

6.12 Lawrence Creek

The proposed Lawrence Creek facility has a capacity of 4.0 MW AC and is located in Section 27 of Shafer Township in Chisago County. The site is located west of Taylors Falls, north of County Road 37 (310th Street North). Aurora anticipates that access to the facility will be through a newly constructed road off of County Road 37. Preliminary plans anticipate a development area of approximately 39.4 acres within the 74.3 acres of Aurora’s site control. The site is currently cultivated and the nearest home is located approximately 230 feet southeast of the preliminary development area. Electricity from the facility would be delivered to Xcel Energy’s Lawrence Creek Substation located approximately 0.4 miles 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 27) is dominated by agricultural cover comprising both cultivated crops (97.6 percent) and pasture and haylands (2.2 percent). In comparison to the study area the facility location avoids the development and forested areas near Taylors Falls to the east (Figure 51).

Table 27: Lawrence Creek Facility

Land Cover	Control Area		Development Area		Study Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	--	--	--	--	403.9	4.0%
Developed, Open Space	--	--	--	--	757.6	7.5%
Developed, Low Intensity	--	--	--	--	186.6	1.9%
Developed, Medium Intensity	--	--	--	--	76.2	0.8%
Developed, High Intensity	--	--	--	--	25.3	0.3%
Barren Land	--	--	--	--	--	--
Deciduous Forest	7.9	10.6%	--	--	2,139.4	21.2%
Evergreen Forest	--	--	--	--	162.3	1.6%
Mixed Forest	--	--	--	--	67.0	0.7%
Shrub/Scrub	--	--	--	--	21.58	0.2%
Grassland Herbaceous	2.3	3.1%	--	--	282.9	2.8%
Pasture/Hay	6.4	8.6%	0.9	2.2%	2,769.1	27.5%
Cultivated Crops	57.7	77.6%	38.4	97.6%	2,471.0	24.5%
Woody Wetlands	--	--	--	--	91.2	0.9%
Emergent Herbaceous Wetlands	--	--	--	--	627.4	6.2%
Totals	74.35	100.0%	39.36	100.0%	10,081.5	100.0%

6.12.1 Effects on Human Settlement

The proposed location is in a cultivated parcel in an area that is a mixture of scattered rural residences and agricultural land. The nearest home is located approximately 230 feet

southeast of the preliminary development area. Construction of the facility will not result in displacement of any homes or businesses.

The facility is located in an area zoned as Agricultural by Chisago County. The site is not located within an identified orderly annexation area. Solar farms covering up to 20 acres are a permitted use within the Agricultural District; solar farms covering more than 20 acres require a conditional use. Under the Chisago County Zoning Ordinance components of the farm must meet setback, height, and coverage limitations for the district in which the system is located. The ordinance also prohibits solar energy farms in certain areas:

- Shoreland Districts as designated by the Department of Natural Resources (DNR) and the Chisago County Shoreland Management Ordinance
- Six Hundred (600) feet of areas formally designated or protected from development by Federal, State or County agencies as wildlife habitat, wildlife management areas or designated as National Wild and Scenic land or corridor
- Wetlands to the extent prohibited by the Minnesota Wetland Conservation Act, and
- The Floodplain District.

The conditional use permit conditions require some type of visual screening of the facility as well as preservation of natural wildlife, wetland, woodland or other corridors:

The facility is located west of the tourist destinations of Taylors Falls and the St. Croix River Valley. Construction and operation of the facility would not impact the use of nearby recreational resources.

No mitigation measures beyond those proposed in Section 5.2 are identified for the Lawrence Creek facility.

6.12.2 Effects on Land Based Economies

The proposed facility would remove approximately 39 acres of farmland from agricultural use. In addition to the Lawrence Creek facility, Aurora's Chisago, Scandia, and Wyoming facilities, as well as the North Star Solar Project, a 100 MW PV project proposed by North Star Solar PV LLC are all proposed in Chisago County. If all of the proposed facilities are developed, the five facilities would result in a cumulative reduction of approximately 970 acres from agricultural use in Chisago County for at least 25 years.

