

6.18 Pipestone

The proposed Pipestone facility has a capacity of 2.0 MW AC and straddles the border between Sweet Township and the city of Pipestone in Pipestone County. The site is located in the northwest portion of the city of Pipestone, south of 5th Street NW. Aurora anticipates that the site would be accessed through a new drive off of 5th Street NW. Preliminary plans anticipate a development area of approximately 14.7 acres within the 15.8 acres of Aurora’s site control. Electricity from the facility would be delivered to Xcel Energy’s Pipestone Substation located approximately 3,640 feet east of the facility.

The facility is located within the North-Central Glaciated Plain Section of the Prairie Parkland Province. Land cover within the preliminary development area (Table 34) is dominated by cultivated crops (98.9 percent). The proposed location avoids the developed area of Pipestone to the south and east of the study area around the Pipestone Substation as well as many of the grassland areas in the area of the Pipestone National Monument (Figure 76).

Table 34: Pipestone Facility – Land Cover

Land Cover	Control Area		Development Area		Study Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Open Water	--	--	--	--	142.3	1.1%
Developed, Open Space	0.1	0.7%	0.1	0.7%	1,184.4	9.4%
Developed, Low Intensity	--	--	--	--	756.7	6.0%
Developed, Medium Intensity	--	--	--	--	349.5	2.8%
Developed, High Intensity	--	--	--	--	108.0	0.9%
Barren Land	--	--	--	--	6.4	0.1%
Deciduous Forest	--	--	--	--	94.1	0.8%
Evergreen Forest	--	--	--	--	--	--
Mixed Forest	--	--	--	--	--	--
Shrub/Scrub	--	--	--	--	--	--
Grassland Herbaceous	0.1	0.7%	0.1	0.4%	1,279.1	10.2%
Pasture/Hay	--	--	--	--	400.4	3.2%
Cultivated Crops	15.5	98.6%	14.5	98.9%	8,171.1	65.0%
Woody Wetlands	--	--	--	--	--	--
Emergent Herbaceous Wetlands	--	--	--	--	82.3	0.6%
Totals	15.8	100.0%	14.7	100.0%	12,574.1	100.0%

6.18.1 Effects on Human Settlement

The located is a cultivated parcel that straddles the northwest portion of the city of Pipestone and the eastern portion of Sweet Township. The nearest home is located approximately 114 feet south of the preliminary development area in the single family residential district immediately south of the proposed location. The location is within an

orderly annexation area. The portion of the proposed location in the city of Pipestone is zoned as R-1, Single Family.¹⁶⁸ The portion of the proposed location located in Sweet Township is zoned as Urban Expansion. The intent of the Orderly Expansion District is to provide for an orderly transition from farm to urban land use.¹⁶⁹ Neither the city nor county ordinances address solar installations; the County anticipates that a solar facility would require a conditional use permit under the Essential Services section of county zoning ordinances.

Construction of the facility will not result in displacement of any homes or businesses. The proposed facility location is, however, located adjacent to residential development immediately north of a single family residential area and would change the visual character of what is currently an agricultural field.

The Pipestone National Monument, the Pipestone Indian WMA and the Pipestone WPA are all located within one mile of the proposed facility. The construction and operation of the Project is not expected to impact the use of the WMA or WPA.

A snowmobile trail runs along the southern border of the area of site control. No impacts to the use of the trail are anticipated.

The Pipestone facility is located approximately half a mile from the southern boundary of the Pipestone National Monument. The Pipestone National Monument is managed by the National Park Service, and offers an opportunity to explore cultural and natural resources that are unique to the area. The Monument contains active quarry pits where Native Americans continue the traditions of quarrying pipestone. The quarries are surrounded with native tallgrass prairies, and there are trails located within the Monument for the public to explore.¹⁷⁰ Aurora has consulted with the Superintendent of the Pipestone National Monument, and the construction and operation of the Project are not anticipated to impact user experience at the Monument.

Westview Park is located approximately 300 feet south of the proposed development area. Park visitors would likely experience noise during the construction of the Project. Once operational, park visitors may be able to see the fence of the facility, but visual impacts are not anticipated to impact the enjoyment of nearby recreational resources.

The Pipestone facility's proximity to the nearby residential neighborhood (see Figure 75) would mean that the aesthetic impacts to nearby housing is likely to be noticeable. A landscaping plan, as identified in Section 5.2.7, could be developed to minimize visual impacts to the residential area south of the facility.

