

6.14 Mayhew Lake

The proposed Mayhew Lake facility has a capacity of 4.4 MW AC and is located in Section 12 of Sauk Rapids Township in Benton County. The site is located northwest of the city of Sauk Rapids, northeast of the intersection of County Road 29 and County Road 57. Aurora anticipates that the facility will be accessed through a newly constructed access road off of County Road 57. Preliminary plans anticipate a development area of approximately 21.8 acres within the 36 acres of Aurora’s site control. Electricity from the facility would be delivered to Xcel Energy Mayhew Lake Substation located approximately 180 feet east of the facility.

The facility is located within the Western Superior Uplands Section of the Laurentian Mixed Forest Province. Land cover within the preliminary development area (Table 30) is dominated by agricultural crops (49.5 percent cultivated crops and 44.6 percent pasture and haylands). The proposed location avoids the more developed areas of Sauk Rapids located to the west and the south and is similar in land cover to the agricultural areas located in the northern and northeastern portions of the study area (Figure 59).

Table 30: Mayhew Lake Facility

Land Cover	Control Area		Development Area		Study Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	-	-	-	-	273.0	2.2%
Developed, Open Space	3.5	9.7%	1.1	5.1%	1,039.0	8.3%
Developed, Low Intensity	0.5	1.4%	0.2	0.8%	1,283.8	10.2%
Developed, Medium Intensity	1.1	3.0%	-	-	1,448.2	11.5%
Developed, High Intensity	-	-	-	-	291.2	2.3%
Barren Land	-	-	-	-	20.2	0.2%
Deciduous Forest	-	-	-	-	877.8	7.0%
Evergreen Forest	-	-	-	-	40.5	0.3%
Mixed Forest	-	-	-	-	3.7	--
Shrub/Scrub	-	-	-	-	24.2	0.2%
Grassland Herbaceous	-	-	-	-	239.1	1.9%
Pasture/Hay	19.6	54.5%	9.7	44.6%	2,774.4	22.1%
Cultivated Crops	11.3	31.5%	10.8	49.5%	3,213.7	25.6%
Woody Wetlands	-	-	-	-	38.9	0.3%
Emergent Herbaceous Wetlands	-	-	-	-	987.1	7.9%
Totals	36.0	100.0%	21.8	100.0%	12,554.7	100.0%

6.14.1 Effects on Human Settlement

The proposed facility is on a cultivated parcel in a rural area with scattered rural residences. One home is located within the preliminary development area and would be removed if the

facility is constructed. Outside of the preliminary development area the nearest home is located approximately 290 feet to the east.

The location is within an orderly annexation area between Sauk Rapids Township and the city of Sauk Rapids and is zoned as a “Sauk Rapids Annexation Area” by Benton County. The area of site control is designated as Single Family Residential in the *Sauk Rapids Transportation Plan*.¹³⁹ County Road 29 has been designated as a Growth Corridor.¹⁴⁰

A snowmobile trail maintained by the Benton County Trails Association follows the ditch along County Road 29. The facility is located with the State-Designated Sauk Rapids-Rice Goose Refuge. There are no other recreational trails, state, county or local parks located within one-half mile of the proposed facility. Construction and operation of the facility would not impact the use of nearby recreational resources.

Beyond the mitigation measures described in Section 5.2, Aurora has committed to providing sufficient notice of the project schedule with the landowner to allow for notice to the renters.¹⁴¹ As the removal of the home is part of a voluntary agreement between Aurora and the landowner, no additional measures are proposed to mitigate the displacement.

No mitigation measures beyond those described in Section 5.2 are identified for the Mayhew Lake facility.

6.14.2 Effects on Land Based Economies

The proposed facility would remove approximately 21 acres of farmland from agricultural use for at least 25 years. EERA staff is not aware of any other solar facilities announced in the area of the proposed 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 9 acres (42 percent) of the developed area are considered to be prime farmland and 2 acres are considered to be prime farmland if drained (Table 13). Within the comparison area surrounding the Mayhew Lake Substation, approximately 27 percent is considered to be prime farmland and 22 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 Mayhew Lake facility as it is within an orderly annexation area.

¹³⁹ City of Sauk Rapids, *Sauk Rapids Transportation Plan*. 2011
<http://saukrapids.govoffice.com/vertical/Sites/%7B0431F973-8F1A-45B9-BC40-963EF7BF7919%7D/uploads/%7B0C3622A0-840E-4902-8AA4-A88BCB2B47C4%7D.PDF> at Figure 10.

¹⁴⁰ Ibid. at Figure 8, Benton County Comments, September 29, 2014

¹⁴¹ Application, at p. 40

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

No mitigation measures beyond those described in Section 5.3 are identified for the Mayhew Lake facility.