Approximately 18 acres (45 percent) of the developed area are considered to be prime farmland and 16 acres are considered to be prime farmland if drained (Table 13). Within the comparison area surrounding the Lawrence Creek Substation, approximately 36 percent is considered to be prime farmland and 19 percent is considered to be prime farmland if drained. In order to avoid the developed area around Taylors Falls and the forested areas along the St. Croix River and the wetlands scattered through the study area, it is likely that any alternate locations would also be sited on prime farmland or prime farmland if drained (Figure 53).

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 Lawrence Creek facility.

6.12.3 Effects on Archaeological and Historic Resources

No archaeological sites were identified in a survey of the Lawrence Creek facility. No mitigation measures beyond those identified in Section 5.4 are proposed.

6.12.4 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 9.2 acres of wetlands within the preliminary development area; 0.13 acres of Type 1 (seasonally flooded basins or floodplains, 3.35 acres of Type 2 (wet meadow), 4.49 acres of Type 3 (shallow marsh), and 1.21 acres of Type 6 (shrub swamp).¹³²

The preliminary design for the facility anticipates grading of approximately 10.7 acres of the site during construction.¹³³

No mitigation measures beyond those described in Section 5.5 are identified for the Lawrence Creek facility.

6.12.5 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 Lawrence Creek facility. The NHIS database review did show records for several state-listed threatened, endangered, special concern and tracked species within one mile of the area of site control for the facility (Table 28).¹³⁴

Table 28: Lawrence Creek - NHIS Records

Common Name	Scientific Name	State Status	Federal Status	Records Within 1 mile Of Land Control
Pistolgrip	<i>Tritogonia verrucosa</i>	Endangered	None	1
Purple Wartyback	<i>Cyclonaias tuberculata</i>	Endangered	None	1

