



Existing Land Use and Environmental Conditions Memorandum

To: *Darren Laesch, MnDOT*

From: *Jack Corkle, PTP, AICP, WSB & Associates*
Rose Ryan, AICP, WSB & Associates

Date: *August 6, 2015*

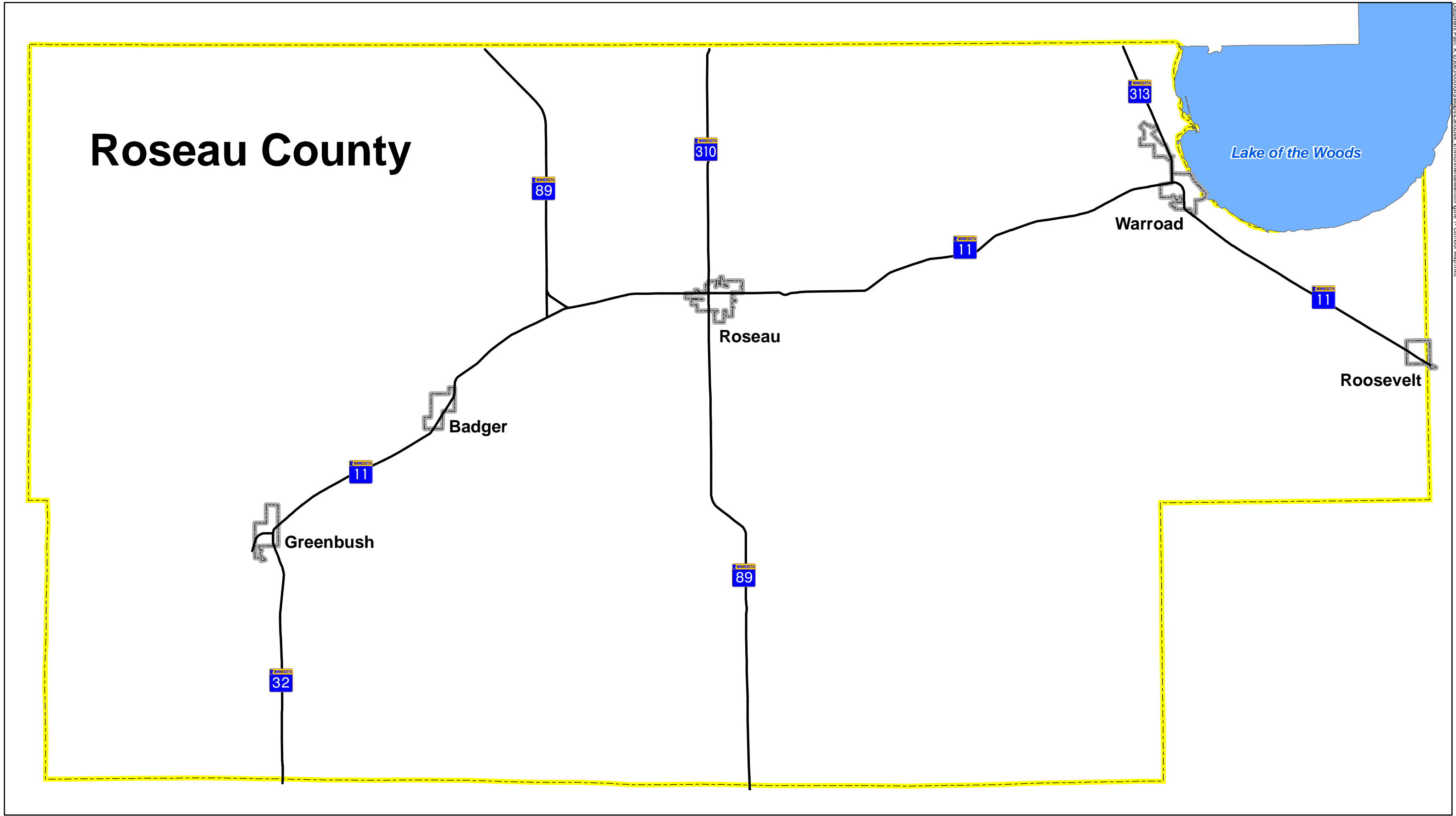
Re: *Land Use and Environmental Characteristics*
TH 11 Corridor Assessment
WSB Project No. 03063-000

The purpose of this memo is to document land use and environmental characteristics of the Trunk Highway (TH) 11 Corridor from Greenbush to Roosevelt in Roseau County. Understanding existing land use and environmental characteristics helps planners and communities better understand what additional transportation demands may be on the corridor in the future and how those demands may be met given the context of the corridor as it relates to the natural and social environment.

This memo is divided into three primary sections. The first section provides some general information on TH 11 and the area in which the study is occurring. The second section provides information on current land use, demographics, and potential growth areas. Understanding existing and future land uses and demographics on and near the TH 11 corridor provides insight on future needs relative to today's existing conditions. The third section describes existing environmental characteristics, including historic and archeological resources, federal and state-listed rare features, wetlands, and potentially hazardous materials located near TH 11.

Study Background Information

TH 11 is the primary east-west route for communities located near the Canadian border including the incorporated cities of Greenbush, Badger, Roseau, Warroad and Roosevelt (**Figure 1**). The communities located along TH 11 are home to a number of businesses, large and small, that are dependent upon the corridor to provide access for employees, to ship goods into and out of sites and for bringing in customers. Major employers located along TH 11 include Polaris, Marvin Windows and Seven Clans Casino. Much of the area between the communities along the corridor is largely undeveloped, with a smattering of manufactured home communities, contractor yards, agricultural uses, isolated businesses, residential development and the Roseau Airport in between.



Document Path: K:\03063-000\GIS\Map\landuse_Environmental\enr\Figure 1- Corridor Map.mxd

Figure 1- Corridor Study Area

TH 11 Existing Land Use and Environmental Conditions

The corridor study area covers the approximately 60 miles of TH 11 between Greenbush and Roosevelt. As part of the study, existing and future conditions will be evaluated and recommendations for improvements along the corridor will be identified for implementation over the next 20 years. A number of items will be studied including congestion, safety, infrastructure condition, future growth and development, and natural and cultural environmental constraints. The latter two topics are the focus of this memo.

Land Use

This section of the memo summarizes existing land uses adjacent to TH 11 and identifies anticipated growth areas and changes in future land use. This section also includes information about past, current, and projected demographics related to population and employment in Roseau County.

Existing Land Use and Zoning

This section of the memo describes land use directly adjacent to the TH 11 corridor. Information on existing zoning is presented where available. This section also includes information on major land uses within each city that generate traffic onto TH 11. Information is provided by community, starting at the western/southern limits in the City of Greenbush and extending to the east in Roosevelt. Aside from shoreland and floodplain ordinances, Roseau County does not have zoning regulations that impact the TH 11 corridor. County zoning does not regulate access onto TH 11.

Greenbush

Along TH 11, the City of Greenbush limits extend from Forsness Road (County Road 76) to just west of 210th Street (CR 4). Most of the development within the community is located on the west, north and south sides of TH 11 (TH 11 runs both east-west and north south through the community). Commercial activities along TH 11 itself are fairly limited, with most of the adjacent land use being residential or park. Commercial and industrial areas within Greenbush are largely concentrated along Main and 1st Streets, TH 32 and CSAH 4 (210th Street). **Figure 2** shows existing land use in Greenbush.

The Oakview Municipal Golf Course is located south of TH 11, between Forsness Road and Oak Lane. This area is zoned for Parks and Recreation. On the north side of TH 11 in this segment, existing land use is generally low-density single family residential and open space and is zoned General Residential. Multi-family residential housing is located on the northwest corner of TH 11 and 7th Street.

Between Oak Lane/7th Street and CR 7, land use along TH 11 is generally single family residential and open space, with the exception of multi-family residential housing located on the northeast corner of TH 11 and 7th Street. Existing land use is commercial and single family residential between CR 7 and the Minnesota Northern Railroad Line. This area is zoned General Residential west of 5th Street, Original Townsite between 5th Street and Main Street, and Commercial east of Main Street.

Park and open space land uses are located between the railroad line and the bend in TH 11. Welcome Park is located south of TH 11 in this segment. This area is zoned Commercial.

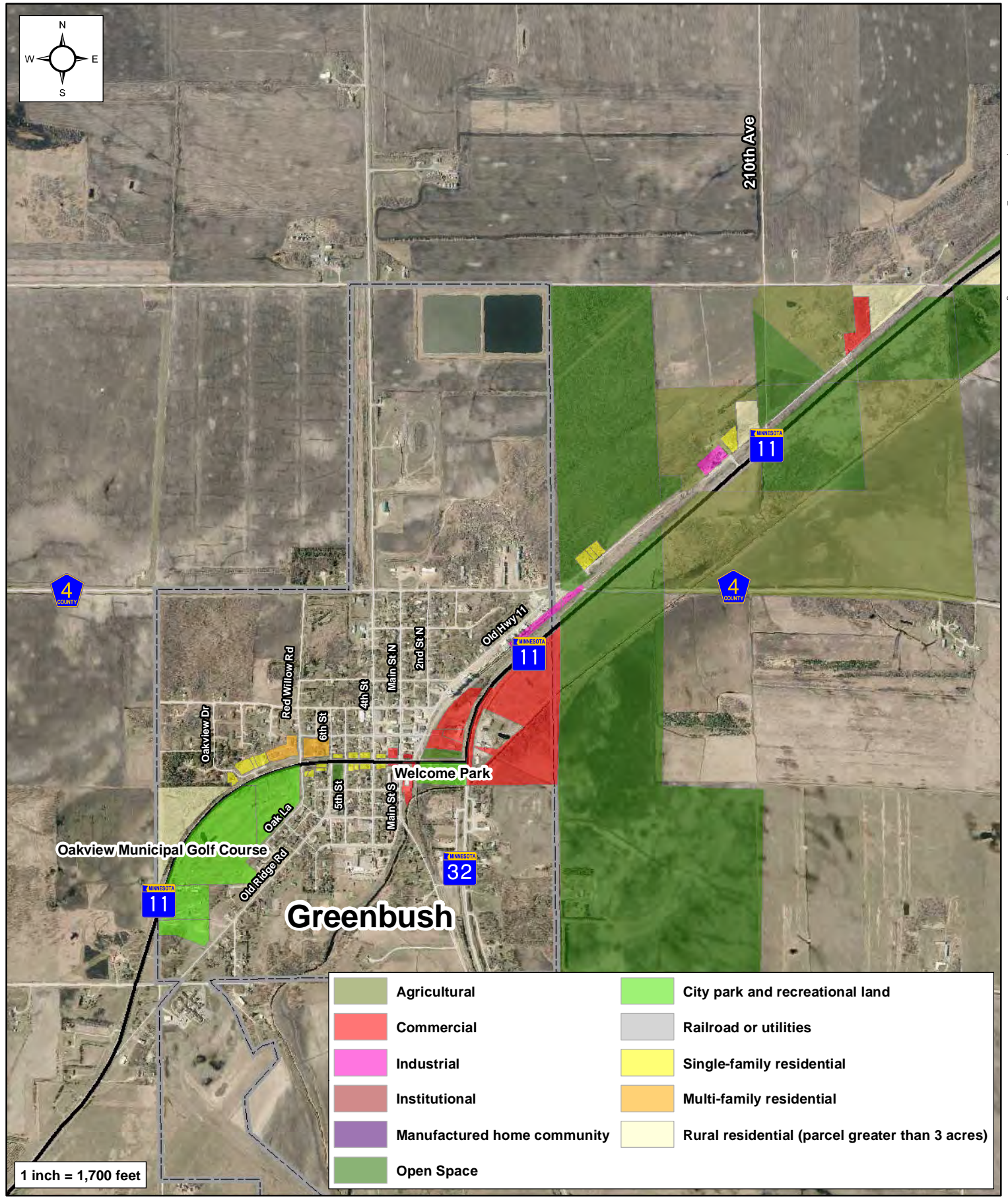


Figure 2
Greenbush Land Use



TH 11 Existing Land Use and Environmental Conditions

Commercial zoning and land uses continue along TH 11 between TH 32 and approximately 1,000 feet north of TH 32. North of this location, land along TH 11 is undeveloped, with commercial zoning on the west side of TH 11 and Greenway zoning to the east of TH 11.

Within and near the City of Greenbush, there are several major employers and destinations that draw regional traffic from TH 11. The Central Boiler offices and manufacturing facility is located south of the Greenbush city limits on 160th Avenue. Life Care Nursing Home and Greenbush/Middle River elementary and secondary schools are located south of TH 11, within city limits. Wahl Brothers Snowmobile Racing and Supplies is located along TH 11, west of Greenbush. Additionally, an auto salvage yard is located behind the Roseau County Co-op Association Bulk Plant located on the north side of CSAH 4, just west of TH 11.

At this time, there are no major growth areas that have been identified by the community. Local businesses have begun to come out of the recession and some are experiencing growth. However, no major expansion of existing or new facilities has been identified and no new housing developments have been identified presently. Greenbush zoning ordinances do not regulate access to TH 11 as part of new development or redevelopment.

Badger

Badger city limits extend along TH 11 from just east of 270th Avenue to N Main Street. Land use along TH 11 in the City of Badger is generally undeveloped or agricultural and much of the TH 11 corridor is zoned as a Wildlife District to preserve habitat. Most development in Badger is located northwest of TH 11, between TH 11 and the railroad line. **Figure 3** shows existing land use in Badger.

Scattered commercial land use is located on the west side of TH 11 south of Stokes Avenue. This area is zoned for commercial use. Commercial and industrial uses are primarily located between Carpenter and Chicago Avenues. Single family residential land use is located south of Carpenter Avenue, consistent with existing single family residential zoning. Veteran's Memorial Park is located at the northwest corner of TH 11 and CSAH 2 (University Avenue). Additional single family residential land use is located between the two legs of N Main Street. This area is zoned for single family residential, with one portion zoned as a Wildlife District.

TH 11 is a key route used for regional access to the city. The Badger-Greenbush School draws regional traffic, as do several agricultural and trucking businesses located within and near the city.

Presently there are no large-scale growth plans identified for the community. The Roseau County Co-op is considering expanding its storage facility south of Badger city limits. The existing facility is located north of TH 11 on 250th Street. Additionally, CHS-Northern Grain is considering relocating its grain elevators from its current location on James Street to a location south of Badger along TH 11.

