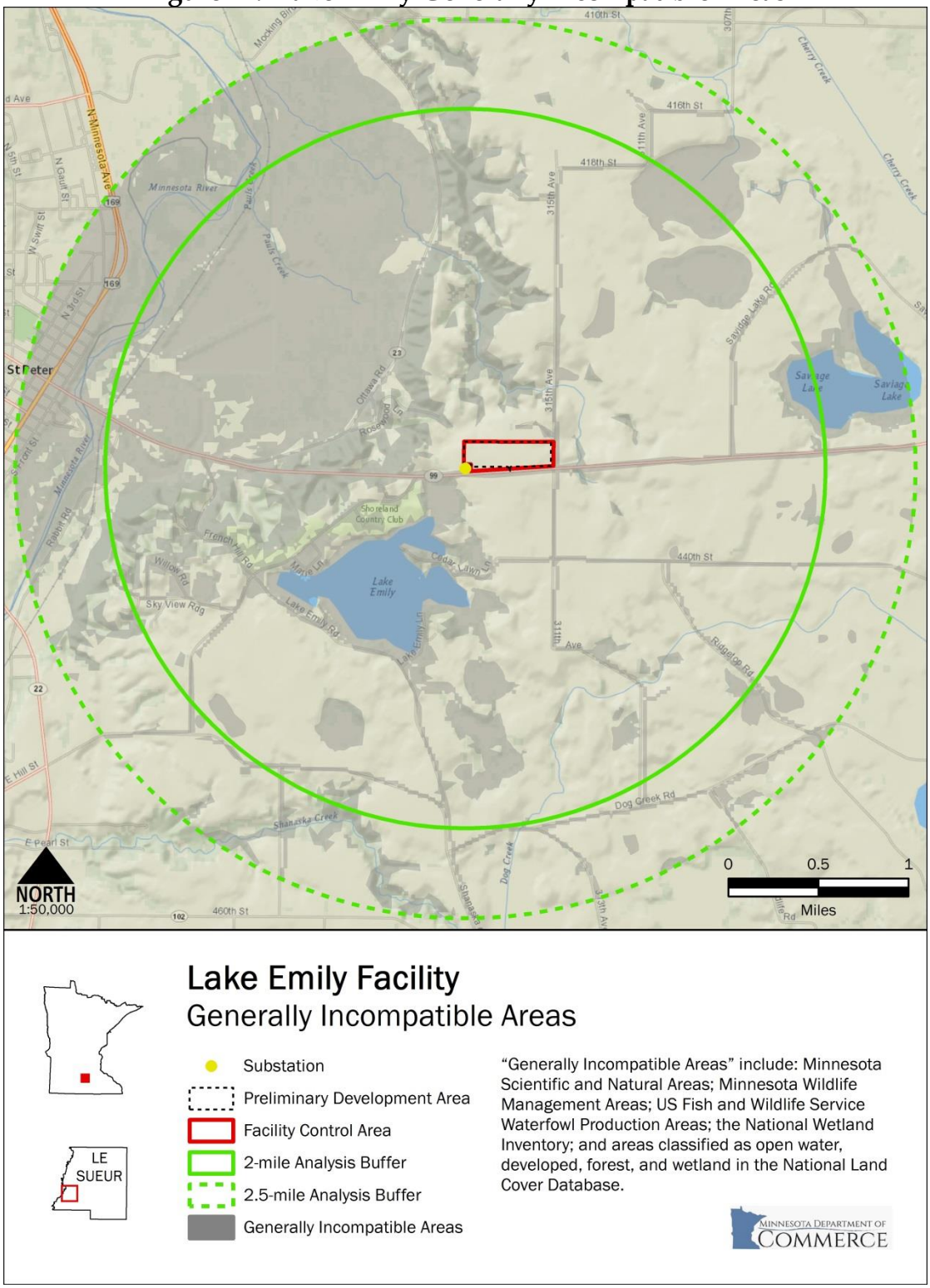

Figure 45: Lake Emily Prime Farmland and Other Areas