

6.9 Hastings

The proposed Hastings facility has a capacity of 5.0 MW AC and is located in Section 8 of Denmark Township in Washington County. The site is located across the Mississippi River from the city of Hastings, northeast of the intersection of US Highway 10 and Norell Road South. Aurora anticipates that the facility will be accessed from a new access road off of Norell Road South. Preliminary plans anticipate development area of the entire 40.6 acres of Aurora’s site control. Electricity from the facility would be delivered to Xcel Energy’s Hastings Substation, located approximately 1.5 miles 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 23) is comprised almost entirely by cultivated crops (99.8 percent). When compared to the land cover in the study area surrounding the Hastings Substation, the facility location avoids the developed area of Hastings, wetlands and Mississippi River to the south and the St. Croix River to the East (Figure 39).

Table 23: Hastings Facility Land Cover

Land Cover	Control Area		Preliminary Development Area		Study Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	-	-	-	-	1,983.8	15.8%
Developed, Open Space	0.10	0.2%	0.1	0.2%	1,634.5	13.0%
Developed, Low Intensity	-	-	-	-	1,809.8	14.4%
Developed, Medium Intensity	-	-	-	-	1,247.5	10.0%
Developed, High Intensity	-	-	-	-	312.2	2.5%
Barren Land	-	-	-	-	7.8	-
Deciduous Forest	-	-	-	-	969.2	7.7%
Evergreen Forest	-	-	-	-	12.7	0.1%
Mixed Forest	-	-	-	-	2.0	-
Shrub/Scrub	-	-	-	-	72.5	0.6%
Grassland Herbaceous	-	-	-	-	148.7	1.2%
Pasture/Hay	-	-	-	-	808.0	6.4%
Cultivated Crops	40.6	100.0%	40.5	99.8%	2,298.8	18.3%
Woody Wetlands	-	-	-	-	1,038.0	8.3%
Emergent Herbaceous Wetlands	-	-	-	-	192.9	1.5%
Totals	40.6	100.0%	40.6	100.0	12,538.4	100.0%

6.9.1 Effects on Human Settlement

The proposed facility location is a cultivated parcel located in a predominantly agricultural area with scattered rural residences. The nearest home is located approximately 645 feet northwest 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 A-2 by Washington County. The area of site control is designated as General Rural in Chapter 3 of the *Washington County 2030 Comprehensive Plan*.¹²⁰

The Rutstrum WMA and the St. Croix National Scenic Riverway are located within one mile of the proposed facility. The facility would not be visible from these areas. There are no additional recreational trails, state, county or local parks within one-half mile of the proposed facility. Neither construction nor operation of the facility would impact the use of nearby recreational resources.

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

6.9.2 Effects on Land Based Economies

The proposed facility would remove approximately 41 acres of farmland from agricultural use for at least 25 years. EERA staff is not aware of other solar facilities announced in the area of the proposed facility, so there is no indication that the conversion of land from agricultural uses for the proposed project would be part of a cumulative reduction of available land for crops or pasture.

Essentially all of the 41 acre preliminary development area is considered to be prime farmland (Table 13). The Prime Farmland Exclusion for electric power generation facilities identified in Minnesota Rule part 7850.4400, subpart 4, does not apply due to the facility's proximity to Hastings. The facility location is not enrolled in the Metropolitan Agricultural Preserves Program.

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 Hastings facility.

6.9.3 Effects on Archaeological and Historic Resources

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

¹²⁰ Washington County, *Washington County 2030 Comprehensive Plan: A Policy Guide to 2030: Land Use*, (September 2010) Figure 3-11 "Future Land Use"
<http://www.co.washington.mn.us/DocumentCenter/View/124>

6.9.4 Effects on Natural Environment

There are no rivers, streams or lakes within the area of facility site control. The proposed facility is located near the juncture of the Mississippi and St. Croix Rivers in an area. Because of the presence of two Audubon Important Bird Areas (IBA) (the St. Croix Lake IBA and Vermillion Bottoms IBA), the DNR anticipates this area will have a relatively high level of avian activity. Significant impacts from the PV installation are not anticipated, but any overhead electric lines present a potential risk for avian collisions.