¹³² Appendix C

¹³³ Application, at Appendix F

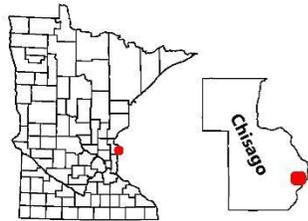
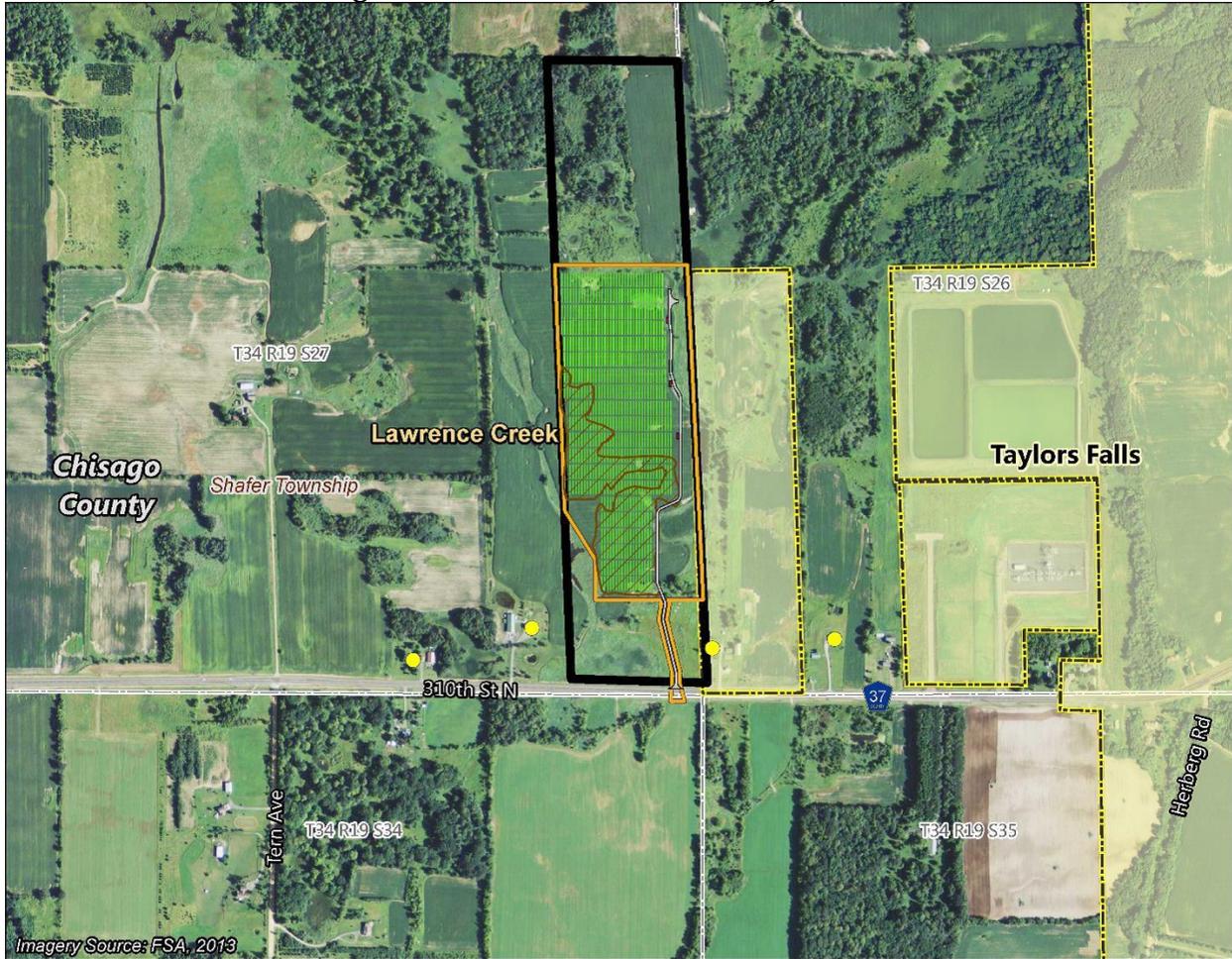
¹³⁴ Application, at p. 81, Appendix I

Spotted Pondweed	Potamogeton pulcher	Endangered	None	1
Elktoe	Alasmidonta marginata	Threatened	None	1
Fluted-shell	Lasmigona costata	Threatened	None	1
Monkeyface	Quadrula metanevra	Threatened	None	1
Spike	Elliptio dilatata	Threatened	None	1
Stemless Tick-trefoil	Desmodium nudiflorum	Threatened	None	1
American Water- pennywort	Hydrocotyle americana	Special Concern	None	1
Black Sandshell	Ligumia recta	Special Concern	None	1
Louisiana Waterthrush	Parkesia motacilla	Special Concern	None	1
Round Pigtoe	Pleurobema sintoxia	Special Concern	None	1
Hickorynut	Obovaria olivaria	Tracked	None	1
Spiny Hornwort	Ceratophyllum echinatum	Tracked	None	1
Western Foxsnake	Pantherophis ramspotti	Tracked	None	1
White Baneberry	Actaea pachypoda	Tracked	None	1

As discussed in Section 5.6, a field survey of the Lawrence Creek 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.

Figure 50: Lawrence Creek Project Detail



- Residence Location
- Proposed Inverter
- Proposed Arrays
- Proposed Road
- Proposed Grading Area
- Preliminary Development Area
- Facility Land Control
- Municipal Boundary

