

6.24 Zumbrota

The proposed Zumbrota facility has a capacity of 3.5 MW AC and is located in Section 25 of Minneola Township in Goodhue County. The site is located just west across US Highway 52 of the city of Zumbrota, south of 445th Street. Aurora anticipates that the facility will be accessed through a newly constructed drive off of 445th Street.¹⁹⁶ Preliminary plans anticipate a development area of approximately 31.9 acres within the 35.6 acres of Aurora’s site control. Electricity from the facility would be delivered to Xcel Energy’s Zumbrota Substation located approximately 0.4 miles east of the facility.

The facility is located within the Paleozoic Plateau Section of the Eastern Broadleaf Forest Province. Land cover within the preliminary development area (Table 41) is dominated by cultivated crops (91.7 percent), with areas of developed open space (5.3 percent) and grasslands (2.3 percent) also present. The proposed location avoids the developed area of Zumbrota, located east of US Highway 52, and most of the grassland areas that are scattered throughout the study area surrounding the Zumbrota Substation (Figure 100).

Table 41: Zumbrota Facility - Land Cover

Land Cover	Control Area		Development Area		2.5 Mile Buffer	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	--	--	--	--	27.1	0.2%
Developed, Open Space	1.7	4.9%	1.7	5.3%	945.2	7.5%
Developed, Low Intensity	0.2	0.5%	0.2	0.5%	725.4	5.8%
Developed, Medium Intensity	0.1	0.2%	0.1	0.2%	188.1	1.5%
Developed, High Intensity	--	--	--	--	54.2	0.4%
Barren Land	--	--	--	--	12.1	0.1%
Deciduous Forest	--	--	--	--	661.0	5.3%
Evergreen Forest	--	--	--	--	3.8	0.0%
Mixed Forest	--	--	--	--	--	--
Shrub/Scrub	--	--	--	--	--	--
Grassland Herbaceous	1.3	3.5%	0.7	2.3%	2,181.5	17.4%
Pasture/Hay	0.0	0.0%	0.0	0.0%	1,880.5	15.0%
Cultivated Crops	32.4	91.0%	29.2	91.7%	5,673.9	45.2%
Woody Wetlands	--	--	--	--	175.3	1.4%
Emergent Herbaceous Wetlands	--	--	--	--	24.2	0.2%
Totals	35.6	100.0%	31.9	100.0%	12,552.4	100.0%

¹⁹⁶ Appendix C

6.24.1 Effects on Human Settlement

The facility is located in a rural area with scattered rural residences, including a residential development to the south of the proposed facility. The facility location is currently cultivated and the nearest home is located approximately 290 feet south of the preliminary development area. Construction of the facility will not result in displacement of any homes or businesses. The facility is located within Zumbrota's orderly annexation area. The facility is located in Goodhue County's Agricultural A-3 Urban Fringe. The A-3 zoning classification is designated to identify areas where development should be limited to avoid creating obstacles to future urbanization¹⁹⁷. The facility would be classified as a "Solar Energy System" in Section 19 of the *Goodhue County Zoning Ordinance*, and would be considered as either a conditional use or interim permitted use in the A-3 Zoning area.¹⁹⁸

There is a snowmobile trail north of the facility along 455th Street; the snowmobile trail does not cross the development area. No other recreational trails, county state or local parks within one-half mile of the proposed facility. Construction and operation of the facility would not impact the use of nearby recreational resources.

The Zumbrota facility's proximity to the nearby residential neighborhood (see Figure 99) would mean that the aesthetic impacts to nearby housing is likely to be noticeable. A landscaping plan as described in Section 5.2.7 could be developed to minimize visual impacts to the residential area south of the facility.

6.24.2 Effects on Land Based Economies

Based on the preliminary site design, the Zumbrota facility would remove approximately 29.2 acres from agricultural use. Aurora's Pine Island facility is also located in Goodhue County. Based on the preliminary site design, Aurora anticipates that the Pine Island Facility would remove approximately 41.2 acres from agricultural use, resulting in a cumulative decrease of 70.4 acres.

Approximately 21 acres (65 percent) of the developed area are considered to be prime farmland and 6 acres (17 percent) are considered to be prime farmland if drained (Table 13). Within the comparison area surrounding the Zumbrota Substation, approximately 47 percent is considered to be prime farmland and 7 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 Zumbrota facility as it is within an orderly annexation area.

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

¹⁹⁷ Goodhue County Comments

¹⁹⁸ *Goodhue County Zoning Ordinance: Article 19, Solar Energy System (SES) Regulations*. (Amended September 16, 2014) <http://www.co.goodhue.mn.us/DocumentCenter/View/2428>

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

6.24.3 Effects on Archaeological and Historic Resources

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

6.24.4 Effects on Natural Environment

There are no rivers, streams or lakes within the area of facility site control. An unnamed tributary that flows into the North Fork of the Zumbro River abuts the southern boundary of the facility.