¹⁶⁸ City of Pipestone Comments, September 23, 2014

¹⁶⁹ Pipestone County Comments, September 23, 2014

¹⁷⁰ National Park Service. *Pipestone National Monument: Plan Your Visit*
<http://www.nps.gov/pipe/planyourvisit/index.htm>

6.18.2 Effects on Land Based Economies

The proposed facility would remove approximately 16 acres of farmland from agricultural use. At this time 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 would be part of a cumulative reduction of available land for crops or pasture.

Approximately 10 acres (67 percent) of the developed area are considered to be prime farmland and 5 acres (33 percent) are considered to be prime farmland if drained (Table 13). Within the comparison area surrounding the Pipestone Substation, approximately 68 percent is considered to be prime farmland and 13 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 Pipestone facility as it is within the municipal boundary of Pipestone.

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 Pipestone facility.

6.18.3 Effects on Archaeological and Historic Resources

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

6.18.4 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.¹⁷¹

The preliminary design for the facility does not anticipate any grading of the site during construction.¹⁷²

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

6.18.5 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 Pipestone facility. The NHIS database review did show records for one state listed special concern species

¹⁷¹ Appendix C

¹⁷² Application, at Appendix F

(Least weasel (*Mustela nivalis*)) and one state tracked species (Smoothish Orach (*Atriplex glabriuscula*)) within the preliminary development area. Additionally instances of federally listed endangered (Topeka shiner (*Notropis Topeka*)), threatened (Western Prairie Fringed Orchid (*Platanthera praeclara*) and candidate (Dakota Skipper (*Hesperia*)) species, as well as several instances of state-listed endangered, threatened, special concern and tracked species within one mile of the area of site control for the facility.¹⁷³

Table 35: Pipestone Facility - NHIS Listed Species

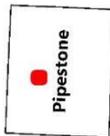
Common Name	Scientific Name	State Status	Federal Status	Records Within 1 Mile of Site Control	Records Within Preliminary Development Area
Blackfoot Quillwort	<i>Isoetes melanopoda</i>	Endangered	None	1	--
Dakota Skipper	<i>Hesperia dactotae</i>	Endangered	Candidate	1	--
Hairy Water Clover	<i>Marsilea vestita</i>	Endangered	None	1	--
Henslow's Sparrow	<i>Ammodramus</i>	Endangered	None	1	--
Powesheik Skipper	<i>Henslowii Oarisma poweshiek</i>	Endangered	None	1	--
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	Endangered	Listed Threatened	1	--
Mud Plantain	<i>Heteranthera limosa</i>	Threatened	None	1	--
Short-pointed Umbrella- sedge	<i>Cyperus acuminatus</i>	Threatened	None	1	--
Water-hyssop	<i>Bacopa rotundifolia</i>	Threatened	None	1	--
A Species of Lichen	<i>Buellia nigra</i>	Special Concern	None	1	--
Buffalo Grass	<i>Buchloe dactyloides</i>	Special Concern	None	3	--
Least Weasel	<i>Mustela nivalis</i>	Special Concern	None	1	1
Meadow Popcorn-flower	<i>Plagiobothrys scouleri</i>	Special Concern	None	1	--
Mudwort	<i>Limosella aquatica</i>	Special Concern	None	2	--
Plains Prickly Pear	<i>Opuntia macrorhiza</i>	Special Concern	None	1	--
Regal Fritillary	<i>Speyeria idalia</i>	Special Concern	None	1	--
Slender Plantain	<i>Plantago elongata</i>	Special Concern	None	1	--
Three Stamened Waterwort	<i>Elatine triandra</i>	Special Concern	None	1	--
Topeka Shiner	<i>Notropis topeka</i>	Special Concern	Listed	1	--

¹⁷³ Application, at p. 81, Appendix I

Common Name	Scientific Name	State Status	Federal Status	Records Within 1 Mile of Site Control	Records Within Preliminary Development Area
			Endangered		
Tumblegrass	Schedonnardus paniculatus	Special Concern	None	1	--
Carolina Foxtail	Alopecurus	Tracked	None	1	--
Forget-me-not	carolinianus Mysotis verna	Tracked	None	2	--
Little Barley	Hordeum pusillum	Tracked	None	1	--
Mouse-ear Chickweed	Cerastium	Tracked	None	2	--
Mousetail	brachypodium Myosurus minimus	Tracked	None	2	--
Smoothish Orach	Atriplex glabriuscula	Tracked	None	2	1

