ENVIRONMENTAL ASSESSMENT

PRAIRIE ISLAND INDIAN COMMUNITY

North Elk Run Community Development and Fee-to-Trust Project

Olmsted County, MN | October 2024

Lead Agency:

Bureau of Indian Affairs
Midwest Regional Office
Norman Pointe II Building
5600 W. American Blvd. Suite 500
Bloomington, MN 55437

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Section 1 | Introduction

1.1 SUMMARY OF THE PROPOSED ACTION AND ENVIRONMENTAL REVIEW PROCESS

This Environmental Assessment (EA) has been prepared pursuant to the National Environmental Policy Act (NEPA) to assess the environmental impacts of the acquisition by the U.S. Bureau of Indian Affairs (BIA) of approximately 781 acres partially located in unincorporated Olmsted County and partially located in the City of Pine Island, Minnesota (Project Site) in federal trust status for the Prairie Island Indian Community (PIIC; Tribe) for tribal residential and community development purposes (Proposed Action). This EA has been completed in accordance with requirements set forth in NEPA (42 USC § 4321 et seq.); the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR § 1500 et seq.); and the BIA NEPA Handbook (59 Indian Affairs Manual 3-H). This document provides a detailed description of the Proposed Action and analyses of the potential environmental consequences associated with development of the project alternatives discussed in **Section 2**. This document also includes discussions regarding impact avoidance as well as mitigation measures where necessary.

The BIA serves as the Lead Agency for NEPA compliance and will use this EA to determine if the Proposed Action would result in significant adverse effects to the environment. The EA will be released for public comment. Comments will be considered by the BIA, and either a Finding of No Significant Impact will be prepared or additional environmental analysis will be conducted. After the NEPA process is complete, the BIA may issue a determination on the Proposed Action.

1.2 BACKGROUND

1.2.1 Prairie Island Indian Community

The Tribe is a federally-recognized Indian Tribe representing the Mdewakanton Dakota people (PIIC, 2023a). The Dakota have lived in what are now known as the States of Minnesota, Iowa, and Wisconsin since time immemorial. As a result of eight treaties between 1805 and 1858, the Dakota War of 1862, and acts of Congress in 1863, the Dakota were completely dispossessed of their ancestral lands and mostly driven from Minnesota; however, a small group of Dakota remained and settled near Prairie Island.

The reacquisition of the Tribe's homelands began in the late 19th century and continued in the 1930's with the purchase of 414 acres of land at Prairie Island by the federal government for the benefit of the Tribe (refer to **Section 3.6.2** for additional details regarding the history of the Tribe). This acreage constitutes the central core of the Tribe's Reservation that has provided a small footprint for tribal members' homes. Today, the Reservation comprises 3,100 acres on Prairie Island, much of which is inundated and undevelopable, within the ancestral homeland of the Dakota, at the confluence of the Vermillion and Mississippi Rivers, approximately 35 miles southeast of the Twin Cities of Minneapolis - Saint Paul and near the cities of Red Wing and Hastings, Minnesota. The Tribe also owns parcels adjacent to the Project Site and has submitted a separate fee-to-trust application for this land.

The Tribe currently consists of over 1,000 enrolled members, approximately 300 of whom reside on or near the Reservation (PIIC, 2023a). The Tribe provides a full range of governmental services to its members and owns and operates businesses on the Reservation including, notably, the Tribe's existing Treasure Island Resort & Casino (Casino), which is the largest employer in Goodhue County with over 1,700 employees and includes a hotel and convention center, gaming, dining, bowling, live entertainment, an RV park, and a marina to accommodate visitors arriving by the Mississippi River. The Tribe provides virtually all essential governmental services to its members without any appreciable cost to the State, County, or local unit of government.

The Tribe is a member of the Inter-Tribal Buffalo Council, which includes over 60 tribes with a goal of restoring buffalo to Indian Country, and as such proposes to utilize a portion of the Project Site for buffalo pastureland (refer to Section 2 for additional details). American bison have historically been referred to as buffalo amongst Native Americans and settlers alike, derived from the French word "bœuf" given by French fur trappers in the 1600s (National Park Service, 2020). The Lakota Nation gifted the Tribe a bull in 1992, which was utilized by the Tribe to increase the buffalo population on their land (Prairie Island Indian Community, 2024b). Two cows were purchased shortly after, and the Edwin Buck Jr. Memorial Buffalo Project emerged. The buffalo herd has grown exponentially on the Tribe's reservation over the past 30 years, reaching nearly 200 individuals today (Prairie Island Indian Community, 2024b; MPR News, 2023). As such, additional high-quality pastureland is needed to better accommodate the herd.

The Tribe's current Reservation and facilities are limited and at risk. Serious ongoing risks include flooding and loss of land from the construction of Lock and Dam 3 and nuclear risks associated with an adjacent nuclear power plant and storage waste facilities. These risks are further discussed below.

1.2.2 Flood Risks

Through 1935 and 1936, the War Department began installing a series of locks and dams on the Mississippi River to create and maintain a 9-foot navigable channel. One lock and dam (Lock and Dam 3) resulted in the inundation of a portion of the Reservation, as well as more than a thousand acres of land historically occupied by the Tribe for centuries, including village sites, ceremonial areas, and hundreds to thousands of burial sites. Eventually lock and dam responsibilities were transferred to the U.S. Army Corps of Engineers (USACE). The USACE later acknowledged the destruction of numerous burial mounds, cultural sites, and a village site (USACE, 1974). In return, the USACE offered the use of adjacent land to the Tribe that the USACE was condemning as part of the Lock and Dam 3 project. Nearly eight decades later, legislation was passed to transfer the land in trust and return control over the important cultural landscape to the Tribe. However, this land is also located within a Federal Emergency Management Agency (FEMA)-designated floodplain (Minnesota Indian Affairs Council, n.d.).

The USACE has acknowledged that the construction and operation of Lock and Dam 3 has significantly altered the ecosystem and hydrology in the vicinity of the Tribe's Reservation (USACE, 1974). This has led to an increasing frequency and severity of inundation on the Reservation that is still ongoing. The Tribe's Reservation is currently within 100-year and 500-year floodplains, as defined by FEMA (**Figure 1.2-1**). FEMA defines 100-year floodplains as areas with a 1% annual chance of flooding and 500-year floodplains as areas with .2% annual chance of flooding. Additionally, the Reservation is adjacent to a FEMA-defined regulatory floodway, which is defined as the channel of a watercourse and its adjacent land that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

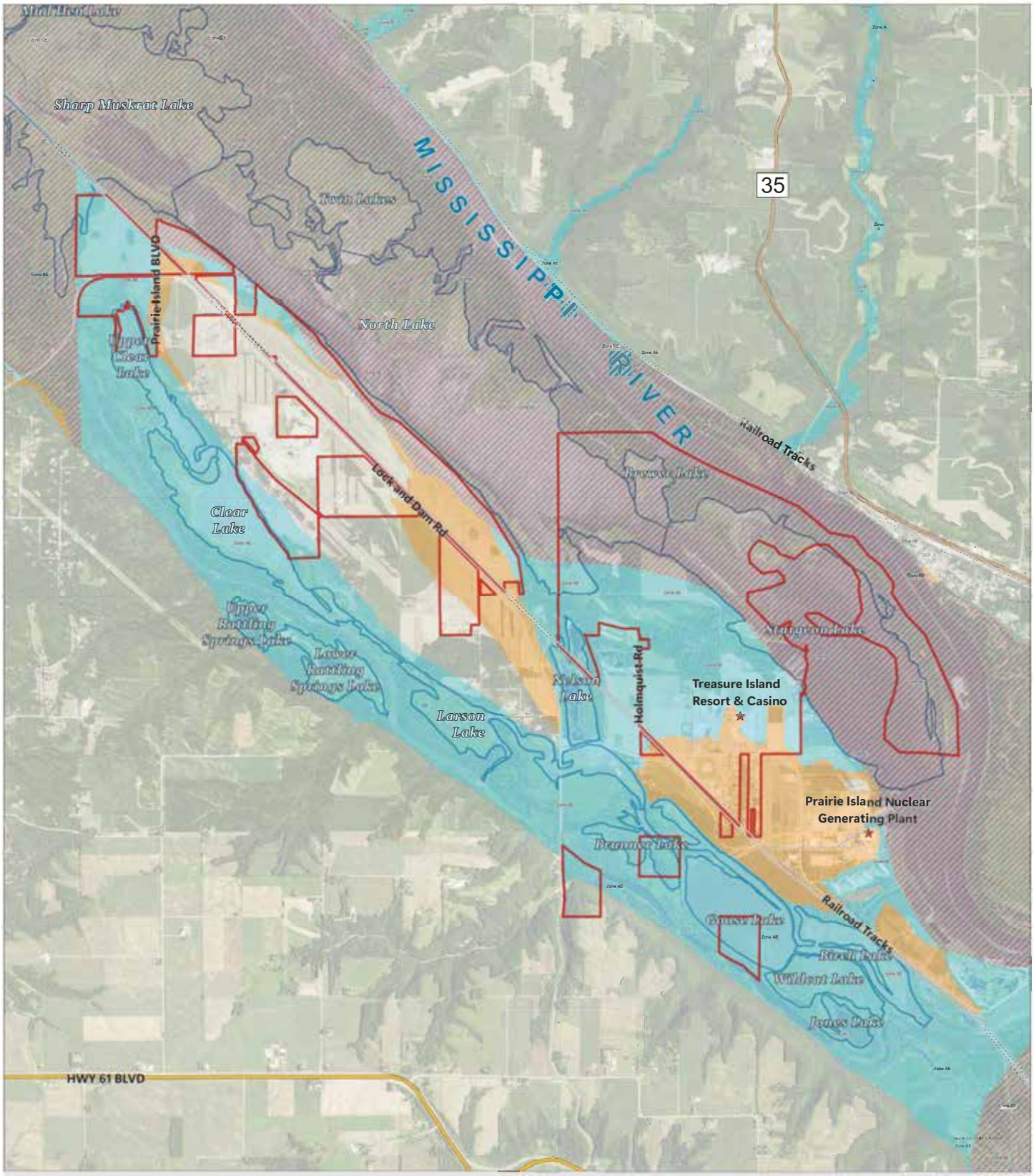


FIGURE 1.2-1
FEMA FLOODPLAINS OF EXISTING PIIC RESERVATION

Communities are required to regulate development in regulatory floodways to prevent increases in upstream flood elevations. Flooding has so far destroyed Tribal member homes and agricultural land. Recent flooding has extended beyond the flowage rights claimed by the USACE and has required significant expenditure of resources by the Tribe to protect their homes, government offices, and economic development.

1.2.3 Nuclear Risks

The Reservation and Tribe are also at risk from the Prairie Island Nuclear Generating Plant and associated on-site nuclear waste storage facilities, which are operated by Xcel Energy and are adjacent to the Reservation (PIIC, 2023b). The plant was originally announced as a coal and gas-fired power plant that would provide jobs and economic benefits to the area; however, the plant quickly evolved into nuclear power generation, and operation began in 1973 under 20-year licenses. On June 27, 2011, the Nuclear Regulatory Commission renewed the licenses for an additional 20 years. Used fuel and fuel assembly materials that are no longer useful for nuclear power generation continue to pose long-term health risks, including increased cancer risks, birth defects, and death, as well as potentially devastating and permanent environmental impacts.

FEMA conducts radiation "plume phase" simulations to estimate radii and effects of direct radiation exposure from nuclear emergencies. FEMA and other agencies, including the Minnesota Department of Public Safety (MNDPS), conducted a simulation of a nuclear-related accident near the Reservation and modeled the long-term evacuation of the Reservation and surrounding area that could occur. The results are shown on **Figure 1.2-2**. The simulation identified increased risk within the Reservation and surrounding area (FEMA, 2010). The Reservation was categorized within the highest risk zone: the 10-mile Emergency Planning Zone (EPZ), which would require immediate evacuation upon a nuclear disaster with a minimum of two years before being able to safely return to an evacuated area. The Reservation is also within the 50-mile Ingestion Planning Zone (IPZ) (FEMA, 2010; Minnesota Department of Public Safety, 2018).

Regarding risks from the Prairie Island Nuclear Generating Plant and associated waste storage facilities, the Tribe has entered into an amended settlement agreement with Xcel Energy that was approved by the State legislature (Minnesota Statutes 2023, Section 216B.1645, subdivision 4). The settlement provides for payments to the Tribe to be used for, amongst other purposes, acquiring land in Minnesota within 50 miles of the Tribe's Reservation to be taken into federal trust for the benefit of the Tribe.

1.2.4 Unmet Needs Report and Resiliency Plan

Due to the potential health and safety risks to the Reservation posed by the adjacent Prairie Island Nuclear Generating Plant and associated on-site waste storage facilities and lack of buildable land from ongoing flooding, the Tribe is seeking to establish trust land in an area that is safer and more reliable. The Tribe has prepared an Unmet Needs Report and Resiliency Plan (Resiliency Plan) to address the potential health and safety risks to the Reservation and tribal housing, businesses, and facilities posed by the flooding and adjacent Prairie Island Nuclear Generating Plant and associated on-site waste storage facilities. The Resiliency Plan outlines the steps the Tribe intends to take to establish tribal community resources, including housing, and back-up means to compensate for economic and job losses within the Tribe's ancestral lands in an area outside the 10-mile EPZ of the Prairie Island Nuclear Generating Plant. The Proposed Project is one aspect of the Resiliency Plan and is intended to establish tribal housing and community facilities in a safer and more developable area.

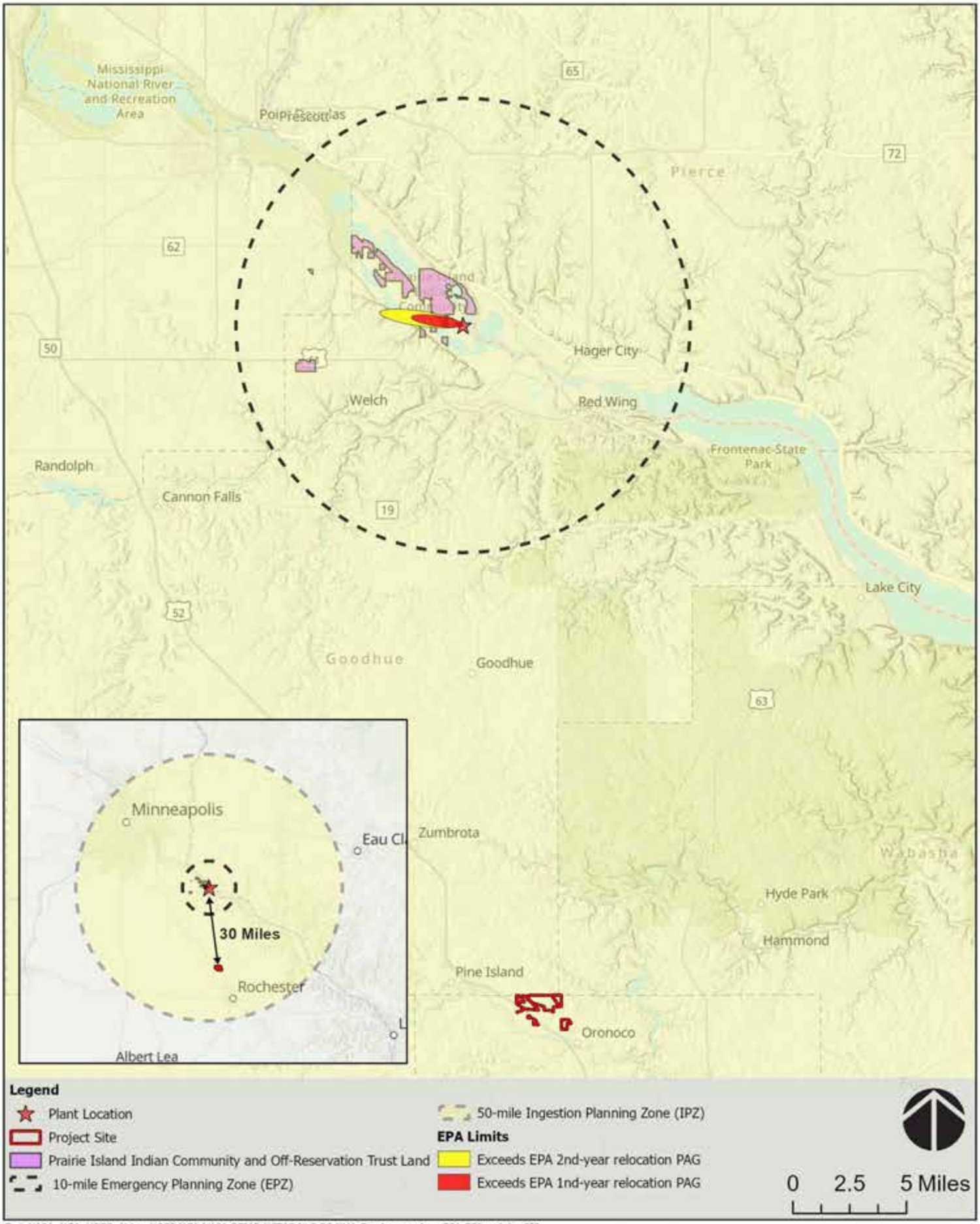


FIGURE 1.2-2

FEMA NUCLEAR INCIDENT IMPACT ZONES

Additionally, the Tribe owns parcels adjacent to the Project Site within the boundaries of both the City of Pine Island and Olmsted County and has submitted a separate fee-to-trust application for this land. This separate project, referred to as the PIIC Emergency Gaming Facility and Fee-to-Trust Project, consists of another element of the Resiliency Plan that is intended to provide a back-up means to address risks to the Tribe's economy (and related impairment of governmental functions) and potential job losses should a catastrophic event occur that would result in closure of the Tribe's existing Casino.

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose and need for the Proposed Action is to facilitate tribal self-sufficiency, self-determination, and economic development, thus satisfying the Department of the Interior's (Department) land acquisition policy as articulated in the Department's trust land regulations at 25 CFR Part 151. The Department's authority to act on the Tribe's application is governed by the Department's regulations at 25 CFR Part 151, in particular the requirements at § 151.3, 151.11, and 151.12.

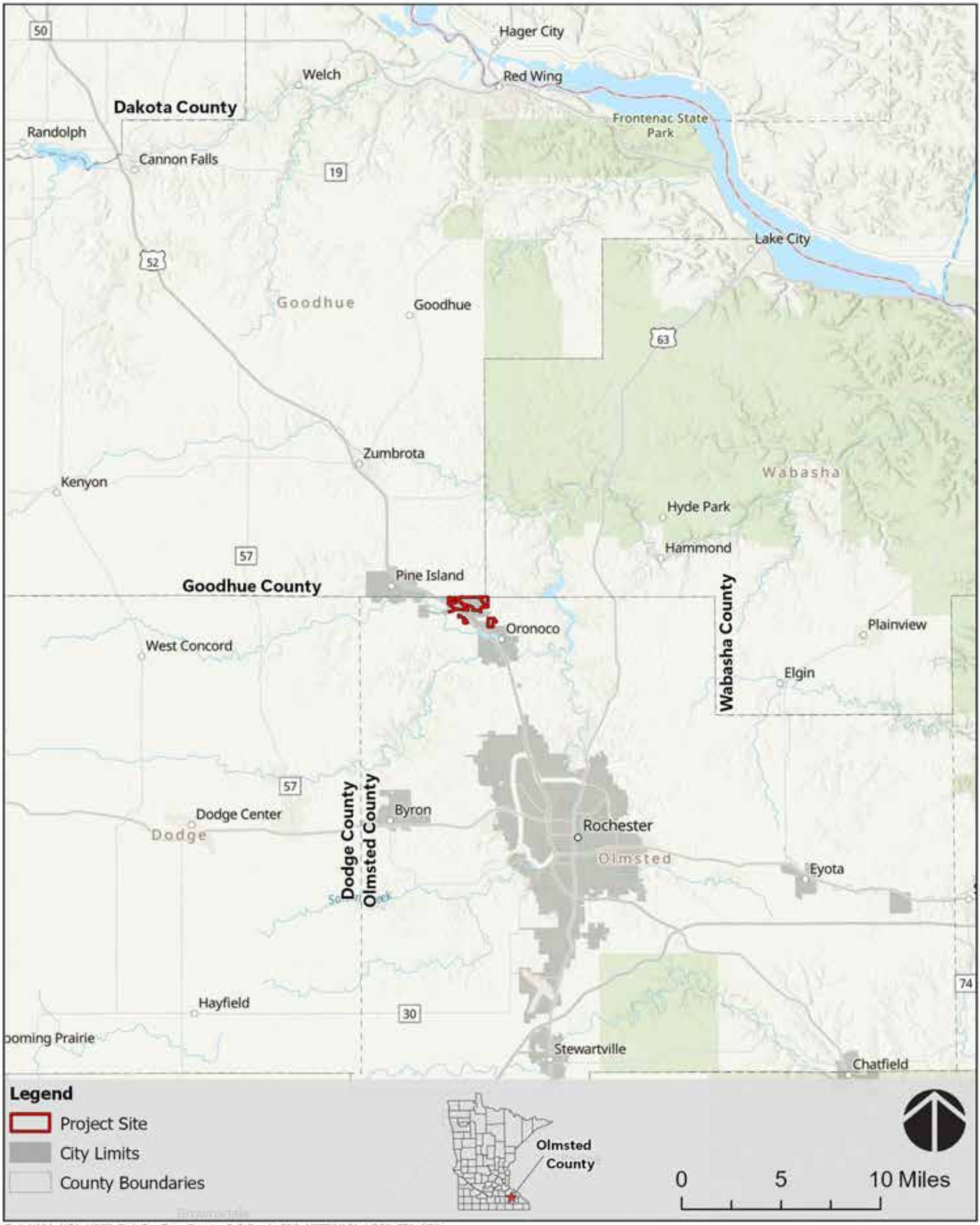
1.4 LOCATION AND SETTING

The Project Site is currently owned by the Tribe in fee and is located along Highway 52 (Hwy 52) partially within the City of Pine Island and partially within unincorporated Olmsted County, Minnesota. The Project Site was selected to meet the purpose and need of the Tribe's Resiliency Plan (**Section 1.2.4**) for the following reasons:

- It is located within the ancestral homelands of the Tribe, including lands that were ceded by the Dakota in the 1851 Treaty (PIIC, 2023b);
- It is located outside of the FEMA 10-mile Emergency Planning Zone (EPZ), which carries the highest potential contamination risk from the Prairie Island Nuclear Generating Plant and associated waste storage facilities;
- It is located within a 50-mile radius of the existing Reservation, consistent with the settlement between Xcel and the Tribe and as provided by Minnesota Statutes 2023, Section 216B.1645, Subdivision 4; and
- It is located outside of the area of inundation risk from Lock and Dam 3;

The Project Site is within Sections 1 and 12 of Township 108 North, Range 15 West and Sections 6 and 7 of Township 108 North, Range 14 West, within the Fifth Principal Meridian, and within the Oronoco U.S. Geological Survey (USGS) 7.5' quadrangle map. **Table 1.4-1** identifies the parcels, associated acreages, and current jurisdictions of the Project Site. **Figure 1.4-1** and **Figure 1.4-2** show the location of the Project Site, and **Figure 1.4-3** presents an aerial photograph of the Project Site and the immediate vicinity.

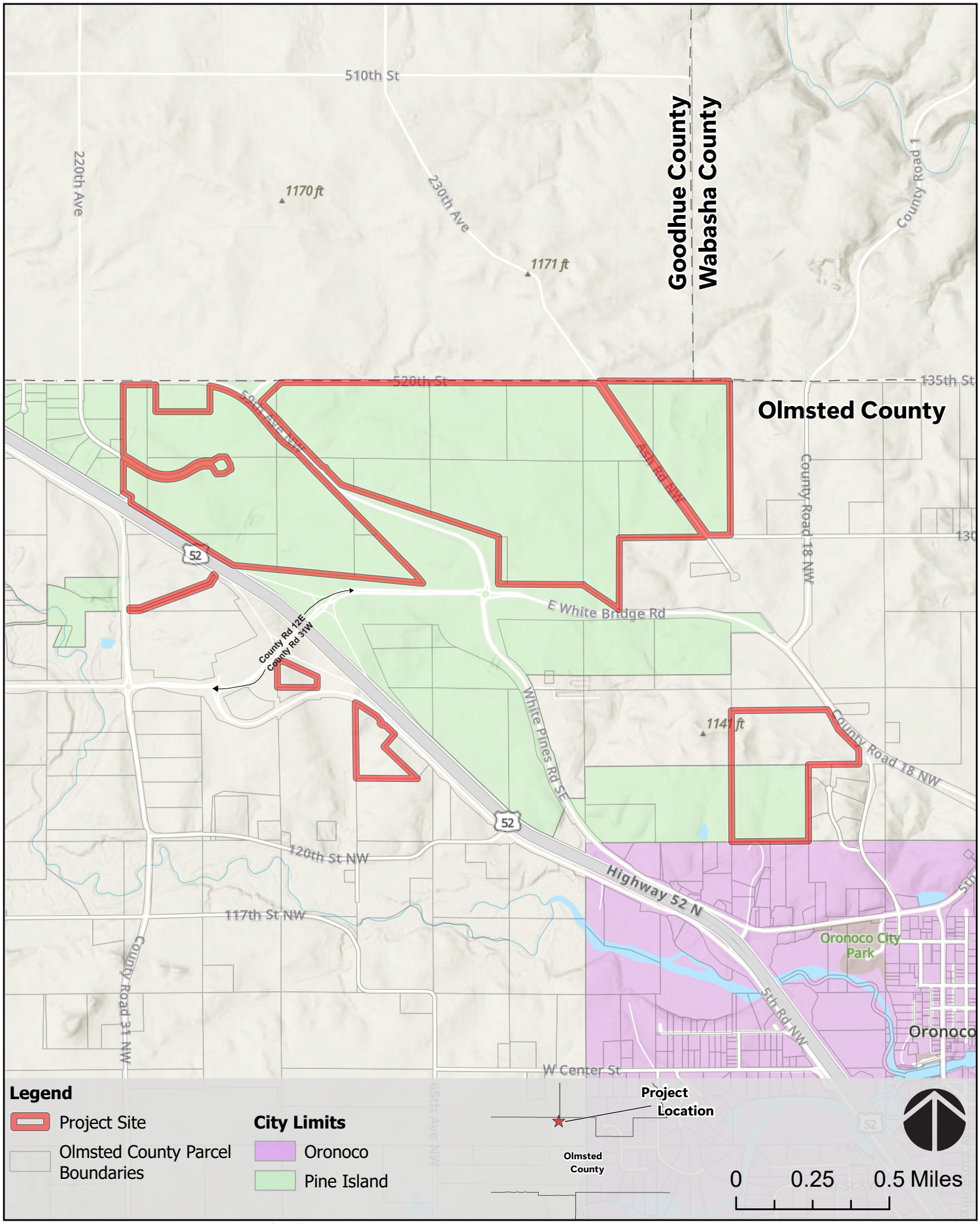
The Project Site currently consists of undeveloped open space that is grazed by cattle, and other portions are actively farmed and harvested for soybeans and corn. Surrounding land uses consist of agriculture and rural residences. The Project Site is relatively flat with rolling hills and elevations ranging from approximately 1,000 to 1,100 feet above mean sea level (amsl).



Esri, NASA, NGA, USGS, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS

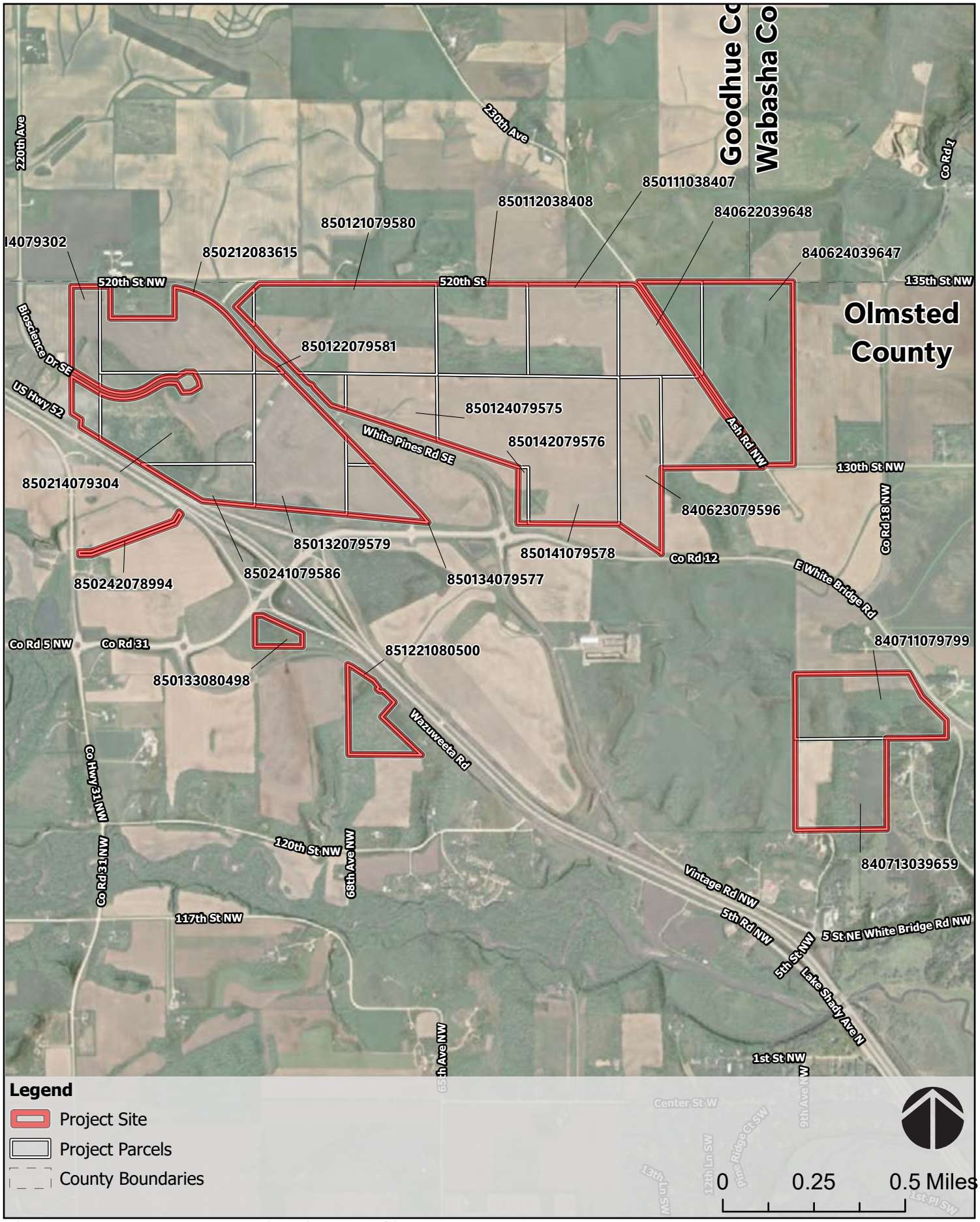
FIGURE 1.4-1

REGIONAL LOCATION



Esri, NASA, NGA, USGS, FEMA, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

FIGURE 1.4-2
SITE AND VICINITY



Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar

FIGURE 1.4-3
AERIAL OVERVIEW

Table 1.4-1: Project Site APNS and Acreages

APN	Acres	Current Jurisdiction
85.02.42.078994	1.98	City of Pine Island
85.01.33.080498	4.75	Olmsted County
85.12.21.080500	16.72	Olmsted County
85.02.41.079586	15.44	City of Pine Island
85.01.22.079581	1.78	City of Pine Island
85.01.32.079579	55.42	City of Pine Island
85.01.34.079577	13.63	City of Pine Island
85.01.24.079575	24.1	City of Pine Island
85.01.21.079580	74.1	City of Pine Island
85.01.12.038408	41.13	City of Pine Island
85.01.11.038407	41.6	City of Pine Island
84.06.22.039648	40	City of Pine Island
84.06.24.039647	100	City of Pine Island
84.06.23.079596	32.36	City of Pine Island
85.01.42.079576	2.98	City of Pine Island
85.01.41.079578	102.69	City of Pine Island
84.07.11.079799	42.6	Olmsted County
84.07.13.039659	40	City of Pine Island
85.02.14.079302	19.11	City of Pine Island
85.02.12.083615	46.99	City of Pine Island
85.02.14.079304	63.65	City of Pine Island
Total	**781.03**	

Source: PIIC, 2023b

1.5 AGREEMENTS

1.5.1 City of Pine Island

Development would fall partially within the City of Pine Island. The Tribe has entered into an Intergovernmental Agreement (IGA) with the City of Pine Island (**Appendix A**). The IGA addresses cooperative efforts for law enforcement, emergency response, and water and sewer infrastructure.

1.5.2 Goodhue County Law Enforcement Services

On March 11, 2004, the Tribe entered into a Cooperative Agreement Regarding Law Enforcement with Goodhue County for the existing Prairie Island Reservation (Goodhue County, 2004). The agreement recognizes the Tribe's Police Department as the primary provider of law enforcement services to the Prairie Island Reservation. While this agreement does not currently apply to the Project Site, law enforcement services are provided to the City of Pine Island, including a portion of the Project Site, by the Goodhue County Sheriff's Department (Goodhue County, 2023).

The Tribe anticipates that this existing agreement with Goodhue County may be modified as necessary to address law enforcement services to the Project Site. However, the Tribe's Police Department would be the primary provider of law enforcement services to the Project Site upon acquisition in trust. The Tribe also has entered into a prosecution agreement with the Goodhue County Attorney's Office for the Prairie Island Reservation, and the Tribe provides annual payments for the Goodhue County Attorney's Office to serve as the prosecuting agency for State citations issued by the Tribe's Police Officers. The prosecution agreement may be modified to address the Project Site, as needed.

1.6 TERMINOLOGY

Terms used throughout this EA include the following:

Project Site: The approximately 781-acre fee-to-trust property in the City of Pine Island and unincorporated Olmsted County, Minnesota.
Reservation: The Tribe's current 3,100-acre trust property near the City of Red Wing, Minnesota.
Alternative A: Proposed Action, including: 1) Acquisition of the Project Site into federal trust, and 2) Subsequent land use planning and development of the Project Site for tribal residential, commercial/industrial, and community purposes.
Alternative B: No acquisition of the Project Site into federal trust and no proposed development.

1.7 ANTICIPATED PERMITS AND APPROVALS

The project alternatives, as discussed in **Section 2**, may require the federal and State permits and approvals identified in **Table 1.7-1.**

Table 1.7-1: Potential Permits and Approvals

Agency	Permit or Approval	Alternatives
Secretary of the Interior	▪ Transfer of the 781-acre Project Site into federal trust status and issuance of a proclamation making it part of the Tribe's Reservation.	A
U.S. Environmental Protection Agency	▪ Verification of coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit for Storm Water Discharges Associated with Construction Activity as required by the Clean Water Act. ▪ For on-site wastewater treatment, registration of the sub-surface drainage system with the Underground Injection Control program with the USEPA. ▪ For potential discharge of on-site wastewater to surface waters, coverage under the NPDES permit.	A A
U.S. Fish and Wildlife Service	▪ Informal consultation under Section 7 of the federal Endangered Species Act regarding potential effects to endangered species.	A
State Historic Preservation Office	▪ Consultation under Section 106 of the National Historic Preservation Act if historic properties may be impacted.	A
Minnesota Department of Transportation	▪ Approval of off-site road access improvements and issuance of encroachment permits.	A
Olmsted County	▪ Approval of potential off-site access driveway/roadway improvements and utility connections.	A
City of Pine Island	▪ Approval of potential off-site utility connections.	A
North Zumbro Sanitary District	▪ Approval of potential off-site wastewater facility connections.	A

Section 2 | Proposed Project and Alternatives

This section describes the alternatives analyzed in this EA. A reasonable range of alternatives has been selected based on consideration of the purpose and need of the Proposed Action as well as opportunities for potentially reducing environmental effects. Alternatives include the Proposed Project (Alternative A) and the No Action alternative (Alternative B), further described below. Consistent with CEQ regulations, **Section 2.4** summarizes and compares potential environmental consequences, benefits, and/or detriments of alternatives. **Section 2.5** discusses the alternatives that were considered but not analyzed.

2.1 ALTERNATIVE A: PROPOSED PROJECT

Alternative A consists of the following components: (1) Transfer of the Project Site into federal trust status with accompanying reservation proclamation for the benefit of the Tribe (Proposed Action); and (2) Subsequent land use planning and development of the Project Site for residential, commercial/industrial, and community development purposes to support the Tribe.