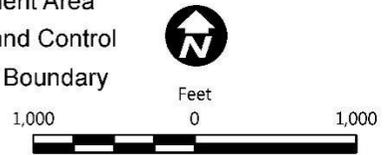


Figure 51: Lawrence Creek Land Cover Overview

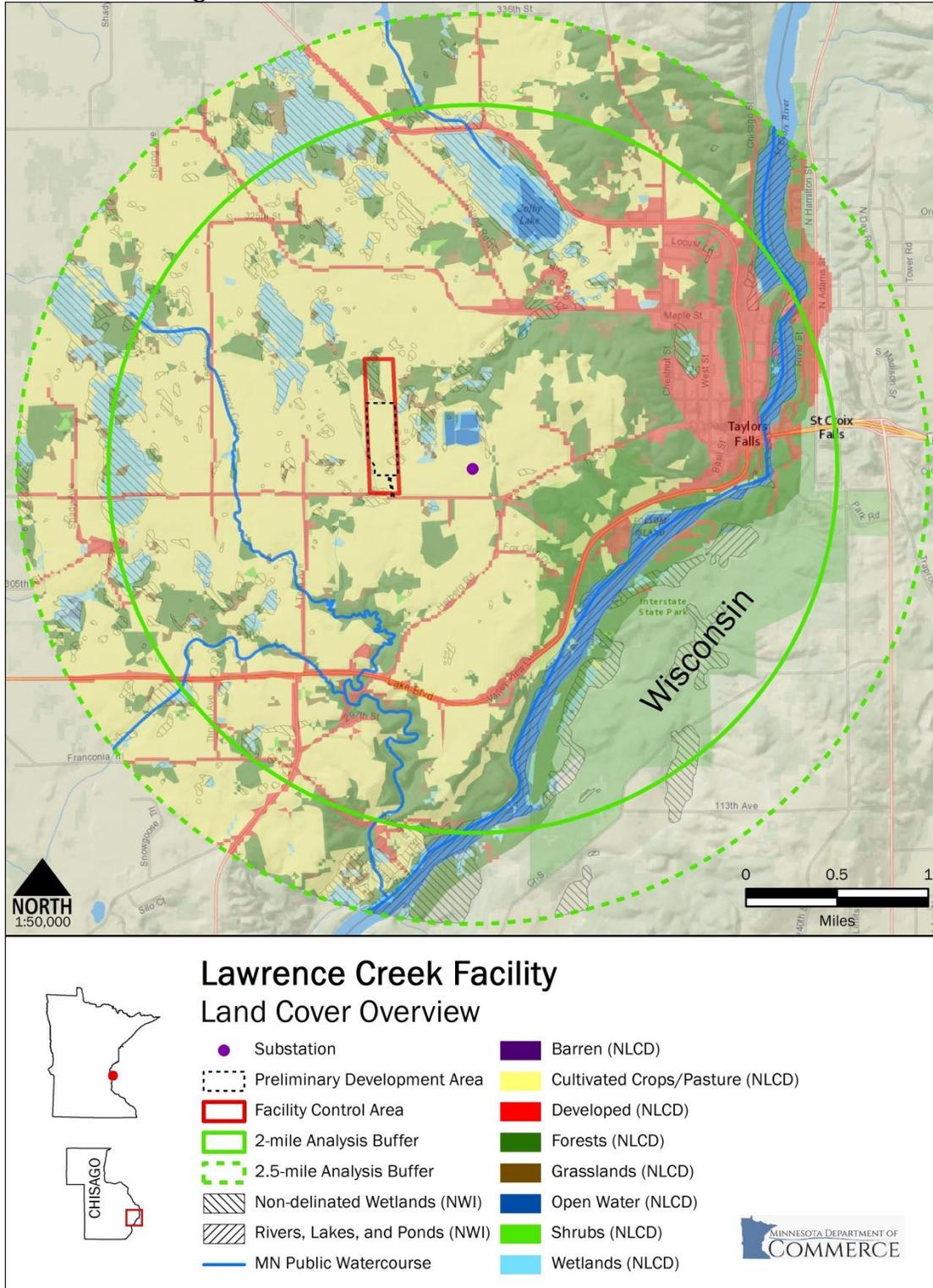
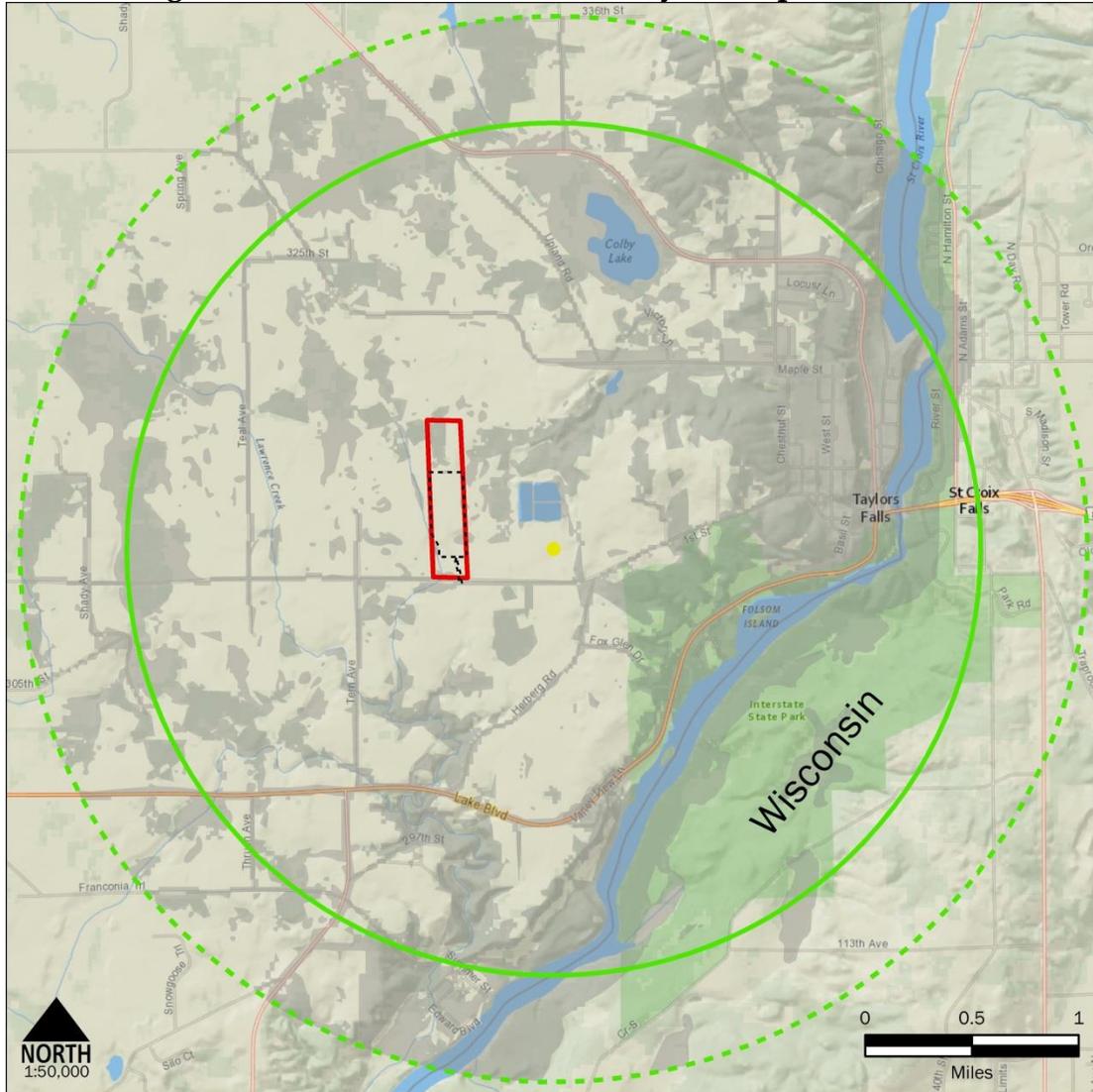