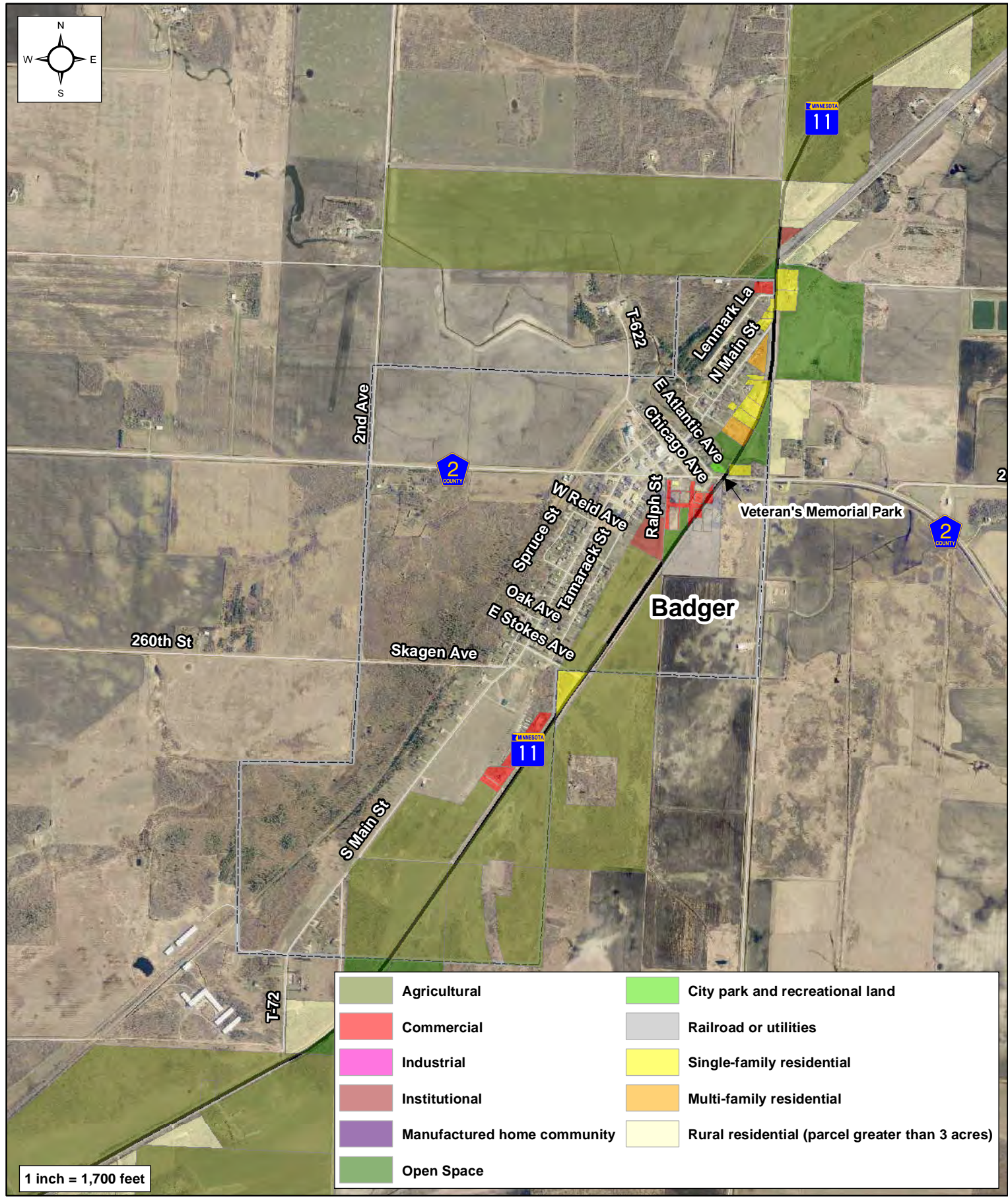


Figure 3
Badger Land Use



TH 11 Existing Land Use and Environmental Conditions

Roseau

Along TH 11, Roseau city limits extend from 18th Avenue NW to 16th Avenue NE, with some land south of the railroad line between 18th Avenue NW to 375th Avenue also identified as part of corporate limits. This area is approximately 1,300 feet south of TH 11. However, the land use on site is a trucking firm that accesses TH 11 from 18th Avenue NW. The City of Roseau does not regulate access to TH 11 in its zoning ordinance.

Land use west of 15th Avenue NW is agricultural, though is zoned C-2 (Outlying Commercial) on the south side. The north side of the corridor between 18th Avenue NW and TH 89/TH 310 is largely outside of Roseau city limits, with a few parcels incorporated into the city. **Figure 4** shows existing land use in Roseau.

On the south side of TH 11 between 15th Avenue NW and TH 89, adjacent land use is auto-oriented commercial and is zoned C-2. In this segment, most of the land north of TH 11 is outside of city limits. The portions that are within the city limits are zoned C-2 and existing land use is auto-oriented commercial.

Between TH 89 and 3rd Avenue NW, zoning is a mix of R-1 (Single-Family Residential) and C-1 (Central Commercial). Existing land use is consistent with current zoning, with a mix of residential and commercial land uses in this segment.

Zoning between 3rd Avenue NW and the Roseau River is a mix of C-1 and P-2 (Heavy Public). Existing land uses are also consistent with current zoning. There are commercial land uses between 3rd Avenue NW and 2nd Ave NE and a public park and parking between 2nd Ave NE and the Roseau River.

Between the Roseau River and 11th Avenue NE, zoning is primarily R-1 with small sections of P-1, C-1/C-2, and R-4 (Manufactured Home Park). Again, land use is generally consistent with city zoning. Most land use in this segment is single family residential, with the exception of the Roseau Community School located between 4th and 6th Avenues NE, commercial land uses at 8th and 10th Avenues NE, and a manufactured home community located on the south side of TH 11 between 10th and 11th Avenues NE.

On the south side of TH 11, R-1 zoning continues to the city limits just east of 11th Avenue NE. Existing land use in this segment is institutional (church). North of TH 11, the city limits extend to 16th Avenue NE. This area is zoned C-2. Existing land use on the north side of TH 11 is commercial and agricultural.

Between Roseau city limits and 420th Avenue, land use is a mix of agricultural, rural residential, manufactured home community, institutional (church) and commercial. The Roseau Municipal Airport is located east of 420th Avenue.

Roseau is the largest city in Roseau County and is home to several agencies and businesses that attract regional traffic. Polaris Industries is a major employer in Roseau, located just south of TH 11 on TH 89. Roseau is also home to Roseau County offices and the LifeCare Hospital. Additionally, a US-Canadian border crossing is located 10 miles north of Roseau and draws traffic from TH 11.

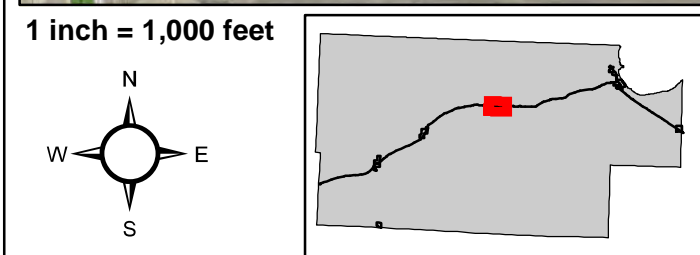
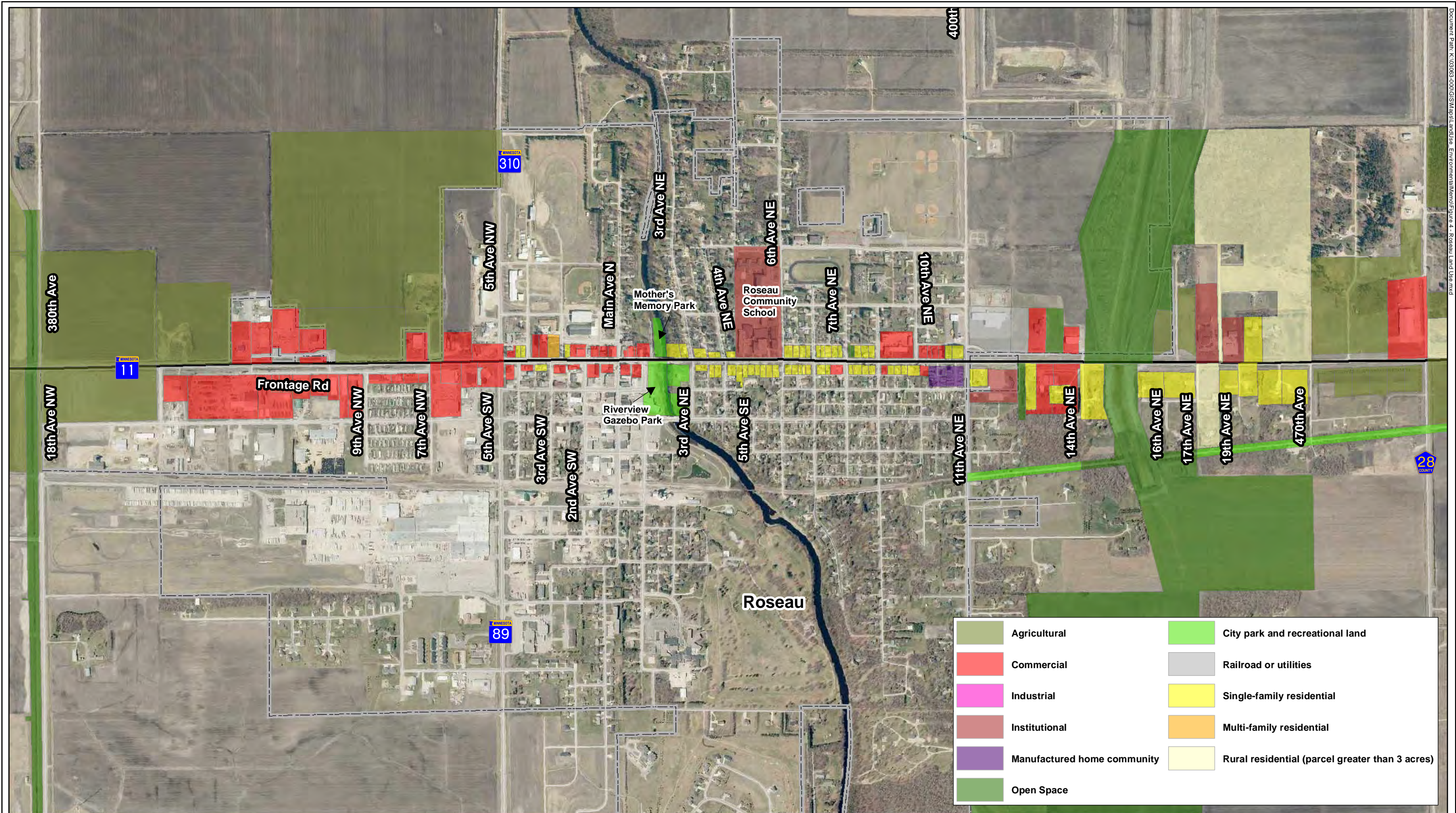


Figure 4
Roseau Land Use



TH 11 Existing Land Use and Environmental Conditions

Most of the city itself is developed with the exception of a few areas. Small areas that are still available for development include the land north of TH 11 and east of 11th Avenue NE on the eastern end of town, the area west of 15th Avenue NW in the western end of town and some property adjacent to the existing Polaris site. The city indicated that growth on the western side of town was more likely in the short- to mid-term. Currently, most of the city is designated floodplain. A Roseau River diversion project will be complete in fall 2015, at which time most of the city (include undeveloped land on the western side of town) will no longer be considered flood plain. The city anticipates development will be more desirable once the diversion project is complete.

Warroad

Warroad city limits extend along TH 11 from one half mile west of Cedar Avenue NW to McKinley Street SW. East of the Warroad city limits, there is scattered single family residential, manufactured home communities, and commercial land use. **Figure 5** shows land use within Warroad.

Between the western city limits and Cedar Avenue NW, land use is generally agricultural with some commercial land use south of TH 11. There is existing commercial and manufacturing/industrial land use along TH 11 between Cedar Avenue NW and the Warroad River. Marvin Windows & Doors manufacturing plant and administrative offices are located in this segment of TH 11.

Between the Warroad River and McKinley Street SW, adjacent land use is a mix of single-family residential, multi-family residential, and commercial. West of Warroad city limits, land use is primarily agricultural and open space with some scattered commercial and rural residential land uses.

Warroad is the second largest city in Roseau County. Regional traffic is drawn to the community due to several large employers, including Marvin Windows & Doors, Heatmor, and the Warroad Hospital. Regional recreational traffic also uses TH 11 to access parks and resorts along Lake of the Woods. There is a 24-hour border crossing located 6 miles north of Warroad on TH 313. TH 11 is a primary route to access TH 313 and the border crossing, particularly when the Roseau border crossing is closed (12-8 AM). Additionally, the city has an airport that is located north of TH 11 on TH 313.

Most of the community located within city limits is developed or is as developed as it can be (some areas have natural resources that limit the amount and type of development that can occur near Lake of the Woods and the Warroad River) with the exception of the area south of TH 11 between 585th Avenue and Cedar Avenue/TH 313.

Outside city limits, but near the community is the current location of the Seven Clans Casino which is operated by the Red Lake Band of Chippewa Indians. The casino is a popular tourist and recreational location. The Red Lake Band of Chippewa Indians has long-term plans for expanding this site that will bring more employment and tourists to the area. As of the writing of this memo, the Red Lake Band was making improvements to the casino entrance off of TH 11. **Figure 5** shows the location of the Seven Clans Casino.