2.1.1 Proposed Land Uses

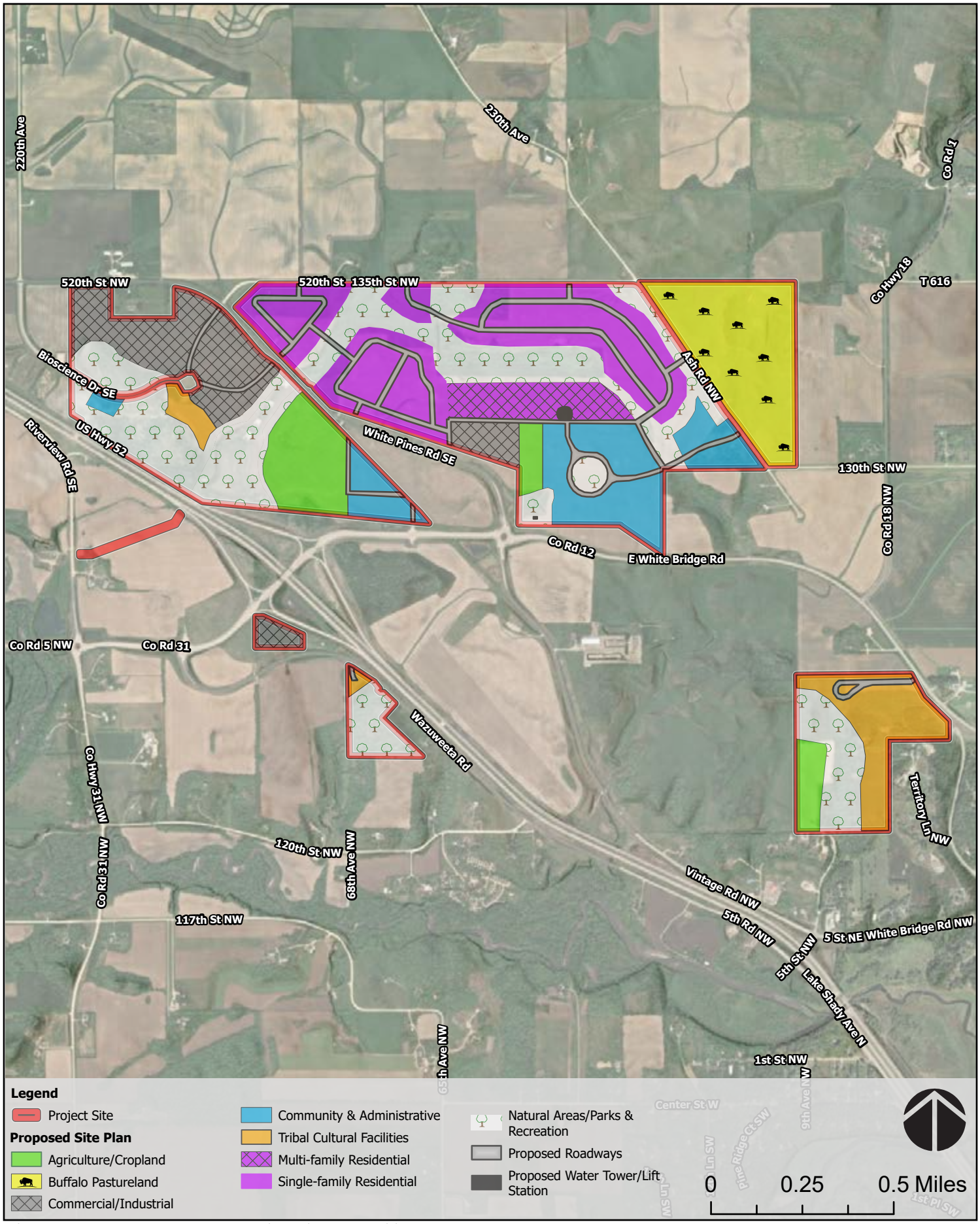
The Tribe intends to implement land uses that complement the surrounding area while accommodating the Tribe's needs. A conceptual site plan illustrating proposed land uses within the Project Site is provided in **Figure 2.1-1**. The conceptual site plan is intended to serve as a general development plan for the Tribe that will guide development of specific projects and land uses over the next 10 - 20 years. Proposed land uses are anticipated to include those listed in **Table 2.1-1** and are further described below.

Residential, Community, and Administrative Facilities

Alternative A would involve the establishment of residential housing for tribal members and associated community and administrative facilities. Proposed residential uses include 154 single-family residences across approximately 154 acres, 70 multi-family residences and a 30-unit (10,000 sf) assisted living facility. Community and administrative facilities would include a public safety facility; public works/maintenance facility; administration building; community center/wellness center; health clinic/health care facility; education center/library; ceremonial/cultural uses, and buffalo maintenance facility. In total, the residential, community, and administrative facilities are expected to employ approximately 155 to 267 (**Appendix B**).

Commercial/Industrial

Commercial/industrial uses would include 5,000 sf of convenience, fast food, and drive thru facilities as well as 15,000 sf of grocery store and co-op facilities. The convenience, fast-food, and drive thru development is anticipated to accommodate 10 employees and an estimated 1000 visitors per day, while the grocery store and co-op facilities would accommodate 10 employees and an estimated 500 visitors per day (**Appendix C**).



Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar

FIGURE 2.1-1
ALTERNATIVE A SITE PLAN

TABLE 2.1-1: PROPOSED LAND USES

Tribal Land Use Designation	Description	Units/Size	Estimated Acreage
Single Family Residential	Single Family Residential	154 Units 423,900 sf	154.21
Multi-Family Residential	Multi-Family Residential	70 Units	31.27
	Assisted Living Facility	30 Units 10,000 sf	
Community & Administrative	Public Safety Facility	15,000 sf	89.34
	Public Works/Maintenance Facility	10,000 sf	
	Administration Building	22,000 sf	
	Community Center/Wellness Center	40,000 sf	
	Health Clinic/Health Care Facility	5,000 sf	
	Education Center/Library	10,000 sf	
	Buffalo Maintenance Facility	5,000 sf	
	Water Tower and Lift Station	40,500 sf	
Commercial/Industrial	Convenience/Fast Food/Drive Thru	5,000 sf	82.61
	Grocery Store/Co-op	15,000 sf	
Cultural Facilities	Cemetery	-	51.68
	Cultural Center/Wacipi	7,000 sf	
	Ceremonial House/Bark Lodge	1,000 sf	
Buffalo Pastureland	-	-	80.46
Natural Areas/Parks and Recreation	-	-	234.28
Agriculture/Cropland	-	-	56.25
Water Tower/Lift Station			0.93
		Total	781.03

Cultural Facilities

A 6.9-acre cemetery as well as a cultural center/Wacipi and ceremonial house/bark lodge are planned. The cultural center and ceremonial house would consist of 8,000 sf for the purposes of hosting tribal ceremonies and cultural events. Approximately 43.35 acres have been allocated for these facilities in the southeastern corner of the Project Site. The area proposed for the cultural facility currently consists of agricultural land, wooded areas/oak savannah, and pastureland. The area proposed for the cemetery currently consists of agricultural land and wooded areas. These facilities are anticipated to accommodate 5 employees and 50 visitors per day (**Appendix C**).

Buffalo Pastureland

Approximately 80.46 acres of the Project Site would be dedicated as buffalo pastureland that would support the Tribe's buffalo herd. The buffalo pastureland would occupy the northeastern-most corner of the Project Site and would provide educational opportunities to students in the community and surrounding region. The area currently consists of pastureland and is used for cattle grazing.

Natural Areas/Parks and Recreation

The majority of the Project Site under Alternative A would be designated as natural areas/parks and recreation. These land uses would consist of approximately 192.35 acres that would be preserved as open space. Currently, these areas consist of oak savannah, open space, agricultural, and grazing land. Multi-use pathways for walking and biking may be developed throughout the Project Site.

Agriculture/Cropland

The Proposed Project includes 56.25 acres of agricultural and cropland. A community garden would be developed south of the proposed residential areas on approximately 7.89 acres. Corn, soybeans, hay, and other crops currently grown on the Project Site will continue to be cultivated.

2.1.2 Access Roads and Utilities

Proposed access roads and utilities needed to support proposed land uses are included in **Table 2.1-2** and are further described below.

TABLE 2.1-2: PROPOSED ACCESS ROADS AND UTILITIES

Road/Utility	Linear Feet
Roads	41,597.1
Multiuse Trails	42,352.4
Water	44,814
Wastewater	44,814
Force Main	8,000
Electric (People's Coop)	5,166
Electric (Goodhue County Coop)	29,744
Telecommunications	38,587
Natural Gas	TBD

Access Roads and Turn Lanes

Regional access to the Project Site is provided via Hwy 52 at E White Bridge Road/County Road 31 W where there is a full interchange. The Project Site is locally accessible via 135th Street NW (which becomes 59th Avenue NW near the Project Site) and 230th Avenue (which becomes Ash Road NW near the Project Site) from the north, and from E White Bridge Road and 59th Avenue NW to the south. Under Alternative A, approximately seven new roadway connections would be established along existing roadways (59th Avenue NW, E White Bridge Road, and Wazuweeta Road) where access to the internal roadway network of Alternative A would be provided (**Figure 2.1-1; Appendix C**). The following access drives are proposed:

- Proposed Drive #5 at 59th Avenue NW
- Proposed Drive #6 at 59th Avenue NW
- Proposed Drive #7 at 59th Avenue NW
- Proposed Drive #10 at E White Bridge Road
- Proposed Drive #12 at E White Bridge Road
- Proposed Drive #13 at E White Bridge Road
- Proposed Drive #15 at Wasuweeta Road

The internal roadway network would consist of private streets that would be developed consistent with appropriate local and State roadway standards. Turn lanes into and out of proposed driveways would be designed consistent with MnDOT's Access Management Manual guidelines and the Transportation Element of the Olmsted County Comprehensive Plan.

Additionally, in accordance with MnDOT's Access Management Manual and Olmsted County guidelines, the following turn lanes are proposed (**Appendix C**):

- Proposed Intersections 5, 6, 7: Eastbound and westbound right-turn lanes are proposed (proposed access driveways along 59th Avenue NW).
- Proposed Intersections 12 and 13: Westbound right-turn lanes shall be constructed (proposed access driveways along E White Bridge Road).
- Proposed Intersections 5, 12 and 13, and 14: Eastbound left-turn lanes are proposed for intersections 5 (proposed access driveway along 59th Avenue NW), 12 and 13 (proposed access driveways along E White Bridge Road), and 14 (proposed access driveway along Wazuweeta Road).

Water Supply

A Water/Wastewater Technical Study was prepared to assess estimated water demand and wastewater generation of Alternative A (**Appendix B**). The average daily water demand of Alternative A at full buildout is estimated at 138,372 gpd and the maximum daily water demand is estimated at 276,746 gpd, further discussed in **Section 3.10**. There are two options for water supply for Alternative A: 1) installation of on-site groundwater wells; or 2) connection to the City of Pine Island's water supply system. Potential water treatment and supply options are shown on Figure 4.0 of **Appendix B**. A combination of both options may be utilized as determined necessary as buildout occurs over a period of approximately 10 to 20 years.

As described in **Section 1.5.1**, an IGA was signed on November 29, 2023, between the Tribe and the City to facilitate a partnership for water and wastewater services (**Appendix A**). As stated in the existing IGA (**Appendix A**), as a condition of water service, the City and the Tribe would cooperatively discuss the public and private infrastructure needed to serve the Tribe's development plans and would amend or otherwise supplement the IGA as mutually agreed.

If the City's water supply system is utilized, a pipeline, storage tank, and pumping stations would be needed to accommodate the water demand of Alternative A. The City stated in the IGA that it has the capacity to supply 70,000 gpd of residential water and 40,000 gpd of non-residential water in the short-term (0-6 years, from approximately 2024 to 2029), totaling 110,000 gpd. This supply is expected to accommodate near-term development; however, based on the City's limited capacity and projected 5% annual increase in demand, the long-term water supply needs for Alternative A would exceed the City's current supply capabilities. Accordingly, Alternative A would largely rely on on-site water supply and treatment infrastructure to accommodate the needs of Alternative A. In order to meet the long-term estimated maximum daily water demand (276,746 gpd) of Alternative A, two on-site groundwater wells, a water tower, and a water treatment facility could be constructed. On-site water supply and treatment facilities may be implemented in combination with connection to the City's water supply system should available capacity be available.

Wastewater Treatment and Disposal

The average daily wastewater generation rate of Alternative A at full buildout is estimated at 124,535 gpd and the maximum daily wastewater generation rate is estimated at 249,070 gpd, further discussed in **Section 3.10** (**Appendix B**). There are two options for wastewater treatment and disposal for Alternative A: 1) installation of on-site wastewater treatment and disposal facilities; or 2) connection to the City of Pine Island's or North Zumbro Sanitary District's wastewater treatment and disposal system. Potential wastewater treatment and disposal options are shown on Figure 5.0 of **Appendix B**. A combination of both options may be utilized as determined necessary as buildout occurs over a period of approximately 10 to 20 years.

As described in the IGA (**Appendix A**), the City has the capacity to treat 70,000 gpd of residential wastewater and 40,000 gpd of non-residential wastewater. However, this capacity is only sufficient for the short-term (0-6 years, 2024-2029) and cannot accommodate full buildout of Alternative A. In the long-term, Alternative A could be served by the proposed North Zumbro Sanitary District wastewater treatment facility, which would cater to multiple communities, including the Tribe. This option would require constructing a conveyance system to transport wastewater from the Project Site to the new facility. Because the feasibility of connecting to either the City of Pine Island or North Zumbro Sanitary District is uncertain, the Tribe may utilize on-site wastewater treatment and disposal systems to meet the needs of Alternative A or in combination with connection to a municipal sewer and wastewater treatment system should available capacity be available. As stated in the IGA, as a condition of infrastructure connections, the City and the Tribe would cooperatively discuss the improvements needed to serve the Tribe's development plans and would amend or otherwise supplement the IGA as mutually agreed. Similarly, the North Zumbro Sanitary District would require connection fees and service fees as a condition of the provision of wastewater service to the Tribes lands as it would with any other residential or commercial development.

Because the feasibility of connecting to either the City of Pine Island or North Zumbro Sanitary District is uncertain, the Tribe may utilize on-site wastewater treatment and disposal systems to meet the needs of Alternative A, or in combination with connection to a municipal sewer and wastewater treatment system should available capacity be available. On-site wastewater treatment and disposal options include a subsurface treatment system (STS) and a package plant sequencing batch reactor (SBR) system. An STS would consist of a septic tank to retain solids and a drainage field of approximately 11 to 21 acres to treat wastewater through soil filtration and microbial activities. At a minimum, wastewater would be treated to secondary levels, depending on the disposal method utilized, and potential sub-surface systems would be designed consistent with USEPA standards for the collection, treatment, and disposal of wastewater. An on-site sludge storage facility may be developed, or sludge may be disposed of via a landfill, municipal wastewater treatment plant with sludge disposal capabilities, or a private contractor specializing in sludge disposal.

Other Utilities

While electric, telephone, and cable services are already present on the Project Site, additional capacity would be necessary to serve Alternative A, which could include extending additional lines to the Project Site. The Project Site is primarily within the service area of Peoples Energy Cooperative (PEC) with a small western portion within the Goodhue County Cooperative Electrical Association (Minnesota IT Office, 2023). The Project Site is not within the service area of Xcel Energy, however, Xcel Energy provides electrical services to most of the City in addition to areas immediately north and east, and may be coordinated with to provide electrical service to the Project Site (Xcel Energy, 2023a).

Each electrical provider has future upgrades planned in the vicinity of the Project Site that would meet Alternative A's energy needs, further discussed in **Section 3.10**. The nearest natural gas line is approximately 5 miles west of the Project Site (Pipeline and Hazardous Material Safety Administration, 2023). Xcel Energy is also a natural gas provider, but it does not currently provide gas service to Olmsted County or Goodhue County (Xcel Energy, 2021). While electrical appliances would be utilized in lieu of natural gas to the extent feasible, propane fuel may be utilized for cooking appliances and water boilers within the residents and other facilities. This propane would be transported to the Project Site by truck as needed.

2.1.3 Grading and Drainage

A drainage and grading study has been prepared for Alternative A and is included as **Appendix D**. Construction would involve grading and earthwork, removal of existing pavement, and placement of new paving. Grading on the Project Site would require approximately 58,517 cubic yards (CY) of cut and approximately 56,606 CY of fill with a net cut of 1,911 CY. The net cut could be used throughout the Project Site. Construction would also include approximately 7.46 miles of internal driveways and access drives. Grading and paving of internal roadways would result in approximately 140,046 square yards of permanent disturbance, while 4 to 1 side slopes are considered temporary disturbance because they will be re-vegetated following construction.

Development would lead to an increase in impervious surfaces, which could result in an estimated increase in peak flow rates of 39.8 cfs for the 2-year and 45.2 cfs for 100-year storm events. Stormwater drainage infrastructure would be designed to accommodate 24-hour and 100-year flood events with off-site runoff rates modeled to either equal or decrease from existing conditions and would be designed consistent with the Minnesota Stormwater Manual Minimal Impact Design Standards (MIDS) (**Appendix C**). Stormwater would be collected through vegetated swales to transport water to detention ponds until discharge into drainage ditches. Low impact development design and pre-treatment and subsequent infiltration of stormwater would be protective of water quality and would improve peak flow rates and treat stormwater for water quality prior to entering drainage ditches.

2.1.4 Public Services

As shown in **Table 1.4-1** and **Figure 1.4-2**, the Project Site is currently partially within the City of Pine Island and partially within unincorporated Olmsted County. Therefore, law enforcement, fire protection service, and emergency medical service providers for both the City and the County are discussed below.

Law Enforcement

Law enforcement within the City of Pine Island is contracted with the Goodhue County Sheriff's Office; the Goodhue County Sheriff's Office's Pine Island office located at 611 Suite A North Main Street within the City of Pine Island (Goodhue County, 2023). Law enforcement services for unincorporated portions of Olmsted County are provided by the Olmsted County Sheriff's Office.

The Prairie Island Indian Community Police Department (PIPD) currently provides law enforcement services to the reservation and would provide primary law enforcement services to the Project Site upon acquisition in trust. Prairie Island Indian Community Police officers are certified by the State of Minnesota and are licensed peace officers with the power to enforce state and Tribal law. The Tribe also staffs a Tribal Court. The Goodhue County and/or Olmsted County Sheriff's Office may provide supplemental law enforcement services if necessary.

Alternative A includes the development of a public safety facility within the Project Site that would be equipped for use as a local office for the PIPD and may be utilized as a resource for local law enforcement agencies. The Tribe has entered into an IGA with the City of Pine Island (**Appendix A**) that addresses the provision of law enforcement services (which are provided to the City of Pine Island by the Goodhue County Sheriff's Department). The Tribe also has entered into a prosecution agreement with the Goodhue County Attorney's Office for the Prairie Island Indian Reservation, and the Tribe provides annual payments for the Goodhue County Attorney's Office to serve as the prosecuting agency for State citations issued by the Tribe's Police Officers.

The Tribe anticipates entering into cooperative services agreement(s) with local law enforcement agencies for mutual aid and assistance, similar to existing agreements in place with Goodhue County for law enforcement services at the existing reservation (see **Section 1.5.2**) and consistent with the existing IGA with the City of Pine Island (see **Section 1.5** and **Appendix A**).

Fire Protection and EMS

Fire protection services and emergency medical responses for the City are provided by the Pine Island Fire Department. The Pine Island Fire department is staffed by volunteers and has a service area of 131 square miles that includes areas outside of the City of Pine Island (Pine Island Fire Department, 2023). Unincorporated Olmsted County is serviced by several fire departments in the County, but the unincorporated portion of the Project Site would likely be serviced by the Pine Island Fire Department. The Tribe has entered into an IGA with the City of Pine Island that addresses cooperative efforts for emergency response (see **Section 1.5** and **Appendix A**).

2.1.5 Protective Measures and Best Management Practices

Protective measures and best management practices (BMPs), including regulatory requirements and voluntary measures that would be implemented by the Tribe, have been incorporated into the design of Alternative A. Where applicable, these measures would be incorporated into design or construction contracts to eliminate or substantially reduce environmental consequences from Alternative A. These measures are presented in **Table 2.1-3**.

Table 2.1-3: Alternative A Protective Measures and Best Management Practices

Resource Area	Protective Measures and Best Management Practices
Land Resources	▪ Erosion control measures will be implemented during construction as discussed further under the Water Resources BMPs. ▪ Standard engineering practices and IBC standards will be used, including adherence to geotechnical standards ensuring soil suitability for structures.
Water Resources	▪ To reduce water usage, low-flow toilets, faucets, and other water-using appliances shall be installed to the extent feasible. ▪ Should an on-site WWTP be selected, wastewater shall be treated to tertiary levels consistent with USEPA standards. ▪ Final stormwater designs shall be consistent with USEPA standards and the Minnesota Stormwater Manual MIDS. ▪ Coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) shall be obtained from the USEPA for construction site runoff during the construction phase in compliance with the Clean Water Act (CWA).

	▪ A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared, implemented, and maintained throughout the construction phase of the development, consistent with CGP requirements. The SWPPP would include, but would not be limited to, the following BMPs to minimize storm water effects to water quality during construction: o Grading activities shall be limited to the immediate area required for construction. o Temporary erosion control measures (such as silt fences, fiber rolls, staked straw bales, temporary re-vegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed as needed for disturbed areas. o Construction activities shall be scheduled to minimize land disturbance during peak runoff periods to the extent feasible. o Disturbed areas shall be paved, re-vegetated, and/or stabilized following construction activities. o A spill prevention and countermeasure plan shall be developed that identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, etc.) used on-site. o Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 USC §§ 1251 to 1387). o Construction materials shall be stored, covered, and isolated to prevent runoff loss and contamination of surface and groundwater. o Fuel and vehicle maintenance areas shall be limited to the impact area. o Sanitary facilities shall be provided for construction workers. o To minimize dust generation during construction, soil will be wetted down with water prior to ground disturbance as needed. o Generated waste shall be properly disposed of.
Biological Resources	▪ Exterior lighting shall be downcast and shielded such that lighting and glare do not overspill the built environment. ▪ Uplighting, disruptive flashing lights, or materials that cause excessive glare shall not be used. ▪ Due to the cultural and biological importance of oak habitat, healthy oaks within the oak savanna habitat shall not be removed.
Air Quality	The following dust suppression measures shall be implemented during construction to control the production of fugitive dust (particulate matter 10 microns in size [PM_{10}]) and prevent wind erosion of bare and stockpiled soils: ▪ Exposed soil shall be sprayed with water or other suppressant twice a day or as needed to suppress dust. ▪ Dust emissions during transport of fill material or soil shall be minimized by wetting loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, cleaning the interior of cargo compartments on emptied haul trucks before leaving a site, and/or covering loads. ▪ Spills of transported fill material on public roads shall be promptly cleaned. ▪ Traffic speeds on the Project Site shall be restricted to 15 miles per hour to reduce soil disturbance. ▪ Wheel washers shall be provided to remove soil that would otherwise be carried offsite by vehicles to decrease deposition of soil on area roadways. ▪ Dirt, gravel, and debris piles shall be covered as needed to reduce dust and wind-blown debris. The following measures shall be implemented to reduce emissions of criteria air pollutants (CAP), greenhouse gases (GHG), and diesel particulate matter (DPM) from construction:

	▪ The Tribe shall control criteria pollutants and GHG emissions from the facility by requiring all diesel-powered equipment be properly maintained and minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions would be generated primarily by construction equipment, machinery engines shall be kept in good mechanical condition to minimize exhaust emissions. The Tribe shall employ periodic and unscheduled inspections to accomplish the above measures. ▪ The use of low reactive organic gases (150 grams per liter or less) shall be required for architectural coatings to the extent practicable. ▪ Environmentally preferable materials, including recycled materials, shall be used to the extent readily available and economically practicable for construction of facilities. The Tribe shall reduce emissions of CAPs and GHGs during operation through the following actions: ▪ The Tribe shall install electric vehicle charging stations for all residential, commercial/industrial, and administration land uses. ▪ Water consumption shall be reduced through low-flow appliances, drought resistant landscaping, and the incorporation of "Save Water" signs near water faucets throughout the development. ▪ The Tribe will use electric boilers and appliances in lieu of natural gas or propane units to the greatest extent practicable. ▪ The Tribe shall control CAPs, GHG, and DPM emissions during operation by requiring that all diesel-powered vehicles and equipment be properly maintained and minimizing idling time to five minutes at loading docks when loading or unloading food, merchandise, etc. or when diesel-powered vehicles or equipment are not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. ▪ The Tribe shall use energy efficient lighting and appliances, which would reduce energy usage, thus reducing indirect CAP and GHG emissions.
Public Services and Utilities	BMPs to be implemented during construction: ▪ Construction equipment shall contain spark arrestors, as provided by the manufacturer. ▪ Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. ▪ The Tribe shall contact the Utility Notification Center to notify the utility service providers of excavation at the work site. In response, the utility service providers shall mark or stake the horizontal path of underground utilities, provide information about the utilities, and/or give clearance to dig. ▪ The site shall be cleaned daily of trash and debris to the maximum extent practicable. BMP to be implemented during construction and operation: ▪ A solid waste management plan shall be developed and adopted by the Tribe that addresses recycling and solid waste reduction and proper disposal onsite during construction and operation. These measures shall include, but not be limited to, the installation of a trash compactor for cardboard and paper products, the installation of ample and visible trash bins to encourage proper disposal, recycling, and periodic waste stream audits.
Hazardous Materials	Personnel shall follow BMPs for filling and servicing construction equipment and vehicles. BMPs that are designed to reduce the potential for incidents/spills involving hazardous materials include the following: ▪ Fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment to reduce the potential for accidental release.

	▪ Catch-pans shall be placed under equipment to catch potential spills during servicing. ▪ Refueling shall be conducted only with approved pumps, hoses, and nozzles. ▪ Disconnected hoses shall be placed in containers to collect residual fuel from the hose. ▪ Vehicle engines shall be shut down during refueling. ▪ No smoking, open flames, or welding shall be allowed in refueling or service areas. ▪ Refueling shall be performed away from bodies of water to prevent contamination of water in the event of a leak or spill. ▪ Service trucks shall be provided with fire extinguishers and spill containment equipment. ▪ Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with local, State, and federal regulations. ▪ All containers used to store hazardous materials shall be inspected at least once per week for signs of leaking or failure. ▪ In the event that contaminated soil and/or groundwater is encountered during construction related earthmoving activities, work shall be halted until a professional hazardous materials specialist or other qualified individual assesses the extent of contamination. If contamination is determined to be hazardous, the Tribe shall consult with the USEPA to determine the appropriate course of action, including development of a Sampling and Remediation Plan if necessary. Contaminated soils that are determined to be hazardous shall be disposed of in accordance with federal regulations.
Noise	BMPs to be implemented during construction: ▪ Construction activities shall be limited to daytime hours between 7 am and 10 pm. ▪ Construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds in accordance with manufacturers' specifications. ▪ Maintenance of construction equipment and machinery, including noise reducing components such as mufflers, silencers, covers, guards, vibration isolators, etc., shall be performed regularly to reduce excess noise. ▪ Haul trucks shall be operated in accordance with posted speed limits. ▪ Construction equipment and machinery shall only be operated by trained and qualified personnel. ▪ Loud stationary construction equipment shall be located as far away from sensitive receptor areas as feasible. ▪ Construction equipment and machinery that produce reduced noise levels shall be utilized to the extent feasible. BMPs to be implemented during operation: ▪ Heating, ventilation, and air conditioning equipment associated with tribal facilities shall be shielded to reduce noise.
Visual Resources	▪ Placement of lights on buildings shall be designed so as not to cast light or glare offsite. ▪ Shielding, such as with a horizontal shroud, shall be used for outdoor lighting to ensure it is downcast. ▪ Timers on tribal facilities shall be utilized to limit lighting to necessary times. ▪ Exterior glass shall be non-reflective low-glare.

2.2 ALTERNATIVE B – NO ACTION

Under Alternative B, the Project Site would not be placed into federal trust for the benefit of the Tribe and jurisdiction of the Project Site would remain with the City of Pine Island and Olmsted County. The existing tribal housing shortages would continue, and in the event of a catastrophic event on the existing Reservation, the Tribe would not have access to a safer and more reliable land base.

The Project Site could be developed at some point in the future consistent with federal, State, and local requirements. However, future development would be speculative. It is therefore assumed that existing uses of the Project Site would continue with the majority of the Project Site remaining largely in agriculture and grazing.

2.3 COMPARISON OF ALTERNATIVES

Alternative A: Proposed Project. Among the project alternatives considered, Alternative A would best meet the Tribe's objectives and would provide the greatest socioeconomic benefit to the Tribe and surrounding community and would provide housing and necessary facilities to support the Tribe. Alternative A would result in more impacts associated with land conversion and would generate more traffic and higher demands for utilities and public services in comparison to Alternative B. Acquisition of the land in trust would provide the Tribe with flexibility to develop housing and tribal facilities in a safer and more reliable area than the Tribe's current reservation. Alternative A would also serve to facilitate tribal self-sufficiency, self-determination, and economic development by providing potential supplemental income sources that would still provide a beneficial source of revenue and employment opportunities in an area that is safer and more practical for development. Among the project alternatives, Alternative A would best meet the stated purpose and need to facilitate tribal self-sufficiency and self-determination as it would provide the greatest housing support and economic, cultural, and workforce opportunities for the Tribe.

Alternative B: No Action. Under Alternative B, the Project Site would remain in its existing condition and would not be taken into trust. No environmental effects would occur aside from impacts associated with ongoing agriculture and grazing. This alternative would achieve the lowest net GHG emissions amongst the project alternatives and thus the lowest social cost of carbon emissions. Under Alternative B, the Tribe would not achieve the community and economic benefits that would be accomplished by Alternative A. This alternative would not meet the stated purpose and need of facilitating economic development, tribal self-sufficiency, and self-determination.

2.4 ALTERNATIVES ELIMINATED FROM CONSIDERATION

The intent of the analysis of alternatives in the EA is to present to decision-makers and the public a reasonable range of alternatives that are both feasible and sufficiently different from each other in critical aspects. The alternatives discussed herein were considered and rejected from further consideration because these alternatives were either deemed infeasible, would not offer environmental advantages over the alternatives considered, or would not fulfill the stated purpose and need of the Proposed Action.

2.4.1 Alternative Location

The Project Site is already owned by the Tribe in fee. The Project Site was selected by the Tribe as it falls within the Tribe's ancestral land base, was available to the Tribe for purchase, is safe and developable, has adequate site access, and is located outside of flood risks from the adjacent Mississippi River and the FEMA EPZ area as discussed in **Section 1.2** and shown in **Figures 1.2-1** and **1.2-2**. Consideration of an alternative site would require the Tribe to purchase additional land, thus placing an undue financial burden on the Tribe. Therefore, alternative locations for the trust acquisition are not evaluated within the EA.

2.4.2 Development on the Tribe's Existing Reservation

The Tribe's existing reservation currently contains tribal housing, facilities, and the Tribe's existing Casino on land already held in trust for the benefit of the Tribe. However, the reservation is currently subject to nuclear risks and flood risks from the adjacent Mississippi River and the FEMA EPZ area as discussed in **Section 1.2** and shown in **Figures 1.2-1** and **1.2-2**. A primary purpose of Alternative A is to provide tribal housing and facilities in a safer and more developable area. As such, development on the Tribe's existing reservation would not meet the stated purpose and need of providing a safer and more reliable area for tribal housing, facilities, and economic development, and was eliminated as a feasible alternative.

Section 3 | Affected Environment and Environmental Consequences

3.1 INTRODUCTION

This section describes the existing environment of the area affected by the project alternatives as well as the environmental consequences for each project alternative. The following environmental issue areas are described: Land Resources, Water Resources, Air Quality, Biological Resources, Cultural and Paleontological Resources, Socioeconomic Conditions and Environmental Justice, Transportation and Circulation, Land Use, Public Services and Utilities, Noise, Hazards and Hazardous Materials, and Visual Resources. Note that, consistent with 40 CFR § 1508.1(g), the term "effects" is used synonymously with the term "impacts" to describe changes to the environment resulting from the alternatives that are reasonably foreseeable, whether direct, indirect or cumulative.

3.2 LAND RESOURCES

3.2.1 Regulatory Setting

The land resources regulatory setting is summarized in **Table 3.2-1** and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.2-1: Regulatory Policies and Plans Related to Land Resources

Regulation	Description
Federal	
Clean Water Act	▪ Prohibits sediment and erosion discharge into navigable waters of the United States and establishes water quality goals
State and Local	
Minnesota Statute 103A.206 Soil and Water Conservation Policy	▪ Identifies state policies regarding soils preservation and encourages landowners to employ certain land management practices to conserve soils
New Haven Township Book of Ordinances	▪ Section 10.24 of the book of ordinances regulates extraction of materials and minerals, open pits, and water impoundments
City of Pine Island Comprehensive Plan	▪ Identifies the City of Pine Island's goals and policies related to soils and land resources
Olmsted County General Land Use Plan (GLUP)	▪ Identifies the County's goals and policies related to soils and land resources

3.2.2 Environmental Setting

A discussion of the environmental setting pertaining to geology, topography, seismic conditions, soils and erosion, and mineral resources is provided in **Appendix E** (USGS, 2023a, b).

The Project Site contains significant areas of relatively flat land intermixed with rolling hills. Elevations on-site range from approximately 1,000 to 1,100 feet amsl. While there are naturally occurring hills, there are also areas of historic grading, specifically related to earthen water impoundments and building up of access roads. The Project Site was previously considered for development, and ground disturbance in scattered areas throughout the Project Site has occurred for grading of access roads, building pads, and utility alignments. Drainages throughout the Project Site includes both channeled features with steep banks as well as gently sloped swales and manmade water impoundments with steeper earthen dams. The most significant drainage feature crosses the northern portion of the Project Site and contains rock armoring. Per the County's GLUP, the Project Site is within active karst lands, where the risk of sinkholes can be high. The Project Site falls within an area of low to medium sinkhole risk. Two small sinkholes were observed adjacent to one another within the large drainage feature (**Figure 3.2-1**).

A search of the USGS Mineral Resources Data System found no known mineral resources within the Project Site (USGS, 2023c). A Phase I Environmental Site Assessment (ESA) completed for the Project Site noted an aggregate quarry to the within the northwest portion of the Project Site. Field surveys completed in 2023 did not identify obvious signs of historical resource extraction in this area. Therefore, it is assumed any extraction of aggregate materials that occurred adjacent to the Project Site in the past was of a small scale and did not warrant listing within the USGS Mineral Resources Data System. The nearest known mineral resources in relation to the Project Site are gravel (Roscoe Quarry and Peterson Quarry) and silica (Goodhue County Sand Deposit No 1) quarries located several miles from the Project Site (USGS, 2023c).

There are no known faults within the state, active or otherwise. Therefore, the risk of seismic events at the Project Site is extremely low. A custom soils report was run for the Project Site and showed numerous types of soils underlying the Project Site (NRCS, 2023). **Table 3.2-2** summarizes soil types on the Project Site along with soil characteristics and acres of cover on the Project Site. A soil map is provided as **Figure 3.2-1**. Note acreages in **Table 3.2-2** do not total to the exact acreage of the Project Site due to a portion of the site being classified as open water with no underlying soil type.