Field delineations performed in the summer of 2014 did not identify any wetlands in the area of land control.¹²¹

The preliminary design for the facility does not anticipate any grading of the site during construction.¹²²

In addition to those mitigation measures described in Section 5.5, marking of any overhead collector lines and poles with bird flight diverters and raptor shields may reduce the potential for avian collisions at the Hastings facility.

6.9.5 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 Hastings facility. The NHIS database review did show records for many instances of federally and state listed endangered, threatened and special concern species within one mile of the area of site control for the facility (Table 24).¹²³ However, many of the species identified are aquatic species that would not be impacted as there is no aquatic habitat located within the facility.

Table 24: Hasting Facility - NHIS Records

Common Name	Scientific Name	State Status	Federal Status	Records Within 1 Mile of Land Control
Ebonysheal	<i>Fusconaia ebena</i>	Endangered	None	2
Elephant-ear	<i>Elliptio crassidens</i>	Endangered	None	1
Higgins Eye	<i>Lampsilis higginsii</i>	Endangered	Listed Endangered	3
Pallid Shiner	<i>Hybopsis amnis</i>	Endangered	None	1
Pistolgrip	<i>Tritogonia verrucosa</i>	Endangered	None	1
Purple Wartyback	<i>Cyclonaias tuberculata</i>	Endangered	None	1
Rock Pocketbook	<i>Arcidens confragosus</i>	Endangered	None	1
Sheepnose	<i>Plethobasus cyphus</i>	Endangered	Candidate	1
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	None	1
Washboard	<i>Megaloniaias nervosa</i>	Endangered	None	1

¹²¹ Appendix C

¹²² Application, at Appendix F

¹²³ Application, at p. 81, Appendix I

Common Name	Scientific Name	State Status	Federal Status	Records Within 1 Mile of Land Control
Winged Mapleleaf	<i>Quadrula fragosa</i>	Endangered	Listed Endangered	1
Butterfly	<i>Ellipsaria lineolata</i>	Threatened	None	1
Elktoe	<i>Alasmidonta marginata</i>	Threatened	None	1
Kitten-tails	<i>Besseyia bullii</i>	Threatened	None	1
Monkeyface	<i>Quadrula metanevra</i>	Threatened	None	1
Mucket	<i>Actinonaias ligamentina</i>	Threatened	None	2
Paddlefish	<i>Polyodon spathula</i>	Threatened	None	1
Spike	<i>Elliptio dilatata</i>	Threatened	None	2
Wartyback	<i>Quadrula nodulata</i>	Threatened	None	1
American Ginseng	<i>Panax quinquefolius</i>	Special Concern	None	1
Black Sandshell	<i>Ligumia recta</i>	Special Concern	None	2
Blue Sucker	<i>Cycleptus elongatus</i>	Special Concern	None	3
Creeping Juniper	<i>Juniperus horizontalis</i>	Special Concern	None	1
Lake Sturgeon	<i>Acipenser fulvescens</i>	Special Concern	None	2
Red-shouldered Hawk	<i>Buteo lineatus</i>	Special Concern	None	2
Round Pigtoe	<i>Pleurobema sintoxia</i>	Special Concern	None	2
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Tracked	None	2
Hickorynut	<i>Obovaria olivaria</i>	Tracked	None	2
Walter's Barnyard Grass	<i>Echinochloa walteri</i>	Tracked	None	1

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

As identified 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 38: Hastings Project Detail



- Residence Location
- Proposed Inverter
- Proposed Arrays
- Proposed Road
- ▭ Preliminary Development Area
- ▭ Facility Land Control