6.14.3 Effects on Archaeological and Historic Resources

No archaeological sites were identified in a survey of the Mayhew Lake facility. A barn located within the preliminary development area has not been surveyed.

If the Mayhew Lake facility is constructed, the barn would need to be evaluated for eligibility for the NRHP. If the barn is determined to be eligible for the NRHP, impacts could be mitigated through avoidance of the barn during construction or development of a mitigation plan in consultation with SHPO.

6.14.4 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 show approximately 0.53 acres of Type 2 (wet meadow) wetlands within the area of site control.¹⁴²

The preliminary design for the facility anticipates grading of approximately 5.6 acres of the site during construction.¹⁴³

No mitigation measures beyond those described in Section 5.5 are identified for the Mayhew Lake facility.

6.14.5 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 Mayhew Lake facility. The NHIS database review did show records for one state-listed tracked species (Cowbane (*Oxypolis rigidior*)) within one mile of the area of site control for the facility.¹⁴⁴

DNR comments on the facility indicate that the facility is adjacent to a DNR public waters wetland and across the road form a “prairie rich fen,” a native plant community identified as a Site of Biodiversity Significance of moderate rank.¹⁴⁵

¹⁴² Appendix C

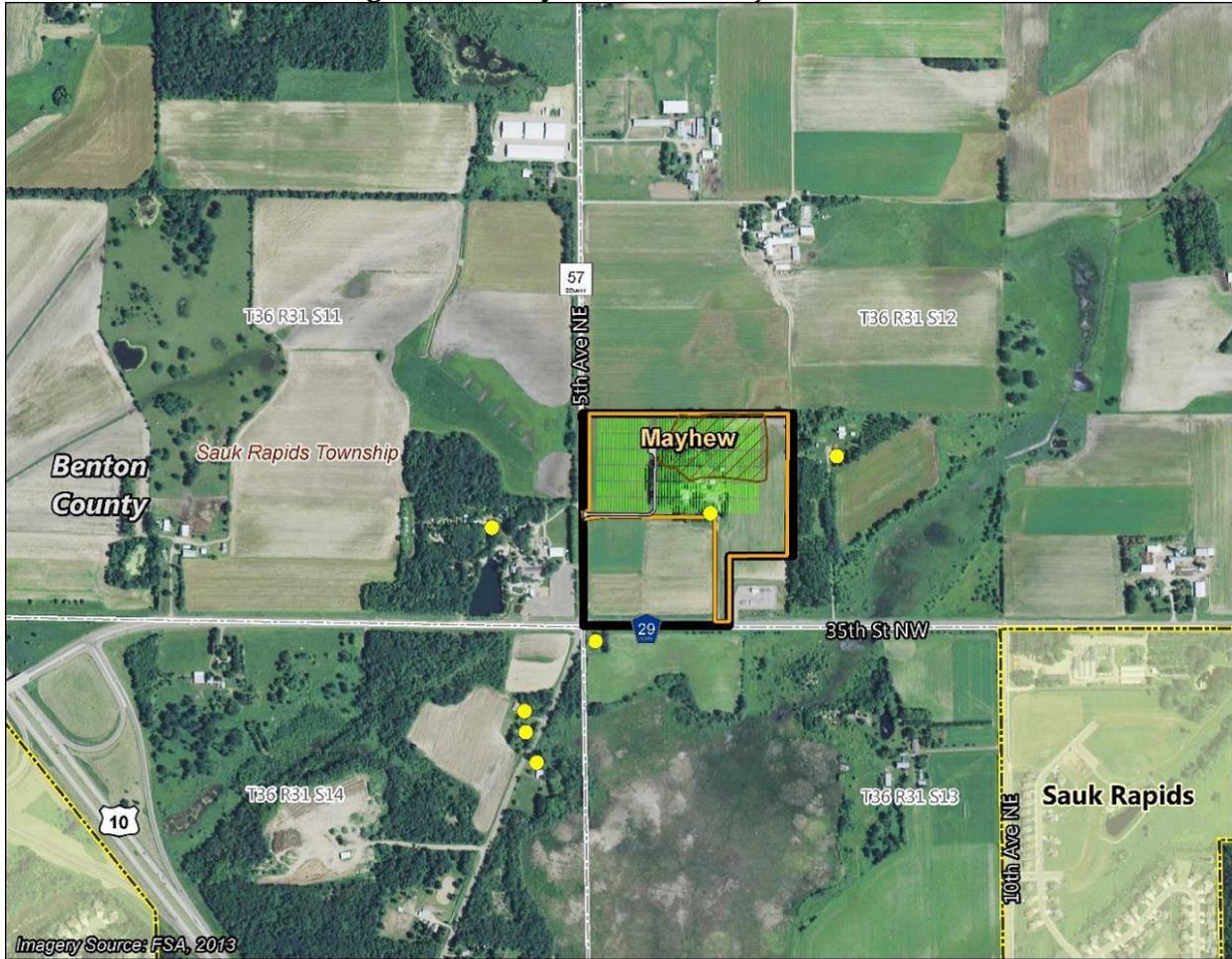
¹⁴³ Application, at Appendix F

¹⁴⁴ Application, at p. 81, Appendix I

¹⁴⁵ Application, at Appendix A

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

Figure 58: Mayhew Lake Project Detail



- Residence Location
- Proposed Inverter
- Proposed Arrays
- Proposed Road
- Proposed Grading Area