Field delineations performed in the summer of 2014 show approximately 0.3 acres of Type 7 (wooded swamp) wetlands within the area of land control.¹⁹⁹

The preliminary design for the facility anticipates grading of approximately 4.6 acres of the site during construction.²⁰⁰

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

6.24.5 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 Zumbrota facility. The NHIS database review did show records for one state listed threatened species (Tuberclad Rein-orchid (*Platanthera flava* var. *herbiola*)) and one state listed special concern species (White Wild Indigo (*Baptisia lactea* var. *lactea*)) within the preliminary development area, and one state listed threatened species Valerian (*Valeriana edulis* var. *ciliata*))within one mile of the area of site control for the facility.²⁰¹

No mitigation measures beyond the field survey described in Section 5.6 are identified for the Zumbrota facility.

¹⁹⁹ Appendix C

²⁰⁰ Application, at Appendix F

²⁰¹ Application, at p. 81,

Figure 99: Zumbrota Project Detail



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

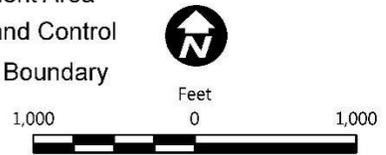


Figure 100: Zumbrota Land Cover Overview

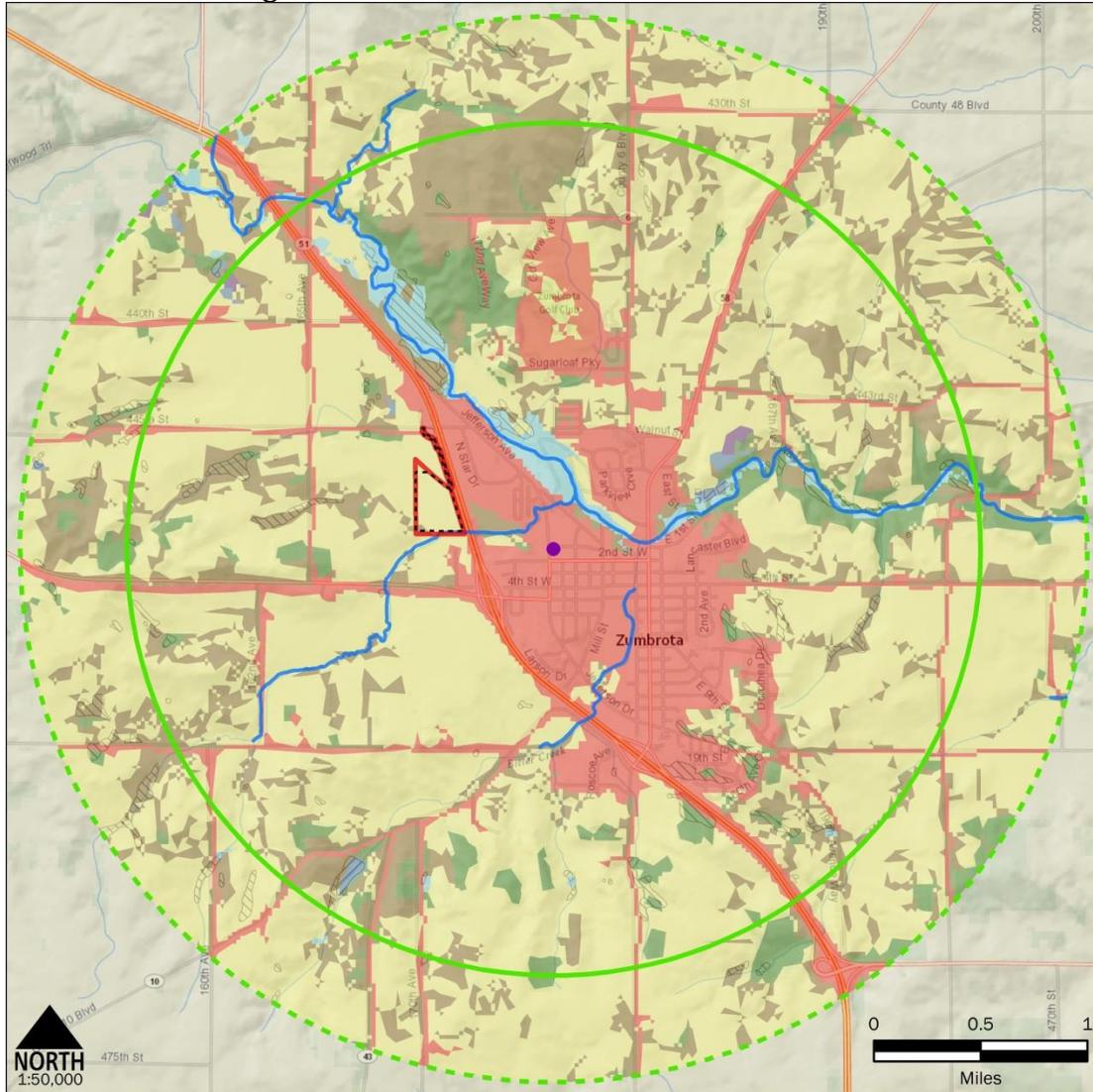
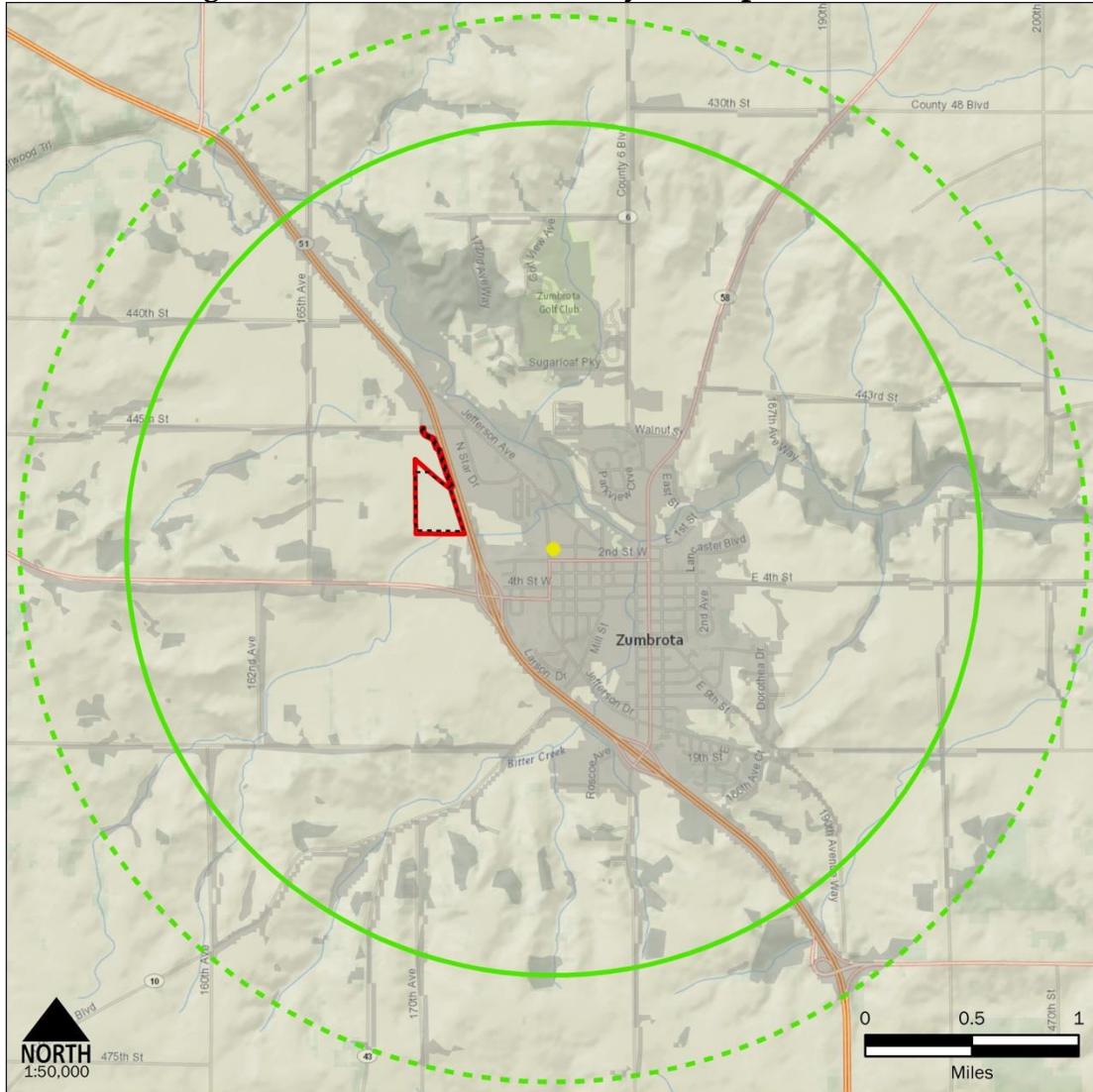


Figure 101: Zumbrota Generally Incompatilbe Areas



**Zumbrota 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 102: Zumbrota Prime Farmland