Table 3.2-2: Soils within the Project Site

Soil Type	Description	Acres of Project Site
Atkinson loam, 0 to 1 percent slopes	▪ Prime farmland ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	14.61
Atkinson loam, 1 to 6 percent slopes	▪ Prime farmland ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	5.22
Backbone sandy loam, 1 to 6 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	2.15
Barremills silt loam, drainageway, 1 to 5 percent slopes,	▪ Prime farmland ▪ Well drained ▪ Occasional flooding	0.07

Soil Type	Description	Acres of Project Site
occasionally flooded	▪ Depth to water table 42-48 inches ▪ Not a hydric soil	
Bassett-Kasson complex, 6 to 12 percent slopes, eroded	▪ Farmland of statewide importance ▪ Moderately well drained ▪ Not prone to flooding ▪ Depth to water table of 48-72 inches ▪ Not a hydric soil	0.04
Brodale-Sogn complex, 12 to 25 percent slopes	▪ Not prime farmland ▪ Somewhat excessively drained ▪ Depth to water table more than 80 inches ▪ Not prone to flooding ▪ Not a hydric soil	7.18
Channahon loam, 1 to 6 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	5.23
Channahon loam, 6 to 12 percent slopes	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	45.29
Chaseburg silt loam, moderately well drained, 0 to 2 percent slopes	▪ Prime farmland ▪ Moderately well drained ▪ Occasional flooding ▪ Depth to water table 42-60 inches ▪ Not a hydric soil	38.52
Chaseburg silt loam, moderately well drained, 2 to 6 percent slopes	▪ Prime farmland ▪ Moderately well drained ▪ Occasional flooding ▪ Depth to water table 42-60 inches ▪ Not a hydric soil	0.01
Coggon silt loam, 2 to 6 percent slopes	▪ Prime farmland ▪ Moderately well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	7.02
Dickinson sandy loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	1.01
Dorerton loam, 12 to 25 percent slopes	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	12.33
Dorerton loam, 25 to	▪ Farmland of statewide importance	0.94

Soil Type	Description	Acres of Project Site
40 percent slopes	▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	
Dowagiac sandy loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	17.59
Dowagiac silt loam, 2 to 6 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	12.15
Downs-Hersey complex, 12 to 18 percent slopes, moderately eroded	▪ Not prime farmland ▪ Well drained ▪ Low runoff class ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	0.05
Downs-Hersey complex, 2 to 6 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	0.06
Elbaville silt loam, 18 to 30 percent slopes	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	5.30
Eleva sandy loam, 2 to 6 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	85.05
Eleva sandy loam, 6 to 12 percent slopes	▪ Prime farmland ▪ Somewhat excessively drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	19.07
Eyota loamy sand, 12 to 25 percent slopes	▪ Not prime Farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	1.55
Eyota sandy loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding	20.47

Soil Type	Description	Acres of Project Site
	▪ Depth to water table more than 80 inches ▪ Not a hydric soil	
Floyd silt loam, 1 to 4 percent slopes	▪ Prime farmland ▪ Somewhat poorly drained ▪ Not prone to flooding ▪ Depth to water 12-42 inches ▪ Not a hydric soil	4.23
Frankville silt loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	2.18
Kasson silt loam, 2 to 6 percent slopes	▪ Prime farmland ▪ Low runoff class ▪ Moderately well drained ▪ Depth to water table 24-48 inches ▪ Not a hydric soil	0.10
Lilah sandy loam, 6 to 12 percent slopes	▪ Not prime farmland ▪ Excessively drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	17.06
Lilah-Billett complex, 12 to 18 percent slopes, moderately eroded	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	0.16
Lindstrom silt loam, 2 to 6 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	8.19
Lindstrom silt loam, 6 to 15 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	2.09
Marlean silty clay loam, 25 to 40 percent slopes	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	2.23
Mt. Carroll silt loam, 2 to 6 percent slopes, moderately eroded	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	1.51
Oronoco loam, 6 to	▪ Farmland of statewide importance	6.72

Soil Type	Description	Acres of Project Site
12 percent slopes	▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	
Ostrander loam, 2 to 5 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	8.25
Ostrander silt loam, 0 to 2 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	18.17
Racine loam, 12 to 18 percent slopes, eroded	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	4.54
Racine loam, 2 to 5 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	94.08
Racine silt loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table 42-48 inches ▪ Not a hydric soil	19.81
Rockton loam, 0 to 1 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	0.35
Rockton loam, 1 to 6 percent slopes	▪ Prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	36.48
Rockton loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	18.98
Salida gravelly sandy loam, 12 to 35 percent slopes	▪ Not prime farmland ▪ Excessively drained ▪ Not prone to flooding ▪ Depth to water of more than 80 inches	23.98

Soil Type	Description	Acres of Project Site
	▪ Not a hydric soil	
Sogn loam, 4 to 12 percent slopes	▪ Not prime farmland ▪ Not prone to flooding ▪ Somewhat excessively drained ▪ Depth to water table more than 80 inches ▪ Not hydric soils	9.72
Terril loam, sandy substratum, 1 to 6 percent slopes	▪ Prime farmland ▪ Moderately well drained ▪ Not prone to flooding ▪ Depth to water table 30-36 inches ▪ Not a hydric soil	100.30
Timula silt loam, 12 to 20 percent slopes, moderately eroded	▪ Not prime farmland ▪ Well drained ▪ Not prone to flooding ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	8.49
Timula silt loam, 6 to 12 percent slopes, moderately eroded	▪ Farmland of statewide importance ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	5.75
Waucoma loam, 2 to 6 percent slopes	▪ Prime farmland ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	3.88
Waukee loam, 0 to 2 percent slopes	▪ Prime farmland ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	50.13
Waukee loam, 2 to 5 percent slopes	▪ Prime farmland ▪ Not prone to flooding ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not a hydric soil	6.50
Whalan loam, 1 to 6 percent slopes	▪ Prime farmland ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not prone to flooding ▪ Not a hydric soil	8.08
Whalan loam, 6 to 12 percent slopes	▪ Farmland of statewide importance ▪ Well drained ▪ Depth to water table more than 80 inches ▪ Not prone to flooding ▪ Not a hydric soil	3.10

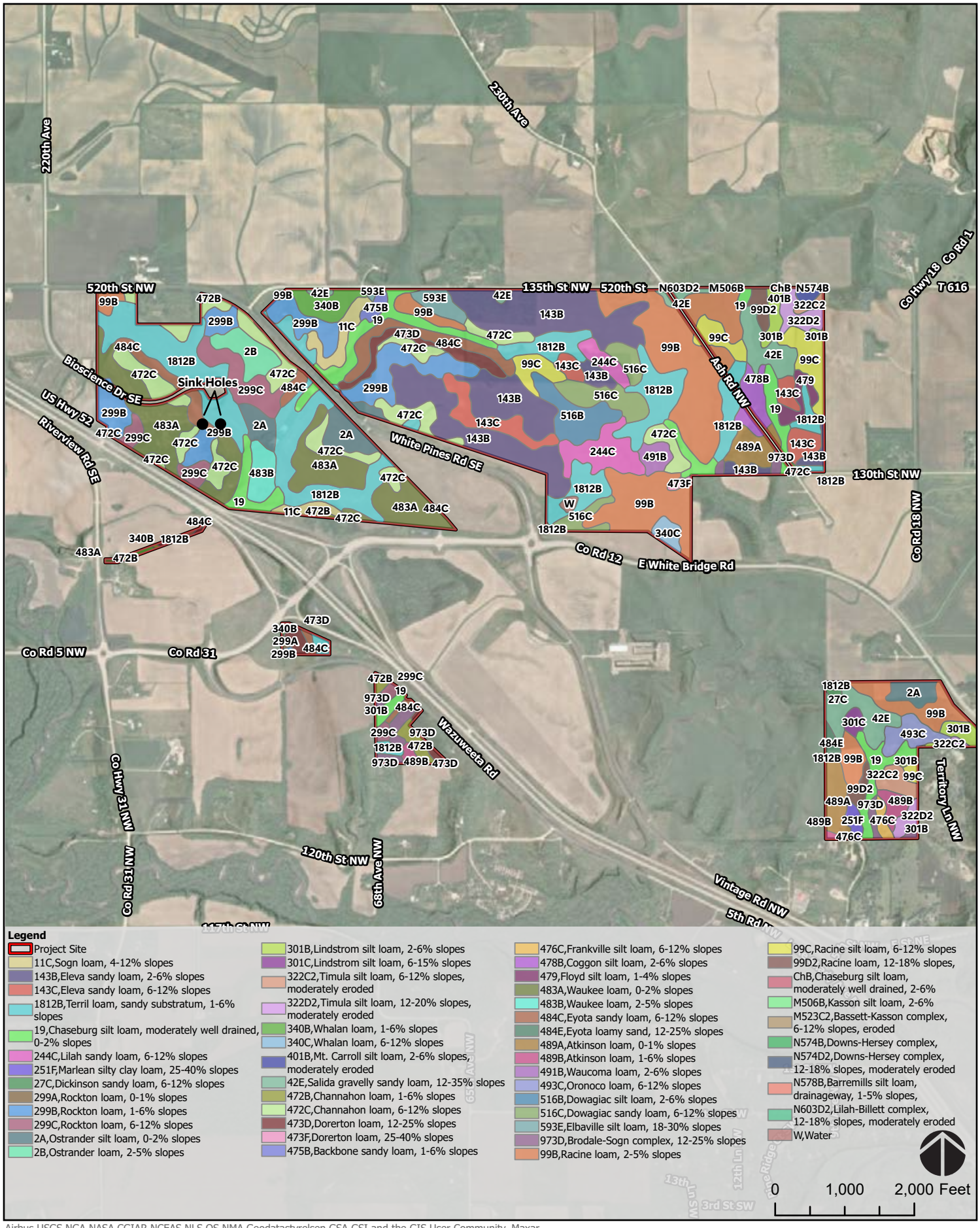


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FIGURE 3.2-1
SOIL TYPES

3.2.3 Impacts

Assessment Criteria

Impacts to land resources would be significant if an alternative were to change topography such that it caused an adverse effect such as landslides, significant erosion, or placed people or property in harm's way. Effects related to seismic conditions would be significant if the alternative were to substantially increase risks from seismic events. Impacts to soils would be significant if the alternative were to significantly increase soil erosion or places structures or infrastructure on unsuitable soils.

Alternative A: Proposed Project

Topography

Operation of Alternative A would not result in ongoing changes to the topography of the Project Site, therefore, potential impacts related to topography would be limited to the construction phase. A grading and drainage report has been prepared for Alternative A and is included as **Appendix D**. Grading on the Project Site would require approximately 58,517 cubic yards (CY) of cut and 56,606 CY of fill with an overall net cut of 1,911 CY, which will be scattered throughout the project site to achieve a balanced cut and fill. As discussed in **Appendix D**, the site would be designed to generally follow the existing topography, and as explained in **Section 2.1.5**, standard engineering practices and IBC standards would be utilized. During construction, erosion control BMPs would be implemented as part of the SWPPP, discussed further in **Section 3.3**. Alternative A would not result in actions that would create sheer slopes, high erosion risk, or placement of structures on unsuitable soils such that topography on the site would be significantly altered. Per **Appendix D**, proper collection and treatment of stormwater runoff and implementation of BMPs would prevent significant erosion and changes to topography. Thus, impacts would be less than significant.

Seismic Conditions, Liquefaction, and Landslides

As discussed above and in **Appendix E**, there are no active faults within the entirety of the State. Therefore, it is unlikely that structures or individuals on the Project Site would be subject to seismic shaking. Additionally, as discussed in **Section 2.1**, construction activities and structure design would be conducted in accordance with standard engineering practices and IBC standards, which are designed to be protective against seismic events. As the Project Site is not within an area subject to seismic events, liquefaction would not pose a significant risk to structures or people on or near the Project Site as a result of Alternative A.

As stated in **Appendix E**, there are no known records of landslides on or in the vicinity of the Project Site. Regionally-occurring landslides that have been historically documented were in relation to bank erosion along significant waterways before and after rain events. Alternative A would follow standard engineering practices to prevent the risk of manmade landslides such as ensuring suitable slopes in and around building areas (**Section 2.1**). Additionally, as discussed in **Appendix D**, grading would not alter the on-site drainage patterns, and runoff rates would be equal to or less than existing conditions with consideration of the proposed drainage system. Because conditions on site are not prone to landslides and Alternative A would not alter drainage patterns or increase runoff rates, impacts related to landslides would not occur. Therefore, impacts associated with seismic conditions, liquefaction, and landslides would be less than significant.

Soils and Erosion

Operation of Alternative A would not result in ongoing movement of soils or structures. Additionally, as discussed in **Appendix D**, drainage on the site would be designed to capture and treat the 100-year 24-hour stormwater event such that operational runoff rates would not result in an increase in on-site erosion risks. Therefore, potential impacts would be limited to the construction phase. As shown in **Table 3.2-2** and **Figure 3.2-1**, numerous soil types underlay the Project Site. Two of these soil types are known to experience occasional flooding: Chaseburg silt loam and Barremills silt loam. These soils are classified as moderately well drained to well drained and are on low-grade slopes (1 to 6 percent) where erosion is not a high risk. As discussed above and in **Section 2.1**, standard engineering processes would be used to ensure soil suitability for use. Alternative A would be completed with on-site balanced cut and fill.

The Project Site is within an active karst area where sinkhole risk can be higher (Olmsted County, 2022a). The Project Site falls within an area of low to medium sinkhole potential. Two small sinkholes were observed within the Project Site within a larger drainage feature (**Figure 3.2-1**). This area was identified as a development constraint and no actions are proposed within this area. With incorporation of standard engineering practices, Alternative A would avoid risks associated with use of improper soils.

Land clearing and grading activities during construction would result in exposure of soil, increasing the risk of erosion and associated hazards. Construction of Alternative A would disturb more than one acre of land, therefore, development would obtain coverage under the NPDES CGP for construction activities, and stormwater BMPs listed in **Table 2.1-4** would be implemented to minimize issues associated with the volume and quantity of stormwater runoff. There would be a less than significant impact.

Mineral Resources

There are no known mineral resources within or near the Project Site. Therefore, Alternative A would have no impact on mineral resources.

Alternative B: No Action

Under Alternative B, the land would not be taken into trust and the Project Site would remain in its current state. Alternative B would not result in changes to topography and would not impact minerals. Additionally, there would be no risks associated with seismic conditions, landslides, or liquefaction as the Project Site would continue to operate in its current state as a mixture of open space, agricultural row crop production, and grazing lands, and risks to people or the environment would be unchanged.

3.3 WATER RESOURCES

3.3.1 Regulatory Setting

The water resources regulatory setting is summarized in **Table 3.3-1**, and additional information on the regulatory setting can be found in **Appendix E.**

3.3.2 Environmental Setting

A summary of the environmental pertaining to water resources is below, and additional detail is provided in **Appendix E**.

Table 3.3-1: Federal and State Water Resources Regulations

Regulation	Description
Federal	
Executive Order (EO) 11988	▪ Requires federal agencies to evaluate the potential effects of any actions they may take in a floodplain; floodplain is defined as an area that has a 1 percent or greater chance of flooding in any given year. ▪ Requires agencies proposing that an action be allowed in a floodplain to consider alternatives to avoid adverse effects; if the only practicable alternative action requires siting in a floodplain, EO 11988 requires the agency to minimize potential harm to or within the floodplain.
Clean Water Act	▪ Establishes national water quality goals. ▪ Regulates point and non-point sources of pollution through the National Pollution Discharge Elimination System (NPDES). ▪ Requires an NPDES permit be obtained to discharge pollutants into waters of the U.S. ▪ Requires states to establish water quality standards for waters in their jurisdiction and to periodically prepare a list of surface waters where beneficial uses are impaired.
Safe Drinking Water Act	▪ The USEPA sets National Primary Drinking Water Regulations to protect public health (primary standards) that apply to public water systems and also defines National Secondary Drinking Water Regulations (secondary standards) for contaminants that cause cosmetic and aesthetic effects, but not health effects.
Federal Emergency Management Agency (FEMA)	▪ Responsible for the preparation of Flood Insurance Rate Maps for the National Flood Insurance Program.
State and Local	
Soil and Water Conservation Policy	▪ State Statute 103A.203 outlines the State's soil and water conservation policy, which encourages landowners to conserve water, soil, and other natural resources.
Wetlands Conservation Act	▪ Requires projects to selectively avoid impacts, minimize impacts, or, when impacts are unavoidable, replace lost habitat. ▪ Aims for no net loss of wetlands.
Minnesota Buffer Law	▪ Requires vegetative buffers be maintained alongside lakes, rivers, streams and irrigation/drainage ditches.
Minnesota Water Law	▪ Identifies regulations related to public waters and wetlands, water diversion and dam construction and maintenance, and harvesting of aquatic plants. ▪ State Statute Chapter 103G defines waters of the state. ▪ Assigns the commissioner responsibility to develop a statewide water resources conservation program.
Minnesota Administrative Rules Ch. 6120	▪ Ch. 6120 of the Minnesota Administrative Rules outlines state rules for Shoreland and Floodplain Management.
Olmsted County Wetland Conservation Ordinance	▪ Outlines the process for identifying aquatic habitats, specifying preservation requirements, outlining exceptions, and replacement of impacted areas. ▪ Identifies sensitive water resources and associated buffers.
Olmsted County Water Management Plan	▪ Identifies management and planning concerns for water resources within the County, from drinking water to wetlands.
Comprehensive Watershed Management Plan (Zumbro River)	▪ Planning document to identify ground and surface water issues within the Zumbro River Watershed and to identify priority goals and action items.

City of Pine Island Comprehensive Plan	▪ Identifies the City of Pine Island's goals and policies related to water quality and preservation.
Olmsted County General Land Use Plan	▪ Identifies the County's goals and policies related to water quality and preservation.

Surface Water

Surface water features near the Project Site are shown in **Figure 3.3-1**. The Project Site falls within the Middle Fork Zumbro River Watershed (070400040307) (USEPA, 2023a). The Middle Fork Zumbro River is listed as impaired under Section 303(d) of the Clean Water Act. Additional details on this classification are provided in **Appendix E**. Surface waters on the Project Site include five ponds and a network of ephemeral channels and swales (**Figure 3.3-2**). These features are described in the drainage discussion below.

Drainage and Flooding

The Project Site is within Flood Zone C, which is designated as an area of minimal flood hazard outside of the 100-year floodplain (Zones A and AE) and 500-year flood zone (FEMA, 2017; FEMA, 2023). A FEMA flood map is provided as **Figure 3.3-2**. Drainage infrastructure on-site is largely associated with water controls designed to impound water for livestock use. These features were observed during a survey conducted in October of 2023, described in **Section 3.5**. There are five manmade ponds on the Project Site. The largest pond is a manmade stormwater basin that is part of the on-site drainage system. This feature has rock armoring and rip rap lining the bottom and sides. Standing water was observed in the lower portion of this feature. Three manmade stock watering ponds were observed in the northeastern parcel. One of these ponds had an earthen dam constructed to impound water and two of these ponds were bounded by a bermed fenceline along the northern boundary. The final pond was observed at the northeast corner of the intersection of E White Bridge Road and White Pines Road SE. This feature is a manmade pond that was likely used at one point for stock watering, though it was not actively being used at the time of the survey. An earthen dam was observed along with standing water. Other drainage features within the Project Site are limited to swales between topographical features and ephemeral channels. These features are described in **Section 3.5** and were mapped during a site visit that occurred in October of 2023. Surface water resources on the Project Site are shown on Figure 7 of **Appendix F**.

The general drainage flow currently runs from east/southeast towards Hwy 52 (**Appendix D**). A small portion of the Project Site drains west into a roadside ditch along White Pine Road SE and towards Hwy 52. The main receiving water south of the Project Site is the Middle Fork Zumbro River, which is separated from the Project Site by Hwy 52. HydroCAD was utilized to evaluate pre- and post-development rates of stormwater runoff. Under current conditions, the highest existing rate of runoff is approximately 701.16 cubic feet per second (CFS) under the 24-hour 100-year storm event from a 107.24-acre runoff area. The highest post-development runoff rate without stormwater infrastructure falls within this same drainage area and would total approximately 664.70 CFS (**Appendix D**).

Groundwater

The Minnesota Department of Health (MDH) maintains a repository of groundwater well locations and whether such wells are public, domestic, irrigation, or monitoring wells (MDH, 2023). The vast majority of wells in the vicinity of the Project Site are domestic wells, however, given the significant amount of row crop production in the area, it is likely that these wells also serve to at least periodically supplement crop irrigation. Details on groundwater depth and quality can be found in **Appendix E**.

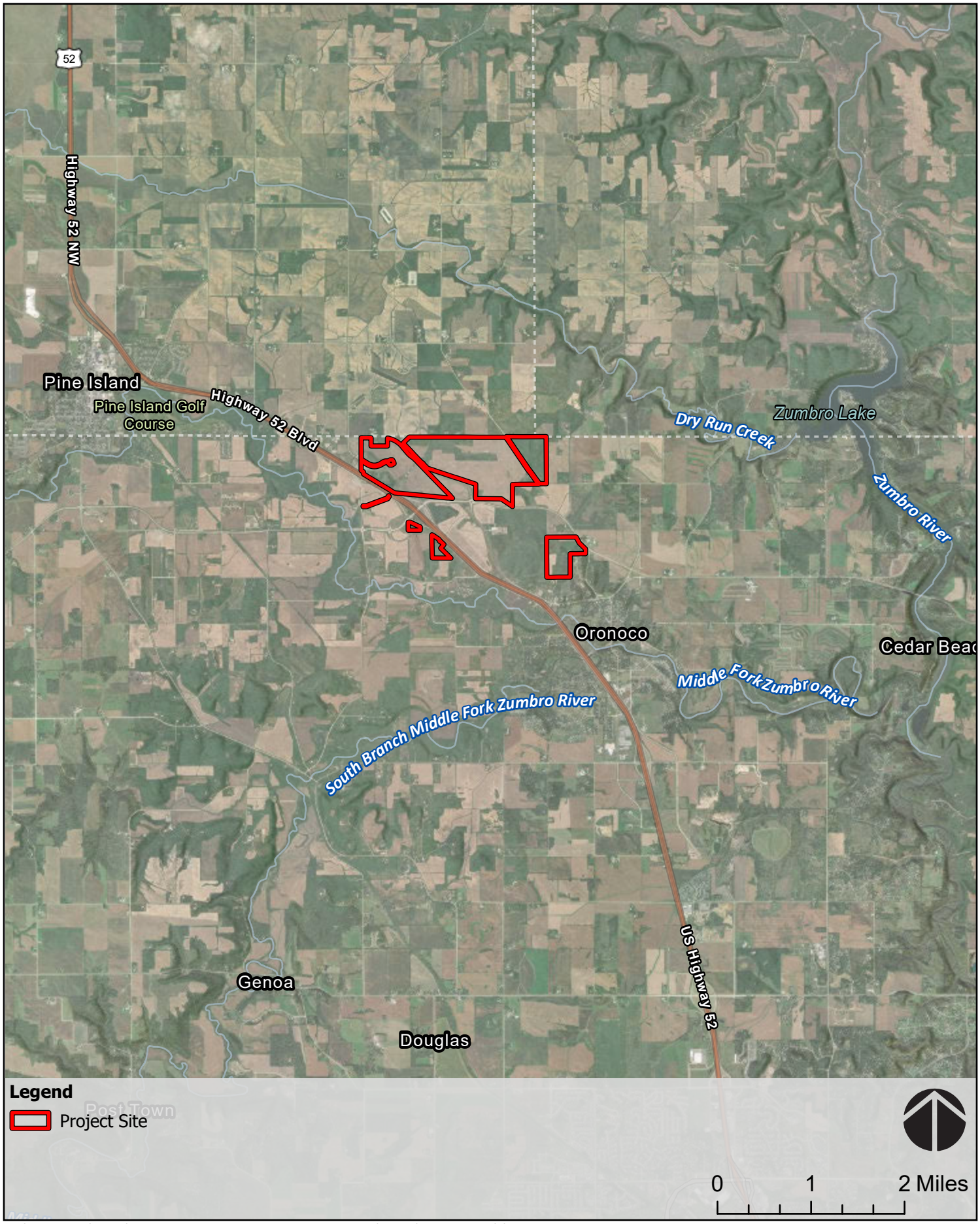

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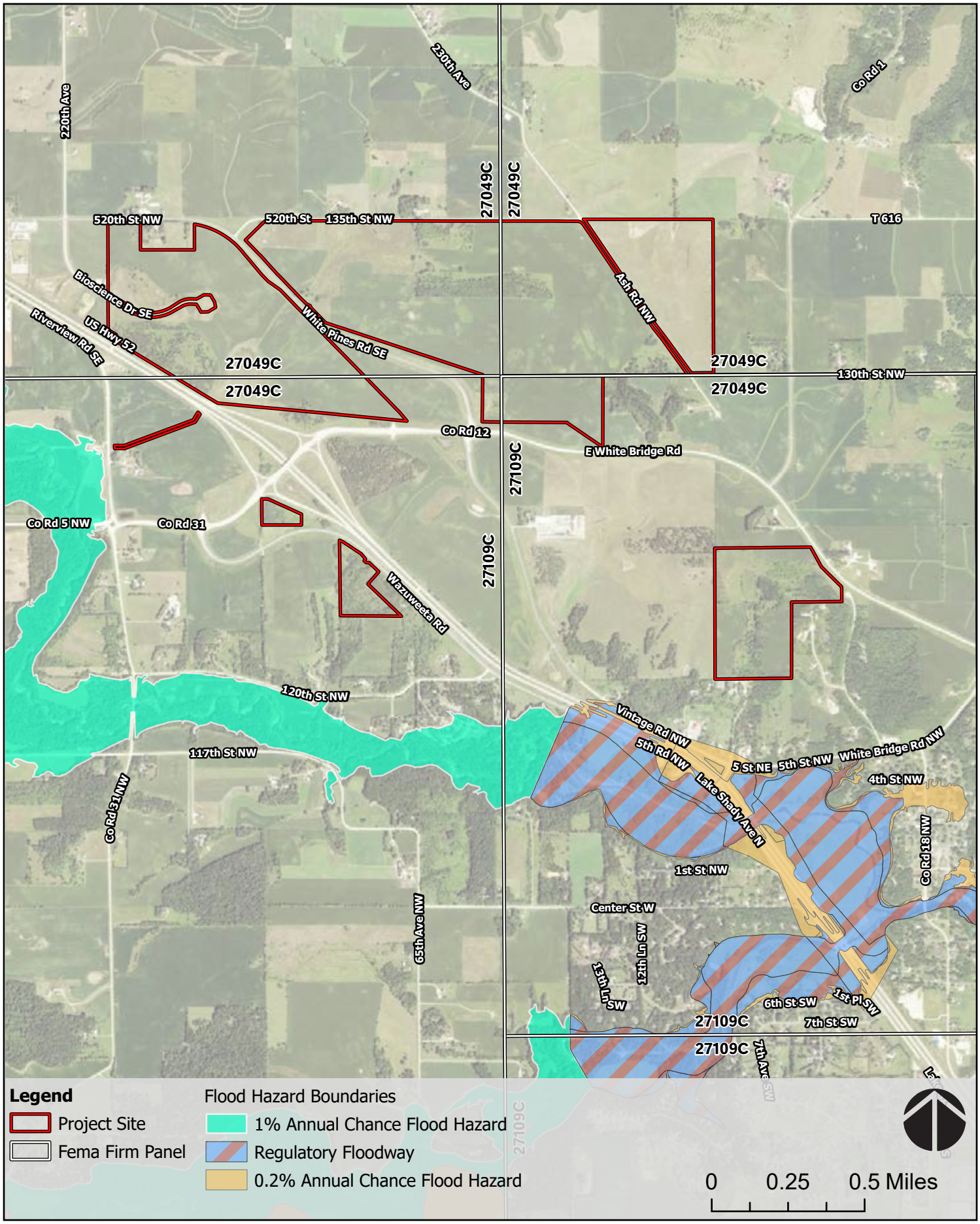
FIGURE 3.3-1
SURFACE WATERS IN THE REGION



Source: Esri, USDA FSA

FIGURE 3.3-2
FEMA FLOOD ZONES

3.3.3 Impacts

Assessment Criteria

Impacts to water resources would be significant if surface water features were impacted or if runoff from the Project Site were to cause local flooding or introduce additional contaminants to stormwater runoff that leaves the Project Site. Groundwater impacts would be significant if development were to adversely affect local water supply either by reducing the availability of potable water or increasing the demand for domestic water to the point where the existing water supply system would need to be expanded. Water quality would be significantly affected if an alternative caused the exceedance of water quality standards of receiving water bodies or groundwater.

Alternative A: Proposed Project

Surface Water and Water Quality

Alternative A would not involve the conversion of surface waters, nor would surface waters be used as a water source. Therefore, Alternative A would not directly impact surface waters.

Construction

Erosion from construction sites can increase sediment discharge to surface waters during storm events, thereby degrading downstream surface water and to a lesser extent groundwater quality. Construction activities would also include the routine use of potentially hazardous construction materials, such as concrete washings, oil, and grease that could spill onto the ground and dissolve into stormwater. Discharges of pollutants, including grease, oil, fuel, and sediments, to surface waters from construction activities and accidents are a potentially significant impact.

Alternative A would involve construction activities in excess of one acre and therefore would be required to apply for coverage under the NPDES General Construction Permit. The provisions of this permit include preparation of a SWPPP that would be developed prior to any ground disturbance. The SWPPP would include BMPs to reduce potential surface water contamination during storm events. BMPs would include, but not be limited to, those presented in **Table 2.1-3.** The BMPs within the SWPPP would minimize adverse impacts to the local and regional watershed from construction activities associated with Alternative A by reducing erosion, reducing the risk of soil contamination from construction materials, and by preventing movement of loose soil into waterways.

In addition to these BMPs that would be part of the adopted SWPPP, dust suppression BMPs identified to protect air quality would further prevent fugitive dust or loose soil from dispersing offsite. These BMPs are listed in **Table 2.1-3**. With adherence to the NPDES permitting program and implementation of the SWPPP, impacts to surface water quality from construction activities would be less than significant.

Operation

Operation of Alternative A would generally not include activities that would endanger water quality. However, an on-site WWTF may be constructed and would result in mechanical treatment of wastewater to tertiary levels at a minimum. As discussed in **Table 2.1-3**, Alternative A would adhere to IBC standards and would follow standard engineering practices regarding suitability of soils. This includes IBC chapter 29, which relates to plumbing standards and the International Plumbing Code. Further, the proposed WWTF and sub-surface system would be designed consistent with USEPA standards for the collection, treatment, and disposal of wastewater.

USEPA has established minimum requirements to prevent contamination of water resources. As discussed in **Appendix B**, conditions on the Project Site are suitable for mechanical treatment and disposal of projected wastewater volumes associated with Alternative A. With proper design and installation of the on-site wastewater system, and adherence to USEPA requirements, impacts to water quality from treatment and discharge of wastewater would be less than significant.

Groundwater

Groundwater would be utilized to supply operational demands of Alternative A, either through the use of on-site groundwater wells or through a municipal connection sourced via groundwater. The estimated water demand for Alternative A is 138,372 gpd (**Appendix B**). The Project Site is within the groundwater province 3 (Karst Province)(MDNR, 2021) and within the Prairie du Chien aquifer (MDH, 2023). As noted in **Appendix B**, municipal water would also be sourced from the Prairie du Chien aquifer. Therefore, regardless of whether water is derived from a municipal connection or on-site private groundwater wells, water would be sourced from the Prairie du Chien aquifer.

Well depth in the vicinity of the Project Site ranges from approximately 225 feet (MDH, 2023 well ID 220931) to approximately 410 feet (MDH, 2023 well ID 1000010660). A long-term monitoring program by the MDNR shows monitoring data of depth to groundwater in 11 wells across this aquifer. Data was collected from about 1970 through 2008 and showed six wells that have fluctuated within 15 feet over the years, four that have fluctuated within 30 feet, and one that has fluctuated within 45 feet. Based on the relatively shallow and consistent depth to groundwater of surrounding water wells and the reliability of bedrock aquifers within the Karst Province, it is not expected that Alternative A would alter local groundwater availability. Therefore, Alternative A would not reduce the availability of potable water to surrounding groundwater users, and expansion of nearby municipal systems would not be necessary. This would be a less than significant impact.

Drainage and Flooding

A drainage and grading study has been prepared for Alternative A and is included as **Appendix D**. As discussed above, the Project Site is within Flood Zone C, an area of minimal flood hazard outside of the 100- and 500-year floodplains (FEMA, 2017; FEMA, 2023). Grading on the Project Site would require approximately 58,517 CY of cut and approximately 56,606 CY of fill with a net cut of 1,911 CY. The net cut would be used throughout the Project Site. Grading and paving of internal roadways would result in approximately 140,046 square yards of permanent disturbance, while 4 to 1 side slopes are considered temporary disturbance because they will be re-vegetated following construction.

Following construction of Alternative A, total impervious surfaces on-site would be significantly more than current conditions, which could result in an estimated increase in peak flow rates of 39.8 cfs for the 2-year and 45.2 cfs for 100-year storm events. Stormwater drainage infrastructure would be designed to accommodate 24-hour and 100-year flood events with off-site runoff rates modeled to either equal or decrease from existing conditions and would be designed consistent with MPCA Construction Stormwater General Permit standards (**Appendix C**). Stormwater would be collected through vegetated swales to transport water to detention ponds until discharge into drainage ditches.

According to the USEPA, the term low impact development (LID) as it relates to stormwater collection and treatment refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater in order to protect water quality and associated aquatic habitat.

Stormwater collection would involve the use of a series of vegetated swales and detention basins that would be used to collect and treat stormwater and to ensure the rate of stormwater discharge does not exceed current conditions. LID design and pre-treatment and subsequent infiltration of stormwater would be protective of water quality and would improve peak flow rates and treat stormwater for water quality prior to entering drainage ditches. Additionally, construction of Alternative A would disturb more than one acre of land, therefore, development would obtain coverage under the NPDES CGP for construction activities, and stormwater BMPs listed in **Table 2.1-4** would be implemented to minimize issues associated with the volume and quantity of stormwater runoff. There would be a less than significant impact.

Alternative B: No Action

Under Alternative B, the Project Site would remain in its current state. Therefore, impacts to water resources would not occur.

3.4 AIR QUALITY

3.4.1 Regulatory Setting

The air quality regulatory setting is summarized in **Table 3.4-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.4-1: Regulatory Policies and Plans Related to Air Quality

Regulation	Description
Federal	
Clean Air Act (CAA) of 1970	▪ The CAA created the National Ambient Air Quality Standards (NAAQS) for six Criteria Air Pollutants (CAPs): ozone, carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide (SO_2), and lead. ▪ States are required to have State Implementation Plans (SIP) for areas that are not achieving the NAAQS (nonattainment areas). ▪ General Conformity Rule requires demonstration that a proposed federal action will conform to the applicable SIP. ▪ Tribal minor new source review permits are required if emissions would exceed certain standards.
NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023)	▪ The Council on Environmental Quality (CEQ) issued interim guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects under NEPA. ▪ Agencies should consider potential effects of a proposed action on climate change and the effects of climate change on a proposed action and its environmental impacts. ▪ Agencies should provide context for GHG emissions, including using best available social cost of GHG estimates. ▪ Agencies should mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.
Secretarial Order (SO) 3399	▪ Secretarial Order (SO) 3399 was issued to prioritize action on climate change throughout the Department and to restore transparency and integrity in the Department's decision-making processes. SO 3399 specifies that when considering the impact of GHG emissions from a proposed action, Bureaus/Offices should use appropriate tools, methodologies, and resources available to quantify GHG emissions and compare GHG quantities across alternatives.
State	
Clean Energy Law	▪ Establishes a carbon-free energy standard and a renewable energy standard. ▪ Requires electrical utilities to achieve 80 percent carbon-free energy by 2030, 90 percent by 2035, and 100 percent by 2040.

	▪ Requires that 55 percent of the energy sold to Minnesota customers come from renewable sources by 2035.

3.4.2 Environmental Setting

Climate and Climate Change

The climate of Olmsted County (including the City of Pine Island) is characterized by cold winters and warm summers. January is the coldest month with low temperatures of 8° F, while July is the warmest month with average high temperatures of 81° F. Olmsted County receives an average of about 33 inches of precipitation annually and annual snowfall is 53 inches (NOAA, 2023; Geospatial Analysis Center, 2017). In recent decades, Minnesota's climate has shown trends of warmer temperatures, higher humidity in summer, and greater annual precipitation, with a significant increase in the severity of thunderstorms (Geospatial Analysis Center, 2017).

Attainment Status

The Project Site is currently within the jurisdictional area of the Minnesota Pollution Control Agency (MPCA). The MPCA regulates air pollutant emissions from stationary sources within Olmsted County. However, once the Project Site is taken into trust, air quality would be under the jurisdiction of the USEPA. To determine conformance with the National Ambient Air Quality Standards (NAAQS), states are responsible for providing ambient air monitoring data to the USEPA. The USEPA then determines, using the violation criteria, if the results of the monitoring data indicate compliance with the NAAQS. The USEPA classifies areas in compliance with the NAAQS as being in "attainment". Areas that do not meet the NAAQS are classified as being in "nonattainment" by the USEPA. As shown in **Table 3.4-2**, the portion of Olmsted County where the Project Site is located meets the federal standards.

Table 3.4-2 Project Area NAAQS Attainment Status

Pollutant	NAAQS
Ozone (8-hour)	Attainment
PM_{10} (24-hour, annual)	Attainment
$PM_{2.5}$ (annual)	Attainment
Carbon Monoxide (8-hour, 1-hour)	Attainment
Nitrogen Dioxide (annual, 1-hour)	Attainment
Sulfur Dioxide (24-hour,1-hour)	Attainment
Lead (30-day average)	Attainment

Source: USEPA, 2024
PM10: Particulate matter with diameters that are generally 10 micrometers and smaller
PM2.5: Particulate matter with diameters that are generally 2.5 micrometers and smaller

Sensitive Receptors

Sensitive receptors are generally defined as land uses that house or attract people who are susceptible to adverse effects from air pollution emissions and, as such, should be given special consideration when evaluating air quality impacts from projects.

Sensitive receptors include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent homes, parks and recreational facilities, and residential areas are examples of sensitive receptors. Nearby sensitive receptors to the Project Site include three single-family homes located adjacent to the northern boundary on 520th Street NW, one single-family home approximately 500 feet east of the Project Site on E White Bridge Road, and several single-family homes located approximately 120 feet east of the Project Site on Territory Lane NW.

3.4.3 Impacts

Assessment Criteria

Development and operation of the project alternatives would emit criteria air pollutants (CAPs), hazardous air pollutants (HAPs), and greenhouse gases (GHGs). This section presents the methodology used to assess the affected environment and to evaluate the potential air quality effects of the development alternatives. The Project Site is in a region classified as being in attainment for all CAPs. Under the federal CAA (and its regulations at 40 CFR Part 93), if a region is in attainment for all CAPs, then the region meets the NAAQS and there are no de minimis levels or thresholds for a project's emissions. Therefore, for purposes of this analysis a significant impact would occur if the alternatives would adversely affect public health or safety (40 CFR § 1508.27 [b][2]) or impede a state's ability to meet the NAAQS.

Construction Analysis

Alternative A is intended to serve as a master development plan for the Tribe that will guide development of specific land uses over the next 10 - 20 years. For the purposes of the construction analysis, it was assumed that construction activities would be phased over this period, with buildout anticipated in 2027. The year 2027 is used as a planning benchmark because significant portions of the development are expected to be operational by that time, even though full buildout may take 10 - 20 years, providing a tangible milestone for assessing temporary construction impacts. Consequently, to estimate annual construction emissions, only 10 percent of the total projected land uses were included in the model to reflect the phased development. Construction of the proposed facilities would result in the temporary generation of emissions resulting from excavation, grading, material hauling, and worker trips. A mix of trucks, scrapers, excavators, and graders would be used to complete the site improvements.

Effects on air quality during construction were evaluated by estimating the quantity of each CAP emitted over the duration of the construction period. Particulate matter 10 microns in diameter (PM_{10}) and fine particulate matter 2.5 microns in diameter ($PM_{2.5}$) are the pollutants of concern resulting during earth-moving and fine grading activities. Volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur dioxide (SO_2), carbon monoxide, GHG, and diesel particulate matter (DPM) emissions would be emitted from heavy equipment due to the combustion of diesel fuel. Mobile source emissions would result from the use of on-road construction vehicles. Emissions from construction trucks and heavy equipment were calculated using the USEPA model Motor Vehicle Emission Simulator (MOVES4) model as well as offroad equipment emission factors. A detailed list of equipment and resulting emissions is included in **Appendix G**.

Operation Analysis

Emission factors in grams per vehicle mile traveled were estimated for patron vehicles and evaluated using the MOVES4 model. MOVES4 calculates emissions for light-duty vehicles, trucks, heavy-duty vehicles, and motorcycles.

The model accounts for progressively more stringent tailpipe emission standards over the vehicle model years evaluated. MOVES4 model input data are site specific. Output data is provided in **Appendix G.** Emissions of PM_{10}, NO_X, SO_2, carbon monoxide, VOCs, and carbon dioxide equivalents from vehicles traveling to, from, and within the Project Site were calculated for Alternative A. Calculations were based on emission factors derived from MOVES4 and trip generation rates provided in the Traffic Impact Study (TIS) developed by KLJ Engineering (**Appendix C**). Average trip lengths were estimated using distance to nearest population centers and are provided in **Appendix G**.

Stationary-Source Emissions

Electricity and natural gas or propane would be used as fuel for space heating, water heaters, and cooking equipment. Annual gas usage for the project alternatives is based on factors provided by the U.S. Energy Information Administration (EIA, 2018; EIA, 2020). Emissions from natural gas combustion are calculated using emission factors from AP-42 (USEPA, 1995).

Federal General Conformity

Conformity regulations apply to federal actions that would cause emissions of CAPs above certain levels to occur in locations designated as nonattainment or maintenance areas for the emitted pollutants. As discussed above, the Project Site is in an area classified as in attainment for all NAAQS; therefore, a federal general conformity analysis is not required for the Proposed Action.

Climate Change

This EA considers whether project emissions have individual or cumulative effects on climate change. GHG emissions were calculated using the MOVES4 model and emission factors from AP-42, EPA's *Compilation of Air Pollutant Emissions Factors*. Given the global nature of climate change impacts, individual project impacts are most appropriately addressed in terms of the incremental contribution to a global cumulative impact; therefore, refer to **Section 3.14** for the analysis of impacts related to climate change.

Federal Class I Areas

The CAA designates international parks, national wilderness areas, and memorial parks larger than 5,000 acres and national parks larger than 6,000 acres as "Class I areas." If a development alternative emits greater than the prevention of significant (PSD) threshold of 250 tons per year (tpy) of any one CAP from stationary sources during construction or operation, a best available control technology analysis would be conducted. The nearest Class I area is Rainbow Lakes Wilderness in Wisconsin, approximately 160 miles from the Project Site.

Tribal New Source Review

The EPA has developed permits by rule to simplify the new source review (NSR) CAA permitting process for certain smaller sources of air pollution commonly found on federal tribal lands. For this analysis, stationary source project-related operational emissions have been quantified and compared to the applicable thresholds. If the thresholds in **Table 3.4-3** are exceeded, an NSR permit would be required.