Figure 39: Hastings Land Cover Overview

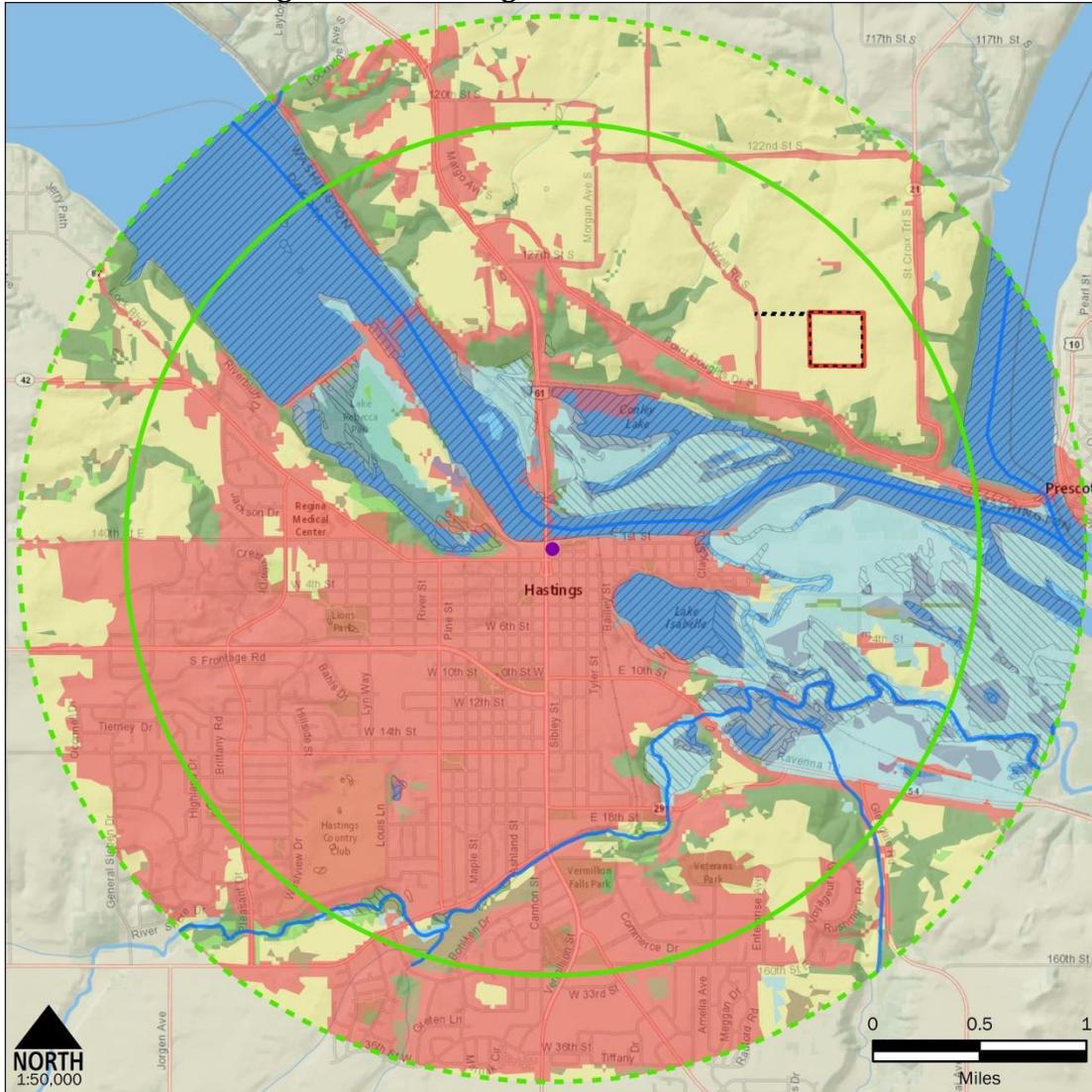