- Preliminary Development Area
- Facility Land Control
- Municipal Boundary



Figure 59: Mayhew Lake Land Cover Overview

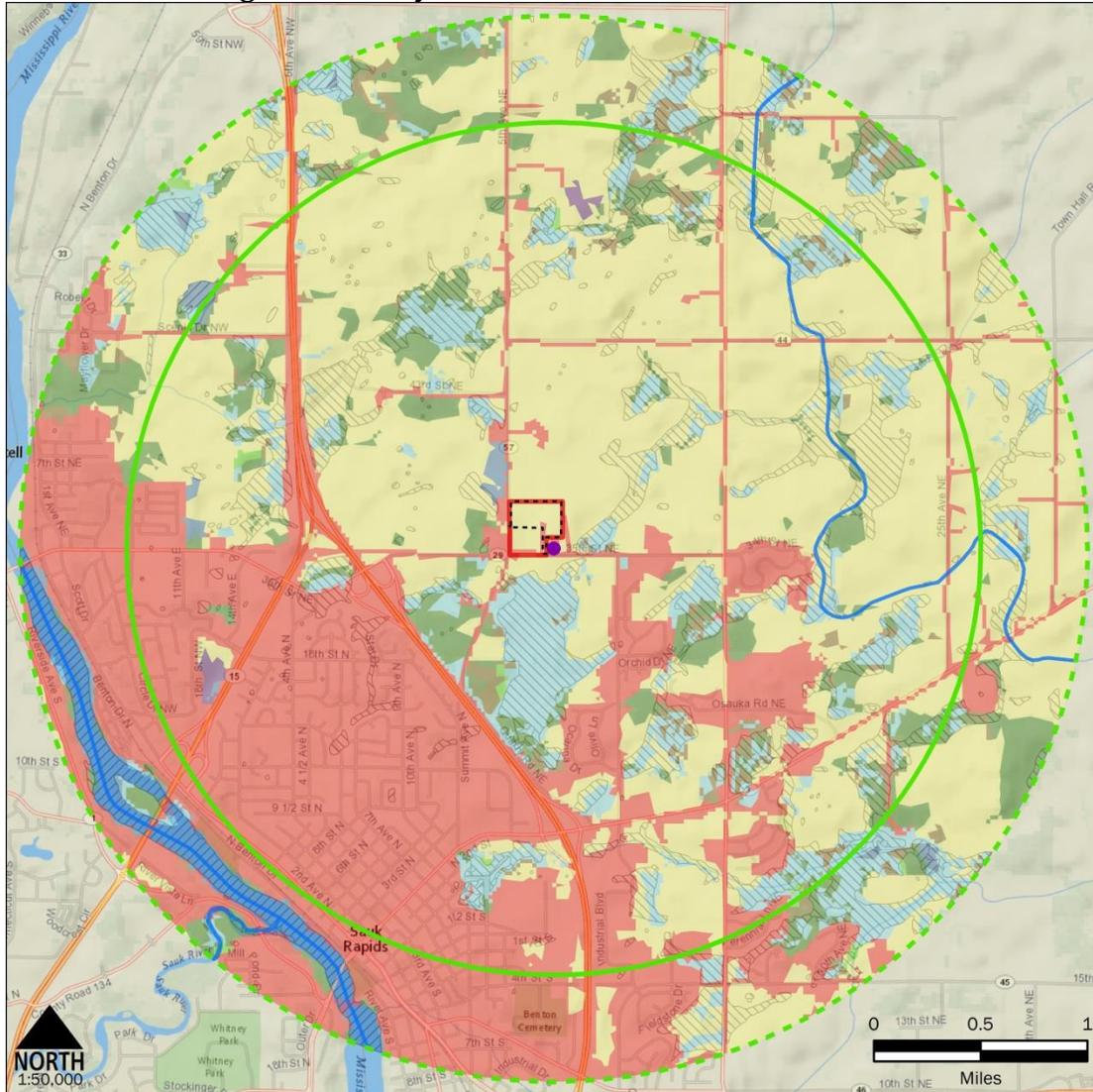
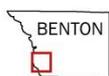
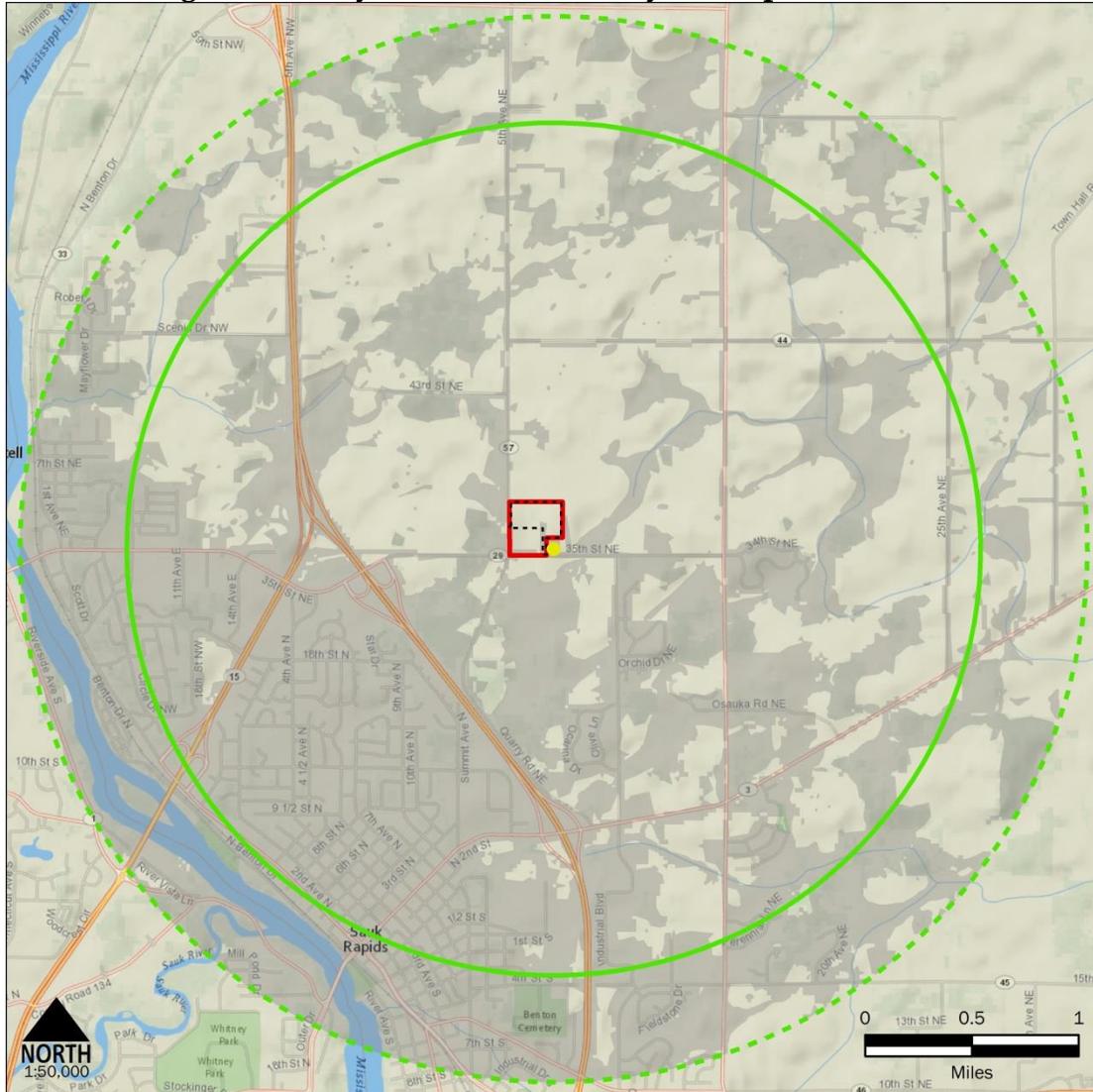