Table 3.4-3: Tribal Minor New Source Review Thresholds

Pollutant	Emissions Thresholds for Attainment Areas (tons per year)
Nitrogen Oxides	10
Volatile Organic Compounds	5
Particulate Matter	10
PM_{10}	5
$PM_{2.5}$	3
Carbon Monoxide	10
Sulfur Dioxide	10

Source: 40 CFR 49.153

Alternative A: Proposed Project

Construction Emissions

Construction of Alternative A would result in emissions of PM_{10}, $PM_{2.5}$, NO_X, SO_X, carbon monoxide, VOCs, GHGs, and HAPs (primarily in the form of DPM) from the use of construction equipment, and grading activities. Construction was assumed to begin in 2026 and last for 10 years. Construction is assumed to occur for eight hours a day, five days a week. The construction emission totals for Alternative A are shown in **Table 3.4-4** (see **Appendix G** model output files).

Table 3.4-4: Construction Emissions of Criteria Pollutants (Tons per Year) – Alternative A

Emissions	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Total Emissions	**2.18**	**2.06**	**2.95**	**0.01**	**103.05**	**10.37**
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix G**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

The Project Site is in a region classified as being in attainment for all CAPs (see **Appendix G** for regulatory information for attainment and CAPs); therefore, in accordance with 40 CFR Part 93, construction would not cause an exceedance of NAAQS. However, construction of Alternative A would produce DPM and fugitive dust (PM_{10}) that may impact rural residences in the vicinity of the Project Site, the nearest of which are adjacent to the Site's northern boundary. BMPs identified in **Table 2.1-3** would reduce construction-related emissions of CAPs and reduce DPM emissions from construction equipment. Construction of Alternative A would not affect public health and safety and is compliant with applicable requirements imposed for the protection of the environment. Therefore, with implementation of the identified BMPs, construction of Alternative A would not result in significant adverse impacts associated with the regional air quality environment.

Operation Emissions

Buildout and operation of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary-source emissions from combustion of natural gas in stoves, heating units, and other equipment. Estimated mobile-source and stationary-source emissions from operation of Alternative A are provided in **Table 3.4-5**. Detailed calculations of vehicle and area emissions are included in **Appendix G**.

Table 3.4-5: Operation Emissions of Criteria Pollutants (Tons per Year) – Alternative A

Sources	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	0.01	0.06	0.94	0.01	0.08	0.08
Mobile	18.27	5.82	154.97	0.09	2.08	0.65
Total Emissions	**18.28**	**5.88**	**155.91**	**0.10**	**2.16**	**0.73**
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix G**
Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

The Project Site is in a region classified as being in attainment for all CAPs. Under the federal CAA (40 CFR Part 93), if a region is in attainment for all CAPs, then the region meets the NAAQS and there are no *de minimis* levels or thresholds for a project's emissions. As shown in **Table 3.4-5**, the actual estimated operational emissions from stationary sources would not exceed the minor NSR thresholds. While this EA estimates the actual emissions from stationary sources, the Tribe will consult with the EPA to determine whether NSR permits may be needed based on regulatory procedures for hypothetical usage and associated emissions. Alternative A would not result in stationary source emissions of any one pollutant in excess of the federal Class I Areas major source threshold of 250 tpy. BMPs provided in **Table 2.1-3** would minimize CAP emissions resulting from operation of Alternative A. With implementation of BMPs, Alternative A would not result in significant adverse impacts associated with the regional air quality environment. Operation of Alternative A would not affect public health and safety and would be compliant with federal mandates for operational vehicle and area emissions.

Alternative B: No Action

Under Alternative B, the Project Site would remain undeveloped and none of the construction or operational air quality impacts identified for Alternative A would occur.

3.5 BIOLOGICAL RESOURCES

3.5.1 Regulatory Setting

The regulatory setting concerning biological resources is summarized in **Table 3.5-2**, and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.5-2: Regulatory Policies and Plans Related to Biological Resources

Regulation	Description
Federal	
Federal Endangered Species Act (ESA)	▪ Protects federally-listed wildlife and their habitat from take. ▪ Requires consultation under Section 7 of the ESA for federal agencies if take of a listed species is necessary to complete an otherwise lawful activity. ▪ Considers habitat loss an impact to the species. ▪ Defines Critical Habitat as specific geographic areas within a listed species range that contain features considered essential for the conservation of the listed species.
Migratory Bird Treaty Act (MBTA)	▪ Protects migratory birds and requires project-related disturbances to be reduced or eliminated during the nesting season (February 15 through September 15).
Bald and Golden Eagle Protection Act	▪ Prohibits take, possession, and commerce of bald and golden eagles and associated parts, feathers, nests, or eggs, with limited exceptions.

Regulation	Description
Clean Water Act (CWA) Section 404 and 401	▪ Defines wetlands and waters of the United States subject to jurisdiction of the U.S. Army Corps of Engineers (USACE) and/or the State. ▪ Guides the permitting and mitigation of filling or dredging of waters of the U.S. under the authority of Section 404 of the CWA by the USACE or the USEPA. ▪ Projects requiring a 404 permit under the CWA also require a Section 401 certification from the USEPA.
Magnuson-Stevens Act	▪ Mandates that the National Marine Fisheries Service (NMFS) identify Essential Fish Habitat (EFH) for federally managed marine fish. ▪ Requires federal agencies to consult with NMFS on activities that may adversely affect EFH.
State and Local	
Minnesota Endangered and Threatened Species Law of 1971	▪ The Minnesota Department of Natural Resources (MDNR) maintains a list of species that are threatened, endangered, or of special concern, codified as Minnesota Rules, Chapter 6134, and parts 6212.1800 and 6212.2300. ▪ Species of concern are not formally listed but are those species that are uncommon in the state or have highly specific habitat requirements that merit monitoring
Soil and Water Conservation Policy	▪ Minnesota State Statute 103A.203 outlines the State's soil and water conservation policy, which encourages landowners to conserve water, soil, and other natural resources.
Wetland Conservation Act	▪ Aims for no net loss of wetlands. ▪ Requires projects to selectively avoid impacts, minimize impacts, or, when impacts are unavoidable, replace lost habitat.
Minnesota Buffer Law	▪ Requires vegetative buffers be maintained.
Minnesota Water Law	▪ Minnesota State Statute Chapter 103G defines waters of the state. ▪ Assigns the commissioner responsibility to develop a statewide water resources conservation program. ▪ Identifies regulations related to public waters and wetlands, water diversion and dam construction and maintenance, and harvesting of aquatic plants.
Olmsted County Wetland Conservation Ordinance	▪ Identifies sensitive water resources and associated buffers. ▪ Outlines the process for identifying aquatic habitats, specifying preservation requirements, outlining exceptions, and replacement of impacted areas.
City of Pine Island Comprehensive Plan	▪ Identifies the City of Pine Island's goals and policies related to biological resources.
Olmsted County General Land Use Plan	▪ Identifies the County's goals and policies related to biological resources.

3.5.2 Environmental Setting

Biological Resources Survey

A biological resources survey was completed for the Project Site on October 17 through 19, 2023. A Biological Assessment was prepared and included as **Appendix F**. Survey methods are described in Section 2 of **Appendix F**.

Habitat Types

The Project Site includes multiple habitat types identified in **Table 3.5-2**. Habitat types are discussed in detail in **Appendix F**. Maps showing terrestrial and surface water habitats are provided as **Figure 3.5-1** and **3.5-2**. Finally, representative site photographs are included as Attachment E of **Appendix F**.

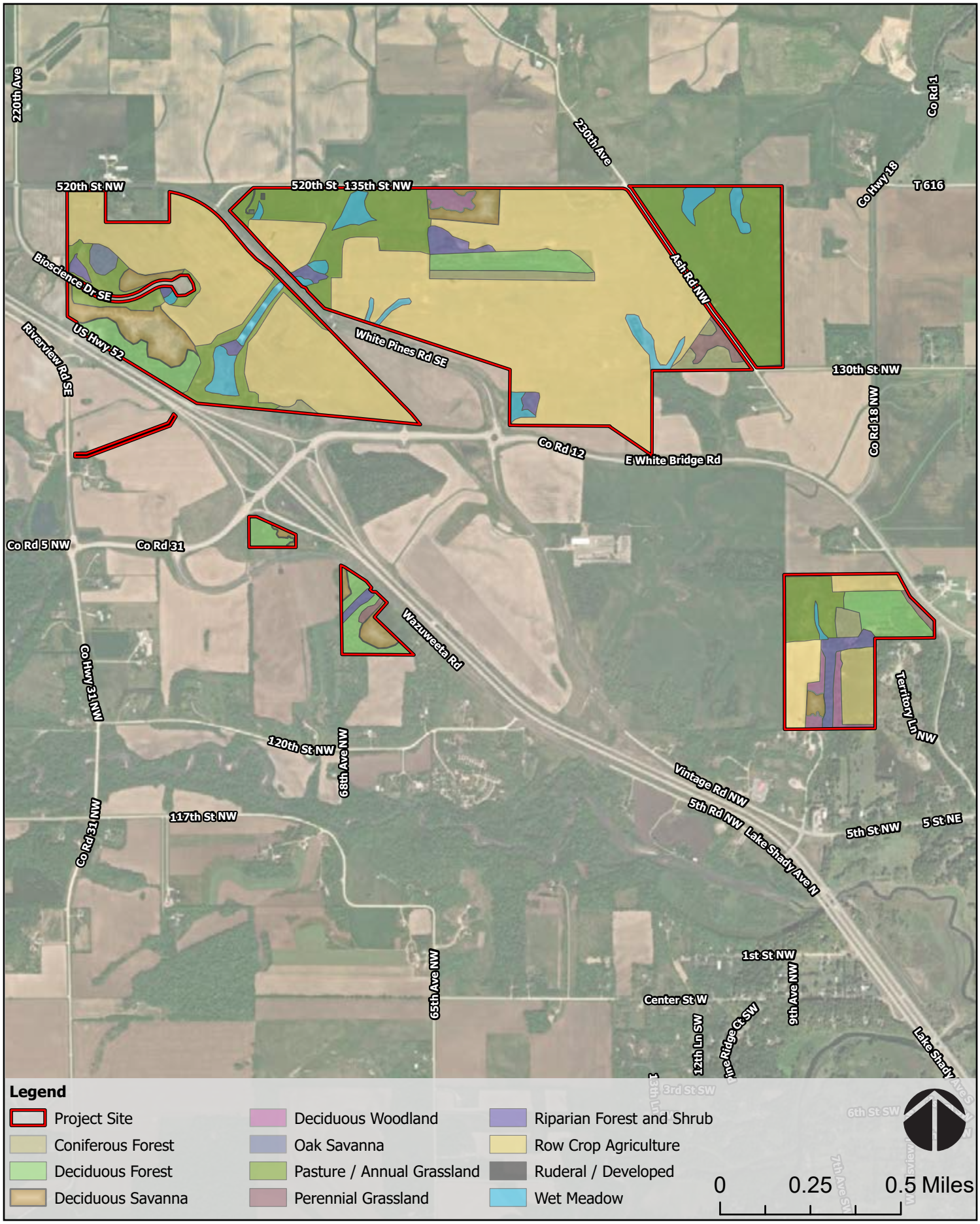
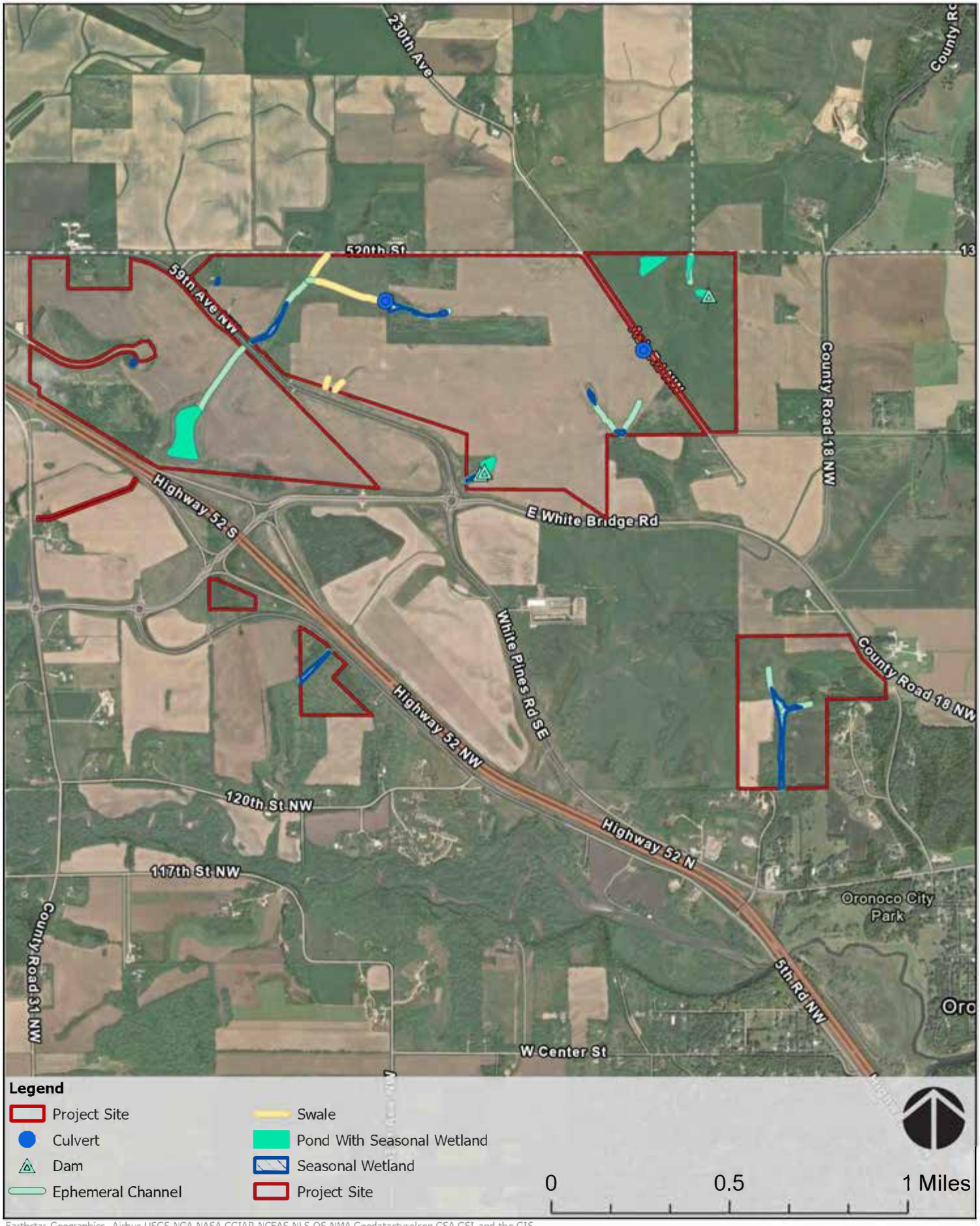


FIGURE 3.5-1
HABITAT TYPES



Earthstar Geographics, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US

FIGURE 3.5-2
SURFACE WATERS

Table 3.5-2: Habitat Types within the Project Site

Habitat Type	Acres Within Project Site
Ruderal/developed	2.8
Row crop agriculture	434.2
Coniferous forest	18.4
Deciduous forest	56.8
Deciduous woodland	10.4
Deciduous savanna	37.6
Oak savanna	3.2
Annual grassland/pasture	162.4
Perennial Grassland (Native Prairie)	6.9
Riparian forest and shrub	13.4
Wet meadow	20.4
Ponds and seasonal wetlands	14.5
Ephemeral channels and swales	N/A – linear features
Total	**781.0**

Aquatic Features

Surface waters on the Project Site include five ponds and a network of ephemeral channels and swales (**Figure 3.5-2**). The largest pond is a manmade stormwater basin that is part of the on-site drainage system. This feature has rock armoring and rip rap lining the bottom and sides. Standing water was observed in the lower portion of this feature. Three manmade stock watering ponds were observed in the northeastern parcel. One of these ponds has an earthen dam constructed to impound water, and two of these ponds are bounded by a bermed fenceline along the north. All three of these ponds contained standing water and displayed varying levels of seasonal wetlands around the open water fringes at the time of the survey. Cattle actively graze around the ponds and cattle traffic in and around the ponds is high. The final pond was observed at the northeast corner of the intersection of E White Bridge Road and White Pines Road SE. This feature is a manmade pond that was likely used for stock watering, though it was not actively being used at the time of the survey. An earthen dam was observed along with standing water.

Because the Project Site has undulating hilly terrain and lacks steep drops in elevation, channels are not heavily incised. Instead, most of the channels are broad and vegetated, with little cobble or bedrock exposure. Reed canary grass is the dominant ground cover. Where channels were absent but clear evidence of water conveyance between channels was observed, these areas were mapped as swales. Ephemeral channels and swales within the Project Site are typically within cattle pastures and heavily disturbed by livestock. These features were generally dry at the time of the survey, with occasional pools of standing water. These features therefore do not hold water year-round.

Federal and State-Listed Species

Lists of plants and animals observed during the survey are included as Attachments C and D of **Appendix F**. No State or federally-listed species were observed during the survey.

Based on the USFWS official species list generated for the Project Site and included as Attachment A of **Appendix F**, the following federally-listed species have the potential to occur in the region surrounding the Project Site:

- Northern long-eared bat (*Myotis septentrionalis*) - Endangered
- Whooping crane (*Grus americana*) – Experimental population, non-essential
- Monarch butterfly (*Danaus plexippus*) – Candidate
- Western regal fritillary (*Argynnis idalia occidentalis*) – Proposed threatened
- Prairie bush-clover (*Lespedeza leptostachya*) - Threatened

Whooping crane has been listed above as it was returned on the official species list. Whooping crane is listed as endangered wherever found, except where listed as an experimental population. Because the Project Site falls within the "experimental population, non-essential" designation, whooping crane is not afforded protection under the federal Endangered Species Act. As discussed in Section 4 of **Appendix F**, prairie bush-clover does not have the potential to occur on the Project Site. Western regal fritillary has a low potential to occur within the Project Site, and potentially suitable habitat on the Project Site is limited to the isolated perennial grassland on APN 851221080500. Winter hibernacula for northern long-eared bat and tricolored bat was not observed on the Project Site, however, the trees within forested/woodland areas may provide active season roosts for these species. Finally, while there are no known monarch butterfly colonies present on the Project Site, milkweed was observed in patches throughout the woodland and forested areas where cattle disturbance was lower (**Figure 3.5-3**).

The MDNR maintains a list of Minnesota's threatened, endangered, and special concern species. During preparation of the Biological Assessment, the MDNR was consulted and a Natural Heritage Review was completed to identify sensitive biological resources, including state-listed species, that may occur on the Project Site (Attachment B of **Appendix F**). The MDNR identified the following state-listed species that may occur in the vicinity of the Project Site:

- Listed mussels documented within the Zumbro River Middle Fork
- Listed fish documented within the Zumbro River Middle Fork
- Bat roosting habitat

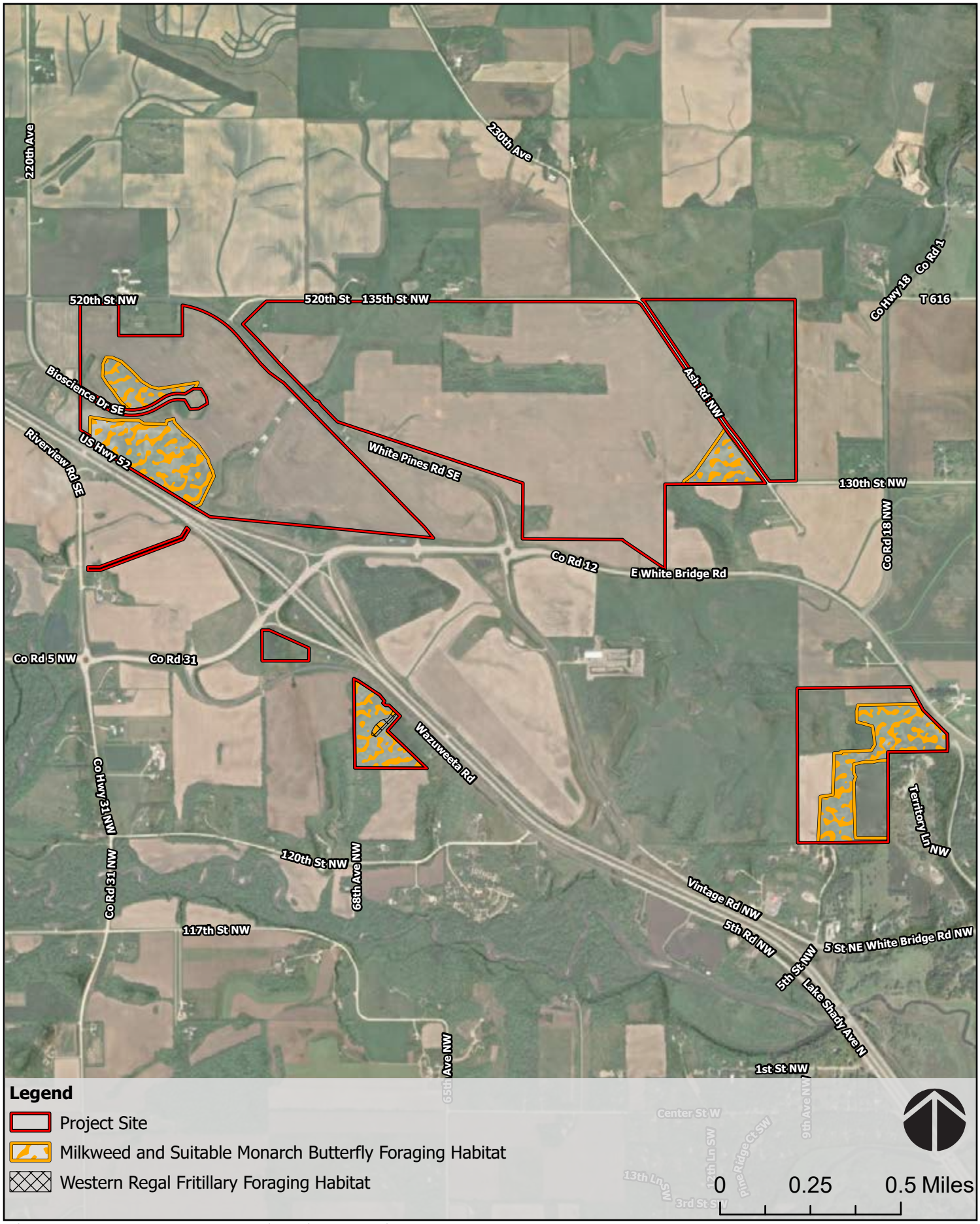
The Project Site lacks suitable habitat for mussels and fish. Therefore, these species do not have the potential to occur on the Project Site. Although precise locations of listed fish and mussels were not provided by MDNR, the nearest point of the Zumbro River Middle Fork in relation to the development area is 0.5 miles to the south of the development area. Minnesota lists both big brown bat and tricolored bat. These two bat species may roost during the active season within trees on-site that have roost characteristics such as basal hollows or sloughing bark.

Nesting Migratory Birds

The Project Site provides potential nesting habitat for migratory birds. As discussed above, whooping crane within the Project Site is not afforded specific protections under FESA. However, whooping crane would still be protected from take under the MBTA.

Critical Habitat

There is no designated or proposed Critical Habitat or EFH for listed species within the Project Site.



Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar

FIGURE 3.5-3

POTENTIAL FEDERALLY-LISTED BUTTERFLY HABITAT

3.5.3 Impacts

Assessment Criteria

Analysis was conducted to determine if construction or operation would result in significant impacts to biological resources. A significant impact to biological resources could occur if development or operation would:

- Result in the loss of sensitive habitat;
- Have a substantial adverse effect on species with listing status under the FESA;
- Have a substantial adverse effect on habitat necessary for the future survival of such species, including areas designated as Critical Habitat by the USFWS and areas designated as EFH by NMFS;
- Result in take of migratory bird species as defined by the MBTA and Bald and Golden Eagle Protection Act; and/or
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.

Consideration is also given to State-listed species herein, however state-listed species are not afforded specific protections once land is acquired in federal trust.

Alternative A: Proposed Project

Habitats

Table 3.5-3 outlines the habitat impact acreages resulting from Alternative A. Habitats converted to an urban land use include commercial, industrial, community and administrative, cultural facility, residential, and infrastructure. Agricultural land uses include cropland and buffalo pastureland. Unimpacted habitats include habitats that are within undevelopable areas or within natural areas/parks and recreation areas.

Table 3.5-3: Habitat Impacts

Habitat	Acres Converted to Urban Land Use	Acres Intended for Row Crop	Acres Intended for Grazing	Unimpacted Acres
ruderal/developed	0.3	0.0	2.3	0.2
row crop agriculture	318.1	52.3	0.0	44.8
coniferous forest	9.0	1.5	0.0	7.9
deciduous forest	20.0	0.0	0.0	36.8
deciduous woodland	0.7	0.2	0.0	9.5
deciduous savanna	19.4	0.3	0.0	17.9
oak savanna	0.0	0.0	0.0	3.2
annual grassland/pasture	39.9	1.6	71.6	49.3
perennial grassland (native prairie)	5.7	0.0	0.0	1.2
riparian forest and shrub	4.1	0.0	0.0	9.8
wet meadow	15.3	0.3	5.5	13.1
pond with seasonal wetland	0.0	0.0	2.7	6.6
seasonal wetland	0.1	0.0	0.0	5.1

Acres intended for grazing would not be subject to land clearing. These areas have previously been subject to grazing pressures and would therefore experience similar land management actions as current or historical land use. Therefore, significant impacts to biological resources within these areas is not anticipated. Additionally, areas intended for row crop that are already used for row crop production would continue to be managed consistent with existing agricultural use. Therefore, impacts to biological resources would not occur in these areas. The impact discussion below therefore focuses on acres converted to an urban land use and acres intended for row crop not already in row crop production.

Ruderal/developed and row crop agriculture habitats have been converted from their natural state and are not considered sensitive. Annual grassland/pasture on the Project Site is seasonally grazed by cattle and was actively being grazed at the time of the survey. This habitat is heavily disturbed by cattle and is crossed by fencing, infrastructure for feeding and watering livestock, and dirt roads. This area is also dominated by non-native grasses. Therefore, the annual grassland/pasture habitat is not considered sensitive and impacts would not be significant. Wet meadow habitat was observed within the annual grassland/pasture and row crop agricultural areas. These areas are also dominated by non-native species and impacts to these areas would not be significant.

Coniferous forests observed within the Project Site are manmade planted areas that include a tree cover monocrop of white or red pine and are not a natural, successional habitat. Trees in these areas are younger and of the same age class and are planted in rows. These areas are not considered sensitive or of limited distribution and are not afforded special protections. Impacts to these areas would not be considered significant.

Other tree-dominated habitats, including deciduous savanna (including oak savanna), deciduous woodland, and deciduous forest provide additional value to wildlife and are in a natural state. The MDNR ranks natural habitats with a conservation status of S1 (critically imperiled) to S5 (secure). Ranks S1 (critically imperiled) and S2 (imperiled) may be considered sensitive due to limited distribution (MDNR, 2009). Deciduous savanna, woodland, and forest habitat MDNR land cover types are: FDs37 Southern Dry-Mesic Oak (Maple) Woodland; MHs49a Southern Wet-Mesic Hardwood Forest; and MHs38 Southern Mesic Oak-Basswood Forest, which are ranked S3 or above and are therefore not considered sensitive. Additionally, there are no federal protections for this habitat. Approximately 62 percent of these habitats have been avoided through project design.

Perennial grasslands are generally not afforded special protections. Within the Project Site, there were three remnants of perennial grasslands. One of these areas was observed along east white bridge road as a narrow strip along the road margin intermixed with non-native species. A second area was observed along Ash Rd NW adjacent to an agricultural field in competition with non-native grasses. The third area was a relatively undisturbed perennial grassland that appeared to be a native prairie remnant that would meet the classification of MDNR Land Cover Ups13. This undisturbed perennial grassland (native prairie) would be considered sensitive and was the best quality native grassland within the Project Site. This area has been wholly avoided and would not be impacted.

Riparian habitats within Minnesota are ranked as a mixture of sensitive and non-sensitive. There are no federal protections for this habitat. Alternative A would avoid over 73 percent of this habitat type. This would be a less than significant impact.

Seasonal wetlands are generally considered sensitive habitat. Only 0.1 acres of this habitat overlaps with an impact area. Mitigation in **Section 4** requires full avoidance of this feature and demarcation of the boundary of this feature during nearby construction activities to prevent impacts.

Aquatic Features

There are no wetlands or surface water features within the development area of Alternative A. Therefore, direct impacts to wetlands or surface waters would not occur. Indirect impacts from potential discharge of pollutants to surface waters during construction are addressed in **Section 3.3.** With adherence to the National Pollutant Discharge Elimination System permitting program and implementation of a Stormwater Pollution Prevention Plan/BMPs (**Table 2.1-2**), indirect impacts to wetlands/waters of the U.S. from construction activities would be less than significant.

Federally-Listed Species

Potential impacts to federally-listed species are summarized below and explained in detail within Section 5 of **Appendix F**.

Monarch Butterfly: Although there are no known colonies of monarch butterfly that use the Project Site, the presence of scattered milkweed within the forested and woodland habitat suggests larval life stage suitability for monarch butterfly. Flowering plants that occur throughout the Project Site could provide nectar resources for foraging adults. Flowering plants were not observed within agricultural row crop areas, aquatic habitats, or ruderal/developed areas. Additionally, high-intensity grazing within annual grassland/pasture and management for livestock grazing has resulted in a high cover of grass species with minimal flowering nectar resources. **Figure 3.5-3** shows those areas that are most suitable for milkweed and flowering plants. These areas are subject to a lower-intensity land management regime. Areas determined to be unsuitable include areas where the land has been developed, has high-intensity grazing/agricultural use, has a closed-canopy tree layer with no understory, has been outcompeted by non-natives, or similar.

A total of 99.6 acres of suitable milkweed and foraging habitat for monarch butterfly was observed. Alternative A could impact 33.4 acres (33.5 percent) of suitable habitat as project components are developed over approximately 10 to 20 years. The majority of suitable habitat for monarch butterfly (66.5 percent) would therefore not be impacted. In February of 2023, the USFWS issued conservation recommendations for monarch butterfly that included land management activities. In order to minimize impacts to monarch butterflies, those land management activities that could be implemented under Alternative A have been included as avoidance, minimization, and mitigation measures in **Section 4** for those areas that will be managed by the Tribe, including commercial, industrial, community and administrative, and tribal cultural facilities. These measures include actions such as use of native vegetation in landscaping and minimizing use of chemical pesticides. This would provide for monarch butterfly land management actions for landscaping in areas of existing monarch butterfly habitat as well as areas not currently suitable for monarch butterfly. There would be a less than significant impact with mitigation.

Western regal fritillary: There is low potential for western regal fritillary to occur within the perennial grassland located on APN 851221080500. This perennial grassland is small and isolated and would not be sufficient to support a population of western regal fritillary, and suitable larval host plants were not observed. This habitat was relatively intact and therefore could serve as foraging habitat to dispersing western regal fritillary. No activities are proposed on or near this habitat. Therefore, there would be no impact.

Northern Long-Eared Bat: There is potential for individual northern long-eared bats to roost during their active season (April 1 through October 31) within individual trees present within the Project Site. Therefore, should roosting bats be present within trees, take of individual bats could occur. Mitigation included in **Section 4** includes timing of tree removal outside of the active season when there is no potential for roosting bats to be present. Should tree removal occur during the active season, mitigation includes the removal of suitable roost trees over a two-day period to avoid take of bats. The majority of roosting bat habitat would be preserved and would not be significantly impacted considering the full extent of roosting habitat across the Project Site and the geographical extent of listed bats that may occur within the Project Site. There would be a less than significant impact with mitigation.

State-Listed Species

As discussed above, the MDNR was consulted, and a Natural Heritage Review was completed to identify sensitive biological resources, including state-listed species, that may occur on the Project Site (Attachment B of **Appendix F**). The only state-listed species identified on this list with potential to occur within the Project Site are state-listed bats. This includes big brown bat and tricolored bat. Mitigation in **Section 4** that is protective of northern long-eared bat would also be protective of big brown bat and tricolored bat. There would be a less than significant impact with mitigation.

While there is no habitat within the Project Site that could support fish or mussels, stormwater runoff from the Project Site at least partially connects to drainages that lead to the Middle Fork Zumbro River. As discussed in **Section 3.3** and **Table 2.1-3**, BMPs protective of water quality would ensure that impaired runoff would not exit the Project Site. Therefore, Alternative A would not result in significant impacts to water quality and therefore would not indirectly impact habitat for aquatic species in the Middle Fork Zumbro River. Therefore, significant impacts to the Middle Fork Zumbro River would not occur.

Nesting Migratory Birds

Nesting migratory birds have the potential to occur on and in the vicinity of the Project Site. The general nesting season occurs between February 15 and September 15. If active nests are present in these areas, commencement of construction activities associated with development of Alternative A could adversely affect these species. Mitigation included in **Section 4** would avoid impacts through a preconstruction nesting bird survey and establishment of a disturbance-free buffer around active nests, should active nests occur within 100 feet of disturbance. Additionally, the Project Site is outside of bald and golden eagle breeding areas (MDNR, n.d.; All About Birds, 2024).

Increased lighting could increase bird collisions with structures and could also cause disorientating effects for avian species. Thus, nighttime lighting from the operation of Alternative A could have a potentially significant effect on both migrating and local bird populations. Incorporation of design features in **Table 2.1-2**, including orientating exterior lighting so it does not cast significant light or glare into natural areas, would reduce potential adverse effects to migratory birds and other birds of prey. Additionally, timers would be used on tribal facilities to limit nighttime use of lighting. There would be a less than significant impact with mitigation.

Critical Habitat

Designated or proposed Critical Habitat or EFH does not occur within or adjacent to the Project Site. Therefore, there would be no impact to Critical Habitat or EFH.

Alternative B: No Action

Under Alternative B, no development would occur within the Project Site. As such, there would be no significant impacts to biological resources in the vicinity of the Project Site.

3.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.6.1 Regulatory Setting

The cultural resources regulatory setting is summarized in **Table 3.6-1** and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.6-1: Regulatory Policies and Plans Related to Cultural Resources

Regulation	Description
Federal	
Section 106 of the National Historic Preservation Act	▪ Federal agencies must identify cultural resources that may be affected by actions involving federal lands, funds, or permitting actions. ▪ Significance of the resources must be evaluated for National Register of Historic Places (NRHP) eligibility. ▪ If an NRHP-eligible resource will be adversely affected, measures to avoid or reduce adverse effects must be taken.
Native American Graves Protection and Repatriation Act	▪ Includes provisions governing the repatriation of Native American remains and cultural items under the control of federal agencies and institutions that receive federal funding ("museums"), as well as the ownership or control of cultural items and human remains discovered on federal or tribal lands.
Archaeological Resources Protection Act	▪ Archaeological resources and sites on public and Indian lands are protected resources.
Paleontological Resources Preservation Act	▪ Establishes that paleontological resources on federal land are protected resources.
State	
Minnesota State Historic Preservation Office	▪ Provides standards and oversight for the identification, designation, and protection of the State of Minnesota's significant cultural resources.
Minnesota Statewide Historic Preservation Plan	▪ The Plan contains a summary of past accomplishments, trends affecting historic resources, and challenges and opportunities in preserving such resources, and discusses the State's vision of accomplishing the five broad Plan Goals focusing on partnerships, access to information, equity, economic benefits, and sustainability and climate resiliency.

3.6.2 Environmental Setting

This section summarizes the prehistory and history of the Project Site, as well as the methodology and findings of the cultural resources study conducted for the Project Site (**Appendix H**). Additional information regarding the setting is included in **Appendix E**.

Prehistory

The first documented Native American occupation of Olmsted County followed the retreat of the last glaciers at the end of the Pleistocene. Migratory groups of hunters and gatherers identified as the Paleoindian tradition were present in this area beginning at least 12,000 years before present (B.P.). Climatic and cultural shifts appeared in the archaeological record with the advent of the Archaic tradition, which extended from about 9,500 to 2,500 B.P. The Woodland tradition (2,500–1,000 B.P.) is typically associated with the introduction of horticulture, construction of earthen burial mounds, and the manufacture of ceramics. At present, there is insufficient evidence to securely attribute specific Woodland contexts to Olmsted County.

At about A.D. 1000 in central Illinois, the population and cultural center of Cahokia rose to prominence, and in the space of one hundred years its influence had spread throughout the central United States. In southeast Minnesota, the best documented Native American culture of the Late Prehistoric period was the Oneota. Although the origins of Oneota cultures are uncertain, by 900 B.P. they were spreading across much of the Midwest. There are no major Oneota agricultural villages reported from Olmsted County, but Oneota sites in La Crosse show evidence of exploitation of the prairies in southeast Minnesota for winter bison hunts.

History

Contact between Europeans and Native Americans began during the 1600s when European trade goods and introduced diseases entered Minnesota as eastern tribes moved west, disrupting and displacing many populations. The Eastern Dakota were the most widespread Native American group in central and northern Minnesota during the historic period, along with the Ojibway peoples who moved into northern Minnesota to the Lake-Forest biome (Benchley et al., 1997). A series of conflicts between Native peoples and Euro-American settlers culminated in 1862 with the Dakota Conflict, after which most Dakota peoples were forcibly relocated further west.

The Minnesota Territory was formed in 1849 by which time Euro-American populations began to settle in what is now known as Olmsted County (Leonard, 1910). Olmsted County was established in 1855 and formerly organized in 1858, shortly after the community of Pine Island was platted and its post office was established which is still in operation today. The largest town in Olmsted County, Rochester, was also founded about the same time (Leonard, 1910; Poch, 1980). Although many of the first settlers were farmers, in the 1860s railroad construction and growing industries also attracted new residents, so by the 1870s, the urban dwellers began to outnumber the rural population.

Prairie Island Indian Community

As a result of numerous treaties including the 1851 Treaty of Mendota, and the 1851 Treaty of Traverse des Sioux, the Dakota people were largely stripped of their ancestral lands (PIIC, 2023). The failure of the U.S. government to uphold its treaty obligations led to war with the Dakota and, ultimately, the largest mass execution in American history – the hanging of 38 Dakota men in Mankato, Minnesota on December 26, 1862. Soon after, Congress invalidated all treaties and the Dakota people were driven from Minnesota. However, a small group remained and settled near Prairie Island. The reacquisition of the Prairie Island Indian Community's homelands began in the late 19th century and was aided by the federal Indian Reorganization Act in 1934. This act encouraged tribes to formalize their governments by adopting constitutions and by-laws.