In the short- to mid-term, the city anticipates future residential and commercial development on large city-owned and privately owned parcels west of Cedar Avenue NW. A residential development (Parker

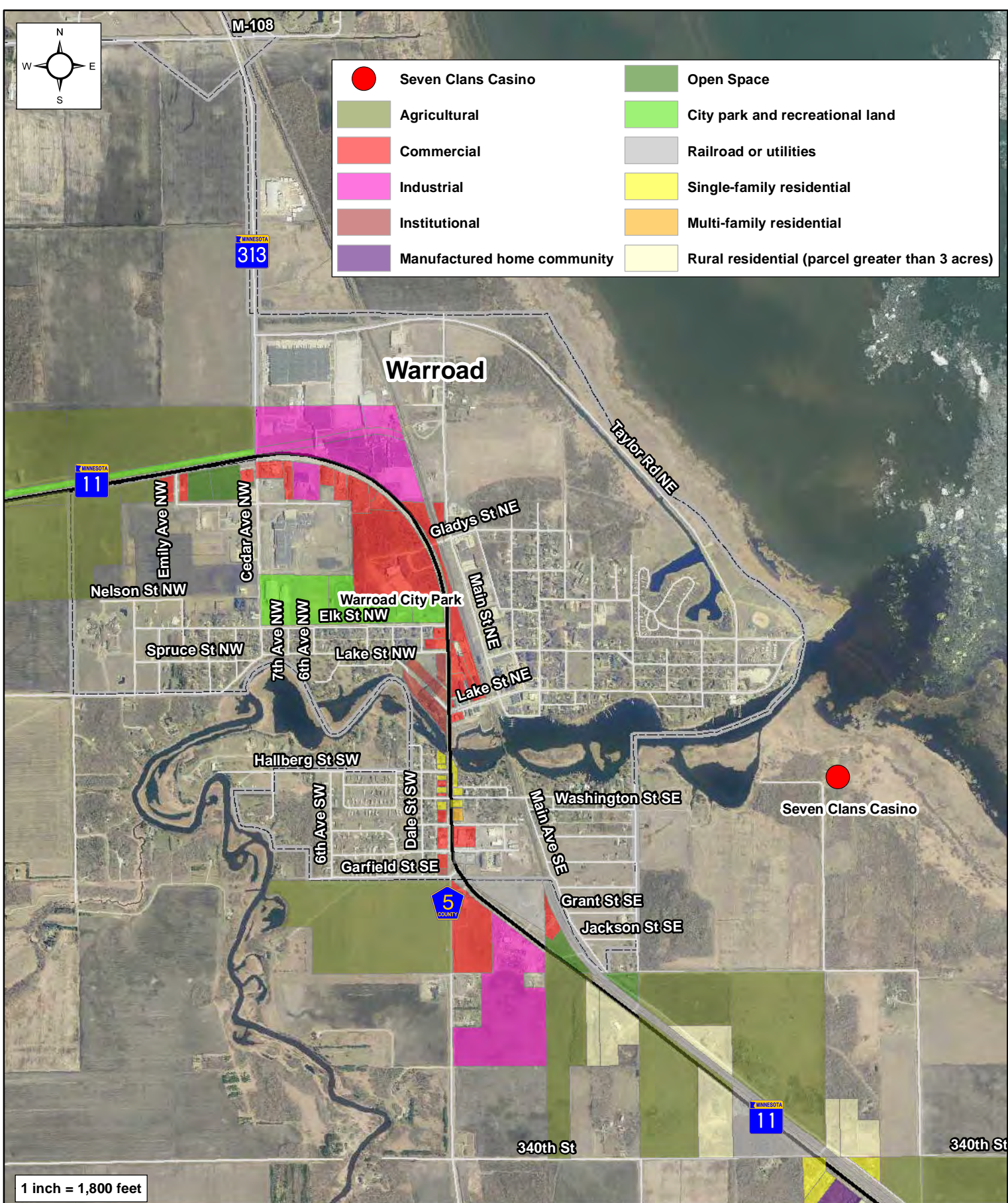
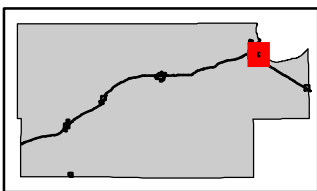


Figure 5
Warroad Land Use



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Farms) is also currently being planned along CSAH 45, southwest of city limits. This development will add traffic to CSAH 45 and TH 11. Additionally, there is a potential commercial building development under consideration on TH 11, south of Warroad city limits (between CSAH 5 and Laznicka Lane). The City of Warroad zoning ordinances do not regulate access to TH 11.

Roosevelt

Along TH 11, Roosevelt city limits extend from 690th Avenue to CSAH 17 at the Roseau-Lake of the Woods County line. Development in Roosevelt is concentrated along Kirkwood Drive, located north and parallel to TH 11. Land use along TH 11 is generally agricultural and open space, with some single family residential and commercial land uses near the TH 11-697th Avenue intersection. **Figure 6** shows land use within Roosevelt.

Roosevelt is the smallest of the cities along TH 11. While there are no major employers in Roosevelt, regional traffic uses TH 11 to access CSAH 17 and resorts along Lake of the Woods. There are no growth areas identified in Roosevelt.

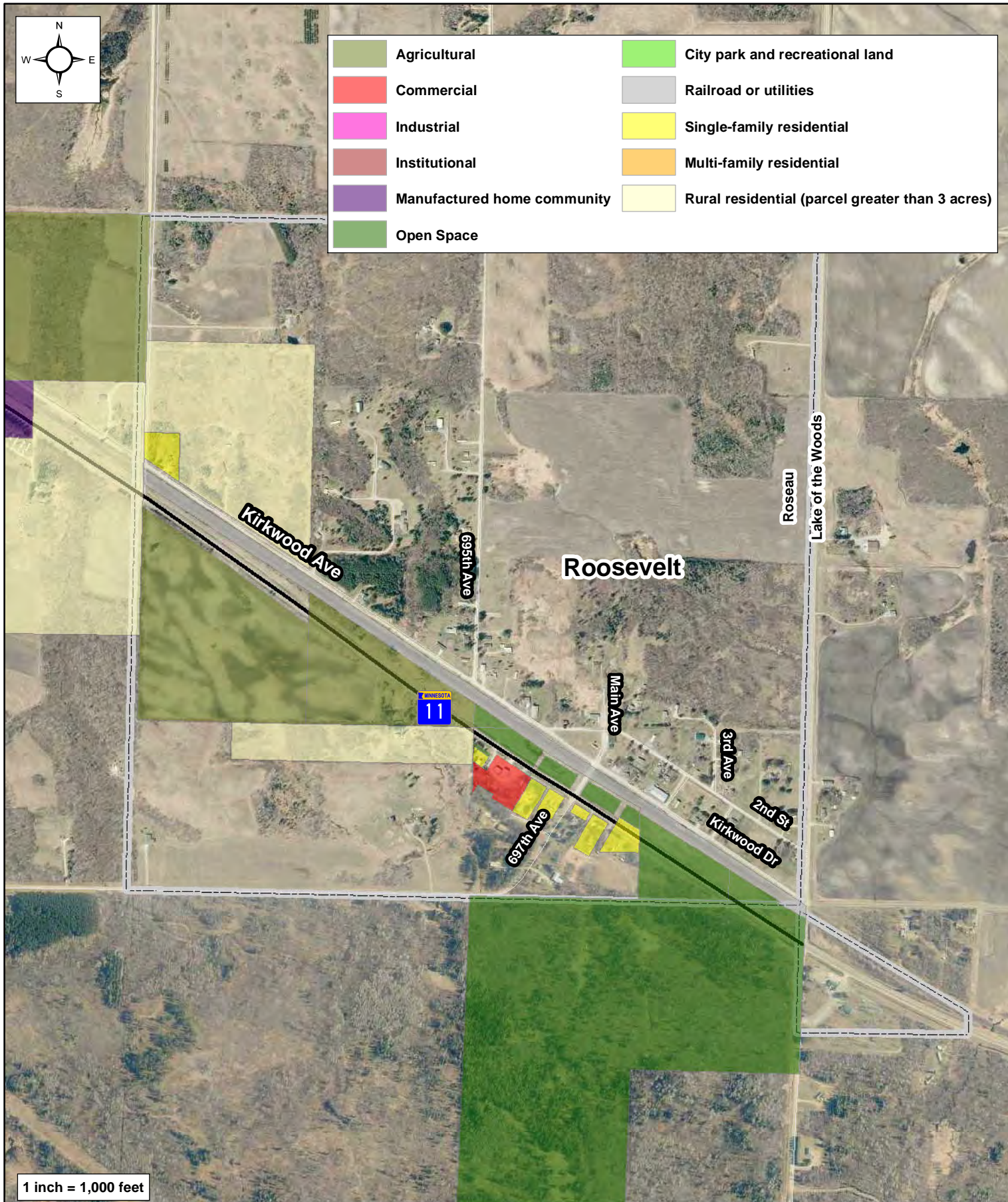
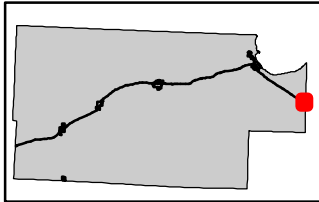


Figure 6
Roosevelt Land Use



TH 11 Existing Land Use and Environmental Conditions

Rural sections of TH 11

Land use is typically agricultural or rural residential between the cities and towns in the TH 11 corridor. There are some exceptions to the generally agricultural land use pattern along TH 11, including the following:

- Auto repair and salvage businesses along TH 11:
 - Northeast of Greenbush
 - Southwest of Badger
 - Northeast of Badger
 - West of Warroad
- Trucking businesses west of Roseau along TH 11
- Roseau Municipal Airport
- Manufactured home communities:
 - 9 miles west of Warroad
 - 7 miles west of Warroad
 - 3 miles west of Warroad
 - 1 mile west of Warroad
- Seven Clans Casino south of Warroad along TH 11

Parks

Several parks are located adjacent to the TH 11 corridor. Parks are of particular interest for transportation agencies, as the agencies are generally required to avoid impacting park and open space that is dedicated for recreational purposes as part of their projects. There are exceptions to this, but it can require additional documentation, mitigation activities, and in some instances replacement of park land. In order to better understand where future improvements may be constrained due to the location of park facilities, they have been identified as part of this study. The location and features of the parks adjacent to TH 11 are described below. Park locations are shown on **Figures 2-6**

- **Oak View Golf Course, Greenbush:** Oakview Golf Course is located on the south side of TH 11 between CR 76 and Oak Lane. It is a 9 hole golf course operated by the City of Greenbush.
- **Welcome Park, Greenbush:** Welcome Park is located at the southwest corner of TH 11 and TH 32 in Greenbush. The park includes walking paths, a picnic area, and play area. This park was developed using Minnesota Department of Natural Resources (DNR) grant funding and is subject to permanent land use requirements. Converting any of this park land would require prior approval by the DNR Commissioner.
- **Veteran's Memorial Park, Badger:** Veteran's Memorial Park is located at the northwest corner of TH 11 and County Road 2 in Badger. The park includes a monument and is currently under development by the city and volunteers.

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- **Mother's Memory Park, Roseau:** Mother's Memory Park is located at the northeast corner of TH 11 and 2nd Avenue NE, along the Roseau River in Roseau. This is a small park with gardens, benches, and sidewalks.
- **Riverview Gazebo Park, Roseau:** Located at the southwest corner of TH 11 and 3rd Avenue NE in Roseau, this park features river views, a gazebo, gardens, benches, and walking paths.
- **Warroad City Park, Roseau:** This park is located southwest of TH 11 and north of Gladys Street in Warroad. The park includes basketball and tennis courts.

While not designated as a public park, the Roseau County Trailblazers have purchased a former rail corridor along TH 11 for use as a snowmobile trail. This trail extends from 11th Avenue S at Roseau City Limits to TH 313 in Warroad.

Demographic Trends

The sections below summarize past, present, and projected demographics and employment that influence the use of TH 11.

Population

The population of Roseau County has remained fairly steady, with four percent population growth since 1990. As of the 2010 Census, the Roseau County population was 15,629. Roseau (population 2,633) and Warroad (population 1,781) were the largest cities in the corridor as of 2010, with both of those communities growing at a slightly faster rate than the county as a whole. Greenbush, Badger, and Roosevelt have lost population since 1990. (Source: US Census)

Roseau County is expected to grow by 14 percent between 2010 and 2030, based on data from the Minnesota State Demographer's Office. While projections are not available at the city level, it is anticipated that Roseau and Warroad would experience larger population gains than the smaller cities, but that there will likely be population increases in all of the communities. **Table 1** shows historic and projected population growth for Roseau County and the cities in the TH 11 corridor.

Table 1: Historic and Projected Population

	Roseau County	Greenbush (City)	Badger (City)	Roseau (City)	Warroad (City)	Roosevelt (City)
1990 Population:	15,026	800	381	2,396	1,679	180
2000 Population:	16,338	784	470	2,756	1,722	166
2010 Population:	15,629	719	375	2,633	1,781	151
2020 Projection:	16,703	Not Available				
2030 Projection:	17,771					
Change in population: 1990-2010	4%	-10%	-2%	10%	6%	-16%
Projected population change: 2010-2030	14%	Not Available				

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While the actual projected increase in population (in terms of raw numbers) is not very high, it is a relatively high percent increase for a county that only grew 4 percent between 1990 and 2010. The growth that is projected to occur will impact demand on the transportation network.

Employment

The number of jobs in Roseau County has grown since 2002. **Table 2** shows the number of jobs in Roseau County and each of the TH 11 corridor cities. TH 11 connects the major employment centers in the county. As of 2011, 91 percent of the jobs in the county were located in one of the five TH 11 corridor cities.

Table 2: Employment in the TH 11 Corridor

	Roseau County	Greenbush (City)	Badger (City)	Roseau (City)	Warroad (City)	Roosevelt (City)
2002	8,124	118	138	3,081	3,960	9
2011	8,604	345	269	3,569	3,671	12*
Change, 2002-2011	6%	192%	95%	16%	-7%	33%

*Roosevelt data is from 2009 (most recent available data)

Between 2002 and 2011, the number of jobs increased in all corridor cities except for Warroad, which experienced a 7.3 percent decrease in jobs. The number of jobs in Greenbush nearly tripled during this time period. Badger saw a similar increase in the number of jobs within the city. Roseau experienced a 15 percent increase in jobs between 2002 and 2011. (Source: US Census)

Employment projections are not available for Roseau County or TH 11 corridor cities. The Minnesota Department of Employment and Economic Development estimates that employment in Northwest Minnesota (which includes Roseau County) will increase 5.9 percent between 2012 and 2022. This is largely consistent with the anticipated changes in population for the area.

Environmental Characteristics

This section of the memo includes information on known environmental characteristics of the TH 11 corridor. Analyses are generally limited to within 500 feet of TH 11. This section includes a review of available data regarding historic and archeological resources, federal threatened and endangered species, state-listed rare species, wetlands, and hazardous materials.

Historic and Archeological Resources

Data on known and potential historic and archeological resources was requested from the State Historic Preservation Office (SHPO). The data provided includes listings on the National Register of Historic Places, standing structures of potential historic importance, and known prehistoric and historic archeological sites. The sections below identify known and potential historic and archeological resources within 500 feet of the TH 11 corridor as noted by SHPO. **Figures 7-11** show the locations of known and potential historic and archeological resources within the corridor.