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

Figure 75: Pipestone Project Detail



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



Figure 76: Pipestone Land Cover Overview

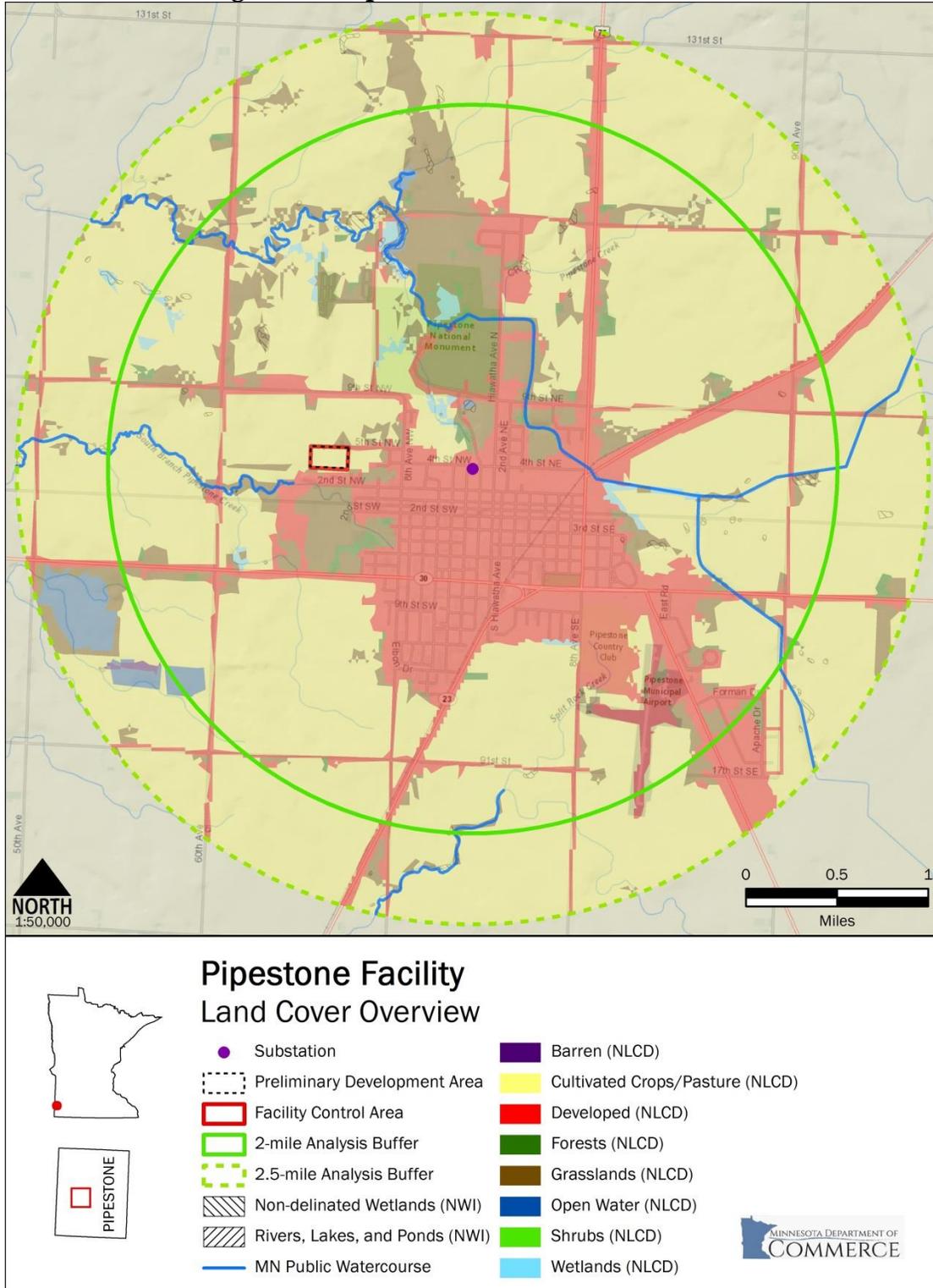
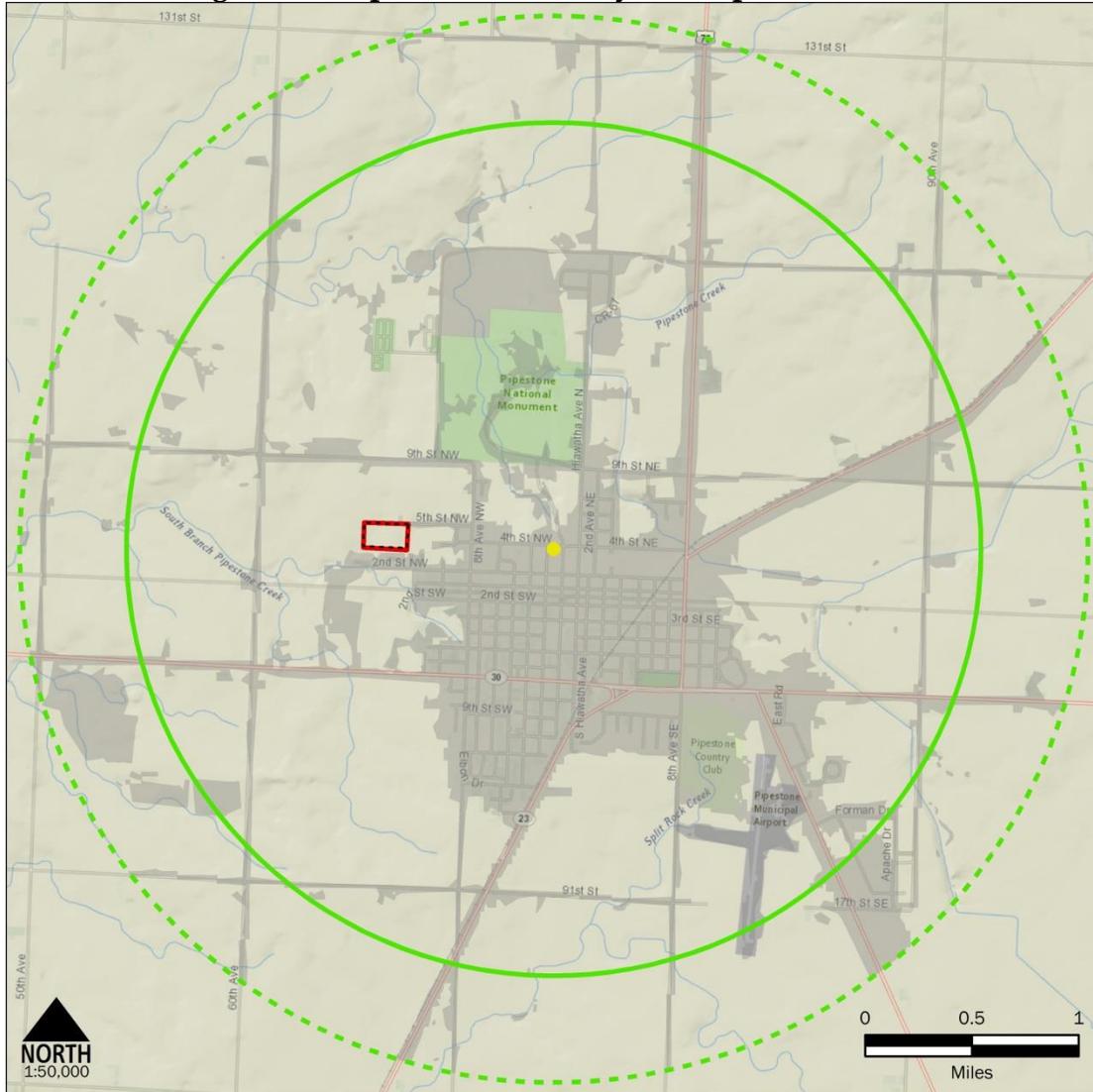