The Tribe adopted its constitution and by-laws on June 20, 1936. Lands were put into trust and the Reservation was established. In 1939, 414 acres of land at Prairie Island were purchased by the federal government for the benefit of the newly organized Tribe. This acreage constitutes the central core of the Tribe's reservation that has provided a small footprint for tribal members' homes. Today, the reservation comprises 3,100 acres (many of which are inundated) on Prairie Island, within the ancestral homeland of the Dakota people, at the confluence of the Vermillion and Mississippi Rivers.

Findings

The Project Site was assessed for the presence of cultural resources by the Earth Systems Research Laboratory of the Minnesota State University, Mankato, in coordination with the Tribe's Tribal Historic Preservation Officer (THPO). The investigation included a review of Office of the State Archaeologist of Minnesota archives for information on previously documented resources located within and near the Project Site, data provided by past studies, a pedestrian survey, and the excavation of shovel tests. A Phase I Archaeological Survey Report detailing the study methodology and results of the archival research and field efforts was completed by Earth Systems Laboratory in 2024 (**Appendix H**).

Historic aerial photographs show the Project Site has been used for intensive agricultural dating as far back as 1937 and is heavily disturbed (**Appendix H**). Agricultural activities are ongoing. Previous cultural and paleontological resources studies have also been conducted in the vicinity of the Project Site. Four known archaeological surveys were completed for various projects in the region of the Project Site. An archaeological survey that was conducted in 2002 for proposed highway and road improvements along Highway 52 between Pine Island and Oronoco determined that the general area of the Project Site was not likely to contain significant archaeological sites. The three other surveys were conducted to characterize the general archaeological probability for the Olmsted County region. These surveys found that the areas with the greatest potential for archaeological sites were within 500-feet of natural major watercourses. There are no natural major watercourses within the Project Site. The nearest natural major watercourses to the Project Site are Dry Run Creek, approximately 1 mile to the northeast, and Middle Fork Zumbro River, approximately 0.25 miles to the west.

Records and Literature Search

Earth Systems Laboratory conducted a search of the Minnesota State Historic Preservation Office archives between February 10th, and 20th, 2024 for archaeological site records and previously conducted studies relevant to the Project Site. A county-wide (Olmsted) survey conducted by Arzigian and Kolb (2010) was also reviewed along with an examination of soil types that could provide indications of archaeologically sensitive landforms within or near the Project Site.

Pedestrian Survey (PENDING)

Paleontological Resources

Several archives were reviewed to assess the paleontological sensitivity of the Project Site, and whether any significant fossil discoveries have been made. These archives and sources included publications of the Minnesota Geological Survey (MGS) relevant to paleontology, and the geology of the Project Site and surrounding region. According to the MGS, the underlying geology of the Project Site and surrounding region consist of Paleozoic formations of the Ordovician (485–443 million years ago [mya]), and Devonian (419–358 mya) ages. The MGS Information Circular #33 (Rice, 1990) reports that a number of fossil specimens from Olmsted County are curated in the MGS collections. These consist of examples of brachiopods (a type of marine mollusc) collected in 1880, gastropods (also a mollusc) found near Stewartsville (south of Rochester) in 1897, bryoza (an aquatic invertebrate) samples from Rochester, and several specimens of conodota (eel-like invertebrates) recovered in 1933, and 1966. The shale and limestone formations within which these specimens can be exposed, primarily in roadcuts and natural outcrops, are presently accessible and examples continue to be found but have not necessarily been cataloged in institutional or agency collections (Wilson, 2016).

3.6.3 Impacts

Significance Criteria

A significant impact would occur if the implementation of an alternative resulted in physical destruction, alteration, removal, or change in characteristics or reduction of integrity of a *historic property* (a cultural resource presently listed or recommended eligible for listing on the NRHP) or important paleontological resources.

Alternative A: Proposed Project

Cultural Resources

A review of the Office of the State Archaeologist files indicated that no previously documented cultural resources have been identified within or in the vicinity of the Project Site. Previous archaeological surveys completed for various projects in the region of the Project Site determined that the general area of the Project Site was not likely to contain significant archaeological sites, and that the areas with the greatest potential for archaeological sites were within 500-feet of natural major watercourses, which do not occur within the Project Site. Additionally, historic aerial photographs show the Project Site has been used for intensive agricultural dating as far back as 1937 and is heavily disturbed, and therefore unlikely to contain significant cultural resources (**Appendix H**).

Although there is low probability that the Project Site contains significant cultural resources, it is possible to inadvertently uncover unknown cultural resources during ground disturbing activities. Accordingly, mitigation measures are presented in **Section 4** for the treatment of unanticipated discoveries of cultural resources and human remains. With mitigation, there would be no adverse impacts to unknown historic properties and human remains. There would be a less than significant impact with mitigation.

Paleontological Resources

No paleontological resources have been reported or observed on or in the vicinity of the Project Site. No paleontological finds have been made within or adjacent to the Project Site and no outcrops, roadcuts, or other exposures of the geologic formations likely to contain significant fossil specimens are known to be present. Therefore, Alternative A would not result in significant adverse effects to known paleontological resources.

Although the possibility is low, previously unknown paleontological resources could be discovered during earth-moving activities. Mitigation measures are presented in **Section 4** for the treatment of unanticipated paleontological discoveries which would ensure that Alternative A would not result in adverse impacts to previously unknown paleontological resources. There would be a less than significant impact with mitigation.

Alternative B: No Action

Under Alternative B, the Project Site would not be taken into trust and no development would occur. The Project Site would remain in its current state. Because no new construction would occur, Alternative B would have no adverse effects on historic properties or paleontological resources.

3.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

3.7.1 Regulatory

The socioeconomic regulatory setting is summarized in **Table 3.7-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.7-1: Regulatory Policies and Plans Related to Socioeconomics

Regulation	Description
Federal	
Executive Order 12898	▪ Disproportionately high impacts to minority or low-income populations should be considered. ▪ A minority population is defined as a census tract containing greater than 50% minorities, or a census tract with a meaningfully greater percentage of minorities than the surrounding tracts.[1] ▪ A low-income population is defined as a census tract with a median household income lower than the poverty threshold, which varies depending on the number of persons in a household.
Executive Order 14096	▪ Provides a broader definition of potentially disadvantaged communities. ▪ Explicitly expands definition of potentially disadvantaged communities to include persons with a tribal affiliation and disabled persons. ▪ Requires federal agencies to fulfill environmental justice reporting requirements and prepare strategic plans. ▪ Describes additional reporting and notification requirements related to toxic spills.

1. Although not specified in EO 12898, for purposes of the social justice analysis, minority races include American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), and Hispanic. Populations of two or more races and populations classified as "Other" were also considered to be minority races.

3.7.2 Environmental Setting

Demographics

Demographic data for Olmsted County, the City of Pine Island, and Minnesota State is presented in **3.7-2**. The Project Site is partially within and adjacent to the City of Pine Island, which had a population of approximately 3,769 in 2020. Olmsted County had a population of approximately 162,847 residents in 2020 (**Table 3.7-2**).

Table 3.7-2: Socioeconomic Data

Census Data	City of Pine Island[1]	Olmsted County	Minnesota State
Demographics			
Population April 1, 2020[2]	3,769	162,847	5,706,494
Median household income (2021 dollars)[3]	N/A	$113,018	$102,691
Persons in poverty[4]	N/A	9.6%	9.6%
Race and Ethnicity[2]			
White alone	92%	83%	82%
Black or African American alone	2%	7%	7%
American Indian and Alaska Native alone	0.2%	0.2%	1%
Asian alone	1%	6%	5%
Native Hawaiian and Other Pacific Islander alone	0%	0%	0%
Two or more races	4%	4%	4%
Hispanic or Latino	2%	6%	6%
White alone	90%	77%	76%
Minority population[5]	10%	23%	24%
Employment			
Employment Oct. 2023 (seasonally adjusted)	–	85,000[7]	3,001,300
Unemployment Rate 2022 (not seasonally adjusted, 1-year estimate)[8]	N/A	3.6%	3.2%
Unemployment Rate Oct. 2023 (seasonally adjusted)[6]	–	–	3.2%
Housing[9]			
Housing units, 2022	N/A	70,904	2,547,867
Vacant units, 2022	N/A	2,159	225,677
Vacancy rate	N/A	3.0%	8.9%

1. Note: Due to its population size of less than 5,000 people, some datasets are not available for Pine Island and a "N/A" may be provided in this column.
2. Source: U.S. Census, 2020b.
3. Source: U.S. Census, 2021.
4. Source: U.S. Census, 2022a.
5. Calculated as 100% minus the White alone, not Hispanic or Latino percentage.
6. Source: U.S. Bureau of Labor Statistics, 2023.
7. Source: Acorn Environmental estimate, based on State-wide labor population, multiplied by labor participation rate, multiplied by percentage of population of working age.
8. Source: U.S. Census, 2022b.
9. Source: U.S. Census, 2022c.

Between 2010 and 2020, Olmsted County saw a population growth of approximately 18,599 new residents (12.9% growth rate), and the County has experienced a fairly steady growth rate of approximately 15,000 to 20,000 new residents per decade for the past 30 to 40 years (Olmsted County, 2022a). The Project Site is within Census Tract 19.02 as designated by the U.S. Census Bureau (U.S. Census Bureau, 2020a).

Economy and Employment

Table 3.7-3 presents mean household income levels and household sizes for Census Tract 19.02 and adjacent census tracts. Olmsted County had an estimated mean household income of $113,018 in 2021, which was approximately 10% higher than the State average of $102,691 (**Table 3.7-2**).

The mean household income for Census Tract 19.02 in 2021 was $164,788, which was well above the established poverty threshold of $24,860 and higher than Olmsted County and State averages (**Table 3.7-3**). There were approximately 3,001,300 people employed in the State in 2023. The unemployment rate was approximately 3.2% statewide and approximately 3.6% for Olmsted County (**Table 3.7-2**).

Table 3.7-3: Household Income – Project Site and Nearby Census Tracts

Census Tract or Location	Mean Household Income[1]	Average Household Size[2]	Poverty Threshold[3, 4]
Project Site			
19.02	$164,788	2.69	$24,860
Vicinity			
19.01	$144,324	2.73	$24,860
14.04	$122,779	2.89	$24,860
17.03	$127,329	2.30	$24,860
16.03	$171,709	2.63	$24,860
808	$91,171	2.56	$24,860
4904	$104,407	2.47	$24,860
4905	$100,098	2.57	$24,860
Olmsted County	$113,018	2.42	$24,860
Goodhue County	$87,029	2.31	$24,860
Wabasha County	$88,604	2.35	$24,860
Minnesota State	$102,691	2.48	$24,860

1. Source: U.S. Census, 2021.
2. Source: U.S. Census, 2020d.
3. Source: U.S. Department of Health and Human Services, 2023.
4. Average household size is conservatively rounded up to the nearest person.

Property Taxes

A total of $107,106 in property taxes and special assessments is due for the Project Site during Fiscal Year 2024 (**Table 3.7-4**). In the 2023 fiscal year, Olmsted County anticipated collecting a total of $124,046,580 in property taxes (Olmsted County, 2023a). Consequently, property taxes on the Project Site parcels comprise approximately 0.09% of County property taxes.

Housing

In 2022, the State was estimated to contain approximately 2,547,867 housing units, of which approximately 225,677 units (8.9%) were vacant (**Table 3.7-2**). Within Olmsted County, the U.S. Census estimates that there were 2,159 vacant housing units as of 2022 (U.S. Census, 2022c).

Environmental Justice

As discussed above, the mean household income for Olmsted County, the State, and the census tract for the Project Site and those in the vicinity are well above the poverty threshold of $24,860 annually for a three-person household. Additionally, as presented in **Table 3.7-5**, the minority population is below 50% in the census tract comprising the Project Site and all census tracts in the vicinity of the Project Site. As the applicant, members of the Tribe are considered a minority population for the purposes of the Executive Order 12898 analysis, regardless of residency.

Table 3.7: 2023 Property Taxes of the Project Site Parcels

APN	Acres	FY 2024 Property Taxes
85.02.42.078994	1.98	$300
85.01.33.080498	4.75	$148
85.12.21.080500	16.72	$522
85.02.41.079586	15.44	$2,520
85.01.22.079581	1.78	$292
85.01.32.079579	55.42	$9,046
85.01.34.079577	13.63	$2,224
85.01.24.079575	24.1	$3,934
85.01.21.079580	74.1	$12,160
85.01.12.038408	41.13	$4,474
85.01.11.038407	41.6	$4,526
84.06.22.039648	40	$3,998
84.06.24.039647	100	$10,496
84.06.23.079596	32.36	$5,280
85.01.42.079576	2.98	$486
85.01.41.079578	102.69	$16,758
84.07.11.079799	42.6	$2,886
84.07.13.039659	40	$4,896
85.02.14.079302	19.11	$3,068
85.02.12.083615	46.99	$8,464
85.02.14.079304	63.65	$10,628
	Total	$107,106

Source: **Table 1.4-1** and Olmsted County, 2024a.

Table 3.7-5: 2020 Population Demographics by Census Tract

Race	19.02 (Project Site)	19.01	14.04	17.03	16.03	808	4904	4905
Total Population[1]	**4,835**	3,925	7,099	5,726	4,564	4,517	4,306	3,259
Hispanic or Latino	**175**	102	255	200	184	107	74	118
Two or More Races	**142**	152	314	193	176	167	80	65
Native Hawaiian & Other Pacific Islander	**0**	4	4	1	1	2	0	0
Asian	**69**	66	736	460	495	45	13	17
American Indian and Alaskan Native	**10**	4	9	16	3	11	11	5
Black or African American	**36**	22	646	383	63	75	9	16
White Alone, not Hispanic or Latino	**4,383**	3,562	5,123	4,453	3,626	4,093	4,111	3,038
Minority %[2]	**9.3%**	9.2%	27.8%	22.2%	22.2%	9.4%	4.5%	6.8%

Source: U.S. Census, 2020c.

1. Note that individual columns do not add to Total Population because of double counting in some categories.
2. Calculated as 100% minus the White alone, not Hispanic or Latino percentage.
3. Olmsted County: 19.02, 19.01, 14.04, 17.03, and 16.03. Goodhue County: 808. Wabasha County: 4904, 4905.

USEPA Environmental Justice Screening Tools

The Environmental Justice Screening and Mapping Tool (version 2.1) and the Climate and Economic Justice Screening Tool were used to identify disadvantaged communities and other demographics near the Project Site. Using USEPA's Environmental Justice Screening and Mapping Tool (EJScreen, version 2.2), the Project Site block-group was compared to the rest of the U.S. and is found within the less than 10th percentile for low income and in the 20th percentile for people of color demographics (**Table 3.7-6**). EJScreen was used to identify if the Project Site was considered a disadvantaged community (**Appendix I**). The mapping tool ranks most of the burdens using percentiles. The percentiles show how much burden each tract experiences when compared to other tracts. According to EJScreen, the Project Site is well below the thresholds for disadvantaged consideration in all aspects of energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development.

Table 3.7-6: EJScreen Report; Project Site Block Group Compared to Minnesota and USA

Variables	Value	State Average	Percentile in State	U.S. Average	Percentile in U.S.
People of Color	5%	20%	21	39%	12
Low Income	5%	23%	11	31%	7
Unemployment Rate	0%	4%	0	6%	0
Less than High School Education	2%	7%	31	12%	20
Particulate Matter (µg/m^3)	7.82	6.78	88	8.08	40
Ozone (ppb)	57.7	58.2	20	61.6	21
Air Toxics Cancer Risk[1] (lifetime risk per million)	20	22	12	25	5

Source: **Appendix I**

3.7.3 Impacts

Assessment Criteria

An impact associated with socioeconomic conditions and environmental justice would be considered significant if development were to disproportionately impact minority or low-income populations, negatively affect the economy or unemployment, overburden the local housing supply, or cause an increase in crime.

Alternative A: Proposed Project

Environmental Justice for Minority and Low-Income Populations

As discussed above, there are no low-income or minority populations in the vicinity of the Project Site, with the exception of the Prairie Island Indian Community (the project proponent). Furthermore, Alternative A would not displace any residential populations in the vicinity of the Project Site. Effects to minority populations would include positive impacts from the beneficial impacts to the local economy (including the creation of construction jobs) due to the construction of Alternative A. Because Alternative A would provide tribal housing, healthcare services, community services and revenue, it would result in improved governmental services to members and facilitate the Tribe's economic self-sufficiency. This would be beneficial for the Tribe. Therefore, Alternative A would not result in disproportionately high and adverse environmental effects to minority or low-income communities, including the Tribe.

Economy and Employment

Construction

Construction of Alternative A would generate temporary employment opportunities and wages that would primarily be filled by the available labor force in the City of Pine Island, Olmsted County, and neighboring City of Oronoco, Goodhue County, and Wabasha County. New one-time employment opportunities would be generated during the construction phase of Alternative A. Additionally, construction of Alternative A is anticipated to stimulate one-time economic benefits to the local area (including the cities of Pine Island and Oronoco, Olmsted County, and Goodhue County). There would be a beneficial impact.

Operation

Operation of Alternative A would result in a variety of benefits to the economy, including residents of nearby counties, cities, and the City of Pine Island. These effects include increases in overall economic output and employment opportunities. During operation, Alternative A would employ approximately 267 full-time and part-time direct jobs (**Table 3.7-7**). Typically, the operation of a business enterprise creates additional jobs within the effected county through a combination of indirect and induced employment opportunities. Indirect jobs produce goods and services needed by workers with direct jobs. Induced jobs are employment positions created by additional spending by both direct and indirect workers. Based on experience with similarly sized projects, it is estimated that the number of indirect and induced jobs created would be approximately 25% to 50% of direct jobs.

Table 3.7-7: Estimated Direct Jobs from Operation

Tribal Land Use Designation	Description	Direct Jobs
Single Family Residential	Single Family Residential (154 units)	-
Multi-Family Residential	Multi-Family Residential (70 units)	3
	Assisted Living Facility [1] (30 units)	4
Community & Administrative	Public Safety Facility	20
	Public Works/Maintenance Facility	10
	Administration Building	55
	Community Center/Wellness Center	10
	Health Clinic/Health Care Facility	10
	Education Center/Library	20
	Buffalo Maintenance Facility	-
	Water Tower and Lift Station	-
Cultural Facility	Cemetery	-
	Cultural Center/Wacipi	5
	Ceremonial House/Bark Lodge	-
Buffalo Pastureland	-	5
Commercial/Industrial	Convenience/Fast Food/Drive Thru and Grocery Store/Coop	120 [2]
Natural Areas/Parks and Recreation		-
Agriculture/Cropland	-	5
Water Tower/Lift Station	-	-
	Total	**267**

SOURCE: **Section 2** and Acorn Environmental estimates for Multi-Family Residential and Agricultural jobs.

1. Estimated by Acorn Environmental. Assumes 8:1 ratio of residents to staff.
2. Estimated by Acorn Environmental. The exact number of employees will depend on the specific commercial/industrial uses.

The total unemployed population of Olmsted County is estimated as the total number of employed and unemployed persons, multiplied by the unemployment rate. This equates to approximately 89,000 multiplied by 3.6% (**Table 3.7-2**) or 3,200 persons. Operations of Alternative A would create approximately 267 jobs (**Table 3.7-7**). Most of these employment positions would be filled by tribal members, or unemployed and underemployed County residents. However, some portion of workers may in-migrate to the County in search of employment. A socioeconomic study commissioned in connection with the proposed Prairie Island Indian Community Emergency Gaming Facility and Fee-to-Trust Project estimates that at most 32% of the workers employed by the casino project would relocate to the County (Prairie Island Indian Community, 2024). A contributing factor in this estimate is the specialized nature of some casino jobs. Because Alternative A does not have a casino component, it is estimated that approximately 20% of jobs would be filled by persons who in-migrate to Olmsted County. Assuming 1.1 employees per household, this would imply that approximately 49 households would in-migrate to the County.[1] This equates to approximately 1.5% of Olmsted County residents who are unemployed. Thus, Alternative A would have a less than significant effect on the ability of local businesses to hire new employees.

Alternative A would result in direct, indirect, and induced economic benefits, which would benefit the residents of the region and members of the Tribe. Direct benefits include expenditures made by operation of the facility in the form of employee compensation and purchases of goods and services. Indirect benefits are the impact of the direct expenditures on other business sectors and reflect the economic spin-off that is made possible by the direct purchases. Overall, Alternative A would result in beneficial impacts to the local economy and employment. There would be a beneficial impact.

Fiscal Impacts

Under Alternative A, the Tribe would not pay corporate income taxes on revenue generated at the proposed industrial/commercial uses, nor would it pay property taxes on tribal land. Tax revenues would be generated for federal, State, and local governments from activities including secondary economic activity generated by the commercial elements of Alternative A (i.e., the indirect and induced effects of the project). While the Tribe would no longer pay approximately $107,000 in property taxes (**Table 3.7-3**) for the Project Site once it goes into federal trust, this represents approximately 0.09% of the approximately $124 million in Olmsted County property taxes. This amount would be exceeded by the direct, indirect, and induced taxes and fees generated by Alternative A. For these reasons, the loss of these property tax revenues would represent a less than significant impact.

Law Enforcement, Fire Protection and EMS Services

Alternative A would result in an increase in demand for law enforcement, fire protection and EMS services on the Project Site, which would result in additional costs for local service providers.

Law Enforcement: As described in **Sections 1.5 and 2**, the Prairie Island Police Department (PIPD) is the primary provider of law enforcement services to the Prairie Island Reservation, which is located approximately 25 miles to the north of the Project Site. PIPD would likely be the primary first responder for calls for service from the Project Site, although the Goodhue County and/or Olmsted County Sheriff's Office may provide supplemental law enforcement services.

[1] Calculated by Acorn Environmental - 267 jobs multiplied by 20%, divided by 1.1 employees per household.

Alternative A includes the development of a public safety building within the Project Site that would be equipped for use as a local office for the PIPD and may be utilized as a resource for local law enforcement agencies as well. The Tribe has entered into an IGA with the City of Pine Island (**Appendix A**) that contemplates the provision of law enforcement services (which are provided to the City of Pine Island by Goodhue County Sheriff's Department (see **Sections 1.5** and **2.1**). The Tribe also has entered into a prosecution agreement with the Goodhue County Attorney's Office for the Prairie Island Reservation, and the Tribe provides annual payments for the Goodhue County Attorney's Office to serve as the prosecuting agency for State citations issued by the Tribe's Police Officers.

While Olmsted County Sheriff's Department would not likely be the first or second responder for calls from the Project Site, it is possible that some calls may be routed to the Olmsted County Sheriff's Department. Any relatively minor increase in calls resulting from Alternative A is not anticipated to require Olmsted County Sheriff's Department to build new or expanded facilities to provide services as a consequence of development on the Project Site. PIPD would be the primary law enforcement provider, a public safety building would be constructed and equipped within the Project Site, and the Tribe and City have entered into an IGA that commitments each entity to work cooperatively to avoid conflicts or gaps in their provision of public safety services within their respective jurisdictions; therefore fiscal and public service impacts associated with law enforcement services would be less than significant.

Fire Protection Services: As described in the PIIC Emergency Gaming Facility and Fee-to-Trust Project EA, the proposed emergency gaming facility is anticipated to stimulate increased utilization of local fire protection and EMS, which was estimated as a 7.9% increase over the projected 2026 Pine Island Fire Department call volume. This was classified as a potentially significant impact (Prairie Island Indian Community, 2024). The development footprint of Alternative A is larger than that of the proposed emergency gaming facility, although Alternative A land uses would be less intensive. Fire and EMS calls under Alternative A would likely be similar to those generated by the proposed emergency gaming facility. Consequently, fiscal impacts associated with providing fire and EMS would similarly be potentially significant. However, increased fire protection and EMS utilization is not anticipated to trigger the need to construct new facilities. The Tribe proposes to enter into a service agreement with the Pine Island Fire Department for fire protection and emergency medical services to the Project Site prior to development, which has been included as a mitigation measure in **Section 4**. With the implementation of mitigation measures listed in **Section 4**, fiscal and public service impacts associated with fire protection services under Alternative A would be less than significant. BMPs listed in **Table 2.1-3** would further reduce potential impacts.

Housing

The U.S. Census estimates that there are 2,159 vacant housing units in Olmsted County (U.S. Census, 2022c). As discussed above, Alternative A may result in the in-migration of an estimated 49 households to the County. Alternative A includes the construction of 224 new residential housing units (**Table 3.7-7**), not including the assisted living facility. Thus, Alternative A would result in a net increase in housing units. There would be no impact.

Substitution Effects

Potential substitution effects (the loss of customers at existing businesses to the new business) of a project are considered when estimating economic impacts. The magnitude of the substitution effect can generally be expected to vary greatly by specific location and according to a number of variables.

That is, how much of a new facility's revenue comes at the expense of other business establishments in the area depends on how many and what type of other establishments are within the same market area, as well as other economic and psychological factors affecting the consumption decisions of local residents. Alternative A is anticipated to have a positive effect on local businesses because the new households who occupy the proposed residences and employees who in-migrate to the County would patronize existing businesses. However, the commercial and industrial components of the project would add to the supply of these types of properties and thus would compete with existing commercial and industrial business owners. As shown in **Table 3.7-8**, the commercial and industrial components of Alternative A would add approximately 0.9% of existing supply in the County. The net effect of increased patronage of local businesses from new residents and employees, offset by the increase in the supply of competing commercial and industrial properties would result in less than significant substitution effects.

Crime

As described in **Section 2.1** and depicted in **Table 3.7-8**, Alternative A includes a mix of land uses that are complimentary to those in the vicinity of the Project Site. As discussed above, the PIPD would be the primary provider of law enforcement services within the Project Site and a public safety building would be equipped and staffed within the Project Site. When additional populations are introduced into an area, the number of criminal incidents would be expected to increase. This is true of any large-scale development. However, because of the compatibility of Alternative A with surrounding land uses, there would be no impact on the crime rate. Potential crime related impacts would be further reduced through the implementation of BMPs listed in **Table 2.1-3.** There would be a less than significant impact.

Alternative B: No Action

Under Alternative B, the Tribe would not receive any of the socioeconomic benefits associated with development on the Project Site. The Project Site would not be acquired in trust and would remain on the City and County's property tax rolls. No development would occur on the Project Site.

3.8 TRANSPORTATION AND CIRCULATION

3.8.1 Regulatory Setting

The transportation regulatory setting is summarized in **Table 3.8-1**, and additional information on the regulatory setting can be found in **Appendix D**.

Table 3.8-1: Regulatory Policies and Plans Related to Transportation and Circulation

Regulation	Description
Federal	
Department of Transportation (DOT)	▪ The mission of the DOT is to ensure a fast, safe, efficient, accessible and convenient transportation system that meets national interests and enhances quality of life. ▪ Organizations within the DOT include the Federal Highway Administration (FHWA), the Federal Aviation Administration, the National Highway Traffic Safety Administration, the Federal Transit Administration, the Federal Railroad Administration, and the Maritime Administration. ▪ The FHWA supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). ▪ US Highway 52 (Hwy 52) is a federal highway within the vicinity of the Project Site.

Regulation	Description
State	
Minnesota Department of Transportation (MnDOT)	▪ The principal agency of the State for development, implementation, administration, consolidation and coordination of State transportation policies, plans and programs, as well as federal transportation plans and programs. ▪ The Stewardship and Oversight Agreement with the FHWA allows MnDOT to assume certain review and approval actions for the FHWA depending on whether a project is on the Interstate System, National Highway System, or off the National Highway System. ▪ The Access Management Manual addresses planning, design, and implementation of land use and transportation strategies in an effort to maintain a safe flow of traffic while accommodating the access needs of adjacent development. ▪ The Facility Design Guide provides design guidance for roads, highways, and other facilities.

3.8.2 Environmental Setting

Transportation Networks and Intersections

The roadways surrounding the Project Site are shown in **Figure 2.1-1** and include E White Bridge Road (County Road 12), White Pines Road SE/59th Avenue NW, 520th Street NW, Ash Road NW, and Hwy 52. Regional access to the Project Site is provided via Hwy 52 at E White Bridge Road/County Road 31 W where there is a full interchange. The Project Site is locally accessible via 135th Street NW (which becomes White Pines Road SE/59th Avenue NW near the Project Site) and 230th Avenue (which becomes Ash Road NW near the Project Site) from the north, and from E White Bridge Road and 59th Avenue NW to the south. Additional details of the surrounding intersections and roadways relevant to the Project Site are included in **Appendix E**.

Existing Intersection Traffic Volumes and Levels of Service

Intersections surrounding the Project Site were analyzed within the 2024 Traffic Impact Study (TIS) included as **Appendix C**. The TIS evaluated the following 15 intersections in the vicinity of the Project Site:

1. E White Bridge Rd/County Rd 12 and White Pines Rd SE
2. Hwy 52 and County Rd 12/31 Interchange east ramp
3. Hwy 52 and County Rd 31/12 Interchange west ramp
4. County Road 5/County Road 31 and Wazuweeta Road
5. Proposed Intersection along White Pines Rd SE/59th Avenue NW
6. Proposed Intersection along White Pines Rd SE/59th Avenue NW
7. Proposed Intersection along White Pines Rd SE/59th Avenue NW
8. White Pines Rd SE/59th Avenue NW and 520th Street
9. 520th Street and 220th Avenue
10. Proposed Intersection along E White Bridge Rd
11. E White Bridge Rd and County Road 18 NW
12. Proposed Intersection along E White Bridge Rd
13. Proposed Intersection along E White Bridge Rd
14. Proposed Intersection along Wazuweeta Road
15. Vintage Road and 5th Street NW

Detailed traffic counts can be found in Attachment A of **Appendix C.** Traffic counts were collected from April 9 to April 11, 2024 during the following peak times for traffic volumes:

- Weekday am: 7 am to 8 am
- Weekday pm: 4 pm to 5 pm

Level of Service (LOS) is a qualitative measure reflecting the traffic operation of the intersection, with LOS A representing best performance and LOS F the worst. LOS describes the traffic conditions in terms of such factors as speed, travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. **Table 3.8-2** shows the corresponding average total delay per vehicle and a description of vehicular conditions at unsignalized intersections for each LOS category from A to F. A summary of the existing traffic operations at the study intersections is shown in **Table 3.8-3**. As shown, study intersections are functioning at LOS A or better in the year 2024 for both the am and pm peak hours. A more detailed table of existing operation levels can be seen in Table 10 of **Appendix C**.

Table 3.8-2: Level of Service for Unsignalized and Signalized Intersections

Level of Service	Control Delay Per Vehicle (seconds) – Unsignalized Intersection	Control Delay Per Vehicle (seconds) – Signalized Intersection	Traffic Condition
A	<10	<10	No Delay
B	>10 and 15	>10 and 20	Short Delay
C	>15 and 25	>20 and 35	Moderate Delay
D	>25 and 35	>35 and 55	Long Delay
E	>35 and 50	>55 and 80	Very Long Delay
F	>50	>80	Volume > Capacity

Source: **Appendix C**

Table 3.8-3: Existing Traffic Operations (2023)

#	Intersection	Peak	Intersection Delay in sec/veh (LOS)
1	E White Bridge Rd/County Rd 12 and White Pines Rd SE	am	4.2 (A)
		pm	3.9 (A)
2	Hwy 52 and County Rd 12/31 Interchange east ramp	am	3.1 (A)
		pm	4.1 (A)
3	Hwy 52 and County Rd 31/12 Interchange west ramp	am	1.6 (A)
		pm	1.5 (A)
4	County Road 5/County Road 31 and Wazuweeta Road	am	4.3 (A)
		pm	4.2 (A)
5	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A
		pm	
6	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A
		pm	
7	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A
		pm	

8	White Pines Rd SE/59th Avenue NW and 520th Street	am	0.2 (A)
		pm	0.2(A)
9	520th Street and 220th Avenue	am	2.3 (A)
		pm	0.5(A)
10	Proposed Intersection along E White Bridge Rd	am	N/A
		pm	
11	E White Bridge Rd and County Road 18 NW	am	1.4 (A)
		pm	1.0 (A)
12	Proposed Intersection along E White Bridge Rd	am	N/A
		pm	
13	Proposed Intersection along E White Bridge Rd	am	N/A
		pm	
14	Proposed Intersection along Wazuweeta Road	am	N/A
		pm	
15	Vintage Road and 5th Street NW	am	1.3 (A)
		pm	1.1 (A)

Source: **Appendix C**

Existing Bicycle, Pedestrian, and Transit System

Near the southern boundary of the Project Site, E White Bridge Road has a multi-use pathway complete with Americans with Disability Act compliant curb cuts and crosswalks. The pathway spans from the US Highway 52/County Road 12 interchange and proceeds easterly along County Road 12/E White Bridge Road, terminating at the roundabout at the intersection of E White Bridge Road and White Pines Road SE.

Other than the multi-use pathway described above, there are no other pedestrian or bicycle facilities along any of the roadways located adjacent to the Project Site. There are no public transit facilities within the vicinity of the Project Site.

3.8.3 Impacts

Assessment Criteria

Impacts to the transportation system would be significant if an alternative increased traffic volumes to the point where traffic exceeds the design capacity of a roadway after implementation of feasible mitigation measures. Study intersections operating at LOS E or lower are consistent with industry standard operational design objectives.

Methodology

The TIS (**Appendix C**) was developed to assess the potential traffic impacts related to the development of the Project Site. A traffic operations analysis was completed using Synchro/SimTraffic V11 software, which included inputs including roadway geometry (i.e., number of lanes, queuing storage lengths, and link distances), posted speed limits, and traffic volumes. Trip generation was calculated using the ITE Trip Generation Manual, Edition 11. For analysis purposes the TIS used 2027 as the first full year of operation and 2047 as the year to assess cumulative impacts.

Based on this, the following near-term scenarios were modeled in the TIS (scenarios for cumulative 2047 conditions are discussed in **Section 3.14.8**):

- No-Build Scenario – Base Year (2024). Existing traffic conditions based on counts collected.
- No-Build Scenario – Year of Opening (2027). Projected traffic volumes in year 2027 based on existing traffic conditions, and assuming a 0.5-percent annual growth rate.
- Build Scenario – Year of Opening (2027). Opening Year 2027 conditions plus the addition of traffic from Alternative A.

In total, Alternative A would generate approximately 969 am peak hour vehicle trips and 1,011 PM peak hour vehicle trips. A detailed description of the methodology used for generating scenarios and assessing potential impacts, such as types of trips, can be found in **Appendix C**.

Study Intersections

Study area intersections are listed in **Section 3.8.1** and shown in Figure 1 of **Appendix C.** Study area intersections include seven new intersections that would be formed along existing roadways (59th Avenue NW, E White Bridge Road, and Wazuweeta Road) where access to the internal roadway network would be provided.

Site Access

Turn lane criteria was reviewed based on guidance documents, such as the MnDOT Facility Design Guide and Access Management Manual, to guide the identification of locations where it may be appropriate to construct dedicated turn lanes for proposed access driveways along E White Bridge Road, White Pines Rd SE/59th Avenue NW, and Wazuweeta Road.

Alternative A: Proposed Project

Construction Traffic

During construction of Alternative A, additional temporary trips would be generated on the weekdays with construction work occurring during daytime hours between 7 am and 10 pm. The worker arrival peak would generally be between 6 am and 7 am and the departure peak between 3:30 pm and 4:30 pm. These peak commute times partially coincide with local commute times. Vendor trips would be spread more evenly throughout the workday. The increase in construction worker commute trips, approximately 46 one-way vehicle trips, and vendor trips, approximately 20 one-way vehicle trips, would be small compared to existing conditions (see **Table 3.8-4**, below), and additional trips would only occur during construction. Construction vehicle trip generation details is provided in **Appendix G**

Furthermore, truck trips would occur primarily outside of the peak commute hours for the surrounding roadway network. The temporary increase in truck, worker, and vendor trips during mostly off-peak hours would constitute a minimal disruption of existing traffic and would not impact the capacity of the surrounding roadway network. Therefore, construction of Alternative A would have a less than significant impact on existing traffic in the surrounding area.

Operation Traffic

The estimated traffic generation resulting from Alternative A is provided in **Table 3.8-4**.

Table 3.8-4: Alternative A – Peak Hour Trip Generation

Peak	In	Out	Total
Weekday am	488	481	969
Weekday pm	515	496	1,011

Source: **Appendix C**

As shown in **Table 3.8-4**, Alternative A is anticipated to add a total of approximately 10,526 new weekday daily vehicle trips, 969 new weekday am peak hour vehicle trips, and 1,011 new weekday pm peak hour vehicle trips to the surrounding roadway systems. Trip origins and destinations for development-generated traffic were estimated based on the total amount of added trips by each land use type, their location, and likely destinations according to the assumptions made within trip generation. For this analysis, internal trips or pass-by trip adjustments were estimated using the different land use categories and their likely origins and destinations. Additional details about trip generation and distribution for Alternative A can be found in **Appendix C**.

Study Intersections

Anticipated opening year intersection operating conditions both with and without Alternative A are shown in **Table 3.8-5**. Detailed level of service worksheets are included in Appendix C of **Appendix C**. As shown in **Table 3.8-5**, the study intersections are currently operating at LOS A with a delay of up to 4.4 seconds per vehicle in the year 2027. With the addition of Alternative A, these intersections are anticipated to continue to operate at LOS A, with delays increasing no more than 2.1 seconds per vehicle. Therefore, impacts to intersection operations from Alternative A would be less than significant.

Site Access

Based on guidance provided by MnDOT's Access Management Manual and Olmsted County, intersections 12 and 13 (proposed access intersections along E White Bridge Rd) warrant a left-turn lane and a right-turn lane. For local roads, MnDOT's Access Management Manual guidelines indicate that an exclusive right-turn lane is generally required for a two-lane undivided highway when the projected average daily traffic (ADT) is over 1,500 vehicles, and the design speed is 45 miles per hour (mph) or higher. A left-turn lane is generally required for a two-lane undivided highway when access is to a public road, an industrial tract, or a commercial center (5-4.01.02: Policy on 2-lane Rural Highways, MnDOT Road Design Manual). Intersections 5, 6, and 7 (proposed access intersections along White Pines Rd SE/59th Avenue NW) meet the volume threshold with a speed limit of 45 mph, warranting a right-turn lane. A right-turn lane is not warranted at Intersection 14 (proposed intersection along Wazuweeta Road) due to a speed limit of 40 mph, yet it may be beneficial. Intersections 5 (proposed access intersection along White Pines Rd SE/59th Avenue NW) and 14 (proposed access intersection along Wazuweeta Rd) provide access to a commercial center; therefore, a left-turn lane may be required for both.