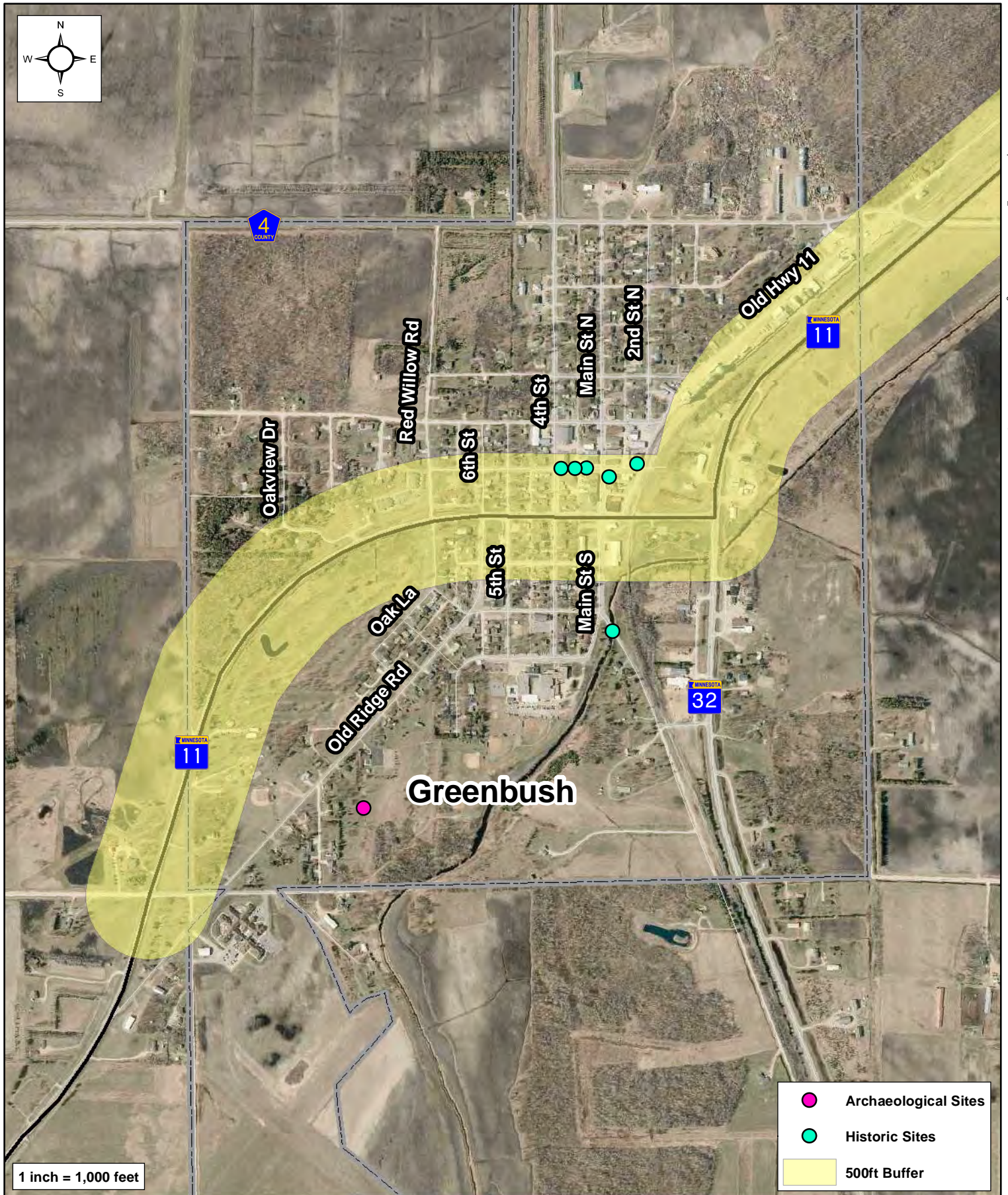
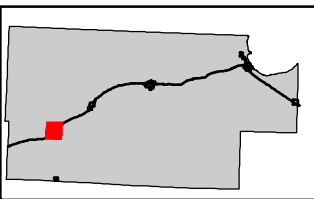


Figure 7
Known & Potentially Eligible Historic
& Archaeological Resources - Greenbush



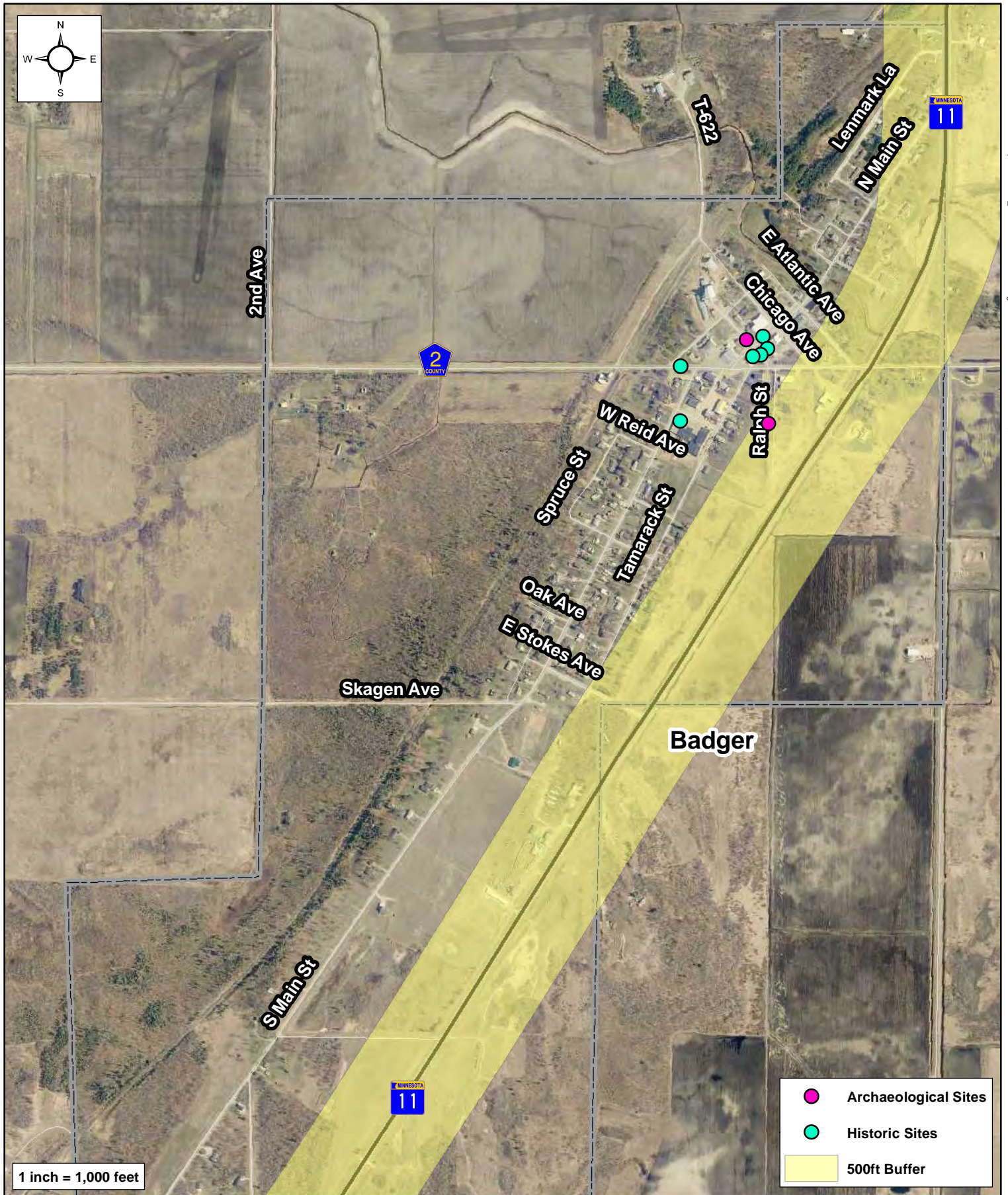


Figure 8
Known & Potentially Eligible Historic
& Archaeological Resources - Badger



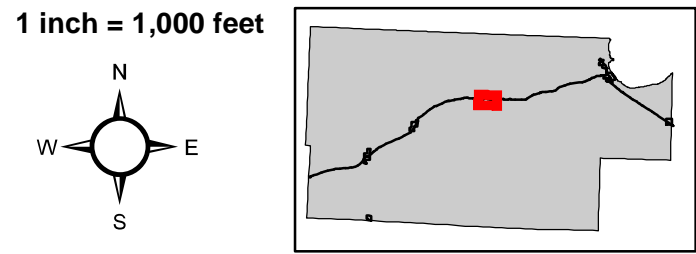
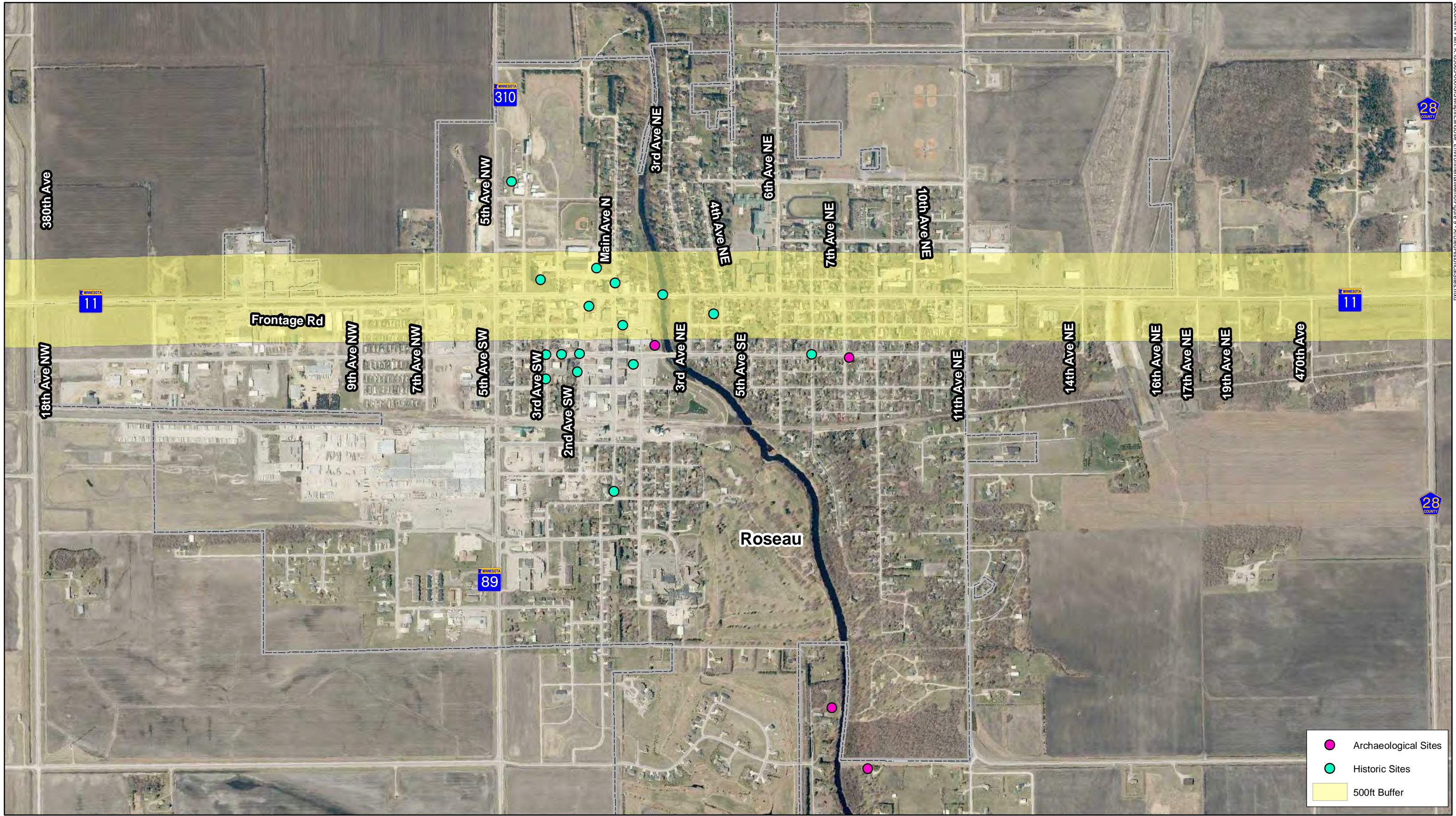


Figure 9
Known & Potentially Eligible Historic
& Archaeological Resources - Roseau





Figure 10
Known & Potentially Eligible Historic
& Archaeological Resources - Warroad



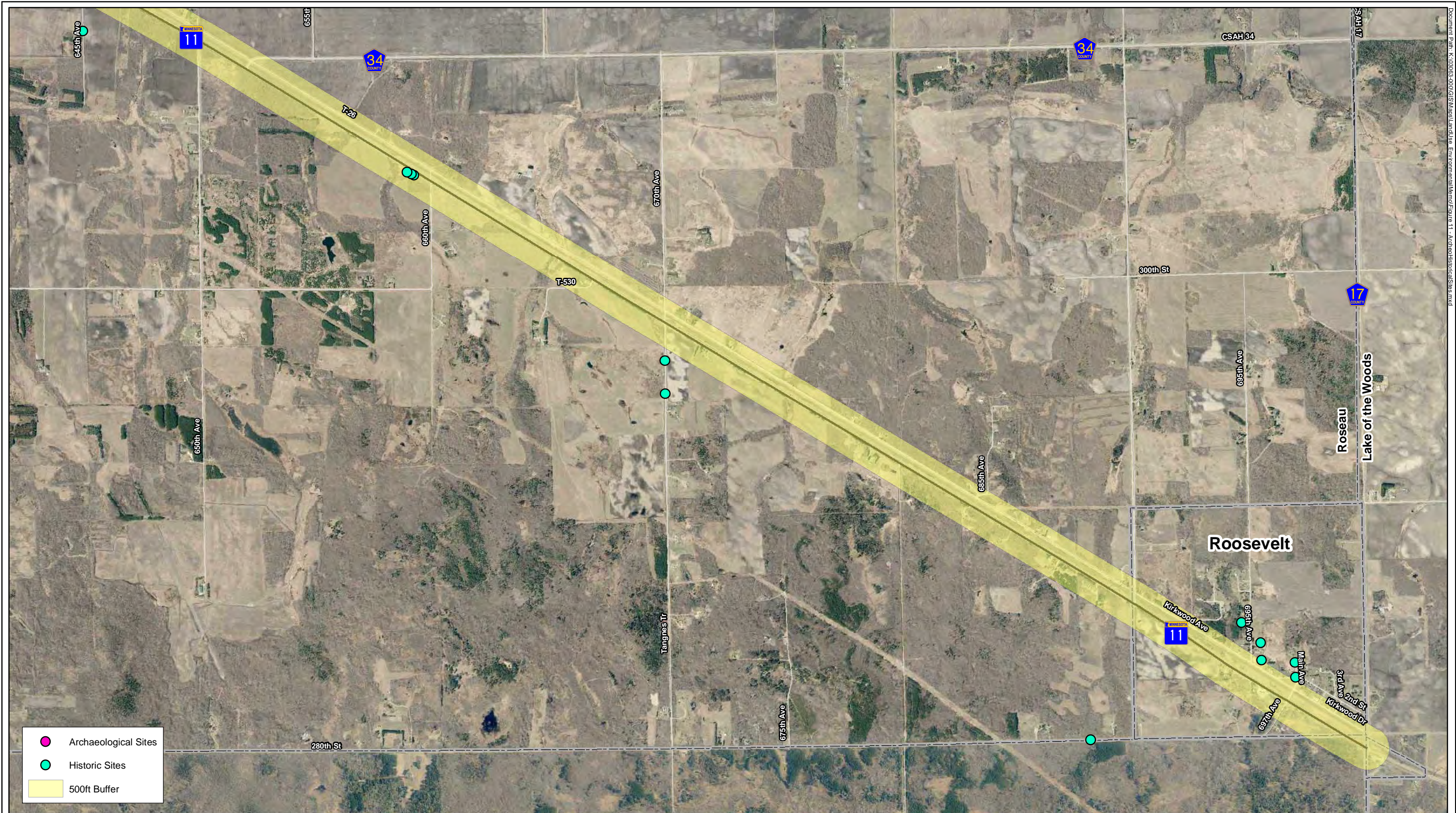


Figure 11
Known & Potentially Eligible Historic & Archaeological Resources - Roosevelt



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Historic Resources

While there are historic resources within 500 feet of the TH 11 corridor, most historic structures are not on property directly adjacent to TH 11. No historic structures within 500 feet of the corridor are listed on the National Register of Historic Places. There are three properties within Roseau County that are on the National Register of Historic Places. These include: the Canadian National Depot, which is located off of Main Avenue; the Roseau County Courthouse which is located off of Center Street West; and the Lodge Boleslave Jablonsky No. 219 which is located in a township not on TH 11.