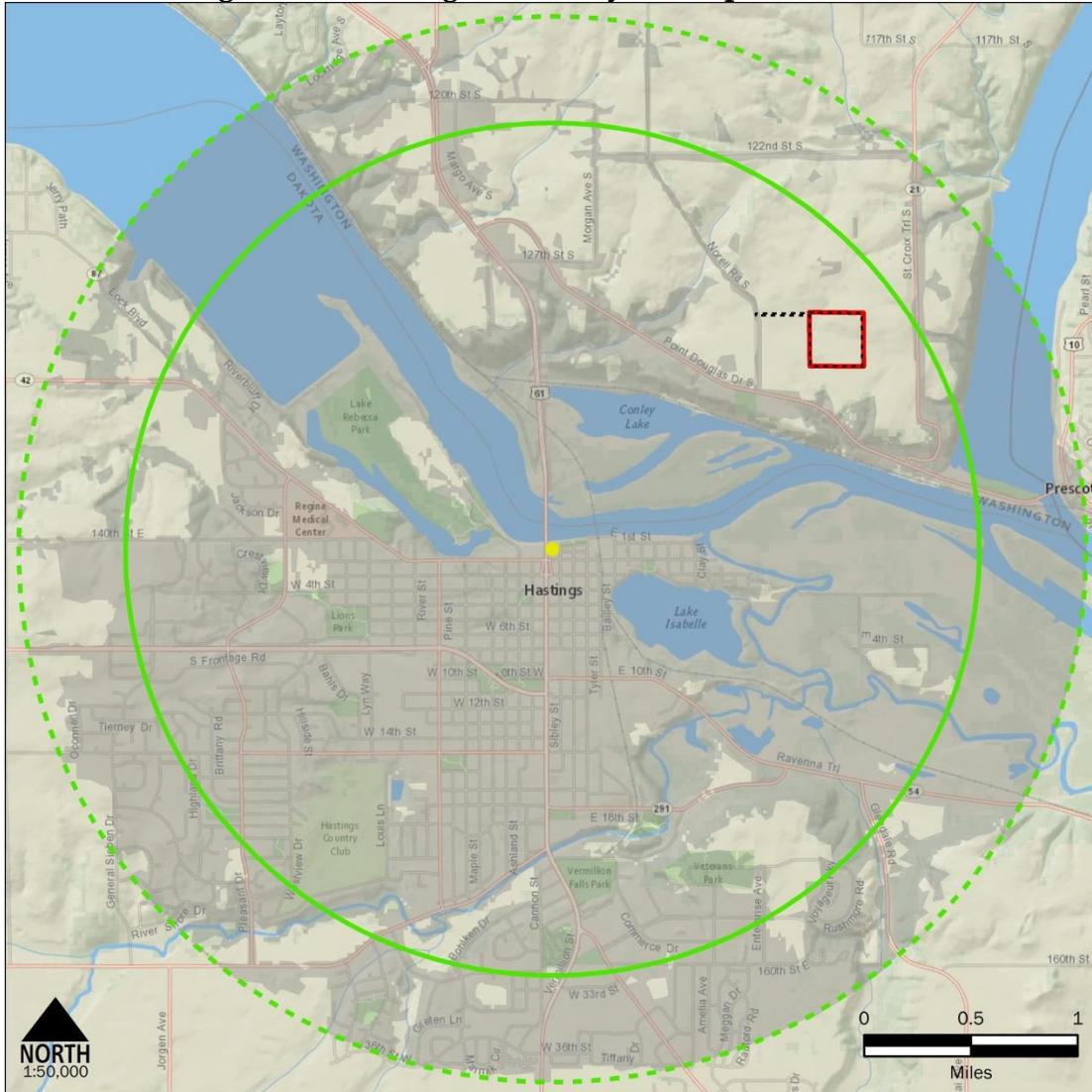