As described in **Section 2**, the required roadway/access improvements described above would be implemented as a part of Alternative A. No other access issues were identified (**Appendix C**). There would be a less than significant impact.

Table 3.8-5: Year of Opening (2027) Traffic Operation Results (sec/veh [LOS])

#	Intersection	Peak	No Build	Build – Alternative A
1	E White Bridge Rd/County Rd 12 and White Pines Rd SE	am	4.4 (A)	4.0 (A)
		pm	3.9 (A)	4.3 (A)
2	Hwy 52 and County Rd 12/31 Interchange east ramp	am	3.3 (A)	3.3 (A)
		pm	4.0 (A)	3.7 (A)
3	Hwy 52 and County Rd 31/12 Interchange west ramp	am	1.8 (A)	3.9 (A)
		pm	1.3 (A)	3.4 (A)
4	County Road 5/County Road 31 and Wazuweeta Road	am	4.3 (A)	4.4 (A)
		pm	4.4 (A)	4.1 (A)
5	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A	2.8 (A)
		pm		3.8 (A)
6	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A	1.1 (A)
		pm		1.3 (A)
7	Proposed Intersection along 59th Avenue NW/White Pines Rd SE	am	N/A	1.3 (A)
		pm		1.4 (A)
8	White Pines Rd SE/59th Avenue NW and 520th Street	am	0.2 (A)	1.2 (A)
		pm	0.2 (A)	1.1 (A)
9	520th Street and 220th Avenue	am	0.5 (A)	0.7 (A)
		pm	0.4 (A)	0.8 (A)
10	Proposed Intersection along E White Bridge Rd	am	N/A	0.6 (A)
		pm		0.4 (A)
11	E White Bridge Rd and County Road 18 NW	am	1.4 (A)	1.6 (A)
		pm	1.2 (A)	1.6 (A)
12	Proposed Intersection along E White Bridge Rd	am	N/A	1.7 (A)
		pm		1.8 (A)
13	Proposed Intersection along E White Bridge Rd	am	N/A	0.4 (A)
		pm		0.6 (A)
14	Proposed Intersection along Wazuweeta Road	am	N/A	2.2 (A)
		pm		1.9 (A)
15	Vintage Road and 5th Street NW	am	0.4 (A)	0.4 (A)
		pm	1.1 (A)	0.3 (A)

Source: **Appendix C**

Bicycle, Pedestrian, and Transit Networks

As noted in **Section 3.8.2**, the Project site is located adjacent to existing non-motorized multiuse pathways that currently extend along the south side of E White Bridge Road from the Hwy 52 interchange to the White Pines Road SE roundabout. Alternative A would include extensions to this existing ADA-compliant multiuse pathway north along both sides of White Pines Road SE.

Alternative A's multi-use pathways would be designed to be ADA-compliant, as well as any walkways and pedestrian ramps designed for access between the development site entrances and exits and at newly constructed intersections providing access to Alternative A's internal roadway network. Refer to Figure 1 of **Appendix C** for proposed multiuse pathway alignments. Alternative A would not generate a high number of new pedestrian trips, bicycling activity, or transit riders along surrounding roadways. Thus, no significant impacts are anticipated to these networks as a result of Alternative A.

Alternative B: No Action Alternative

Under Alternative B, the Project Site would remain in its current state, and consequently there would be no increase in vehicular traffic. There would be no change in pedestrian, bicycle, or transit circumstances.

3.9 LAND USE

3.9.1 Regulatory Setting

The land use regulatory setting is summarized in **Table 3.9-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.9-1: Regulatory Policies and Plans Related to Land Use

Regulation	Description
Federal	
Farmland Protection Policy Act	▪ Intended to minimize the impact that federal programs have on unnecessary and irreversible conversion of farmland to non-agricultural uses. ▪ Assures federal programs are administered in a manner that is compatible with state and local units of government, private programs, and policies to protect farmland.
Federal Aviation Regulation	▪ Provides requirements, standards, and processes for determining obstructions to air navigation.
State	
State Agricultural Land Preservation and Conservation Policy	▪ Provides for the protection and conservation of farmland and other open space land while conserving and enhancing the soil and water resources to ensure quality and long-term use. ▪ The policy encourages the planned growth and development of urban and rural areas to ensure effective use of agricultural land, resources, and capita.
Local	
Olmsted County General Land Use Plan	▪ Sets land use policies that define the community's vision of how, when, and where growth, redevelopment, and preservation should occur. ▪ Addresses areas of Olmsted County, both cities and unincorporated, and includes public and private land use, physical development, and land management decisions.
Pine Island Comprehensive Plan	▪ Intended to guide the growth of the community. ▪ Inventories current land uses, housing, natural resources, transportation, park lands and recreational activities, and wastewater and water infrastructure. ▪ Assesses and identifies future needs and placement of resources and infrastructure in addition to addressing historic preservation as it relates to the community.
City of Oronoco Comprehensive Plan: Future Land Use	▪ Guiding document designed to assist with planning of anticipated future growth of the City of Oronoco.

Goodhue County Comprehensive Plan	▪ Strategic document that outlines the long-term vision, goals, and policies for the County's development and land use.

3.9.2 Environmental Setting

A summary of the environmental setting pertaining to land use is below, and additional detail is provided in **Appendix E**.

Land Use and Zoning

The Project Site is located partially within the City of Pine Island and partially within an unincorporated portion of Olmsted County. Zoning designations for the Project Site and surrounding area are shown in **Figure 3.9-1**. The portions of the Project Site within Olmsted County are zoned Agricultural Protection District (A2) and are designated for agricultural use (Olmsted County, n.d.; Olmsted County, 2022a). The A2 zoning is intended to conserve and enhance agricultural lands valuable for crop production, pasture, and natural habitats, promoting long-term agricultural use and preserving prime farmland by restricting non-farm development (Olmsted County, 2023).

The portions of the Project Site within the City of Pine Island are zoned Agricultural District (AG) and designated for Agricultural use (A) (City of Pine Island, 2011). The AG zoning is intended to protect agricultural land until public utilities are extended and urban development becomes necessary, while allowing for larger lots to preserve the feasibility of future development (City of Pine Island, 2015). Approximately 60.7% (2,255 acres) of the City's total land area is used for agriculture. In addition to this designation, the Project Site is also within the Urban Growth Boundary, as designated by the City of Pine Island Comprehensive Plan (City of Pine Island, 2010). In 2008, the City prepared a conceptual "Elk Run Concept Master Plan" that included multiple types of residential uses (low-, medium-, and high-density), commercial uses including retail and office space, medical offices, mental and physical wellness centers, schools and sports complex, and various community amenities including parks, outdoor amphitheater, and equestrian center. The portion of the Elk Run Concept Master Plan that overlays the portion of the Project Site within the City limits included a mixture of residential and commercial land uses (City of Pine Island, 2008).

In addition to current land use maps, the Olmsted County General Land Use Plan and Pine Island Comprehensive Plan both have future land use maps that reflect policies, land use categories, and locational criteria that guide County and City decisions. Within these maps, the Project Site is designated Urban Service Area or Urban Growth Boundary, which indicates the area is intended to be urbanized over the next 25 to 50 years. The Pine Island Comprehensive Plan future land use map designates the Project Site as Commercial in the western portion and a mixture of Industrial, Low Density Residential, and Medium- and High-Density Residential in the eastern portion, consistent with the previously contemplated Elk Run Concept Master Plan. These different future land use designations can be seen in **Figure 3.9-2**.

Surrounding Land Use and Zoning

Surrounding land uses consist of agricultural land and rural residences to the north, east, and west, with small commercial developments and rural residences to the south.

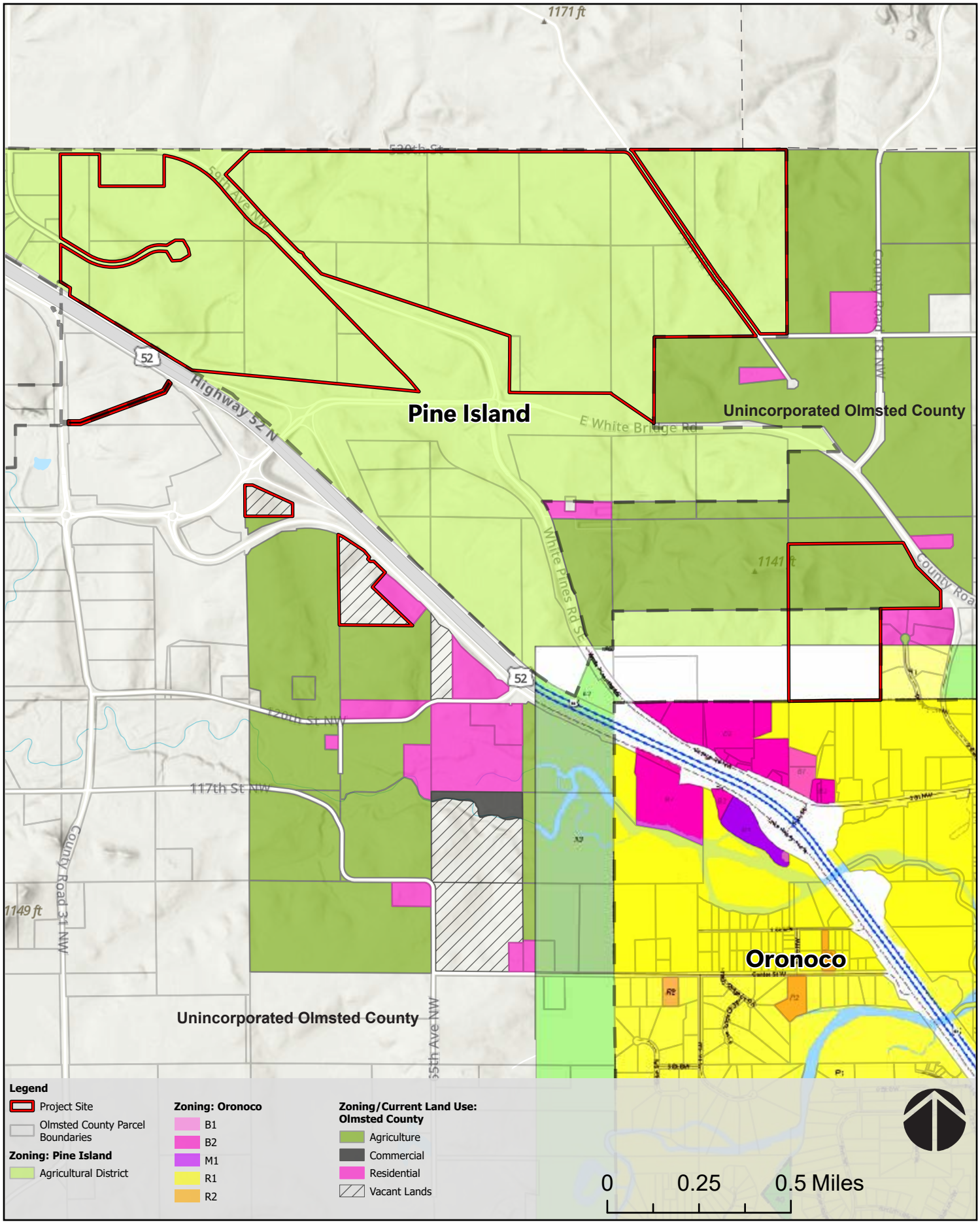
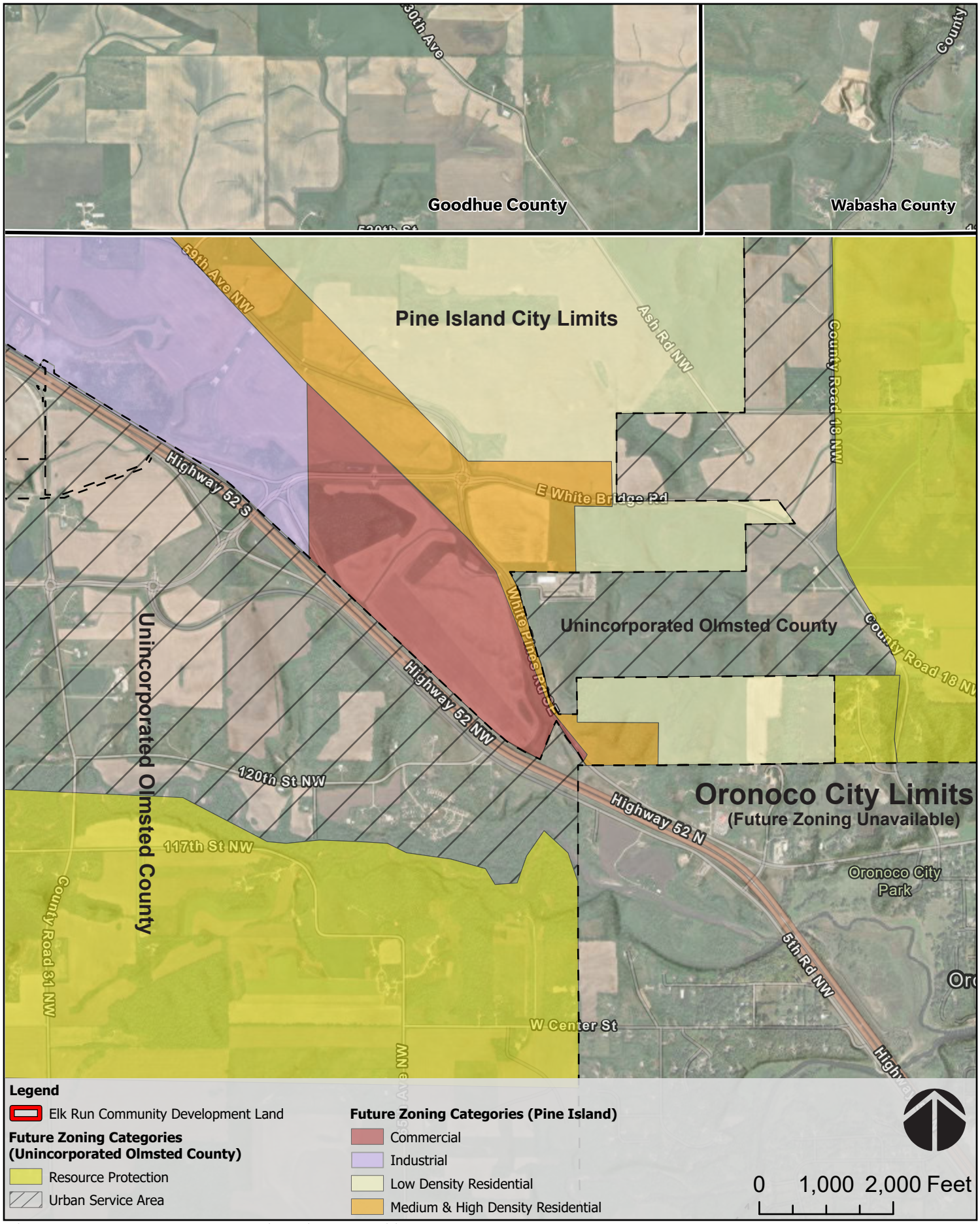


FIGURE 3.9-1
EXISTING ZONING



Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community, Maxar, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

FIGURE 3.9-2
FUTURE LAND USE DESIGNATIONS

The area south of the Project site is zoned Residential (R1) and Highway Business/Commercial (B2) by the City of Oronoco, with planned future land use designated for highway commercial and residential development (City of Oronoco, 2021; City of Oronoco, 2020). The area north of the Project Site is zoned Agricultural Protection District (A1) by Goodhue County and designated for agricultural use (Goodhue County, 2024; Goodhue County, 2016). The area adjacent to the southwestern-most parcel of the Project Site is zoned Low Density Residential District (R1) and designated for Suburban Development by Olmsted County, while the surrounding areas are zoned A2 and designated as Urban Service Areas or Resource Protection Areas (Olmsted County, n.d.). The area adjacent to the Project Site is zoned AG and designated for agricultural use by the City of Pine Island (City of Pine Island, 2011). The Tribe owns property directly adjacent to the Project Site and submitted a separate application for the Prairie Island Indian Community Emergency Gaming Facility and Fee-to-Trust Project for the development of an emergency gaming facility.

The nearest airport to the Project Site is Dodger Center Airport, approximately 17 miles southwest. The Project Site is not located within an airport plan or zoning.

Agriculture

As noted above, the portions of the Project Site within the City of Pine Island are zoned AG, while those within Olmsted County are zoned A2, with the entire site designated for agricultural use. Approximately 139 acres (18%) of the Project Site are mapped as soils that are not prime farmland, approximately 124 acres (16%) of the Project Site are considered farmland of statewide importance, while the majority of the Project Site (approximately 503 acres or 66%) is composed of prime farmland soils. Due to the characterization of some of the soils within the development area as “Prime Farmland,” consultation with the Natural Resource Conservation Service (NRCS) was conducted to determine agricultural value of the development area under the Farmland Protection Policy Act (FPPA). A Farmland Conversion Impact Rating (FCIR) form was submitted to the NRCS (**Appendix J**).

3.9.3 Impacts

Assessment Criteria

Land use impacts would be significant if the alternative is incompatible with surrounding land uses or would conflict with objectives of federal, Tribal, regional, state, and local land use plans, policies, and controls. Significant land use impacts may also occur if the alternative converts Prime Farmland or Farmland of Statewide/Local/Unique Importance to other uses, as defined by the FPPA.

Alternative A: Proposed Project

Land Use Compatibility

The Proposed Project, under Alternative A, includes the development of the Project Site for residential, commercial, and community development purposes to support the Tribe. The proposed development under Alternative A would not be consistent with the City of Pine Island’s and Olmsted County’s current underlying agricultural zoning for the Project Site. However, the proposed land uses are consistent with the long-range plans of the City and County to urbanize the area and provide for more commercial development on the Project Site, which are ongoing efforts that include public infrastructure upgrades to support future development (e.g., water utility improvements, wastewater treatment facility, highway interchange upgrades, etc.). Furthermore, Alternative A would result in the transfer of the Project Site from fee to federal trust status.

Accordingly, local land use and zoning designations would not apply to the Project Site once the land is taken into trust. Nevertheless, the proposed residential, commercial, and community development would align with the character of the future land uses contemplated by the Olmsted County General Land Use Plan and Pine Island Comprehensive Plan. Thus, development of Alternative A would not impede or interfere with the objectives of local land use plans and policies for the areas surrounding the Project Site.

Nearby sensitive receptors include three single-family homes located adjacent to the northern Project boundaries on 520th Street NW/135th St NW, one single-family home approximately 500 feet east of the Project site on E White Bridge Road, and several single-family homes located approximately 120 feet east of the Project site on Territory Lane NW. Alternative A would not physically disrupt neighboring land uses or prohibit access to neighboring parcels. While the proposed uses within the Project Site are not similar in nature to the uses immediately surrounding the site, Alternative A would be compatible and consistent with the planned commercial zoning along the Hwy 52 corridor.

Additionally, potential conflicts involving air quality and noise impacts from construction activities (**Sections 3.3** and **3.11**, respectively), an increase in traffic (**Section 3.8**), visual effects and an increase in lighting (**Section** Error! Reference source not found.), would be minor and further reduced by BMPs identified in **Table 2.1-**. There would be a less than significant impact.

The Project Site is not located within an airport land use plan or zoning, and the nearest airport is over 17 miles away. Therefore, Alternative A would not result in land use incompatibility with a nearby airport and would result in less than significant impacts associated with land use compatibility.

Agriculture

Alternative A would directly convert 412 acres of farmland and indirectly convert 189 acres of farmland across the 781-acre site into commercial, commercial/industrial, community and administrative uses, cultural facilities, multi-family and single-family residential areas, roads, utilities, and a water tower/lift station. In accordance with the FPPA, an FCIR form was completed for Alternative A and submitted to the NRCS on August 26, 2024. The form received a combined land evaluation and site assessment score of 175.4, indicating the potential for adverse effects on farmland resources and the need to consider alternative sites (**Appendix J**).

According to FPPA guidelines, if a site receives an FCIR combined score of 160 or more, alternative sites should be considered to determine if they would serve the proposed purpose while having a lower score or converting fewer acres of farmland (FPPA, 1994). Although Alternative A exceeds the 160-point threshold, the consideration of alternative sites is not feasible. The Project Site was selected because it falls within the Tribe's ancestral land base, is already owned by the Tribe in fee, and is safe and developable without flood risks or FEMA EPZ concerns, as compared to the Tribe's current reservation. Requiring the Tribe to pursue alternative sites would impose unnecessary financial and logistical burdens. Therefore, Alternative A is consistent with the FPPA based on the consideration of alternative sites and remains the most feasible option for the Tribe.

Alternative A is intended to serve as a master development plan for the Tribe that will guide development of specific land uses over the next 10 - 20 years, allowing for continued agricultural operations until full buildout is complete. Furthermore, under Alternative A, 56.25 acres of the Project Site would continue to be utilized for agricultural purposes, maintaining or even exceeding the existing agricultural use on these acres due to the development of new facilities to support farming activities.

Additionally, 80.46 acres would be dedicated to buffalo pastureland to support the Tribe's buffalo herd and 192.35 acres would be preserved as open space. This approach mitigates farmland loss by ensuring the land supports both ecological and cultural values, reflecting a commitment to responsible land management that balances agricultural, cultural, environmental, and community benefits while accommodating necessary development.

The City of Pine Island Comprehensive Plan and the Olmsted County GLUP have no specific policies against the conversion of farmland. While the City of Pine Island's AG zoning protects agricultural land in the short term, it is intended to support future urban development when utilities are extended and development becomes necessary. The development and operation of Alternative A would not affect agricultural uses on adjacent parcels. However, under Alternative A, city and county land use regulations would no longer apply to the Project Site once the land is taken into trust. Therefore, the conversion of farmland within the Project Site would have a less than significant impact on agricultural resources.

Alternative B: No Action

Under Alternative B, the Project Site would remain under County jurisdiction and no development would occur. Therefore, land use consistency or compatibility impacts would not occur under this alternative.

3.10 PUBLIC SERVICES AND UTILITIES

3.10.1 Regulatory Setting

The public services regulatory setting is summarized in **Table 3.10-1**, and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.10-1: Regulatory Policies and Plans Related to Public Services and Utilities

Regulation	Description
Federal	
Safe Drinking Water Act	▪ Establishes protective drinking water standards for protection of public health.
Clean Water Act	▪ Establishes environmental discharge requirements for wastewater treatment.
Public Law 280	▪ Changed criminal jurisdiction from the federal government to certain states, including Minnesota, for offenses involving tribal members in Indian Country.
State	
Minnesota Public Utilities Commission	▪ Mission is to create and maintain a regulatory environment that ensures safe, reliable, and efficient utility services at fair and reasonable rates. ▪ Regulates three cornerstone service industries in the state: electricity, natural gas, and telephone.
Local	
Pine Island Comprehensive Plan	▪ Intended to guide the growth of the community. ▪ Inventories current land uses, housing, natural resources, transportation, park lands and recreational activities, and wastewater and water infrastructure. ▪ Assesses and identifies for the future needs and placement of these resources and infrastructure.

3.10.2 Environmental Setting

A summary of the environmental setting pertaining to public services is below, and additional detail is provided in **Appendix E**.

Water Supply

The City of Pine Island draws its water from the Prairie du Chien-Jordan Aquifer and Jordan Aquifer through two municipal wells, with depths ranging from 452 to 555 feet. These wells are part of the City's water supply infrastructure, which also includes two elevated water storage tanks and transmission mains (existing water supply infrastructure in the vicinity of the Project Site can be seen in Figure 4 of **Appendix B**). The City has a total capacity of 0.70 million gallons per day (MGD), with the average daily water usage being 0.30 MGD. Demand on the City's water supply is projected to increase by 5% per year, gradually reducing available capacity. As a result, the City anticipates needing additional water supply capacity within the next 5 to 10 years, although no plans are currently in place for increasing capacity. (**Appendix B**). The environmental setting for groundwater supply and quality is addressed in **Section 3.3**.

Wastewater Service

The City of Pine Island operates a wastewater treatment facility (WWTF) with a capacity of 0.75 million MGD, discharging treated wastewater into the Middle Fork of the Zumbro River. Currently, the City's average daily wastewater flow typically ranges from 0.35 MGD to 0.40 MGD. The City anticipates an approximate 5% increase in wastewater demand per year over the next 10 years. To address future growth, the regional community is proposing the creation of a new North Zumbro Sanitary District to serve the several communities, including the County of Goodhue, City, City of Wanamingo, City of Zumbrota, and the Tribe. As part of this initiative, a new wastewater facility is proposed to be constructed near the City of Zumbrota. Existing wastewater facilities in the vicinity of the Project Site can be seen in Figure 4 of **Appendix B**.

Solid Waste

The nearest landfill, Kalmar Landfill, is located approximately 8.7 miles south southwest of the Project Site in the County and is approximately 160 acres in size (Olmsted County, 2022b). The landfill accepts municipal solid waste and construction and demolition debris (Olmsted County, 2023c).

Electricity, Natural Gas, and Telecommunications

As discussed in **Section 2.1**, the Project Site is primarily served by PEC, with the Goodhue County Cooperative Electrical Association (GCCEA) covering a small western portion of the Project Site (Minnesota IT Office, 2024). PEC is a member-owned cooperative serving over 19,000 members in rural Minnesota (PEC, 2024), and Goodhue County Cooperative Electrical Association has over 5,000 members, focusing on energy efficiency, safety, and community engagement (GCCEA, 2024). Xcel Energy provides electrical services to most of the City of Pine Island and areas north and east of the Project Site. Xcel Energy's service area currently ends north-northwest of the Project Site, but it plans electrical system upgrades for summer 2024, with two three-phase lines already in the Pine Island area (GCCEA, 2023). There are private companies that provide telephone, internet, and cable services to properties within the vicinity of the Project Site. Examples include BEVCOMM and T-Mobile. For the location of existing utility infrastructure in the vicinity of the Project Site, refer to Figure 4 of **Appendix B**. Electric, telephone, and cable services are already present on the Project Site.

Law Enforcement

The Project Site is located within the boundaries of both the City of Pine Island and the unincorporated County, and therefore falls within the jurisdiction of different law enforcement agencies. In addition, the Tribe maintains its own police department for law enforcement on tribal lands. Each of these law enforcement agencies is described below.

The Prairie Island Police Department (PIPD) provides police protection services to the Tribe's Reservation and the Tribe's existing Casino. PIPD officers are certified by the State and are licensed peace officers with jurisdiction to enforce state and tribal laws. In addition to the Tribe's own police force, the Tribe entered into a cooperative agreement regarding law enforcement with Goodhue County and the City of Red Wing and their law enforcement agencies on March 11, 2004.

The Tribe has also participated in the Southeast Region Counties Mutual Aid Agreement for law enforcement services. Additionally, the Tribe has entered into a prosecution agreement with the Goodhue County Attorney's Office for the Prairie Island Reservation, and the Tribe provides annual payments for the Goodhue County Attorney's Office to serve as the prosecuting agency for State citations issued by the Tribe's police officers.

As discussed in **Section 2.1,** Goodhue County Sheriff's Office provides police services for the City of Pine Island. In 2023, the City of Pine Island contracted for a total of 6,713 hours of service from the Goodhue County Sheriff's Office, an increase from previous years. In that same year, the Sheriff's Office responded to 14,042 calls for service, issued 748 citations, and made 748 arrests (Goodhue County Sheriff's Office, 2024).

The Olmsted County Sheriff's Office provides services to the unincorporated County and has 197 employees in total: 99 at the adult detention center and 98 at the law enforcement center. Of the calls for service received, traffic stop violations are the most frequent with 11,964 calls in 2023. Theft/fraud related calls for service were approximately 316 in the same year (Olmsted County Sheriff's Office, 2023).

Fire Protection and Emergency Medical

As discussed in **Section 2.1**, the Pine Island Fire Department serves the City of Pine Island and the townships of Milton, New Haven, Oronoco, Pine Island, and Roscoe with fire protection and emergency services. The department responds to approximately 440 calls annually (Pine Island Fire Department, 2023). The Pine Island Fire Department only has one fire station, and this fire station is approximately 2.9 miles northwest of the Project Site. The nearest fire station to the Project Site is the Oronoco Fire Station, approximately 0.7 miles southeast.

Unincorporated Olmsted County is serviced by several fire departments in the County, but the unincorporated portion of the Project Site would likely be serviced by the Pine Island Fire Department, which protects over 10,000 residents across a nearly 131 square mile area including the City of Pine Island and the township of Oronoco (Pine Island Fire Department, 2023). The nearest hospital center to the Project Site is Mayo Clinic Hospital, Saint Mary's Campus, approximately 11 miles south of the Project Site. This hospital provides a range of services, including cardiac treatment, psychiatry and psychology treatment, neurosurgery, rehabilitation unit, and emergency department that includes a Level 1 Trauma Center (Mayo Clinic, 2019).

Public Schools

The Project Site is situated within the Pine Island Public School District, which encompasses four educational institutions. As of 2024, these schools collectively serve a student population of approximately 1,493. The district employs about 85 teachers, maintaining a student-to-teacher ratio of roughly 18 to 1. The closest educational facility to the Project Site is Pine Island Elementary School, located approximately 1.1 miles west of the site (Public School Review, 2024).

Parks and Recreation

Public parkland and open space in Olmsted County spans over 12,000 acres and include County regional parks, trails, and dedicated open spaces. The closest park area to the Project Site is Oronoco Park, approximately 0.4 miles southeast of the Project Site.

3.10.3 Impacts

Assessment Criteria

An adverse effect would occur if project-related demands on public services would cause an exceedance of system capacities that results in significant effects to the physical environment.

Alternative A: Proposed Project

Water Supply

As described in **Section 1.5.1**, an intergovernmental agreement (IGA) was signed on November 29, 2023, between the Tribe and the City to facilitate a partnership for water and wastewater services, exemplifying the City's willingness to service Alternative A (**Appendix A**). Therein, the City stated that it has the capacity to supply 70,000 gallons per day (gpd) of residential water and 40,000 gpd of nonresidential water for short term (0-6 years, from 2024 to 2029), totaling 110,000 gpd. This supply is expected to accommodate near-term developments; however, based on the City's limited capacity and projected 5% annual increase in demand, the long-term water needs for Alternative A would exceed the City's current supply capabilities. Alternative A is expected to require an average of 138,372 gpd daily, and the maximum daily water demand, which could reach 276,746 gpd, would further exceed the City's current capacity. Additionally, the City does not have any defined water supply projects or plans to increase its capacity at this time. Therefore, the Tribe plans to utilize on-site wells and a water treatment facility to supply all of the needs of Alternative A, or in combination with connection to the City of Pine Island water supply system should available capacity be available. As stated in the existing IGA (**Appendix A**), as a condition of water service, the City and the Tribe would cooperatively discuss the public and private infrastructure needed to serve the Tribe's development plans and would amend or otherwise supplement the IGA as mutually agreed. This would reduce the potential impact to City water supply infrastructure to less than significant. For the potential impacts of on-site facilities on water supply and quality, refer to **Section 3.3**.

Wastewater

As described in the IGA (**Appendix A**), the City has the capacity to treat 70,000 gpd of residential wastewater and 40,000 gpd of non-residential wastewater. However, this capacity is only sufficient for the short-term (0-6 years, 2024-2029) and cannot accommodate full buildout of Alternative A, which is estimated to generate an average of 124,535 gpd of wastewater, with a peak flow of 249,070 gpd. As such, the City's existing treatment capacity will be exceeded, necessitating additional infrastructure upgrades or connections to new facilities.

In the long term, Alternative A could be served by the proposed North Zumbro Sanitary District wastewater treatment facility, which would cater to multiple communities, including the Tribe. This option would require constructing a conveyance system to transport wastewater from the Project Site to the new facility. For the potential indirect impacts resulting from off-site utility improvements, refer to **Section 3.15**. Because the feasibility of connecting to either the City of Pine Island or North Zumbro Sanitary District is uncertain, the Tribe may utilize on-site wastewater treatment and disposal systems to meet the needs of Alternative A, or in combination with connection to a municipal sewer and wastewater treatment system should available capacity be available. As stated in the existing IGA (**Appendix A**), as a condition of infrastructure connections, the City and the Tribe would cooperatively discuss the improvements needed to serve the Tribe's development plans and would amend or otherwise supplement the IGA as mutually agreed. Similarly, the North Zumbro Sanitary District would require connection fees and service fees as a condition of the provision of wastewater service to the Tribes lands as it would with any other residential or commercial development. This would reduce the potential impact to municipal wastewater infrastructure systems to less than significant. For the potential impacts of on-site wastewater treatment and disposal facilities on water quality, refer to **Section 3.3**.

Solid Waste Service

Construction

Solid waste from construction may include vegetation removal, paper, wood, glass, aluminum, and plastics from packing materials; waste lumber; insulation; empty non-hazardous chemical containers; concrete; metal, including steel from welding/cutting operations; and electrical wiring. These solid waste materials are typical of construction sites. Kalmar Landfill is permitted to accept waste from construction, and therefore the solid waste could be deposited there for processing. Solid waste generated from the construction of Alternative A would be temporary, and therefore would not impact Kalmar Landfill's long-term capacity to serve its current customers.

Operation

To estimate the initial increase (first phase of development) in solid waste due to Alternative A and the total increase in waste at full buildout in potentially 20 years, projections were made for each proposed land use, as shown in **Table 3.10-2**. At full buildout, Alternative A is expected to generate up to 3,525 pounds per day (1.8 tons) or 3,525 tons per year of solid waste. During the initial development phase, the waste stream is projected to be approximately 10% of the total, equating to 353 pounds per day (0.2 tons) or 64 tons per year. This initial increase in solid waste is not anticipated to exceed the capacity of the Kalmar Landfill facility. Given the phased nature of Alternative A's development over the potential 20-year period, the increase in solid waste would be gradual, minimizing any significant impact on landfill capacity. Additionally, a best management practice (BMP) has been incorporated into Alternative A to reduce the waste stream (see **Table 2.1-3**). As a result, this impact is considered less than significant.

If an on-site WWTP is implemented, then the on-site wastewater treatment plant would produce Class B or better biosolids that would require disposal. After thickening and drying, approximately 243 lb.[2] of biosolids would be produced that would require disposal. Class B or higher biosolids are permitted to be disposed of at landfills without restrictions.

[2] Assumed 1.95 lb of dried biosolids produced for every 1,000 gallons of wastewater (National Academies of Sciences, Engineering, and Medicine, 1996)

The quantity of biosolids requiring disposal would be a minimal contribution to the existing solid waste stream at Kalmar Landfill. Therefore, operation of Alternative A would not result in a significant adverse effect to solid waste services.

Table 3.10-2: Solid Waste Generation from Alternative A

Waste Generation Source	Waste Generation Rate	Units	Alternative A Values	Alternative A Waste Generation (lb/day)*
Single Family Residential	10	lb/dwelling unit /day	154	1540
Multi-Family Residential	5.31	lb/unit/day	70	372
Assisted Living Facility	5	lb/dwelling unit /day	30	150
Public Safety Facility	0.007	lb/sq ft /day	15,000	105
Public Works/Maintenance Facility	1.4	lb/100 sq ft/da	10,000	140
Administration Building	0.006	lb/sq ft/day	22,000	132
Community Center/Wellness Center	0.007	lb/sf/day	40,000	280
Health Clinic/Health Care Facility	0.007	lb/sf/day	5,000	35
Education Center/Library	0.007	lb/sf/day	10,000	70
Buffalo Maintenance Facility[1]	-	-	-	-
Water Tower and Lift Station[2]	-	-	-	-
Convenience/Fast Food/Drive Thru	0.9	lb/100 sf/day	5,000	45
Grocery Store/Co-op	0.006	lb/sf/day	15,000	90
Cemetery	-	-	-	
Cultural Center/Wacipi	0.007	lb/sf/day	7,000	49
Ceremonial House/Bark Lodge	0.007	lb/sf/day	1,000	7
Commercial/Industrial[3]	0.006	lb/1000 sq ft/day	850,073[3]	510
Natural Areas/Parks and Recreation[2]	-	-	-	-
Agriculture/Crop Land[1]	-	-	-	-
			Full Buildout Total	3,525 (1.8 tons)
			Initial Buildout Total	353 (0.2 tons)
			Full Buildout Tons per Year	643
			Initial Buildout Tons per Year	64

Source: CalRecycle, 2019

[1] This land use is expected to mainly generate organic waste that will be recycled on-site with minimal solid waste that will require disposal at a landfill.

[2] This land use is expected to generate minimal solid waste and was therefore excluded from the solid waste estimate for Alternative A.

[3] For the purposes of assessing potential impacts, it was assumed 30% of the remaining commercial/industrial land use, approximately 65.05 acres after development of the grocery store/co-op and convenience/fast food/drive thru, would be developed.

Electricity, Natural Gas, and Telecommunications

As discussed in **Section 2.1**, buildings would meet or exceed the standards set forth in the IBC. Prior to construction of Alternative A, the State Utility Notification Center would be contacted to notify utility service providers of excavation activities to avoid impacts to existing utilities (**Table 2.1-3**). There would be a less than significant impact.

The Project Site and development area are within the service area of PEC, and the existing facilities on the site are served by PEC. There is existing electrical infrastructure in the vicinity of the Project Site that could be extended to the Project Site to provide additional capacity. The Tribe would coordinate with PEC or other local electric provider regarding any necessary improvements to the electrical infrastructure to serve the needs of Alternative A. The Tribe would pay the cost associated with increasing the electrical capacities to the Project Site per provider specifications. Any construction requirements, such as trenching and laying service lines, would result in minor temporary impacts and bare earth would be re-seeded. There would be a less than significant impact.

While no natural gas is available in the immediate area, the Tribe is committed to utilizing electrical appliances in lieu of natural gas or propane to the extent feasible, and any gas needs would be met by trucking propane to the Project Site, similar to the other developments in the area. Therefore, no effects would occur related to natural gas infrastructure.

Local telecommunication utility companies of the Tribe's choosing would extend additional connections from adjacent infrastructure to provide telecommunication services. The Tribe would pay the cost associated with increasing these services to the Project Site per the telecommunication company's specifications. Construction requirements, such as trenching and laying service lines, would result in minor temporary impacts and bare earth would be re-seeded. There would be a less than significant impact.

Law Enforcement

For an analysis of fiscal impacts to public safety and law enforcement, please refer to **Section 3.7.3**.