According to the SHPO survey, there are number of potentially eligible historic resources within communities along the corridor and in the rural areas between. These potential resources are shown in the figures and described on the following pages.

In Greenbush, there is a concentration of potential historic structures along Hill Avenue, between 250-500 feet north of TH 11.

There are several potential historic structures in downtown Badger; however, none of these structures are adjacent to TH 11.

Within the city of Roseau, there are two potential historic structures adjacent to TH 11: Budd Hospital at the northwest corner of TH 11 and 3rd Avenue NW and the Roseau Cooperative Creamery at the southeast corner of TH 11 and 3rd Avenue NW. There are also additional potential historic structures located between 250-500 feet north and south of TH 11 through downtown Roseau. The TH 11 bridge over the Roseau River is also noted as a historic resource; however, it is not included in the MnDOT Historic Bridge program.

There are no historic properties adjacent to TH 11 within the City of Warroad. There is a historic marker located at TH 11 and Lake Street. A sign on the west side of TH 11 marks the location of a historic fur post. Several potential historic structures are concentrated along Lake Street, 500 feet to the east of TH 11.

There are several potential historic structures in the rural areas along TH 11. In Salol Township, Salol School is located adjacent to TH 11. There are also three log buildings located along TH 11, west of 660th Avenue in Laona Township.

When planning for potential highway projects, these resources will be considered. Because none of the resources are currently on the National Register of Historic Places, additional research will likely be required if transportation improvements impact the sites. Efforts will first be made to avoid any of these resources as alternatives are considered.

Archeological Resources

Seven archeological sites have been noted by SHPO that are potentially within 500 feet of TH 11. None of these sites are listed on the National Register of Historic Places. It is difficult to pinpoint the exact location of archeological sites based on the data provided by SHPO due to concerns about the resources. In order to protect archeological sites, SHPO provides only the general location of archeological sites. While **Figures 7-11** show locations of archeological sites, it should not be assumed that archaeological

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sites are present in these exact locations. Additional coordination with SHPO and MnDOT's Cultural Resources Unit will be necessary prior to constructing any improvements on TH 11. The paragraphs below describe general locations where known archeological resources could be present in the TH 11 corridor.

Two known archeological sites are located near Badger, potentially near TH 11. These sites include scattered artifacts and potential cemeteries from the pre-contact (prior to 1680) and contact (1680-1837) periods.

Two sites exist near TH 11 in the Roseau area. One site is a pre-contact mound, while the other is a pre-contact cemetery. East of the Roseau Airport are scattered artifacts and a potential pre-contact habitation site.

In the Warroad area, one archeological site is located near TH 11. This site is a potential cemetery from the pre-contact and/or contact period.

Federal Endangered and Threatened Species

US Fish and Wildlife threatened and endangered species records were queried to identify species present within Roseau County. The following five threatened, endangered, and candidate species are known to exist within Roseau County:

- Gray wolf (*Canis lupus*) – Threatened
- Northern long-eared bat (*Myotis septentrionalis*) – Threatened
- Canada lynx (*Lynx canadensis*) – Threatened
- Sprague's pipit (*Anthus spragueii*) – Candidate
- Poweshiek skipperling (*Oarisa poweshiek*) – Endangered

It is possible that any and all of these species are present within habitat adjacent to TH 11. There are large forested areas within the project area that could serve as habitat for the Canada lynx, Gray wolf, and Northern long-eared bat. While there are no native prairies in the project area, there are grassland areas that could serve as habitat for Sprague's pipit and Poweshiek skipperling. However, the grassland areas are on the smaller side and may have been disturbed by the initial roadway construction. It is less likely that those two species occur within the project corridor.

State-listed Rare Features

The Minnesota Department of Natural Resources' (MN DNR) Natural Heritage Information Database was reviewed for the presence of rare features within one mile of TH 11. Several species were identified during the review. These species, their habitats, and potential impacts are summarized in the sections below. **Figure 12** shows the approximate location of rare features within one mile of the study area. The MN DNR does not provide exact locations of in order to protect rare features. Additional coordination with the MN DNR will be necessary prior to constructing any improvements on TH 11.

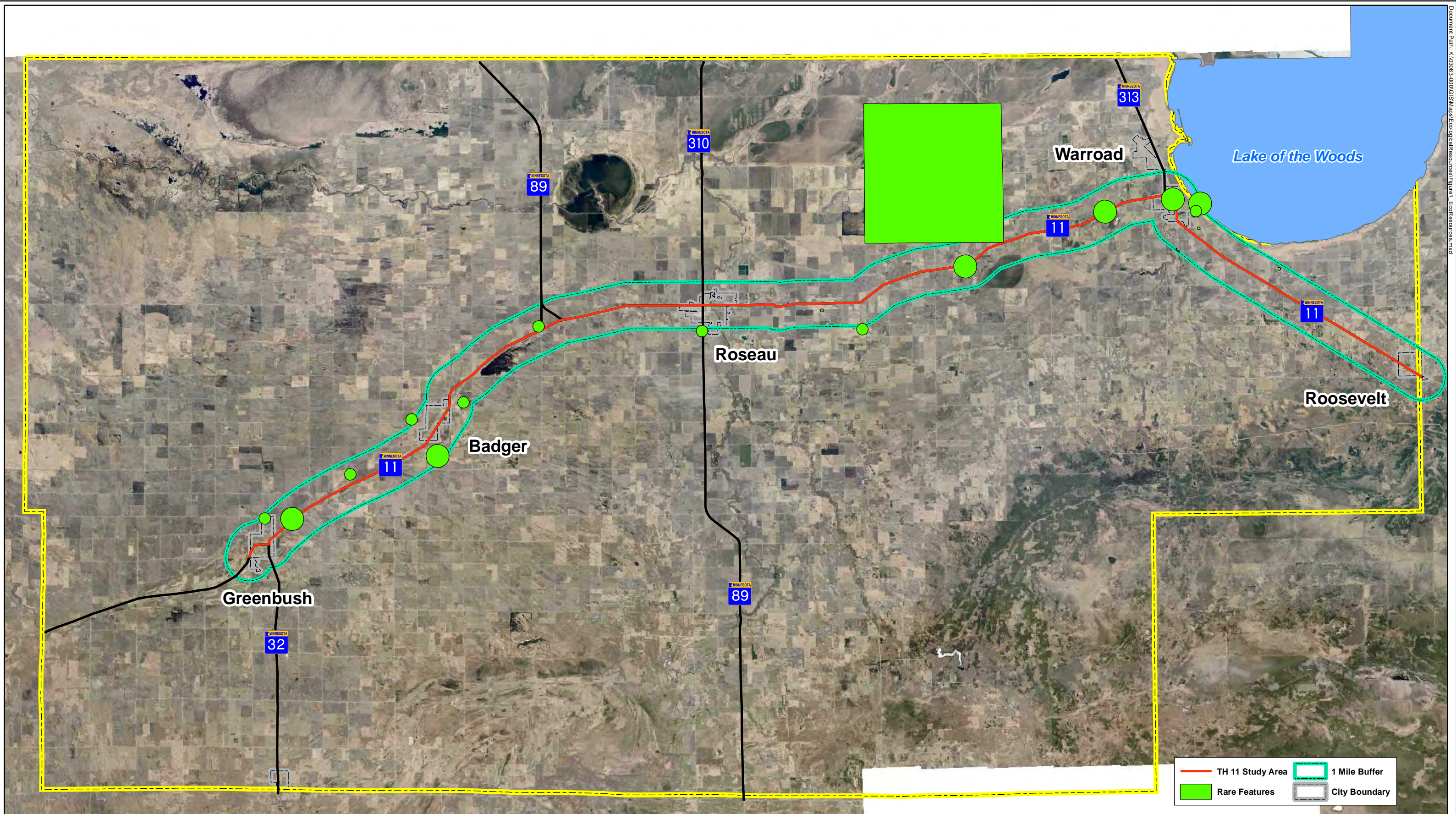


Figure 12
State Listed Rare Features

Marbled godwit (*Limosa fedoa*) – Special Concern – water bird whose habitat consists of native grasslands with sparse to moderate cover adjacent to a complex of wetlands. The bird may use roadside ditches as for foraging. Nesting is within short grassland or cropland stubble. If proposed work within the corridor remains within the existing right-of-way, it is unlikely that work would permanently impact significant habitats utilized by the marbled godwit.

Documented in the following areas:

Greenbush: Near northern city limits (Sections 34 & 35, T161N, R43W; Section 3, T 160N, R43W)

Roseau: Near southern city limits (Sections 23, 24, 25, 26; T162N; R40W)

Approximately 4 miles east of Roseau (Sections 24 & 25, T162N, R39W; Section 19, T162N, R38W)

Blunt sedge (*Carex obtusata*) – Special Concern – herbaceous plant species that grows within native grasslands with dry, sandy, or gravelly soil. Work performed within the previously-disturbed areas surrounding the roadway (the exiting right-of-way) is unlikely to impact this species.

Documented in the following areas:

Greenbush: Near northern city limits (Sections 35 & 36, T161N, R43W; Section 1 & 2, T160N, R43W)

Short-eared owl (*Asio flammeus*) – Special Concern – habitat consists of extensive tracts of open habitats. Work performed within the exiting right-of-way is unlikely to impact this species or its habitat.

Documented in the following areas:

Approximately 0.5 miles west of Badger (Sections 11 & 14, T161N, R42W)

Bald Eagle (*Haliaeetus leucocephalus*) – Special Concern – Protected also by the Bald and Golden Eagle Protection Act. Three nesting areas have been documented within 1 mile of the project corridor; however, all are a minimum of 1,200 feet away from the existing roadway. Based on this distance, if work is performed within the existing right-of-way no impacts to bald eagles are anticipated.

Documented in the following areas:

Approximately 3 miles east of Roseau (Section 23, T162N, R39W)

Approximately 1 mile southeast of Warroad (Section 33, T163N, R36W)

Approximately 5.5 miles southeast of Warroad (Section 12, T162N, R36W)

Lake sturgeon (*Acipenser fulvescens*) – Special Concern – a fish whose habitat consists of moderately clear, large rivers and lakes. They have been documented adjacent to the project corridor. If the proposed project includes impacts to the Warroad River, BMPs that reduce the potential for erosion and sedimentation downstream are recommended. Work within the Warroad River will also be required to avoid the spawning season (March 15 – June 15).

TH 11 Existing Land Use and Environmental Conditions

Documented in the following areas:

Warroad River (Section 28, T163N, R36W)

Nuttall's Sunflower (*Helianthus nuttalli ssp. rydbergii*) – Special Concern – occurs in mesic to wet-mesic native prairies. Work performed within the existing right-of-way of TH 11 is unlikely to impact this species or its habitat.

Documented in the following areas:

Approximately 1 mile south of Warroad (Sections 20, 29, & 30, T163N, R36W)

Northern goshawk (*Accipiter gentilis*) – Special Concern – Documented somewhere within a 35-square mile area north of the project corridor, approximately 7 miles west of Warroad (Sections 35 & 36, T163N, R35W). The last-known record was in 1980, so is likely a historical occurrence. Work performed within the existing right-of-way of TH 11 is unlikely to impact this species or its habitat.

Creek Heelsplitter (*Lasmigona compressa*) – Special Concern – A species of mussel whose habitat consists of sand, fine gravel and mud within creeks, small rivers, and the upstream portions of large rivers. The nearest record is within tributary to the Warroad River, upstream of the proposed project. Work associated with the proposed project is not likely to impact this species. Any work within or near the Warroad River should incorporate erosion and sediment control BMPs to reduce the risk of erosion and sedimentation from the site.

Documented in the following areas:

Approximately 1 mile south of Warroad (Section 5, T162N, R36W)

Jack Pine Forest – A Native Plant Community is documented at two locations within the project corridor. These two stands are some of the last natural jack pine stands west of Warroad. The existing right-of-way for TH 11 is kept clear of trees, so work performed within the existing right-of-way of TH 11 is unlikely to impact these native plant communities.

Documented in the following areas:

Approximately 2 miles west of Warroad (Sections 2, 3, 10, & 11, T162N, R37W; Sections 26, 27, 34, & 35, T163N, R37W)

Jumping Spider (*Marpissa grata*) - A “watchlist” species. Not a protected species.

Upland Sandpiper (*Bartramia longicauda*) – A “watchlist” species. Not a protected species.

Wetlands

The National Wetlands Inventory (NWI) was reviewed to identify wetlands within 500 feet of TH 11. Wetland areas identified as part of the NWI are shown on **Figures 13 – 19**. As potential projects become identified and opportunities for construction occur, field delineations of any wetlands will need to be completed to verify their limits and to identify potential impacts.