Figure 52: Lawrence Creek Generally Incompatible Areas



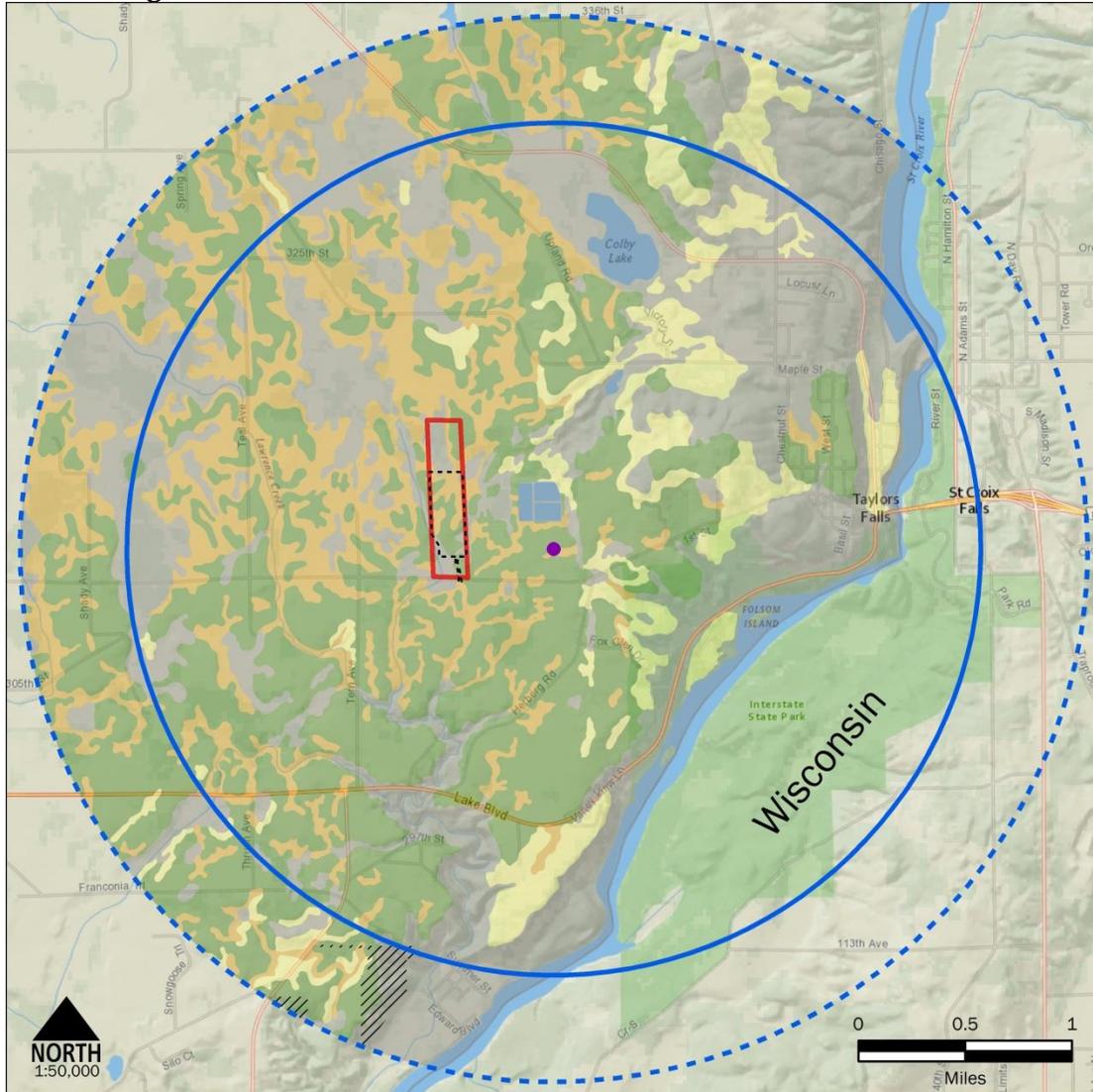
**Lawrence Creek Facility
 Generally Incompatible Areas**

- 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 53: Lawrence Creek Prime Farmland and Other Areas



**Lawrence Creek Facility
 Prime Farmland and Other Areas**

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