Figure 77: Pipestone Generally Incompatible Areas



NORTH
 1:50,000

0 0.5 1
 Miles



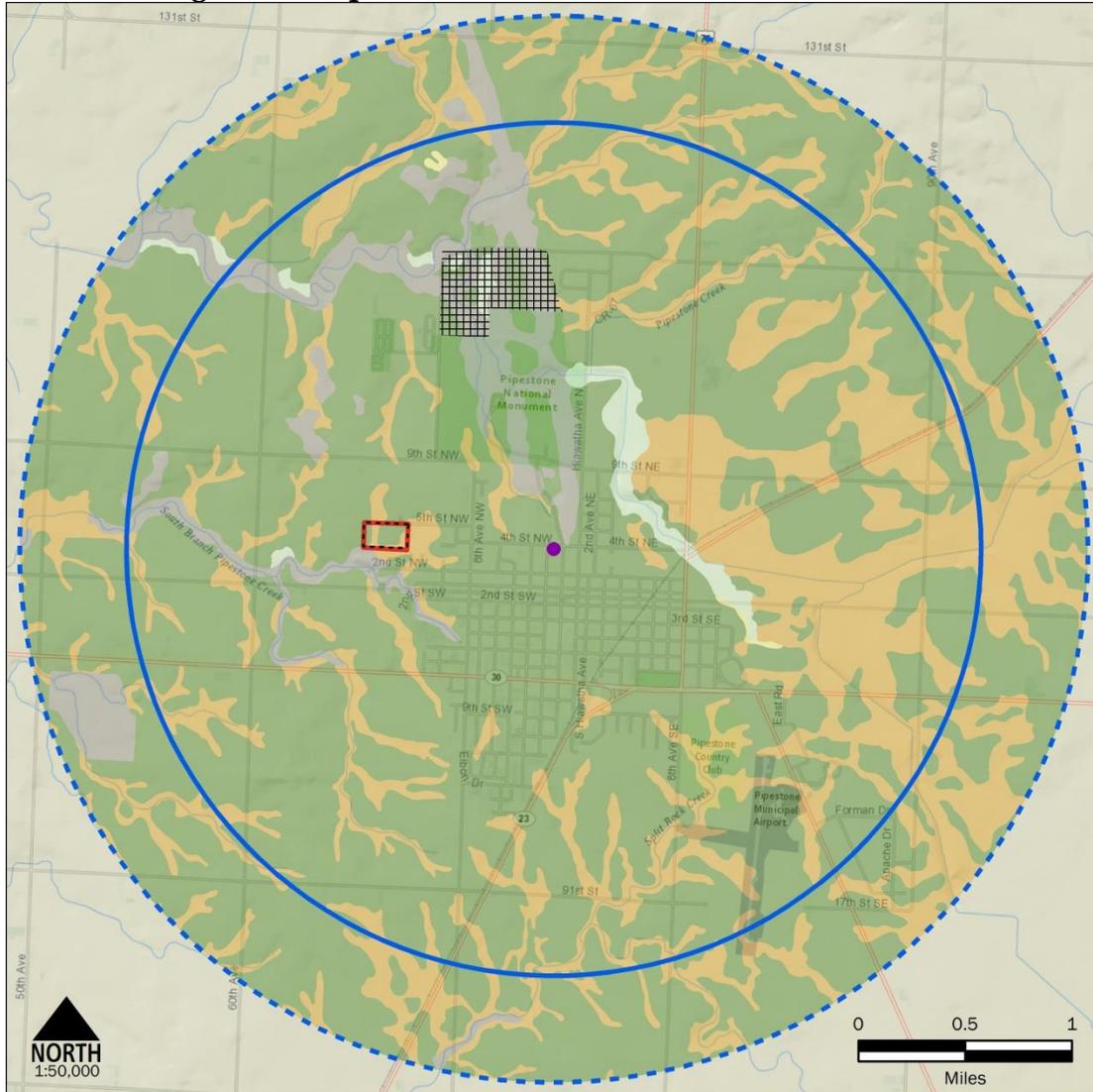
**Pipestone Facility
 Generally Incompatible Areas**

- 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 78: Pipestone Prime Farmland and Other Areas



**Pipestone Facility
 Prime Farmland and Other Areas**

- Substation
- Preliminary Development Area
- Facility Control Area
- 2-mile Analysis Buffer
- 2.5-mile Analysis Buffer
- |||| MN Wildlife Management Area
- ==== FWS Waterfowl Production Area
- Prime Farmland
- Prime Farmland if Drained
- Farmland of Statewide Importance
- Not Prime Farmland
- Other Farmland