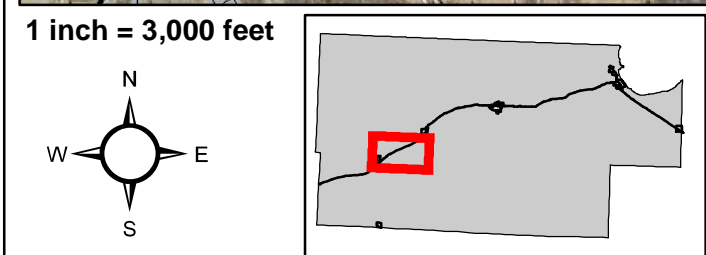
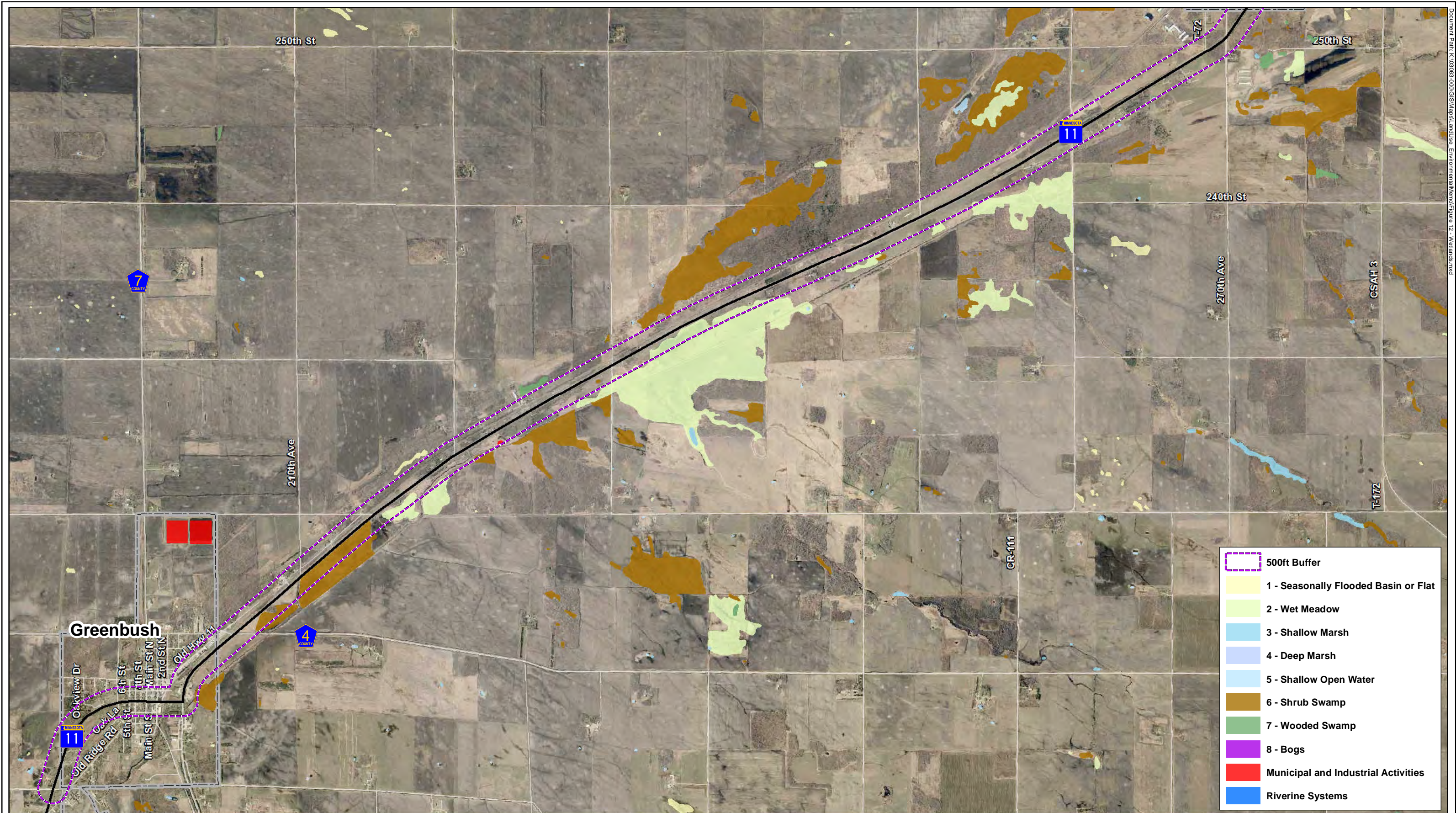


Figure 13
Wetlands - Greenbush



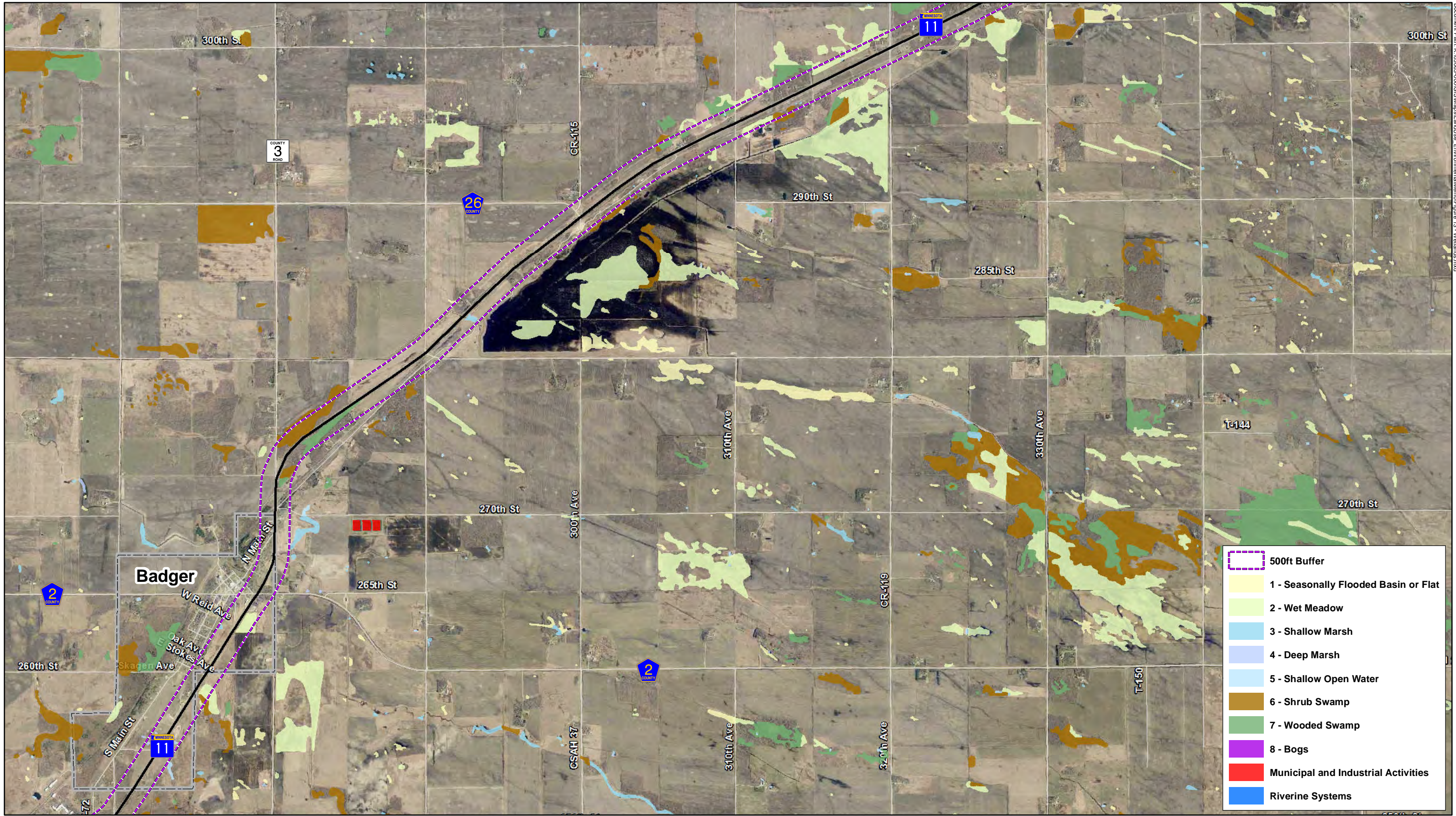
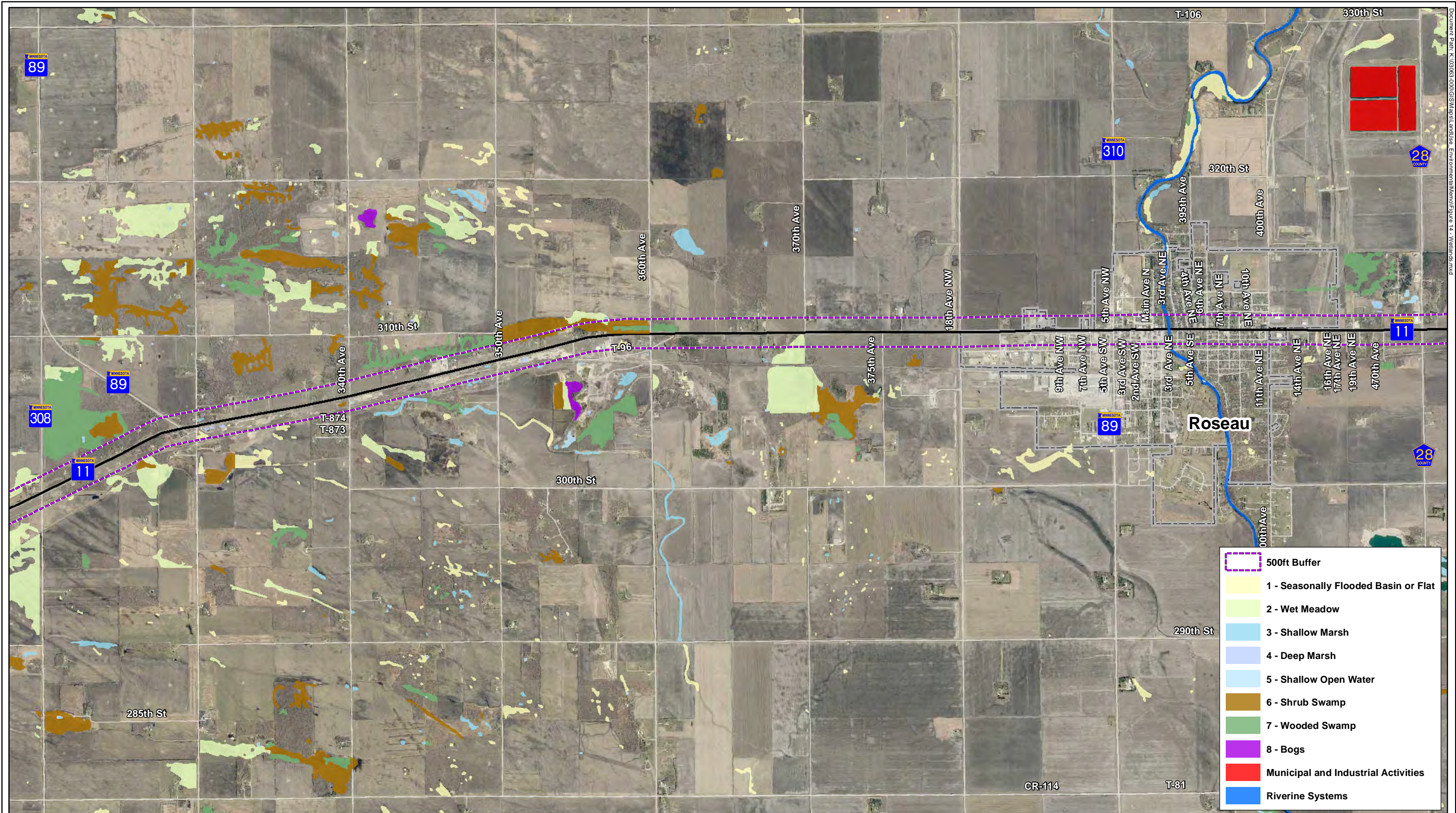
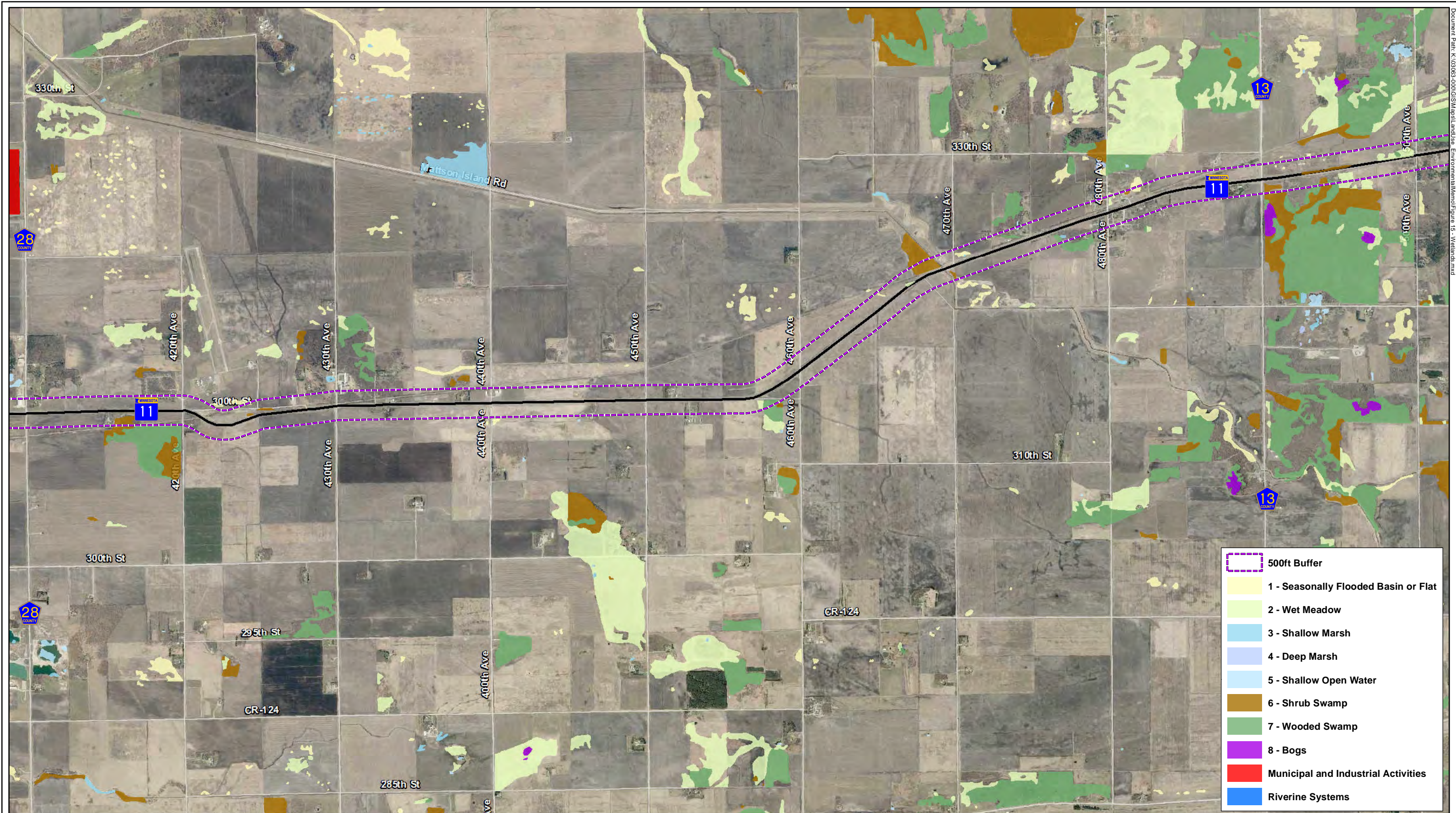