Fire Protection and Emergency Medical Services

Construction

During construction of Alternative A, construction vehicles and equipment, such as welders, torches, and grinders, may accidentally spark and ignite vegetation or building materials. The increased risks of fire during construction would be similar to that found at other construction sites and would not be considered abnormal. Any incidents that would occur on the Project Site would be responded to by Pine Island Fire Department. To further reduce the probability of fire risk and need for services from Pine Island Fire Department, construction-related BMPs in **Table 2.1-3** are provided to further minimize potential adverse effects related to fire risks. Thus, potentially adverse impacts to Pine Island Fire Department during construction would be less than significant.

Operation

For an analysis of fiscal impacts to fire protection and emergency medical services, please refer to **Section 3.7.3**.

Public Schools

The estimated increase in school enrollment from residential land uses under Alternative is approximately 42 school-aged children[3].

[3] This estimate is based on 2020 U.S. Census for the County of Olmsted and the 254 housing units proposed under Alternative A. Based on the 254 housing units proposed under Alterative A and an average household size of 2.42

This estimate assumes that all new residential units built under Alternative A are occupied by families moving into the area and not relocated from elsewhere within the Pine Island Public School District.

As discussed in **Section 3.9.2**, the City initially planned for a much larger development on the Project Site, with the Elk Run Concept Master Plan envisioning a variety of residential, commercial, and community amenities. In contrast, Alternative A represents a smaller-scale development that will be implemented gradually over a span of 10 to 20 years, with most new residents expected to move in within the first 10 years. Given this phased development and the smaller scale of Alternative A compared to the original plan and the fact that the estimated 42 school-aged children would be added over potentially 10 years, the increase in school-aged children to the Pine Island Public School District would be gradual and allow the district to adjust and absorb the new students over time. Therefore, this small increase over time means the district should be able to accommodate the new students without surpassing its highest capacity. Furthermore, if Alternative A were to attract new families to the area, the school district would likely benefit from additional tax revenue, which could be used to hire more teachers or expand resources as needed. The overall increase in enrollment is expected to have a minimal impact on the district's ability to maintain current educational services, and therefore Alternative A would have a less than significant impact on schools.

Parks and Recreation

Based on an average household size of 2.42 persons, residential uses proposed under Alternative A could increase the City population by an estimated 614 persons, which represents an approximately 16.3% increase in the population when compared to the 2020 population of 3,769 (see **Table 3.7-3**). This conservatively assumes that all new residents relocating to the Project site will be new residents moving to the City. Although park visitation is expected to rise, the impact is expected to be moderated by the introduction of additional natural areas under Alternative A. These new nature areas will provide more opportunities for leisure and recreation, helping to absorb the increased demand without overwhelming existing facilities. Furthermore, the other land uses proposed under Alternative A are unlikely to significantly increase park visitation or the use of recreational facilities. Thus, the overall impact on local parks and recreational facilities from Alternative A is expected to be less than significant.

Alternative B: No Action

No development would occur under Alternative B, and the Project Site would remain in its current state. Consequently, no impacts to public service or utilities would occur under Alternative B.

(**Table 3.7-3**), population increase is expected to be approximately 615 people. Using the County average for households with children of approximately 30% (U.S. Census, 2020b), this means approximately 76 households under Alternative A could have children. Of these households, approximately 54.9% (U.S. Census, 2020b) of them could have children between the ages of 6 and 17, resulting in an estimated 42 school-aged children from the approximately 615 population increase due to Alternative A.

3.11 NOISE

3.11.1 Regulatory Setting

The noise regulatory setting is summarized in **Table 3.11-1**, and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.11-1: Regulatory Policies and Plans Related to Noise

Regulation	Description
Federal	
Federal Highway Administration (FHWA) Noise Abatement Criteria	▪ Thresholds during operation for park and residential areas are 67 dBA Leq. ▪ Thresholds during operation for developed areas are 72 dBA Leq.
Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual	▪ Peak particle velocity (PPV) is the maximum instantaneous peak (inches per second) of the vibration signal. ▪ Vibration damage criteria for structures is 0.5 PPV and 0.1 PPV for annoyance.
State	
Minnesota Pollution Control Agency Guide to Noise Control	▪ Establishes maximum noise levels permissible in identified environments and provides use standards relating to the reception of noise within such environments. ▪ The Project Site is currently within Noise Area Classification (NAC) 3 for agriculture L10 = 80 dBA and L50 = 75 dBA during the daytime and L10 = 80 dBA and L50 = 75 dBA during the nighttime.

3.11.2 Environmental Setting

The fundamentals of sounds, effects of noise on people, and characteristics of vibrations are discussed in **Appendix E**. The dominant noise source in the vicinity of the Project Site is traffic along Hwy 52 and local roadways, including Ash Roadway NW, 59th Avenue NW, White Pines Road SE, and E White Bridge Road. Currently, noise sources on the Project Site are associated with ongoing agricultural activities and equipment. The estimated ambient noise level (assumed to be primarily due to traffic noise) in the vicinity of the Project Site ranges from 45.0 dBA to 60.0 dBA equivalent continuous sound pressure level (L_{eq})[4] over a 24-hour period (U.S. Department of Transportation, 2024).

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of the criteria pollutant, whether it is emissions or noise, in the atmosphere.

[4] A common statistical tool is the average, or equivalent, sound level, identified as "L_{eq}", which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour).

Nearby sensitive receptors to the Project Site include three single-family homes located adjacent to the northern site boundaries on 520th Street NW, one single-family home approximately 500 feet east of the Project Site on E White Bridge Road, and several single-family homes located approximately 120 feet east of the Project Site on Territory Lane NW.

3.11.3 Impacts

Assessment Criteria

The assessment of noise effects is based on federal Noise Abatement Criteria (NAC) standards used by the FHWA and on FTA thresholds for perceptible vibration. Specifically, adverse noise and vibration effects are identified at existing sensitive receptor locations if the following were to occur as a result of development:

- Project construction noise levels exceed the FHWA guide estimated noise thresholds for significance for noise-sensitive locations: 7 am to 6 pm = 90 dBA L_{max}; 10 pm to 7 am = 80 dBA L_{max}[5].
- Project construction vibration levels exceed 65 vibration decibels (VdB) (FTA threshold of perception).
- The 23 CFR 772 NAC provides an operational noise threshold of 67 dBA, L_{eq} for traffic-induced noise for residential land uses.

Additionally, the State noise standards set forth in the Minnesota Rules Ch. 7030.0040 were also considered (see Table 9 in **Appendix E**). Under these rules, residential land uses are under noise area classification 1 (NAC 1) and have the following limits:

L10 = 65 dBA and L50 = 60 dBA during the daytime (7 am – 10 pm)
L10 = 55 dBA and L50 = 50 dBA during the nighttime (10 pm – 7 am)

Alternative A: Proposed Project

Construction Noise

Construction noise within the Project Site would result from construction equipment, construction activities, and vehicle traffic, which consists of trucks hauling materials and workers entering and exiting the Project Site. Construction would result in temporary periods of elevated noise levels, typically generating maximum noise levels up to 92 dBA at a distance of 50 feet, as indicated in **Table 3.11-2**.

The noise level at the Project Site would vary depending on the particular type, number, and duration of use of the various pieces of construction equipment. Noise from stationary sources, such as construction equipment, attenuates (lessens) at rate of 6 - 9 dBA per doubling of distance from the source, depending on environmental conditions (e.g., atmospheric conditions, noise barriers). An attenuation factor of 6 dBA per doubling of distance is appropriate for the Project Site given the relatively flat topography between the Project Site and the nearest sensitive receptors.

[5] L_{max} is a measurement of the highest sound level, or maximum sound level, during a single noise event.

Table 3.11-2: Construction Equipment Noise Levels

Construction Equipment	Typical Maximum Noise Levels (dBA) at 50 feet
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Saw	90
Excavator	81
Generator Set	82
Grader	85
Paver	85
Truck	84
Dozer	85
Roller	85
Scraper	85
Tractors/Loaders	80
Welders	74

Sources: FTA, 2018; FHWA, 2006

If the loudest piece of equipment is being utilized, noise levels could be up to 90 dBA L_{max} at the sensitive receptor nearest to construction occurring at the very northern portion of the Project Site. Noise levels would likely decrease to below 90 L_{max} at the actual residential structure and therefore would be below the level of the FHWA estimated threshold for significance during daytime hours, 90 dBA L_{max}. Thus, the construction of Alternative A is unlikely to have a significant impact on these sensitive receptors while construction is occurring at the Project Site. Furthermore, construction noise BMPs identified in **Table 2.1-3** would further reduce the potential for noise during construction activities and limit construction to daytime hours to reduce the potential for sleep disturbance.

For State thresholds, residences are classified as sensitive receptors under NAC 1, with daytime limits of 65 dBA L10 and 60 dBA L50, per Minnesota Rules Chapter 7030.0040 and the Minnesota Pollution Control Agency's Noise Control Guide. Current ambient noise at the nearest sensitive receptor could reach approximately 60 dBA at loudest. With the loudest piece of construction equipment operating, 90 dBA, this could increase the ambient noise level to 90 dBA while operating. If in operation for 6 minutes or longer every hour, it could exceed the NAC 1 threshold for 65 dBA L10. However, heavy construction equipment would be utilized at different times, and construction would be temporary in nature and not a permanent contributor to the ambient noise environment. Furthermore, BMPs in **Table 2.1-3** and mitigation measures in **Section 4** would reduce the potential significant noise impacts to less than significant levels.

Because of the short-term and temporary nature of construction noise and the implementation of the BMPs and mitigation measures to reduce construction noise levels to the extent feasible, effects associated with noise due to construction would not be significant.

Construction Vibration

The vibration levels of typical construction equipment at a distance of 25 feet from the equipment are shown in **Table 3.11-3**. Excessive vibration is usually only an issue when construction equipment with high vibration potential occurs within 25 to 100 feet of a structure. For short time periods, construction activity could occur within 100 feet of the nearest residential structure. Therefore, vibration associated with on-site construction under Alternative A could have a temporary potentially significant impact on nearby sensitive receptors. Mitigation has been included in **Section 4**, such as restricting vibrational equipment near affected sensitive receptors, to reduce this potential impact. With incorporation of mitigation, this impact is less than significant.

Table 3.11-2: Vibration Levels for Construction Equipment

Vibration Source	Approximate Vibration Level (VdB) at 25 ft
Vibratory Roller	94
Large Bulldozers	87
Loaded Trucks	86
Jackhammer	79

Source: Federal Transit Administration, 2018

Operation Noise

During operation of Alternative A, increased traffic would be the largest contributor of new noise to the existing environment. The roadways with sensitive receptors that could experience noticeable increases in traffic from the operation of Alternative A would be 59th Avenue NW and Wazuweeta Rd. There are several sensitive rural residential receptors located along 59th Avenue NW/520th St NW within 0.2 miles of the intersection of 220th Ave. The sensitive receptor located near Wazuweeta Rd. is within 0.2 miles of the intersection of 120th Street NW/Wazuweeta Rd.

Based on information contained in **Appendix C**, it is highly improbably that the sensitive receptor near Wazuweeta Rd. would experience a noticeable difference in the ambient noise environment. This is because the majority of traffic would occur along the Wazuweeta Rd segment between the intersections at County Road 31 and the Proposed Intersection (see Figure 1 in **Appendix C**). Since the sensitive receptor is located south of this roadway segment, it would not experience a significant enough increase in traffic to create a noticeable difference in the ambient noise environment. For the sensitive receptors located near the intersection of 59th Avenue NW/520th St NW, traffic volumes along 59th Avenue NW/520th St NW do have the potential to increase to a noticeable level. For example, for the highest increase, westbound vehicles passing through the 59th Avenue NW/520th St NW intersection during the AM peak hour could increase by up to 56 vehicles from 24 for a total of 80 vehicle trips. Although this represents more than a doubling of traffic on 59th Avenue NW/520th St NW, potentially increasing ambient noise by 5.2 dBA during the AM peak hour from the current 45 dBA, the overall traffic increase remains small. Noise levels would still be below the 67 dBA NAC threshold for significance. Therefore, this impact is less than significant.

Operational noise generated by the proposed residential development and cultural center would be consistent with typical residential neighborhood and community center noise. The primary noise sources include vehicle related sounds (e.g. engine ignition), lawn mowers and other yard maintenance activities, children playing, and occasional large gatherings. These noise sources would not significantly add to the existing noise environment.

Therefore, residential and cultural center activities do not have the potential to significantly increase noise levels in the vicinity of the Project Site or expose off-site sensitive receptors to adverse noise levels. Noise impacts from operation of the residential development and cultural center would be less than significant.

Commercial and industrial noises sources would primarily be from delivery vehicles; cars; heating, ventilation, and air conditioning (HVAC) systems; and parking lot noise. Of these, idling trucks with trailers at loading docks have the potential to generate the loudest and most noticeable noise levels of up to 100 dBA (Berger et al., 2015). While idling trucks could be significant sources of noise, idling would only occur for short periods of time (less than 5 minutes) and truck deliveries would not occur frequently but periodically during the week. With regards to Minnesota Pollution Control Agency Guide to Noise Control standards, sensitive receptors have thresholds of 65 dBA L10 and 60 dBA L50 during daytime. Since the truck idling would be limited to 5 minutes or less, it would not exceed 65 dBA L10. Furthermore, it would not run for 30 minutes in a given hour, and therefore it would also not exceed the 60 dBA L50 threshold. Finally, noise from idling trucks would not be louder than existing agricultural equipment within the Project Site. Therefore, the noise impact due to truck deliveries at the Project Site would be less than significant.

The proposed agricultural activities development under Alternative A, including cropland and buffalo husbandry, is not expected to significantly affect the ambient noise environment. The noise generated from buffalo maintenance and agricultural operations, such as equipment use and livestock care, would be within the normal expectations for such activities and similar to the noise generated by current agricultural practices in the surrounding areas in addition to on the Project Site. Therefore, the noise from buffalo-related activities and agricultural operations would blend with the existing sound environment, causing a less than significant impact.

The proposed recreational and natural use areas under Alternative A is anticipated to have minimal impact on the surrounding noise environment. Natural landscapes, including the creation of walking and biking pathways, are generally low noise activities. Given that the land currently consists of natural and wooded areas, transitioning to recreational use is unlikely to alter the ambient environmental conditions significantly. Overall, this development would not result in a noticeable increase in noise, leading to a less than significant impact on the surrounding environment.

Operation Vibration

The proposed land use would not introduce new sources of perceptible vibration. The largest generation of vibration would be from agricultural activities, but these land uses already exist within the Project Site and would not increase the current vibrations levels generated onsite. Therefore, Alternative A would not result in vibration levels at nearby sensitive receptors that would result in new exceedances of the federal noise abatement criteria; therefore, no significant adverse effects would occur.

Alternative B: No Action Alternative

Under Alternative B, the Project Site would have no further development and would not generate noise beyond existing agricultural operations. No noise impacts would occur under Alternative B.

3.12 HAZARDS AND HAZARDOUS MATERIALS

3.12.1 Regulatory Setting

The hazardous materials regulatory setting is summarized in **Table 3.12-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.12-1: Regulatory Policies and Plans Related to Hazardous Materials and Hazards

Regulation	Description
Federal	
Resource Conservation and Recovery Act	▪ Grants the USEPA the authority to manage hazardous waste throughout its life cycle, including storage, treatment, transportation, production, and disposal. ▪ Establishes a management framework for non-hazardous solid wastes. ▪ Authorizes the USEPA to respond to environmental problems related to underground hazardous substance storage tanks, including petroleum.
Federal Food, Drug, and Cosmetic Act	▪ Enables the USEPA to determine the maximum pesticide residue amount on food. Maximum limits are based on findings that the maximum limit will be reasonably safe in terms of accumulated exposure to the pesticide residue. For pesticides without a set maximum residue limit, the USEPA has the authority to seize these commodities.
Federal Insecticide, Fungicide, and Rodenticide Act	▪ Mandates that pesticides sold or distributed be licensed with the USEPA. A pesticide cannot be licensed until it is proven that the pesticide will not generally cause unreasonable adverse effects on the environment if utilized in accordance with its specifications.
Hazard Communication Standard	▪ Ensures information about chemical and toxic substance hazards in the workplace and associated protective measures are disseminated to workers exposed to hazardous chemicals, including labels, safety data sheets, and proper handling training. ▪ Chemical manufacturers and importers that produce and import chemicals are required to assess their products for hazards; safety data sheets and labels must be created with information that outlines the dangers of the products.
Hazardous Substances Act	▪ Necessitates that hazardous household products have precautionary labeling to alert consumers of hazards, proper storage, and immediate first aid steps in case of an accident. ▪ Enables the Consumer Product Safety Commission to prohibit severely dangerous products and products with hazards that cannot be labeled accordingly to Hazardous Substances Act standards.
Toxic Substance Control Act	▪ Authorizes the USEPA with the authority to require record keeping, reporting, test requirements, and restrictions associated with certain chemical substances and/or mixtures. ▪ Addresses the production, importation, use, and disposal of certain chemicals (e.g., lead paint).
Emergency Planning and Community Right-to-Know Act	▪ Requires industry to report on the use, storage, and release of hazardous substances to federal, state, and local governments. ▪ Requires Indian tribes and state and local governments to utilize this information to prepare their communities for potential risks.
National Fire Protection Association Codes and Standards	▪ Codes and Standards to minimize the possibility and effects of fire and other risks including, but not limited to: sprinkler systems, fire alarms, parking structures, emergency response, and wildland fire protection

Regulation	Description
Local	
Olmsted County Multi-Hazard Mitigation Plan	▪ Identifies and analyzes the hazards most likely to impact the County, assess the community's ability to respond to these events, and develop strategies to mitigate their impact.

3.12.2 Environmental Setting

A summary of the environmental setting pertaining to hazardous material is below, and additional detail is provided in **Appendix E**.

Hazardous Materials

Wenck Associates, Inc. completed a Phase I Environmental Site Assessment (ESA) in March 2018 that included the Project Site and other nearby properties to assess whether there were recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) in connection with these properties (**Appendix K**). The Phase I ESA was conducted in accordance with the American Society for Testing and Materials (ASTM) Standard Practice E-2247-16 and practices set forth in 40 CFR Part 312 – Standards for Conducting all Appropriate Inquiry. No RECs, CRECs or HRECs were identified on the Project Site. However, a material threat of release of petroleum products and potentially hazardous substances was identified adjacent to the Project Site within a tractor barn owned by the Tribe. The threat stemmed from the management of petroleum products and maintenance chemicals within the tractor barn, coupled with the long-time use of floor drains and the subsurface discharge from these drains. A subsequent investigation designated the identified material release as HRECs. No other issues were identified.

Aerial Photographs

Aerial photographs (**Appendix H**) provide historical context for the site's use. From 1937 to 2015, the Project Site was mainly used for agricultural cropland, with associated structures and residences. A historical farmstead that existed prior to 1937 was replaced by current structures between 1960 and 1971. Nearby areas were also agricultural, with residential development appearing between 1975 and 1980. By 2015, three commercial structures were visible to the northwest. Road infrastructure around the site expanded significantly, including the upgrade of Highway 52 into a multi-lane highway, with a new bridge and roundabouts added by 2015.

Hazards

Nuclear Power Plant

There are two nuclear power plants in the State, Monticello Nuclear Generating Plant located in Monticello and the Prairie Island Nuclear Generating Plant located outside of Red Wing, approximately 100 miles and 30 miles from the Project Site, respectively. As discussed in **Section 1.3**, the Prairie Island Nuclear Generating Plant is located adjacent to the existing Reservation and poses a potentially significant risk to the Reservation and the surrounding areas.

FEMA is responsible for overseeing preparedness by state and local authorities situated near nuclear plants. The United States Nuclear Regulatory Commission (NRC) regulations have established 10-mile emergency planning zones (EPZ) around domestic nuclear power plants.

As seen in **Figure 1.2-3**, while the existing Reservation is within the 10-mile EPZ and potential evacuation area for the plant, the Project Site and the City of Pine Island are not. The Project Site is approximately 30 miles south of the Prairie Island Nuclear Generating Plant and is therefore outside of the FEMA-designated 10-mile radius EPZ, but within the 50-mile Ingestion Planning Zone.

The Ingestion Planning Zone refers to an additional area of concern where protective actions may be necessary associated with contamination of water supplies, food crops and livestock above FDA guidelines, and ground contamination above USEPA guidelines (Minnesota Department of Public Safety, 2018). While there is a multi-hazard mitigation plan in Olmsted County (County), this does not directly address any risks from the Prairie Island Nuclear Generating Plant. Furthermore, there are no evacuation or planning documents addressing nuclear emergency preparedness in the County.

Wildfire

Wildfire is considered low risk within Olmsted County because their occurrence is uncommon. Furthermore, different jurisdictions in the County do not vary in their vulnerability to wildfires and increased development has not changed this vulnerability in recent years (Olmsted County, 2017).

3.12.3 Impacts

Assessment Criteria

A project would be considered to have significant hazardous material impacts if the site had existing hazardous materials that would require remediation or mitigation prior to development. Additionally, if development results in the use, handling, or generation of a controlled hazardous material of which the regulated amount would increase the potential risk of exposure that could result in the reduction in quality or loss of life, then there may be a significant impact. Impacts associated with a nuclear power plant would occur should a radioactive release into the environment occur. A project would be considered to have a significant impact if it were to increase the probability of a radioactive release occurring at a power plant or increase the risk of the public or environment being exposed to a radioactive release from a nuclear power plant.

A project would be considered to have a significant impact associated with wildfire if it were to increase wildfire risk on-site or in the surrounding area. This includes, but is not limited to, increasing fuel loads, exacerbating the steepness of the local topography, introducing uses that would increase the chance of igniting fires, reducing fire barriers, inhibiting local emergency response to or evacuation routes from wildfires, building in a high-risk fire zone without project design measure to reduce inherent wildfire risk, and conflicting with a local wildfire management plan.

Alternative A: Proposed Project

Hazardous Materials

Construction

As discussed in **Section 3.12**, no existing hazardous materials contamination associated with Project Site has been identified. However, a material threat of release of petroleum products and potentially hazardous substances was identified adjacent to the Project site within a tractor barn owned by the Tribe and classified as a HREC (**Appendix K**). In the unlikely case that construction personnel encounter contaminated soil or groundwater during earth-moving activities, BMPs listed in **Table 2.1-3** would minimize the possible hazards associated with existing contamination.

Implementation of BMPs would further reduce the potential for Alternatives A to result in significant adverse effects associated with hazardous materials.

Hazardous materials used during construction may include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, paint thinner, and other products. As with any liquid and solid, during handling and transfer from one container to another or general usage, the potential for an accidental release exists. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction employees as well as to the environment. Construction BMPs required within the NPDES General Construction Permit limit and often eliminate the impact of such accidental releases. Since contact with stormwater during construction is the primary means of transporting these contaminants offsite, appropriate BMPs for this impact are included in the construction stormwater BMPs in **Table 2.1-3**. With the implementation of these BMPs and compliance with federal laws relating to the handling of hazardous materials, no adverse effects associated with the accidental release would occur during construction. There would be a less than significant impact.

Operation

Alternative A would utilize hazardous materials in varying quantities and capacities that would depend on the project component. The U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations require documentation of potential risks associated with the handling, use, and storage of flammable and toxic substances under the Hazard Communication Standard. OSHA regulations codified in 29 CFR Part 1910 are applicable to Alternative A.

The maintenance of on-site landscaping would require the transportation, storage, and use of pesticides and fertilizers. If these pesticides were handled inappropriately, then this could pose a potential risk to on-site persons and the environment. Inappropriate handling could happen during transportation, storage, or application. However, the probability of this occurring is minute because appropriate regulations and the manufacturer's guidelines for each hazardous material would be followed. Therefore, the risk to on-site persons and the environment is not significant.

Other hazardous materials used for Alternative A would be related to operation and maintenance. These would include, but are not limited to, motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. Hazardous materials would be stored, handled, and disposed of according to federal and manufacturer's guidelines. Waste would also be produced as a result of operation, but this waste would be usual for residential, commercial, and industrial facilities. For all solid waste produced on the Project Site, manufacturer's guidelines would be followed for the storage, handling, and off-site disposal in addition to adhering to applicable federal and State regulations. Therefore, Alternative A would not result in significant adverse effects related to the waste produced or hazardous materials used. There would be a less than significant impact.

Hazards

Nuclear Power Plant

Because of the potential health and safety risks to the Reservation posed by the adjacent Prairie Island Nuclear Generating Plant and associated waste storage facilities, including the possibility of a release of radioactive material, the Tribe is seeking to establish trust land in an area that is safer and more reliable.

As discussed in **Sections 3.12** and **1.2**, the Project Site is not within the 10-mile radius Emergency Preparedness Zone of the Prairie Island Nuclear Generating Plant, and thus operation of Alternative A is not expected to increase the risk of the public or environment being exposed to a radioactive release. Operations of the Proposed Project would comply with federal guidelines and advisories with regards to operational failure at the Prairie Island Generating Plant, including any applicable requirements related to food, ground, and water contamination exceeding federal regulations within the 50-mile Ingestion Planning Zone. This would ensure that potential risks to tribal community members would be reduced should an incident occur at the plant.

Wildfire Risk

During construction, the operation of equipment could create sparks or fire that could ignite the vegetation on the Project Site, which could then create a wildfire. Examples of construction equipment that could ignite a fire and thus increase risk include power tools and acetylene torches. As discussed in **Section 3.12.2**, the County has a low potential for wildfires igniting or growing large in size given the previous history. Furthermore, the BMPs in **Table 2.1-3** would reduce the probability of igniting a fire. These BMPs include the prevention of fuel being spilled and putting spark arresters on equipment with the potential to create sparks. Therefore, the potential for fire ignition during construction is less than significant.

During operation of Alternative A, the probability of igniting a fire onsite is small, and onsite fuel loads are minimal. As discussed in **Section 2.1**, the Alternative A would be designed consistent with the IBC, which includes measures related to fire and structural safety. Furthermore, as with their existing Reservation, the Tribe would take all necessary steps to reasonably ensure the ongoing availability of sufficient and qualified fire suppression services to the Project Site after development of Alternative A. Fire protection features, such as sprinkler systems and fire-resistant materials, would be incorporated into the design of Alternative A. These measures would reduce the risk of a large structure fire commencing on or spreading off the Project Site. Therefore, impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving ignition of wildland fires during operation of Alternative A are less than significant.

Other

In addition to the hazards listed above, seismic and flooding events have the potential to occur in the vicinity of the Project Site. These potential hazards are assessed in **Section 3.2** and **Section 3.3**, respectively. As concluded in both sections, the risks associated with seismic events and flooding are less than significant.

Alternative B: No Action

Under Alternative B, the Project Site would remain in its current state. Hence, no hazardous material or fire impacts would occur under Alternative B.

3.13 VISUAL RESOURCES

3.13.1 Regulatory Setting

The visual resources regulatory setting is summarized in **Table 3.13-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.13-1: Regulatory Policies and Plans Related to Visual Resources

Regulation	Description
Federal	
Wild and Scenic Rivers Act	▪ Established a policy of preserving designated free-flowing rivers for the benefit and enjoyment of present and future generations. ▪ Encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.
National Scenic Byways Program	▪ Recognizes and protects roads with significant scenic, historic, cultural, natural, recreational, or archaeological value. ▪ Encourages local communities and states to preserve the character of these roads, support tourism, and conserve natural and cultural resources.
State	
Minnesota's Wild and Scenic Rivers Act	▪ To establish statewide standards and criteria for designating, classifying, and managing the state's Wild and Scenic Rivers, including minimum standards for land use, development, and administration. Six rivers have been designated under the Act.
Minnesota Scenic Byways	▪ Roads within the State that have been designated as having regionally outstanding scenic, natural, recreational, cultural, historic, or archaeological significance.
Local	
Olmsted County General Land Use Plan	▪ This plan provides a framework for land use decisions in the County. It indirectly includes policies and recommendations for visual resources through the preservation of natural and scenic resources.
Pine Island Comprehensive Plan	▪ This plan is intended to guide the growth of the community. It includes policies and guidelines aimed at preserving and enhancing visual resources.

3.13.2 Environmental Setting

The Project Site is currently used for agricultural and grazing purposes and is otherwise undeveloped. The Project Site is relatively flat intermixed with rolling hills and wooded areas. Elevations range from approximately 1,000 to 1,100 feet amsl. There are naturally occurring hills and areas of historic grading, specifically related to earthen water impoundments and access roads.

Areas surrounding the Project Site are agricultural with rural residences to the north, east, and west. To the south, there are small commercial developments and rural residences. The Project Site is generally viewable from adjacent roadways, including Hwy 52, White Pine Road SE, and E White Bridge Road. The scattered surrounding residences have varying visibility of the Project Site primarily due to wooded areas. No significant lighting or glare is currently emitted from the Project Site. Sources of light and glare in the vicinity are primarily from vehicular traffic on surrounding roadways. Other sources of light include lighting from buildings within the City of Pine Island and the City of Oronoco and limited commercial development to the south.

Olmsted County-designated scenic resources are not clearly defined. According to the Olmsted County GLUP, scenic/visual resources are generally grouped into natural resources, cultural resources conservation, and recreation enhancement. The GLUP did not identify any of these resources on the Project Site.

No cultural resources were identified in close proximity to the Project Site, and Oronoco Park is approximately 0.4 miles to the south. The Pine Island Comprehensive Plan designates the eastern portions of the Project Site as Neighborhood and Community Park Search Areas as part of the City's Park Dedication Ordinance.

Scenic resources defined by the State include scenic byways and riverways. The closest scenic byway to the Project Site is the Historic Bluff County National Scenic Byway that is approximately 35 miles south (Minnesota Department of Transportation, 2024). The nearest scenic river is the Mississippi River from the City of Anoka to the City of St. Claire that is approximately 81 miles northwest. No scenic resources occur within viewing distance of the Project Site (Minnesota Department of Natural Resources, 2024).

3.13.3 Impacts

Assessment Criteria

Assessing the impacts of a project on visual resources is in large part subjective by nature. Impacts related to visual resources would be considered significant if the alternative were to degrade or diminish the aesthetics of visual resources such as scenic vistas or nature areas, introduce lighting that would substantially increase the nighttime lighting in the area above of existing conditions, and/or cast a shadow on private residences or public areas for substantial portions of the day.

Alternative A: Proposed Project

Viewshed and Visual Character

There are no federal or State-designated scenic byways or resources near the Project Site. Motorists traveling along Hwy 52, White Pine Road SE, and E White Bridge Road would continue to have passing views of the Project Site that would not significantly change with implementation of Alternative A, as approximately half the Project Site would remain in agriculture or as undeveloped pastureland for buffalo or natural areas/parks and recreation. These areas would be located throughout the Project Site to enhance the visual appeal and maintain visual consistency with the overall character of the area. Consequently, while the proposed components under Alternative A would somewhat alter the surrounding viewsheds, these changes would not significantly impact the overall visual quality experienced off-site. There would be a less than significant impact.

Shadow, Lighting, and Glare

As discussed in **Section 3.13**, there are three single-family homes located adjacent to the Project Site's northern boundary on 520th Street NW, one single-family home approximately 500 feet east on E White Bridge Road, and several single-family homes approximately 120 feet east on Territory Lane NW. However, since approximately half the Project Site would remain in agriculture or as undeveloped pastureland for buffalo or natural areas/parks and recreation, there would be no significant changes to shadows on neighboring properties. Alternative A would introduce additional lighting that would be noticeable during nighttime hours, however, lighting would be relatively consistent with lighting of the surrounding area. In addition to new lighting, there would be new sources of glare that would be perceivable off-site. While these lighting and glare sources would be minor due to the small scale of proposed buildings, BMPs in **Table 2.1-3** have been incorporated into the project design to reduce the glare potential of Alternative A. There would be a less than significant impact.

Alternative B: No Action

No development would occur under Alternative B, and the Project Site would remain in its current state. Therefore, no impacts to visual resources would occur.

3.14 CUMULATIVE IMPACTS

3.14.1 Cumulative Setting

This section assesses the potential for the project alternatives to contribute to "cumulative" environmental impacts within each environmental issue area category. Cumulative impacts are defined by the CEQ as effects "on the environment which result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR Section 1508.1[g][3]). For the purposes of this analysis, the cumulative setting includes growth and development envisioned in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, Oronoco Planned Future Land Use map, and Oronoco Township Land Use Plan (City of Pine Island, 2010; City of Pine Island, 2008; Olmsted County, 2022a; City of Oronoco, 2020; City of Oronoco, 2006; and Oronoco Township, 2002). The cumulative setting also includes known development projects that are proposed, planned, and/or currently being constructed within one mile of the Project Site as shown in **Table 3.14-1**. Aside from the Prairie Island Indian Community Emergency Gaming Facility and Fee-to-Trust Project, discussed further below, these projects consist of infrastructure improvements and thus the potential for cumulative effects in combination with the project alternatives would be largely related to construction activities. Finally, the cumulative impact analysis within this EA utilizes the approximated background growth level of 2.0 percent annually as presented within the Traffic Impact Study (**Appendix C**). Cumulative impacts are discussed within each environmental issue area category below.

Table 3.14-1: Potential Future Projects within 1 mile of Project Site Considered in Cumulative Analysis

Project Name	Project Location	Project Description	Project Status	Distance from Project Site
Residential Wastewater Development	Oronoco, MN	Construction of a municipal wastewater collection and treatment system to parallel the existing water system.	Under construction	1.0 mile
Hwy 52 Improvements	HWY 52 from Oronoco to Pine Island	Planned resurfacing of the roadway with potential infrastructure improvements such as a frontage road, flood mitigation improvements, and intersection upgrades.	Planning stages	0.34 miles
PIIC Emergency Gaming Facility and Fee-to-Trust Project	Adjacent to Project Site	The potential development and operation of an emergency gaming facility should a catastrophic event force the closure of the Tribe's existing Treasure Island Resort & Casino.	Planning stages	0.1 miles
Xcel Energy Mankato-Mississippi River Transmission Project	Adjacent to Project Site	Approximately 120 miles of new and upgraded 345 kilovolt (kV) transmission lines between the existing Wilmarth Substation near Mankato and a connection point at the Mississippi River near Kellogg, Mn.	Planning stages	0.1 miles

Sources: KIMT, 2022; City of Oronoco, 2023; Oronoco Township Planning Advisory Commission, 2022; Minnesota Department of Transportation, 2023; Meier Companies, Inc., 2023; ABC6 News, 2022

Projects Immediately Adjacent to the Project Site

PIIC Emergency Gaming Facility and Fee-to-Trust Project

The Tribe owns 419.8 acres surrounding the Project Site within the boundaries of both the City of Pine Island and Olmsted County and has submitted a separate fee-to-trust application for this land. This project, referred to herein as the Prairie Island Indian Community (PIIC) Emergency Gaming Facility and Fee-to-Trust Project, consists of the potential development and operation of an emergency gaming facility should a catastrophic event force the closure of the Tribe's existing Treasure Island Resort & Casino. The PIIC Emergency Gaming Facility and Fee-to-Trust Project is forecasted to expand the population of the City of Pine Island and Olmsted County area by approximately 238 people by 2046, which represents a population growth increase in Olmsted County of 0.15% (**Appendix C**).

The PIIC Emergency Gaming Facility and Fee-to-Trust Project is located within an area previously planned for urban development under the City of Pine Island's conceptual Elk Run Concept Master Plan. This former project included multiple types of residential uses (low-, medium-, and high-density), commercial uses including retail and office space, medical offices, mental and physical wellness centers, schools and sports complex, and various community amenities including parks, outdoor amphitheater, and equestrian center (City of Pine Island, 2008). These previously planned uses are generally consistent with the project alternatives and the PIIC Emergency Gaming Facility and Fee-to-Trust Project.

Xcel Energy Mankato-Mississippi River Transmission Project

Xcel Energy is implementing the Mankato-Mississippi River Transmission Project (Xcel Transmission Project). The project includes approximately 120 miles of new and upgraded 345 kilovolt (kV) transmission lines between the existing Wilmarth Substation near Mankato and a connection point at the Mississippi River near Kellogg, MN. The project is organized into four segments that include either new or upgraded infrastructure. Segment 4, the Rochester Connector, is planned adjacent to the Project Site. Segment 4 includes the implementation of approximately 20 miles of new 161 kV transmission lines between the existing North Rochester Substation near Pine Island and an existing transmission line northeast of Rochester, which is being relocated from its existing alignment to install the new 345 kV infrastructure. Segment 4 Owners include Xcel Energy, Dairyland Power Cooperative, Rochester Public Utilities, and Southern Minnesota Municipal Power Agency. The project is anticipated to be in service in 2028. The Project Site is currently not within the service area of Xcel Energy, however, Xcel Energy provides electrical services to most of the City of Pine Island in addition to areas immediately north and east, and may be coordinated with to provide additional electrical service to the Project Site (Xcel Energy, 2023a).

3.14.2 Land Resources

Cumulative effects associated with land resources could occur as a result of future development in combination with the project alternatives, including the projects listed in **Table 3.14-1** and growth and development envisioned in the in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, the Oronoco Planned Future Land Use map, and the Oronoco Township Land Use Plan. Topographic changes, soil loss, and seismic risk may be cumulatively significant even if the developments alone would not result in significant alterations of the landscape or increase seismic risk.

Potentially cumulatively considerable impacts identified would be reduced with implementation of standard BMPs listed in **Table 2.1-3** during construction to ensure compliance with IBC standards, reduce erosion, control sediment, and treat and contain stormwater to prevent water quality degradation.

Other development projects would be required to follow applicable permitting procedures and development codes. In addition, the project alternatives and all other developments that disturb one acre or more must comply with the requirements of the NPDES Construction General Permit. Adherence to this permit would lessen the probability of significant erosion occurring regionally. The project alternatives would also develop a project-specific SWPPP with BMPs that would reduce potential contribution to impacts associated with erosion and soil loss. Therefore, implementation of the project alternatives would not contribute to significant cumulative impacts to land resources.

3.14.3 Water Resources

Cumulative effects to water resources may occur as the result of the construction of the project alternatives and future development, including the projects listed in **Table 3.14-1** and growth and development envisioned in the in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, the Oronoco Planned Future Land Use map, and the Oronoco Township Land Use Plan. Of the projects described listed in **Table 3.14-1**, the PIIC Emergency Gaming Facility and Fee-to-Trust Project is the only project that could contribute to cumulative impacts related to water supply and wastewater generation, as it is the only project that would utilize water and contribute to wastewater demand. The Highway 52 improvements and Xcel Energy Mankato-Mississippi River Transmission Project would not increase water or wastewater demand in the area. The Residential Wastewater Development project in Oronoco would not result in cumulatively considerable water/wastewater impacts because Oronoco has its own water supply and wastewater treatment facilities (Permit No. MN0071421) unrelated to those of the Project alternatives. The wastewater generated by the project alternatives would have a less than significant impact with regard to water quality due to proper treatment and disposal. Other cumulative developments would be required to adhere to local, State, and federal regulations with regard to wastewater treatment and disposal. Therefore, the project alternatives in combination with the cumulative development would not result in significant adverse cumulative effects to water quality.