Figure 60: Mayhew Lake Generally Incompatible Areas



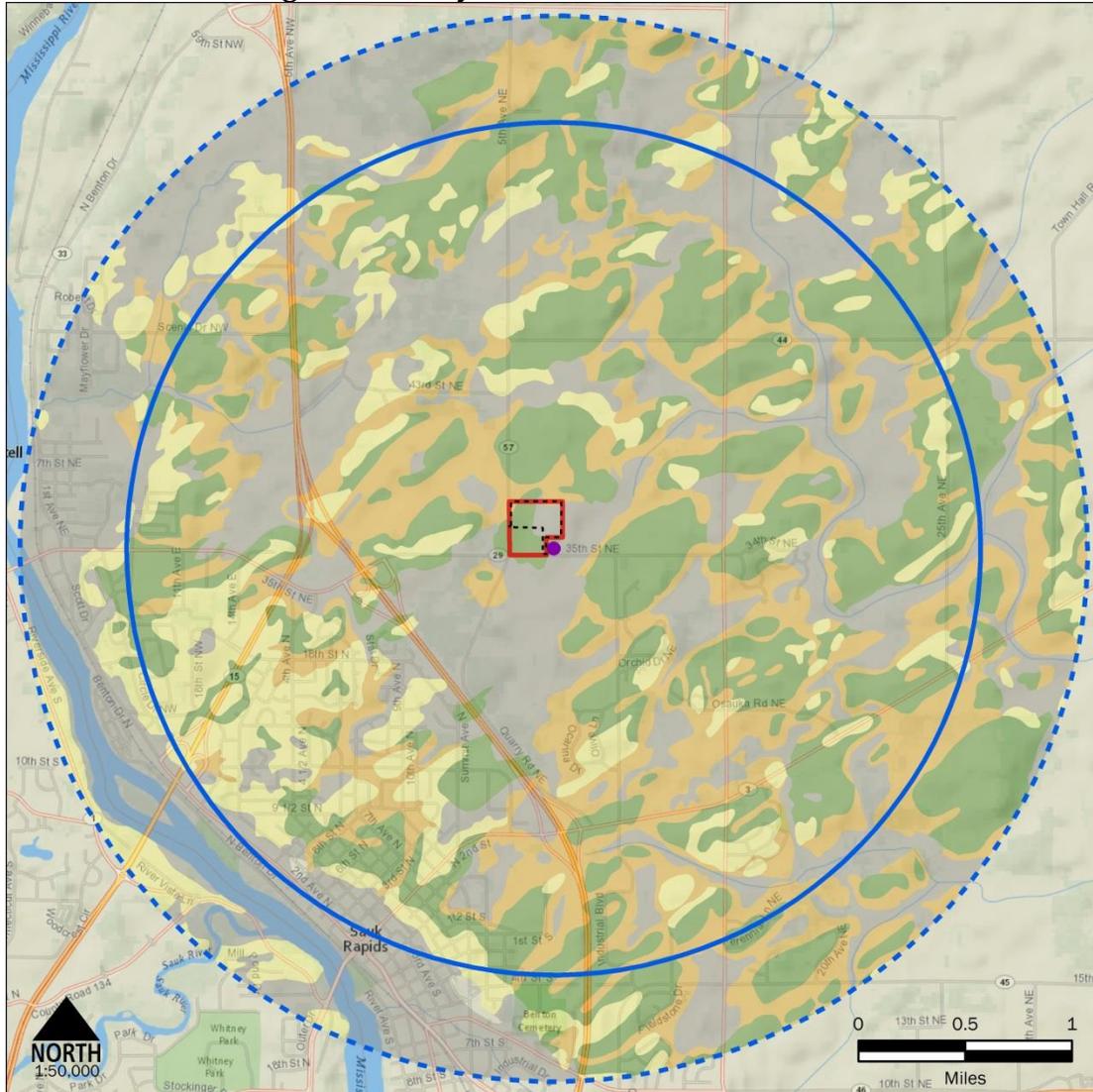
Mayhew Lake Facility Generally Incompatible Areas

- Substation
- Preliminary Development Area
- Facility Control Area
- 2-mile Analysis Buffer
- 2.5-mile Analysis Buffer
- Generally Incompatible Areas

“Generally Incompatible Areas” include: Minnesota Scientific and Natural Areas; Minnesota Wildlife Management Areas; US Fish and Wildlife Service Waterfowl Production Areas; the National Wetland Inventory; and areas classified as open water, developed, forest, and wetland in the National Land Cover Database.



Figure 61: Mayhew Lake Prime Farmland



**Mayhew Lake Facility
 Prime Farmland**

- Substation
- Preliminary Development Area
- Facility Control Area
- 2-mile Analysis Buffer
- 2.5-mile Analysis Buffer
- Prime Farmland
- Prime Farmland if Drained
- Farmland of Statewide Importance
- Not Prime Farmland
- Other Farmland