Figure 14
Wetlands - Badger





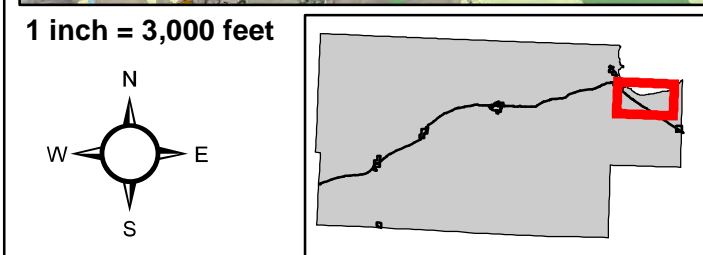
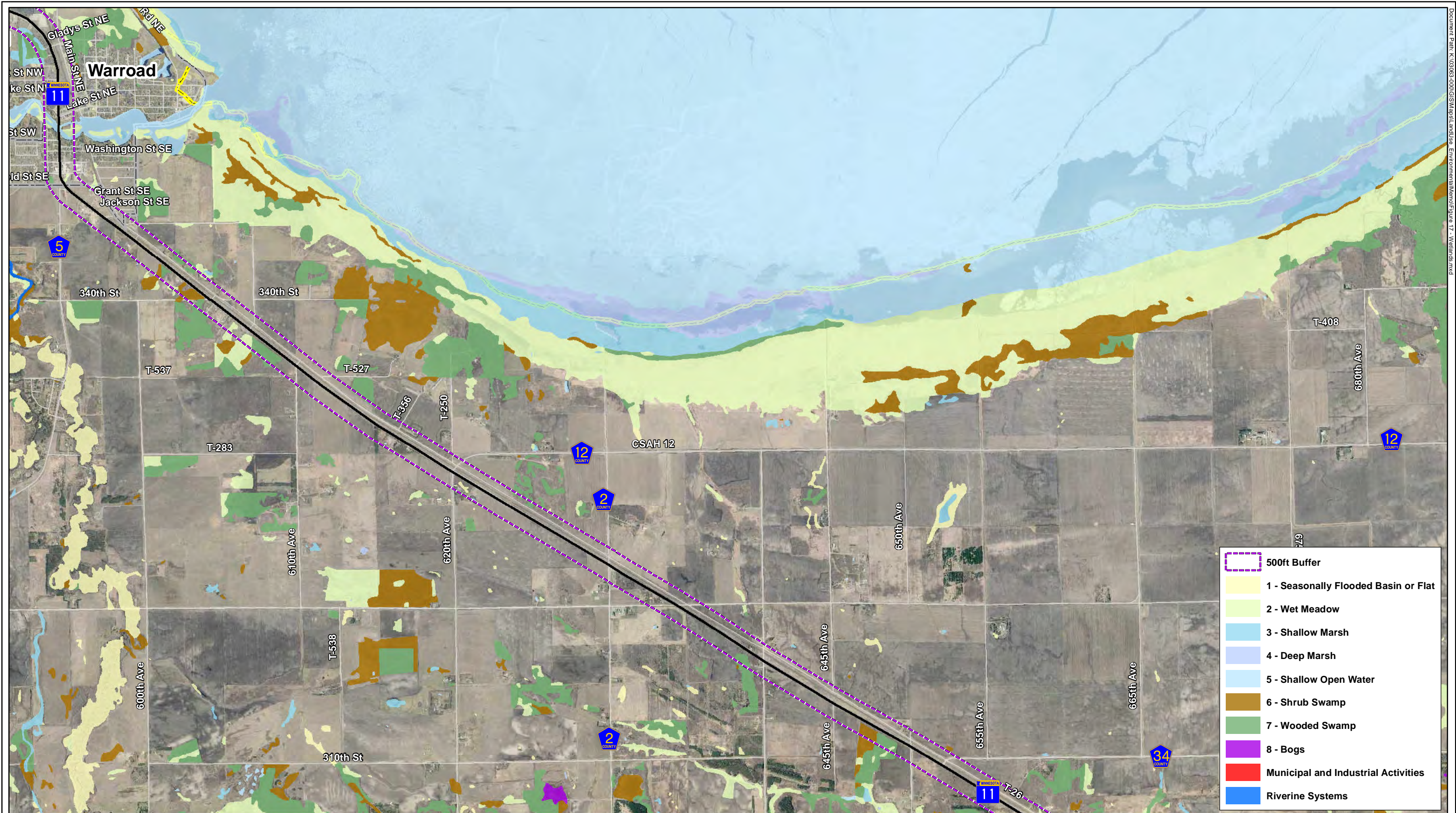


Figure 18
Wetlands - Warroad



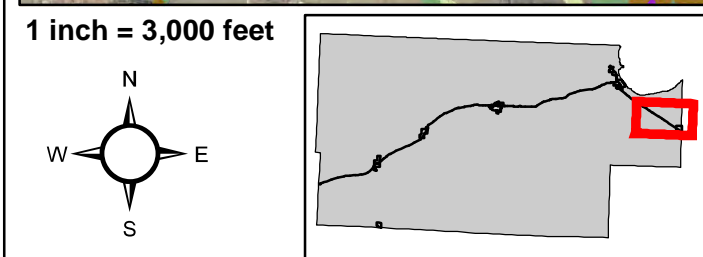
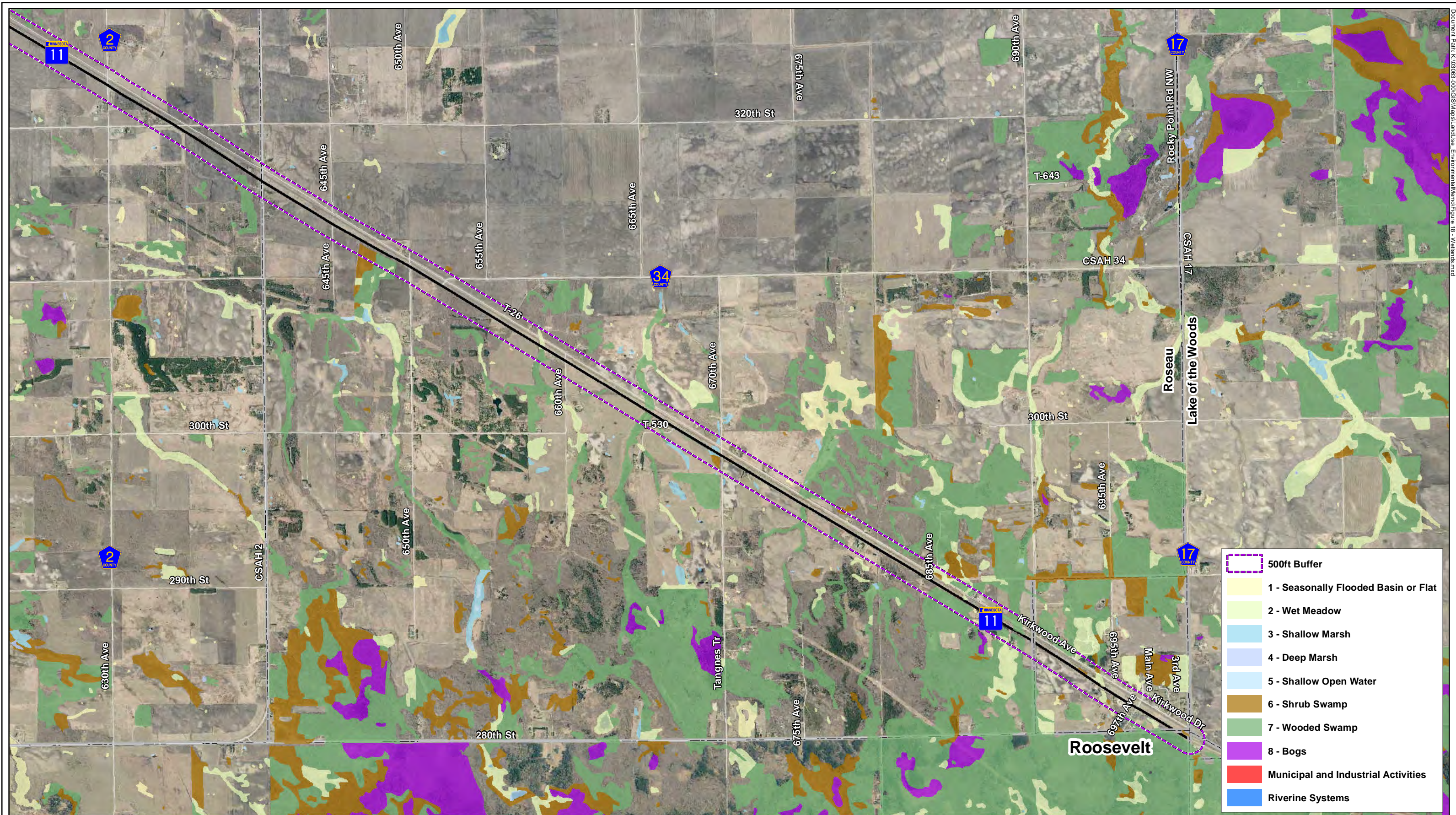


Figure 19
Wetlands - Roosevelt



TH 11 Existing Land Use and Environmental Conditions

Wetlands along TH 11 vary along the corridor. West of Roseau, there are few wetlands within the corridor, further to the east there are more, especially in the areas between Roseau and Warroad and Warroad and Roosevelt.

Within Badger, there is a deep marsh 300 feet west of TH 11 and shallow open water 300 feet east of TH 11.

Just outside of Roseau, there is a deep marsh 100 feet south of TH 11, east of 350th Avenue.

There are a large number of wetlands between Roseau and Warroad. The NWI includes wetlands in the following locations:

- West of 420th Street: Large shrub swamp and wooded swamp, 150 feet south of TH 11.
- West of CSAH 31: Small shrub swamp 50-100 feet north of TH 11.
- West of CSAH 9: Seasonally flooded basin, wooded swamp, and shrub swamp 150 feet south of TH 11. While this record is listed in the NWI, aerial photos indicate that these wetlands appear to be in use for agriculture.
- Along Hay Creek: Small seasonally flooded basins, large shrub swamp within 50 feet north and south of TH 11.
- West of Hay Creek: Wooded swamp 100 feet north and south of TH 11.
- Near 480th Street: Small seasonally flooded basins and shrub swamp north of TH 11.
- Between CSAH 13 and 500th Street: large wetland complex that reaches as close as 100 feet south of TH 11. There is also a shrub swamp and seasonally flooded basin 25 feet north of TH 11.
- Between 500th and 550th Street: large wetland complexes north and south of TH 11, as close as the TH 11 roadway ditch.
- East of 580th Avenue: Wooded and shrub swamp with 100 feet north and south of TH 11. This area also appears to be in use for agriculture.

Within the City of Warroad, there are wetlands within 500 feet of TH 11. Southwest of the TH 11 curve in Warroad, there is a large wooded swamp within 200 feet of the roadway. There are also wetlands adjacent to the Warroad River and seasonally flooded basins south of Garfield Street.

Between Warroad and Roosevelt, there are several wetlands close to TH 11. The NWI lists wetlands in the following locations:

- North and south of 340th Street: Shrub and wooded swamp within 50 feet southwest of TH 11.
- West of CSAH 2: Wooded swamp 150 feet south of TH 11.
- West of 650th Avenue: Shrub and wooded swamp 100 feet south of TH 11.
- Between 650th and 690th Avenues: Several wooded swamps as close as 50 feet south of TH 11. These are generally small complexes, but there is a larger complex near 690th Avenue.
- Between 690th Avenue and Lake of the Woods county line: Small shrub swamp as close as 25 feet north of TH 11.
- Near Lake of the Woods County Line: large wooded swamp as close as 25 feet south of TH 11.

TH 11 Existing Land Use and Environmental Conditions

As potential projects are evaluated, efforts will first be made to avoid impacts to wetlands and if avoidance is not possible, to minimize them to the extent practical.

Hazardous Materials

Contaminated properties can add significant expense to transportation projects if the project requires removal and/or remediation of soils and materials (e.g. buildings with asbestos or other hazardous materials). To better understand potential locations with some type of contamination, the Minnesota Pollution Control Agency (MPCA) database was used to gather information to identify verified or potentially contaminated sites within 500 feet of TH 11. The following databases were consulted on June 29, 2015 as part of this review:

- MPCA "What's in My Neighborhood?" website search
- MPCA Storage Tank Leak site website search

Figures 20-23 show locations identified as having the potential for contamination or hazardous materials on site.

Adjoining Property Listings

According to the MPCA databases, there are 53 sites immediately adjacent to the TH 11 corridor that have the potential for some type of contamination. These sites are grouped into the following categories and included:

- Eighteen (18) Small Quantity Generator listings
 - Indicating the site generates 1-1000 kilograms of hazardous waste per month
- Fifteen (15) Multiple Activities listings
 - Indicating the site is listed on more than one MPCA tracked databases
- Eight (8) Leak listings
 - Indicating a petroleum leak has occurred at the site resulting from a tank system
- Five (5) Tank listings
 - Indicating a storage tank is present, or has been present at the site
- Three (3) Water Permit listings
 - Indicating a permit is in place to limit erosion and pollution during and after construction at the site
- One (1) Wastewater Discharge listing
 - Indicating treated wastewater is discharged onto land or water
- One (1) Feedlot listing
 - Indicating livestock are contained in lots where manure may accumulate