Figure 40: Hastings Generally Incompatible Areas



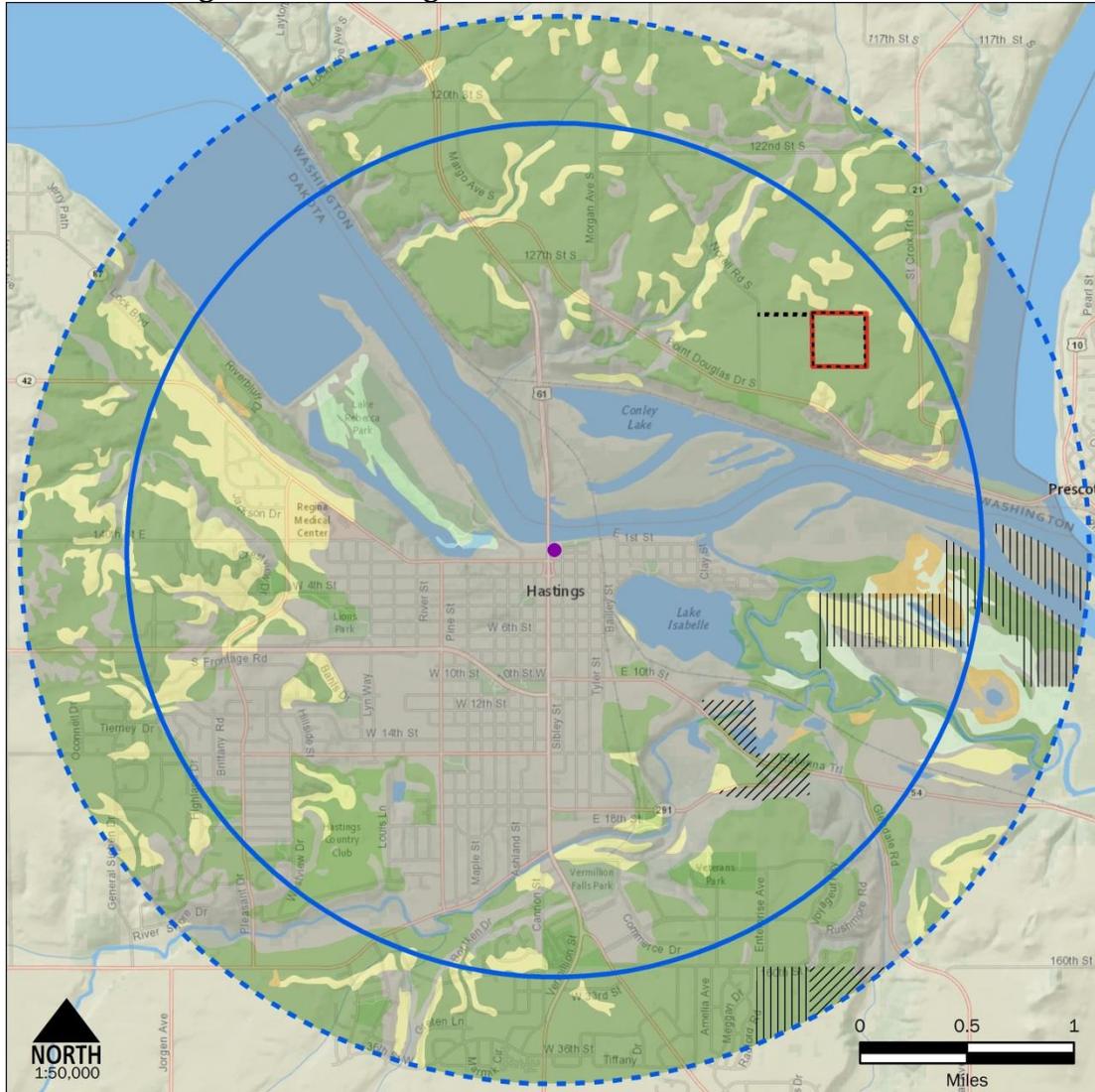
Hastings Facility Generally Incompatible Areas

- 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 41: Hastings Prime Farmland and Other Areas



Hastings 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
- MN Wildlife Management Areas
- Prime Farmland
- Prime Farmland if Drained
- Farmland of Statewide Importance
- Not Prime Farmland
- Other Farmland