Development of the project alternatives in addition to other cumulative projects could result in cumulative effects to groundwater if the total water demand of approved projects exceeds the recharge of the groundwater basin. Future demands on the groundwater basin from cumulative development would be controlled by local land use authorities. As discussed in **Section 3.9**, water demand of Alternative A would not be significant and would be much less than demand of the existing casino. Given the stable groundwater trends in the vicinity, the project alternatives contribution to cumulative impacts to groundwater would be less than significant.

Construction activities could result in erosion and sediment discharge to surface waters, potentially affecting water quality in downstream water bodies. In addition, construction equipment and materials have the potential to leak, thereby discharging oil, grease, and construction supplies into stormwater, potentially affecting both surface water and groundwater. Cumulative developments would be required to apply for the NPDES General Construction Permit and develop site-specific SWPPPs. Stormwater discharges from developed sites could increase the chance of downstream pollution and flooding, and runoff characteristics of a watershed are altered when impervious surfaces replace natural vegetation, row crops, or bare soil. Changes in runoff characteristics could increase drainage volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. However, the project alternatives include treatment and detention to limit off-site stormwater flows to pre-development levels. Therefore, implementation of the project alternatives would not contribute to significant cumulative effects to surface water and flooding.

3.14.4 Air Quality and Climate Change

Air Quality

Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If the individual emissions of a project contribute toward exceedance of the NAAQS, then the cumulative impact on air quality would be significant. In developing attainment designations for criteria pollutants, the USEPA considers the region's past, present, and future emission levels. The Project Site and vicinity is in attainment for all criteria pollutants. The main source of CAP emissions from potential future development, including the growth and development envisioned in the in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, the Oronoco Planned Future Land Use map, and the Oronoco Township Land Use Plan, is mobile sources from automobiles, the generation of which will be reduced as fuel efficiency increases. As automobiles consume less gasoline or transition away from it entirely, emissions of CAPs per mile will decrease. BMPs identified in **Table 2.1-** include installation of electric vehicle (EV) charging stations, contributing to the future reduction in mobile emission sources. Emission estimates for Alternative A in the cumulative year 2046 are provided in **Table 3.14-2**. Detailed calculations of mobile and stationary source emissions are included in **Appendix G**. The MOVES4 air quality model was used to estimate emissions in the year 2046. Increased gas mileage from trucks and vehicles in future years is accounted for in the MOVES4 air quality model. The increase in future gas mileage is attributed to improved fuel efficiency technology and stricter federal and state regulations.

Table 3.14-2: 2046 Operation Emissions of Criteria Pollutants (Tons per Year) – Alternative A

Sources	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	0.01	0.06	0.94	0.01	0.08	0.08
Mobile	6.01	2.96	61.04	0.06	1.81	0.41
Total Emissions	**6.02**	**3.02**	**61.98**	**0.07**	**1.89**	**0.49**
de minimis Level	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix G**
Notes: N/A = Not Applicable. De minimis levels are not applicable because the project area is in attainment.

Therefore, under future year conditions, emissions resulting from Alternative A are expected to be less than opening year and would continue to be below CAA *de minimis* levels. Alternative A would not contribute to NAAQS exceedances or adverse cumulative impacts on the region's air quality. Additionally, BMPs listed in **Table 2.1-3** would further reduce project-related emissions.

Climate Change

Development of Alternative A would result in GHG emissions from construction and operation. Stationary sources that directly emit GHGs include the potential combustion of natural gas in water heaters and appliances. Indirect sources include energy consumption (combustion of fuels used to produce electricity), mobile sources (trips generated by the development), solid waste, wastewater processing, and water transport. **Table 3.14-3** shows direct construction and area GHG emissions and annual indirect operation GHG emissions in metric tons (MT) of carbon dioxide equivalent (CO_2e) from the development alternatives.

The Interagency Working Group on Social Cost of Greenhouse Gases (IWG) has developed estimates of the social cost of GHGs (SC-GHG) (IWG, 2021). The SC-GHG is the monetary value of the net harm to society associated with adding an amount of that GHG to the atmosphere in a given year. In principle, SC-GHG includes the value of all climate change impacts, including, but not limited to, changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. **Table 3.14-4** presents the social cost of the GHG emissions from construction and annual operations of the development alternatives. **Table 3.14-4** also provides an estimate of the lifetime social cost of GHGs, which includes construction and 30 years of operation.

Table 3.14-3: Construction and Operational GHG Emissions – Alternative A

Direct	**GHG Emissions (MT of CO_2e/year)**
Construction Activities	641
Stationary	1,204
Indirect	**GHG Emissions (MT of CO_2e)**
Energy	2,690
Mobile	18,057
Solid Waste	666
Water/Wastewater	617
Construction GHG Emissions	**641**
Annual Operation GHG Emissions	**23,233**

Source: **Appendix G**
Notes: CO2e = carbon dioxide equivalent; MT = metric tons

Table 3.14-4: Social Cost of GHG Emissions – Alternative A

GHG/Cost per metric ton		**Tons**	**Cost**
Construction (2026-2027) CO_2e	$57	641	$36,537
Operation (2027) CO_2e	$59	23,233	$1,370,743
Operation (2046) CO_2e	$80	18,032	$1,442,585
Lifetime CO_2e		541,610	$43,314,081

Notes: Social Cost of GHG emissions based on 3 percent discount rate from IWG, 2021. 2046 costs based on linear interpolated values. Lifetime GHG emissions include construction emissions and 30 years of 2046 operational emissions. GHG emissions quantities are from **Appendix G.**

As shown in **Table 3.14-3** approximately 77 percent of the operational GHG emissions would come from indirect mobile emissions from delivery, patron, and employee vehicles. The federal government has enacted measures that would reduce GHG emissions from mobile sources. These include increasing fuel efficiency of vehicles and providing incentives for transitioning to electric vehicles.

Project-related GHG emissions would be further reduced with the implementation of BMPs provided in **Table 2.1-3**. Construction BMPs would reduce GHG emissions by requiring all diesel-powered equipment be properly maintained and minimize idling time to five minutes when construction equipment is not in use, and by using environmentally preferable materials, including recycled materials, for construction.

Operational BMPs would reduce indirect GHG emissions from electricity use, water and wastewater transport, and waste transport through the installation of EV charging stations, energy-efficient lighting, electric boilers and appliances in lieu of natural gas or propane units, and low-flow water fixtures. This approach is consistent with the CEQ Guidance, which directs agencies to quantify direct and indirect emissions of project alternatives and to consider GHG reduction measures that are reasonable and consistent with achieving the purpose and need for the proposed action.

Additionally, the implementation of project BMPs, including the provision of EV charging stations, use of energy efficient lighting, use of electric boilers and appliances in lieu of natural gas or propane units, and promoting waste reduction, is consistent with the intent of SO 3399 and state strategies to reduce GHG emissions and contribute to the global effort to reduce climate change impacts on disadvantaged communities. Therefore, the implementation of Alternative A would not result in cumulatively considerable impacts associated with GHG emissions and climate change.

Alternative A includes components that would lessen their vulnerability to the impacts from climate change. On-site heating and air conditioning will lessen the effects of increasing temperatures and frequency of extreme heat days or extreme weather conditions. The Project Site is not located in an area susceptible to sea level rise risks. While wildfire risk exists and would be exacerbated by climate change, alternatives would be designed consistent with the IBC, which includes measures related to fire and structural safety to reduce susceptibility to this risk.

3.14.5 Biological Resources

Potential future development, including the PIIC Emergency Gaming Facility Project and growth and development envisioned in the in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, the Oronoco Planned Future Land Use map, and the Oronoco Township Land Use Plan, has the potential to result in cumulative effects to biological resources from the conversion of natural habitat to urban uses. The Project Site does not contain critical habitat or essential fish habitat (EFH), therefore, the project alternatives would not contribute to cumulative impacts to these resources. Additionally, as Alternative A would avoid impacts to aquatic features, development would not contribute to cumulative impacts to wetlands/waters of the U.S. Although Alternative A could impact nesting birds protected under the MBTA and roosting bats, potential impacts would be avoided with implementation of mitigation listed in **Section 4**. The majority of roosting bat habitat would be preserved and would not be significantly impacted considering the full extent of roosting habitat across the geographical extent of special-status bats that may occur within the Project Site. Other development projects in the region (**Table 3.14-1**) would be required to implement similar mitigation measures to protect listed species. Alternative A would not result in cumulatively considerable impacts to biological resources.

3.14.6 Cultural Resources

Cumulative effects to resources typically occur when sites that contain cultural features, artifacts, or paleontological resources are disturbed by development. As these resources are destroyed or displaced, important information is lost and connections to past events, people and culture are diminished. Although Alternative A has the potential to affect previously undiscovered cultural and paleontological resources, mitigation measures in **Section 4** would eliminate these effects. Any future development projects in the area would be required to follow federal, state, and local regulations, as applicable, regarding cultural and paleontological resources and inadvertent discoveries of these resources, requiring mitigation or avoidance. Therefore, implementation of Alternative A would not contribute to cumulatively significant effects on cultural resources, historic properties, or paleontological resources.

3.14.7 Socioeconomic Conditions and Environmental Justice

As discussed in **Section 3.7**, with the exception of fiscal impacts, Alternative A is not anticipated to result in significant adverse impacts related to socioeconomic conditions or environmental justice. Development on the Project Site, when considered in combination with the adjacent Emergency Gaming Facility project, would provide a beneficial impact to the socioeconomic condition of the Tribe by generating revenue to fund various Tribal social service and government programs, residential housing, governmental facilities and cultural infrastructure. Cumulative effects would also include increased jobs, monetary benefits, and only nominal substitution effects typical of similar developments. These would be beneficial effects. Fiscal impacts associated with Alternative A are potentially significant, and mitigation provided in **Section 4** would reduce effects to less than significant levels. Alternative A, when considered in combination with other projects (**Table 3.14-1**), would not contribute to adverse cumulative impacts associated with socioeconomic conditions and environmental justice, after the incorporation of mitigation measures.

3.14.8 Transportation and Circulation

Transportation Network Operation Levels

The TIS provided in **Appendix C** includes an analysis of cumulative traffic impacts resulting from the project alternatives in combination with future growth and development. The following scenarios were evaluated:

- No-Build Scenario – 20-Year Horizon (2047). Projected traffic volumes in horizon year 2047 assuming a 0.5-percent annual growth rate from existing traffic levels.
- Build Scenario – 20-Year Cumulative Horizon (2047). 20-Year Horizon (2047) conditions plus the addition of traffic from the Proposed Project.

The intersection LOS analysis results for the scenarios listed above are provided in **Table 3.14-3**. As shown therein, under all scenarios, the study area intersections would continue to operate as LOS A. Cumulative traffic impacts would therefore be less than significant.

Table 3.143.14-3: 20-Year Horizon (2047) Operational Results (sec/veh [LOS])

#	Intersection	Peak	No Build	Build – Alternative A
1	E White Bridge Rd/County Rd 12 and White Pines Rd SE	AM	4.4 (A)	4.3 (A)
		PM	4.0 (A)	4.6 (A)
2	US Hwy 52 and County Rd 12/31 Interchange east ramp	AM	3.0 (A)	3.7 (A)
		PM	3.9 (A)	4.0 (A)
3	US Hwy 52 and County Rd 31/12 Interchange west ramp	AM	1.7 (A)	4.2 (A)
		PM	1.5 (A)	3.8 (A)
4	County Road 5/County Road 31 & Wazuweeta Road	AM	4.5 (A)	4.4 (A)
		PM	4.5 (A)	4.4 (A)
5	Proposed Intersection along 59th Avenue NW	AM	N/A	2.9 (A)
		PM		4.7 (A)
6	Proposed Intersection along 59th Avenue NW	AM	N/A	1.1 (A)
		PM		1.4 (A)

7	Proposed Intersection along 59th Avenue NW	AM	N/A	1.5 (A)
		PM		1.4 (A)
8	59th Avenue NW & 520th Street	AM	0.3 (A)	1.1 (A)
		PM	0.2 (A)	1.1 (A)
9	520th Street & 220th Avenue	AM	0.7 (A)	0.7 (A)
		PM	0.4 (A)	0.7 (A)
10	Proposed Intersection along E White Bridge Rd	AM	N/A	0.5 (A)
		PM		0.5 (A)
11	E White Bridge Rd & County Road 18 NW	AM	1.7 (A)	1.6 (A)
		PM	1.3 (A)	1.7 (A)
12	Proposed Intersection along E White Bridge Rd	AM	N/A	1.9 (A)
		PM		1.9 (A)
13	Proposed Intersection along E White Bridge Rd	AM	N/A	0.5 (A)
		PM		0.6 (A)
14	Proposed Intersection along Wazuweeta Road	AM	N/A	2.4 (A)
		PM		2.0 (A)
15	Vintage Road & 5th Street NW	AM	1.4 (A)	1.6 (A)
		PM	1.3 (A)	1.2 (A)

Bicycle, Pedestrian, and Transit Networks

Cumulative increases in transit ridership and use of bicycle and pedestrian networks are anticipated with population growth. The Proposed Project would expand upon existing multiuse pathways in the Project area as well as construct pedestrian access between the development site entrances and exits and at all newly constructed intersections providing access to the Proposed Project's internal roadway network. The project alternatives are not anticipated to create significant demands on bicycle, pedestrian and transit networks. Other cumulative projects would be required to study and mitigate impacts to bicycle, pedestrian, and nearby transit networks. Therefore, cumulative impacts would be less than significant.

3.14.9 Land Use

Potential future development, including the adjacent PIIC Emergency Gaming Facility and Fee-to-Trust Project and growth and development envisioned in the in the City of Pine Island Comprehensive Plan, Olmsted County General Land Use Plan, Oronoco Planned Future Land Use map, and the Oronoco Township Land Use Plan, has the potential to result in cumulative land use effects associated with conflicts with existing land uses and conversion of agricultural land. Generally, adherence to local planning documents is intended to prevent disorderly growth or incompatible land uses. The City of Pine Island and Olmsted County have included the Project Site and vicinity within the designated Urban Growth Area with future land uses to include low-, medium- and high-density residential as well as commercial land uses. The Project Site and the adjacent PIIC Emergency Gaming Facility and Fee-to-Trust Project site are part of a larger previously planned development area referred to as the Elk Run Concept Master Plan. The Elk Run Concept Master Plan originally envisioned the Project Site as a mixture of regional commercial/retail, neighborhood commercial, and rural residential lots ranging from a quarter of an acre to an acre in size. Development components of Alternative A are similar to those included in the Elk Run Concept Master Plan but would be smaller in scale and less intensive (City of Pine Island, 2008).

Other cumulative development projects, including the Xcel Transmission Project and Hwy 52 improvements would be subject to independent environmental review process that would consider compatibility and conflicts with existing and adjacent land uses. Additionally, while the cumulative conversion of agricultural land to urban uses as a result of future development could be significant, the project's contribution to this potential cumulative effect would be less than significant as the majority of existing agricultural land within the Project Site would remain undeveloped or would continue to be used for agricultural production. Therefore, Alternative A's contribution to cumulative impacts associated with land use would be less than significant.

3.14.10 Public Service and Utilities

Potential future development, including the PIIC Emergency Gaming Facility and Fee-to-Trust Project and growth and development envisioned in the City of Pine Island Comprehensive Plan and Olmsted County General Land Use Plan, will increase demands for public services and utilities (infrastructure projects listed in **Table 3.14-1** would not contribute to increased demands for public services and utilities and are therefore not discussed further). The expansion of public services and associated facilities to serve future growth would be funded in part through development fees and property taxes.

The Project Site and surrounding area have been planned for commercial, mixed-use, and residential development in the Elk Run Concept Master Plan, leading to expanded public services and utilities in anticipation of growth. Alternative A and the adjacent PIIC Emergency Gaming Facility and Fee-to-Trust Project are smaller in scale than the originally planned buildout, resulting in fewer impacts on public services and utilities. Additionally, an IGA between the Tribe and the City of Pine Island ensures the cooperation of providing short-term water and wastewater services to Alternative A. For long-term demands, the Tribe may supplement with on-site systems or regional facilities as needed. Thus, the potential impact on municipal water and wastewater infrastructure is expected to be less than significant.

The adjacent PIIC Emergency Gaming Facility and Fee-to-Trust Project would involve the acquisition of parcels adjacent to the Project Site in federal trust, removing the parcels from State and local property taxes. As with Alternative A, fire protection and emergency medical services would likely be provided by the Pine Island Volunteer Fire Department and local law enforcement services, such as Pine Island Police Department, Goodhue County Sheriff's Department, and Olmsted County Sheriff's Department. The PIIC Emergency Gaming Facility and Fee-to-Trust Project would also be required to mitigate any public services impacts, including negotiating a service agreement or equivalent to compensate for increased public services. Other projects listed in **Table 3.14-1** consist of small infrastructure improvement projects that would improve utilities in the region and would not introduce additional populations into the area that would increase calls for service or utility demand. Accordingly, Alternative A would not result in a significant contribution toward cumulative impacts related to public services and utilities.

3.14.11 Noise

The primary contributor to new noise during the operation of Alternative A would be increased traffic, particularly along 59th Avenue NW, where sensitive receptors may experience a minor rise in noise during peak hours, though still below NAC significance thresholds. Traffic near Wazuweeta Road is unlikely to cause noticeable noise changes due to the location of the sensitive receptor relative to the roadway. Commercial noise, such as delivery trucks, would be limited in duration and therefore not exceed local regulations. Agricultural activities, including buffalo husbandry, would blend with the existing rural environment, minimally impacting noise levels.

Additionally, cumulative projects in the area, like the PIIC Emergency Gaming Facility and Fee-to-Trust Project, would be subject to noise regulations, ensuring that the combined impact of future developments remains cumulatively less than significant.

3.14.12 Hazards and Hazardous Materials

There is the potential for impacts related to hazardous materials during construction of Alternative A in combination with other projects. As discussed above, Alternative A and other planned developments (**Table 3.14-1**) that disturb one acre or more must comply with the requirements of the NPDES Construction General Permit. Adherence to the permit requirements and development of a site-specific SWPPP with BMPs would reduce the potential for hazardous materials releases into off-site waterways. BMPs in **Table 2.1-3** would be implemented, therefore reducing potential hazardous material risks during construction to less than significant levels. Hazardous materials used during operation would be used, stored, and handled according to federal regulations and manufacturer guidelines. New development would similarly be required to adhere to appropriate and applicable regulations regarding the delivery, handling, and storage of hazardous materials, thereby reducing the risk to the public's health and welfare due to accidental exposure. Therefore, Alternative A would not contribute to significant cumulative impacts associated with hazards and hazardous materials.

3.14.13 Visual Resources

Potential future development, including the adjacent PIIC Emergency Gaming Facility and Fee-to-Trust Project, Xcel Transmission Line Project, Hwy 52 improvements, and growth and development envisioned in the City of Pine Island Comprehensive Plan and Olmsted County General Land Use Plan has the potential to change the visual landscape within the viewshed of the Project Site from the conversion of open land to urban uses, and to introduce additional sources of light and glare. It should be noted that both the PIIC Emergency Gaming Facility and Fee-to-Trust Project and Xcel Transmission Project would undergo separate NEPA review, including an assessment on visual impacts.

As discussed in **Section 3.9** and **Section 3.13**, development of Alternative A would be generally consistent with the surrounding land uses and would not introduce any development components that would impact visual resources or the overall character of the area with the incorporated design features and BMPs (**Table 2.1-3**). Additionally, while the cumulative conversion of agricultural land to urban uses as a result of future development could be significant, the project's contribution to this potential cumulative effect would be less than significant as the majority of existing agricultural land within the Project Site would remain undeveloped or would continue to be used for agricultural production. Therefore, the contribution of Alternative A to cumulative impacts to visual resources would be less than significant.

3.15 INDIRECT AND GROWTH-INDUCING EFFECTS

Under NEPA, indirect and growth-inducing effects of a Proposed Project must be analyzed (40 CFR §1508.1(g)(2)). The CEQ Regulations define indirect effects as effects that are caused by an action and are later in time or further removed in distance but are still reasonably foreseeable. Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly.

3.15.1 Indirect Effects of Off-Site Improvements

This section provides a description of the indirect effects from off-site improvements that may occur as a result of the alternatives.

Access Improvements

As shown on **Figure 2.1-1** and discussed in **Section 2**, the following access drives are proposed and may require connections and/or improvements to off-site roadways:

- Proposed Drive #5 at 59th Avenue NW
- Proposed Drive #6 at 59th Avenue NW
- Proposed Drive #7 at 59th Avenue NW
- Proposed Drive #10 at E White Bridge Road
- Proposed Drive #12 at E White Bridge Road
- Proposed Drive #13 at E White Bridge Road
- Proposed Drive #15 at Wasuweeta Road

Additionally, in accordance with MnDOT's Access Management Manual and Olmsted County guidelines, the following turn lanes are proposed (**Appendix C**):

- Proposed Intersections 5, 6, 7: Eastbound and westbound right-turn lanes are proposed (proposed access driveways along 59th Avenue NW).
- Proposed Intersections 12 and 13: Westbound right-turn lanes shall be constructed (proposed access driveways along E White Bridge Road).
- Proposed Intersections 5, 12 and 13, and 14: Eastbound left-turn lanes are proposed for intersections 5 (proposed access driveway along 59th Avenue NW), 12 and 13 (proposed access driveways along E White Bridge Road), and 14 (proposed access driveway along Wazuweeta Road).

These roadway connections and improvements may occur outside the Project Site within public rights-of-way and are therefore considered off-site improvements. Access drive connections and improvements may include grading, paving, and widening to provide sufficient access and accommodate anticipated traffic. These activities would largely impact areas shoulder areas that have been previously paved or disturbed. Therefore, indirect effects associated with off-site access/roadway improvements would be less than significant.

Utility Improvements

As discussed in **Section 2**, utilities are already present on the Project Site, however, additional capacity may be needed to accommodate the alternatives.

Potential water/wastewater treatment and supply options are shown on Figures 4.0 and 5.0 of **Appendix B**. As discussed in **Section 2**, as a condition of water/wastewater service, the City and the Tribe would cooperatively discuss the public and private infrastructure needed to serve the Tribe's development plans and would amend or otherwise supplement the IGA as mutually agreed. If the City's water supply and wastewater services are utilized, off-site pipeline connections may be necessary. Additionally, Alternative A could be served by the proposed North Zumbro Sanitary District wastewater treatment facility.

This option would require constructing an off-site conveyance system to transport wastewater from the Project Site to the new facility. Because the feasibility of connecting to either the City of Pine Island or North Zumbro Sanitary District is uncertain, the Tribe may utilize on-site wastewater treatment and disposal systems to meet the needs of Alternative A or in combination with connection to a municipal sewer and wastewater treatment system should available capacity be available.

While electric, telephone, and cable services are already present on the Project Site, additional capacity would be necessary to serve Alternative A, which could include extending additional lines to the Project Site. The Project Site is primarily within the service area of PEC with a small western portion within the Goodhue County Cooperative Electrical Association (Minnesota IT Office, 2023). The Project Site is not within the service area of Xcel Energy, however, Xcel Energy provides electrical services to most of the City in addition to areas immediately north and east, and may be coordinated with to provide electrical service to the Project Site (Xcel Energy, 2023a). Off-site electrical connections are largely existing and would require minimal off-site ground disturbance.

Should additional underground water/wastewater and/or electrical connections be necessary, off-site ground disturbance would be limited to work within road shoulders and public rights-of-way. As part of the BMPs for the alternatives, the Utility Notification Center will be contacted prior to ground disturbance so that underground utility locations can be staked prior to construction and properly avoided. Therefore, indirect effects associated with off-site improvements would be less than significant.

3.15.2 Growth-Inducing Effects

Growth inducement may constitute an adverse impact if the increased growth is not consistent with or accommodated by the land use and growth management plans and policies for the area affected. Local land use plans provide for development patterns and growth policies that allow for orderly development supported by adequate public services and utilities such as water supply, roadway infrastructure, sewer services, and solid waste disposal services. A project that would induce “disorderly” growth (i.e., would conflict with local land use plans) could indirectly cause adverse environmental or public service impacts. The growth-inducing analysis below conservatively focuses on Alternative A because Alternative A would result in the highest generation of employment and utility demands.

As discussed in **Section 3.7**, Alternative A is projected to directly generate 267 jobs. It is expected that these 267 jobs would be filled by tribal members or unemployed and underemployed County residents. However, some portion of workers may in-migrate to the County in search of employment. A socioeconomic study commissioned in connection with the proposed Prairie Island Indian Community Emergency Gaming Facility estimates that at most 32% of the workers employed by the casino project would relocate to the County (Prairie Island Indian Community, 2024). A contributing factor in this estimate is the specialized nature of some casino jobs. Because Alternative A does not have a casino component, it is estimated that approximately 20% of jobs would be filled by persons who in-migrate to Olmsted County. Assuming 1.1 employees per household, this would imply that approximately 49 households would in-migrate to the County. This equates to approximately 1.5% of Olmsted County residents who are unemployed. As such, significant regional commercial growth-inducing impacts would not be anticipated to occur. In addition, the housing element of Alternative A would offset any housing demands of Alternative A. Thus, the existing housing stock and infrastructure is sufficient to support Alternative A without necessitating the construction of additional infrastructure.

Additional utility service connections may be necessary to accommodate development of Alternative A. These connections would be sized to serve the Project Site and would only serve the Project Site. Therefore, the alternatives would not remove barriers to growth or induce growth through expansion of utilities beyond what is necessary to serve the alternatives.

Based on the above, significant growth-inducing impacts would not occur.

Section 4 | Mitigation Measures

Mitigation measures to address potentially significant impacts that could result from implementation of a federal action consist of the following (40 CFR § 1508.1(y)):

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures to be implemented during construction and operation of the alternatives are included in **Table 4-1**. All mitigation is enforceable because it is (1) inherent to the project design; and/or (2) or required by federal or tribal regulations.

Table 4-1: Mitigation Measures

Resource Area	Proposed Mitigation	Alternative
Biological Resources	**Federally Listed Roosting Bats** The following measures are recommended to avoid and/or reduce impacts to potentially roosting bats: ▪ Tree removal shall occur outside the active season of roosting bats (April 1 through October 31) as possible. OR ▪ If tree removal occurs within the active season of roosting bats, a qualified biologist shall perform a preconstruction survey prior to tree removal to identify suitable roost trees. Suitable roost trees shall be removed over a two-day period utilizing hand tools. On the first day, tree limbs shall be removed. On the second day the balance of the tree will be felled. **Nesting Migratory Birds** ▪ The following measures are recommended to avoid and/or reduce impacts to nesting migratory birds/other birds of prey: ▪ If construction activities commence during the general nesting season (February 15 to September 1), a preconstruction nest survey shall be conducted by a qualified biologist on and within 100 feet of proposed construction within 7 days of initiating ground disturbance. If active nests are identified, the qualified biologist shall determine a suitable avoidance buffer based on the needs of the species observed. ▪ Avoidance measures include establishment of a buffer zone using construction fencing or similar, or the postponement of construction until after the nesting season, or until after a qualified biologist has determined the nest is no longer active. Avoidance buffers may vary in size depending on habitat characteristics, project-related activities, and disturbance levels.	A

	▪ Should work activity cease for 14 days or more during the nesting season, surveys shall be repeated to ensure birds and have not established nests during inactivity. **Monarch Butterfly** ▪ The following measures are recommended to avoid and/or reduce impacts to monarch butterfly: ▪ Landscaping shall maximize the use of native vegetation ▪ Landscaping plans shall not include non-native tropical milkweed (*Asclepias curassavica*) ▪ Land management activities shall minimize the use of pesticides, including insecticides, fungicides, and herbicides. Pest management shall be conducted through non-chemical means as feasible. ▪ If use of chemical pesticides is necessary, the following practices shall be implemented: o Avoid use during summer, which is the peak time for Monarchs to occur in the vicinity of the Project Site. o Avoid the use of neonicotinoids or other systemic insecticides. o Avoid the application of pesticides on milkweed plants and define buffer zones to protect habitat from nearby areas where pesticides are applied. o Avoid insecticides that target lepidopterans. o Avoid the use of strobilurin fungicides on milkweeds. o Use targeted application methods, avoid large-scale broadcast applications, and take precautions to limit off-site movement. **Seasonal Wetlands** The following measures are recommended to avoid and/or reduce impacts to seasonal wetlands: ▪ Prior to construction within 200 feet of the seasonal wetland within the impact area, a qualified biologist shall demarcate the boundaries of the wetland with high visibility pin flagging or similar. ▪ No activities shall occur within the boundary. The boundary shall remain in place until construction activities within 200 feet of the seasonal wetland have been completed.	
Cultural and Paleontological Resources	**Inadvertent Discoveries of Cultural Resources** ▪ In the event that cultural resources are inadvertently discovered during project-related ground disturbance, ground disturbance shall be halted within 50 feet of the find and the BIA and the Tribe's THPO and/or a qualified archaeologist (i.e., an archaeologist that meets the qualifications at 36 CFR Part 61), or paleontologist if the find is of a paleontological nature, shall be retained to assess its potential significance. ▪ Construction activities may continue in other areas but may not resume in the area of the find until the significance of the find is assessed and is appropriately treated. ▪ If the find is determined by the BIA/THPO/qualified archaeologist to not be significant (i.e., not a *historic property*), no additional cultural resources investigations are necessary and work may resume in the area of the find.	A, B

	▪ If any find is determined to be significant by the THPO or archaeologist or paleontologist, a BIA representative shall meet with the THPO or archaeologist or paleontologist to determine the appropriate course of action, including the development of a Treatment Plan and implementation of appropriate avoidance measures or other mitigation. **Inadvertent Discoveries of Human Remains** ▪ Consistent with NAGPRA requirements, if human remains or objects of cultural patrimony are discovered during project-related ground-disturbing activities, ground disturbance in the vicinity of the find shall be halted and the location shall be secured (43 CFR § 10.4(c)). ▪ The BIA and Tribe's THPO shall be immediately notified of the discovery and the Olmsted County Sheriff/Coroner shall be immediately informed of the find in accordance with the Minnesota Statues § 307.08, and 43 CFR § 10.5(a) (1). ▪ If the remains are determined to be Native American in origin, the BIA shall consult with the THPO and/or appropriate Tribe to discuss the recovery and treatment of the remains (43 CFR § 10.5). ▪ A written plan of action shall be prepared that addresses the custody of the remains and the planned disposition (43 CFR § 10.5(b)). ▪ The disposition of the human remains, funerary objects, sacred objects, or objects of cultural patrimony shall be carried out in accordance with procedures set forth in 43 CFR § 10.6.	
Public Services and Utilities	**Service Agreement** The following measure is recommended for all alternatives: ▪ The Tribe shall make good faith efforts to enter into a service agreement with the Pine Island Fire Department that will provide payment for the provision of fire protection and emergency medical services to the Project Site. The agreement shall address any required conditions and standards for emergency access and fire protection system.	A
Noise	**Construction Noise and Vibration** The following mitigation measures are recommended for reducing potential construction noise and vibration impacts to sensitive receptors: ▪ The Tribe shall monitor construction noise and vibration and will designate a disturbance coordinator (such as an employee of the general contractor or the project manager for the Tribe), post the coordinator's contact telephone number conspicuously around the Project Site, and provide the number to nearby sensitive receptors. The disturbance coordinator shall receive all public complaints, be responsible for determining the cause of the complaints, and implement any feasible measures to alleviate the problem. ▪ The use of vibrational construction equipment shall be restricted such that vibration levels will not exceed 90 VdB at sensitive receptors adjacent to the Project Site on its norther border. Should any vibrational construction equipment be required that results in vibration decibel levels that would exceed 90 VdB at the adjacent sensitive receptors, a buffer or set back will be utilized.	

Section 5 | Consultation & Coordination

This section lists agencies and organizations consulted during preparation of this EA.

Agencies, Organizations, and Individuals Consulted	Summary of Consultation and Coordination
Federal	
U.S. Fish & Wildlife Service (USFWS)	The USFWS was consulted to obtain a list of federally listed special-status species with the potential to occur in the vicinity of the Project Site (USFWS, 2024a). Additionally, the USFWS National Wetlands Inventory was consulted to identify potential wetlands and waters in the vicinity of the Project Site (USFWS, 2024b). The BIA may initiate informal consultation with USFWS regarding the potential for the project alternatives to impact federally listed species in accordance with the federal Endangered Species Act (ESA).
U.S. Environmental Protection Agency (USEPA)	The USEPA website was reviewed for information regarding NAAQS attainment status (USEPA, 2024a). Additionally, the USEPA's model Motor Vehicle Emission Simulator Version 4 (MOVES4) was used to calculate emissions (USEPA, 2024b). The USEPA EJScreen tool was used to generate an EJScreen Community Report, which has been included as **Appendix I** (USEPA, 2024c).
U.S. Geological Survey (USGS)	The USGS website was reviewed for information concerning geological and hydrological information in addition to geological hazards (USGS, 2024).
U.S. Census Bureau (USCB)	The USCB website was reviewed for information concerning demographic data (U.S., Census, 2024).
U.S. Department of Health and Human Services	The U.S. Department of Health and Human Services website was reviewed for information concerning federal poverty guidelines to determining poverty (U.S. Department of Health and Human Services, 2024).
U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)	The NRCS was consulted for data concerning farmland and soil characteristics information. A Farmland Conversion Impact Rating (FCIR) form was submitted to the NRCS (**Appendix J**; NRCS, 2023).
U.S. Bureau of Labor Statistics	The U.S. Bureau of Labor Statistics website was reviewed to obtain labor statistics (U.S. Bureau of Labor Statistics, 2023).
FEMA	The Prairie Island Nuclear Generating Plant After Action Report/Improvement Plan prepared by FEMA was reviewed as well as floodplain maps (FEMA, 2023).
National Center for Education Statistics	The website was consulted regarding enrollment information for the Pine Island Public School District (National Center for Education Statistics, 2024).
State	
Minnesota Department of Natural Resources (MDNR)	The Minnesota Department of Natural Resources was consulted to obtain a Natural Heritage Review as well as a Conservation Planning Report in order to identify known or potential sensitive biological resources within the Project Site (MDNR, 2009; MDNR, 2024).
Minnesota Department of Public Safety	The Minnesota Department of Public Safety information pamphlet regarding ingestion phases for a nuclear power plant incident (Minnesota Department of Public Safety, 2018).
Minnesota Department of Transportation	The Minnesota Department of Transportation website was reviewed for information regarding scenic byways (Minnesota Department of Transportation, 2024).

Local	
Olmsted County	Olmsted County planning documents, such as the General Land Use Plan, and the website were consulted for information regarding numerous environmental topics, such as public services (Olmsted County, 2022a; Olmsted County, 2024).
Rochester-Olmsted Planning Department	The Olmsted County Water Management Plan was reviewed for information regarding wastewater (Olmsted County, 2024c).
City of Oronoco	The City of Oronoco website was reviewed for information regarding wastewater services, long-range planning, taxes, and public services (City of Oronoco, 2024).
Goodhue County Sheriff's Office	The website was consulted for information regarding law enforcement (Goodhue County Sheriff's Office, 2024).
Olmsted County Sheriff's Office	The website was consulted for information regarding law enforcement (Olmsted County Sheriff's Office, 2023).
Pine Island Volunteer Fire Department	The Pine Island Volunteer Fire Department website was consulted for information regarding fire services (Pine Island Fire Department, 2023).
City of Pine Island	The City's staff, website, and reports were consulted for information concerning long-range planning, taxes, and public services (City of Pine Island, 2024).
Tribe	
Prairie Island Indian Community	The cultural resources study was conducted and reviewed by the Tribe's THPO (PIIC, 2024).
Prairie Island Police Department	The Tribe provided information regarding their police department (PIIC, 2024c).

Section 6 | References

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Section 7 | Preparers

7.1 LEAD AGENCY

Bureau of Indian Affairs, Midwest Regional Office
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7.2 ENVIRONMENTAL CONSULTANTS

Environmental Assessment, Expanded Regulatory Setting (Appendix E), Biological Assessment (Appendix F), and Air Quality Modeling Outputs (Appendix G)

Affiliation	Name	Qualifications/Title
Acorn Environmental 5170 Golden Foothill Pkwy El Dorado Hills, CA 95762	Ryan Sawyer	BA, AICP; 20 years of experience, Project Director
	Kt Alonzo	BS, 10 years of experience, Project Manager/Senior Biologist
	John Fox	BS, MBA, CPA; 35 years of experience, Senior Environmental Analyst
	Kelli Raymond	BS, 10 years of experience, Senior Environmental Analyst/Biologist
	Shadde Rosenblum	BA, MS; 25 years of experience, Senior Environmental Analyst
	Kristen Miner	BS, MS; 9 years of experience, Environmental Analyst
	Kimberlina Gomez	BS, MS; 2 years of experience, Environmental Analyst/Biologist
	Emma Miller	BA; 2 years of experience, Environmental Analyst
	Katie Francisco	BS; 1 year of experience, Environmental Analyst
	Dana Hirschberg	23 years of experience; GIS/graphics technician

Technical Studies

Affiliation	Name	Title
Cultural Resources Study (Appendix H)		
Prairie Island Indian Community Dakota Language & Culture Department 5636 Sturgeon Lake Road Welch, MN 55089	Franky Jackson Noah White	PIIC Tribal Historic Compliance Officer, Land and Environment PIIC Tribal Historic Preservation Officer, Land & Environment

Minnesota State University, Mankato Earth Systems Laboratory 228 Wiecking Center Mankato, MN 56001-6062	Andrew A. Brown	MS, Principal Investigator, Geospatial Research Data Manager
	Ronald C. Schirmer	PhD, Co-Principal Investigator, Co-Director
Traffic Impact Study (Appendix C), Grading and Drainage Study (Appendix D), and Water/Wastewater Study (Appendix B)		
KLJ Engineering 370 Wabasha Street Suite 300 Saint Paul, MN 55102-1323	Ian Butler-Severson	Planner/Project Manager
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Socioeconomic Analysis (Appendix Socio)		
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