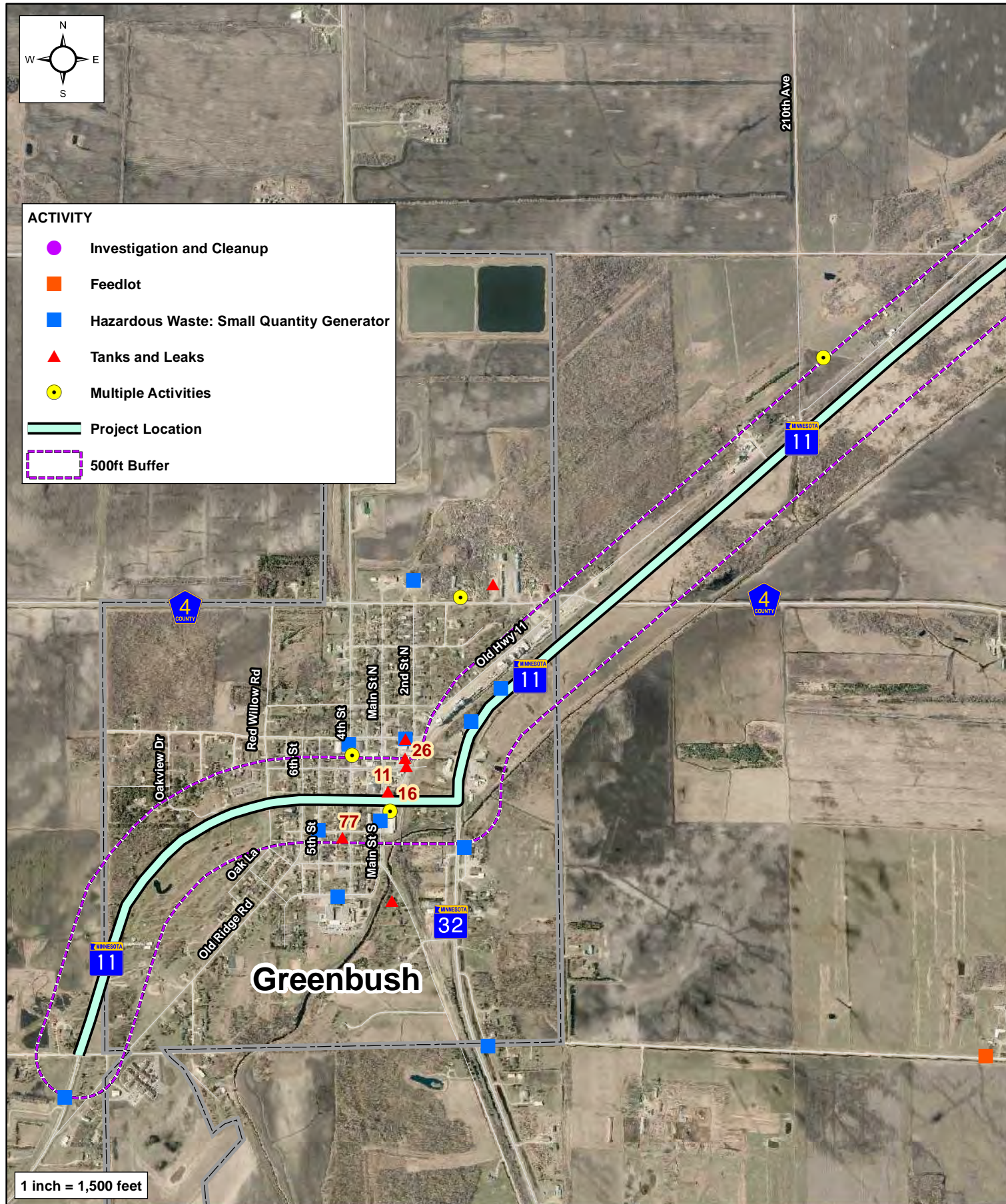


Figure 20
MPCA What's In My Neighborhood Search Results
Greenbush



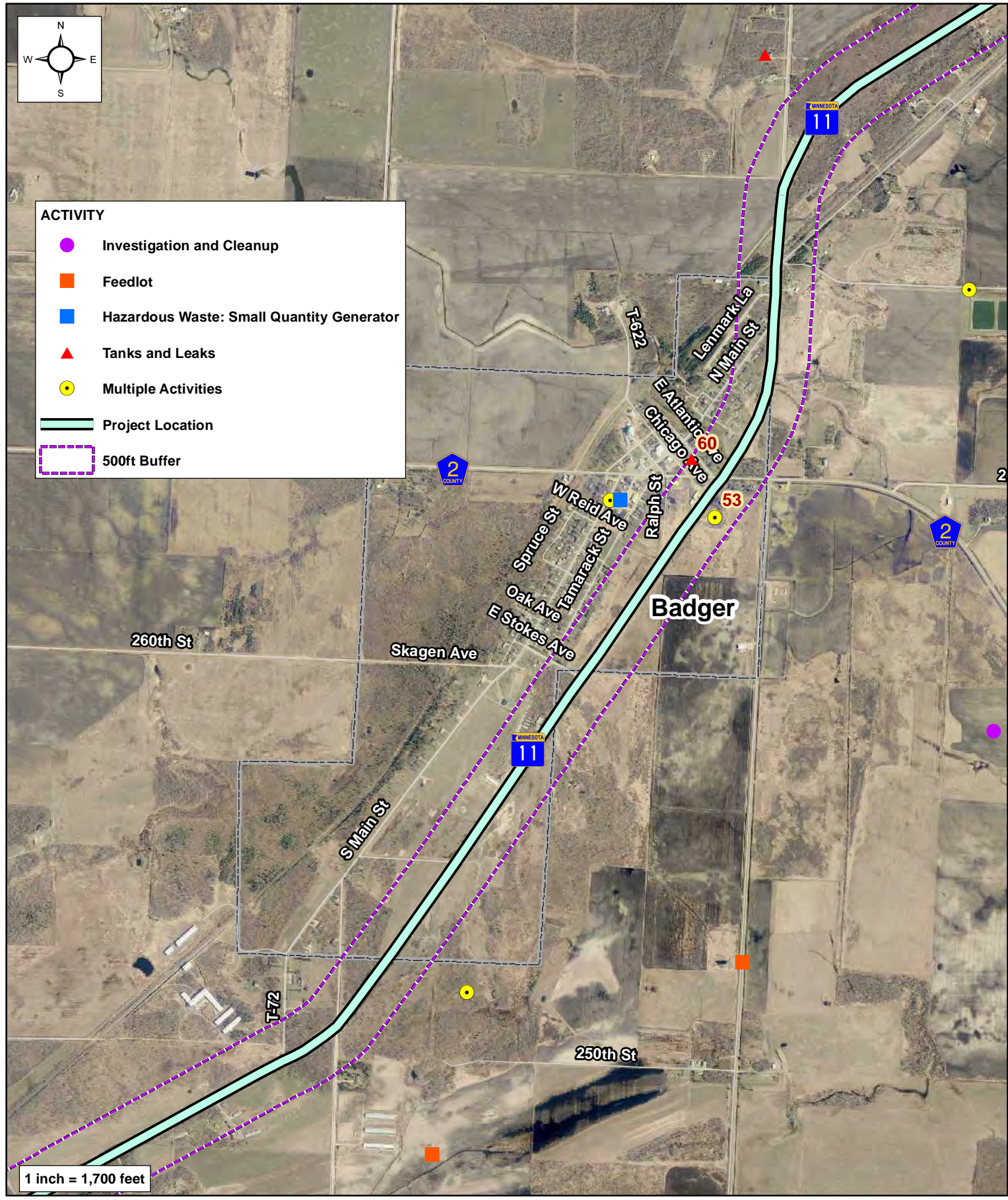
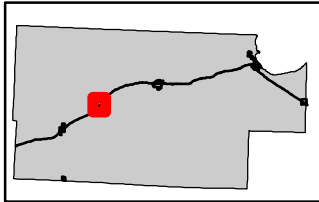


Figure 21
MPCA What's In My Neighborhood Search Results
Badger



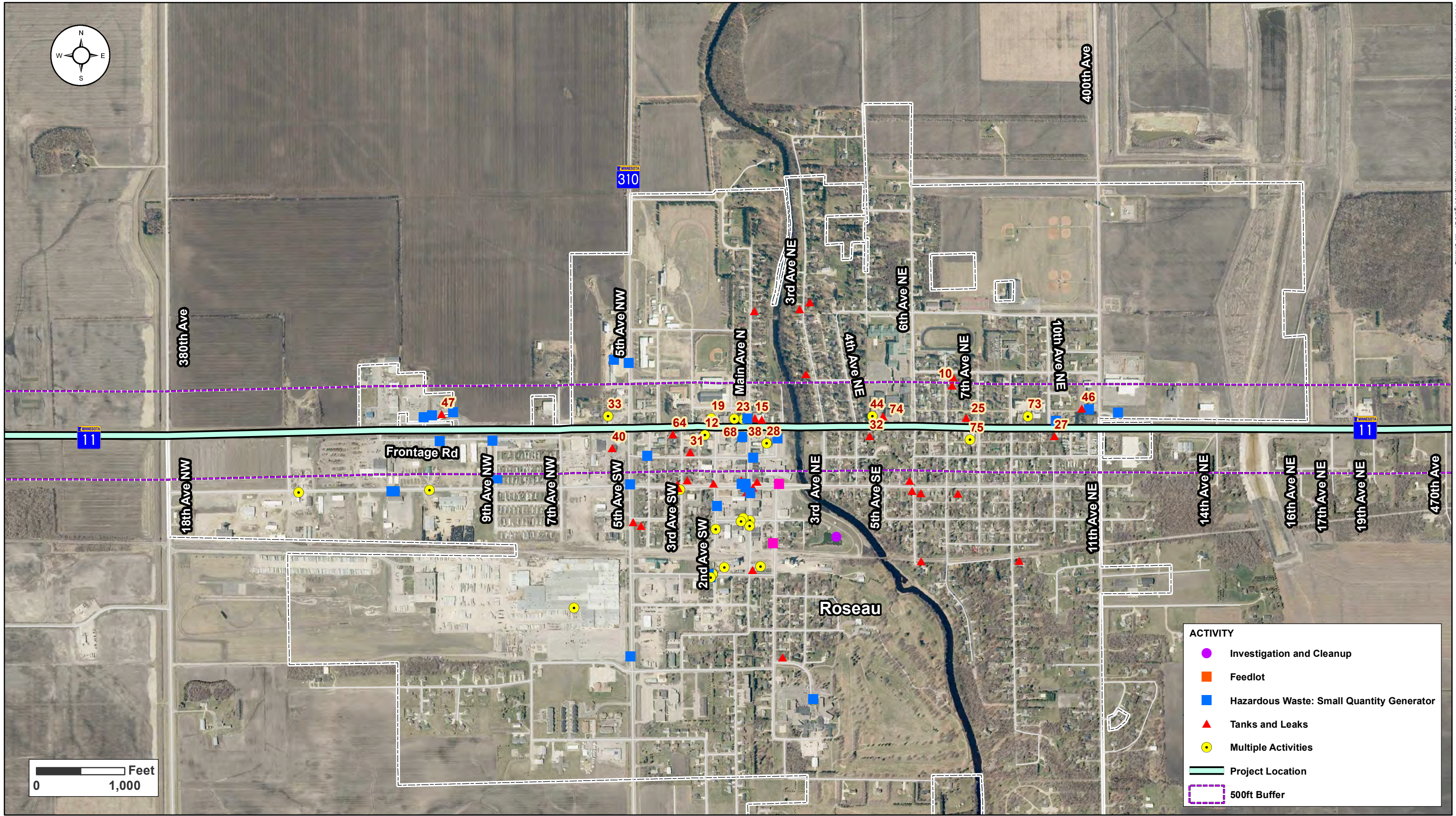
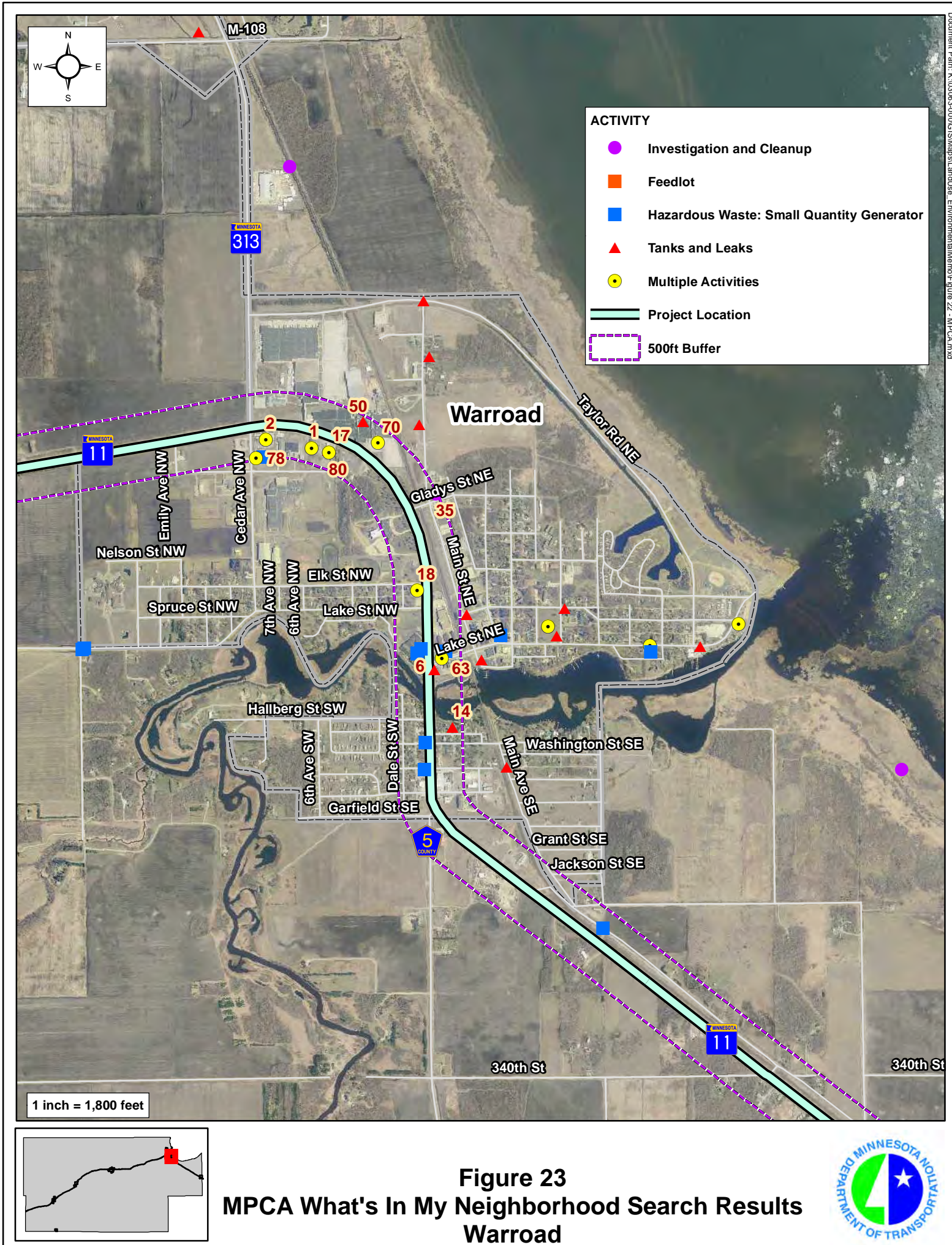


Figure 22
MPCA What's In My Neighborhood Search Results
Roseau





TH 11 Existing Land Use and Environmental Conditions

None of the identified adjoining listings directly indicate a hazardous material spill or release except for the following:

- Leak listings – Indicate a petroleum leak has occurred. All adjoining leaks have been issued site closure by the MPCA, except for Sites 17 and 18, indicating an investigation and/or cleanup has been completed and the leak has been determined not to pose a threat to human health and the environment in its current state. Site closure does not indicate the site is free of contamination. Known leaks have occurred at the following locations:
 - Site 6: Riverside Bait and Tackle, 102 Lake Street E, Warroad
 - Site 11: Foss Storage Property/Former Gas Station, 102 Main Street N, Greenbush
 - Site 12: Roseau Mobil, 204 3rd Street NW (TH 11), Roseau
 - Site 15: Main Avenue in Roseau, 300 Main Avenue Block, Roseau
 - Site 16: Residence, 111 Main Street, Greenbush
 - Site 17: Holiday Station, 901 N State Street (TH 11), Warroad
 - Site 18: Holiday Station, 203 N State Street (TH 11), Warroad
 - Site 19: Pro Automotive, 203 3rd Street NW (TH 11), Roseau
 - Site 33: Holiday Station, TH 11 and TH 310 intersection, Roseau
 - Site 38: Former JC Penney site, 106-109 3rd Street N (TH 11), Roseau
 - Site 44: Roseau School, 509 3rd Street NE (TH 11), Roseau
 - Site 50: Marvin Windows, TH 313 N, Warroad
 - Site 53: Roseau County Coop, 111 TH 11, Badger
 - Site 64: Residence, 203 3rd Avenue NW, Roseau
 - Site 68: Northland Tire, 117 3rd Street NW (TH 11), Roseau
 - Site 73: Roseau Electric Coop, 903 3rd Street NE (TH 11), Roseau
 - Site 75: Former Arneson's Direct Service, 703 3rd Street NE (TH 11), Roseau
 - Site 80: Super America, 907 N State Street (TH 11), Warroad
- Voluntary Investigation and Cleanup (VIC) listing – Inclusion on this database indicates non-petroleum contamination has been discovered at the site and the Voluntary Investigation and Cleanup (VIC) Program was utilized for redevelopment. The only VIC listing within the TH 11 corridor is the Marvin Windows & Doors Site at 401 State Ave N (TH 11) in Warroad. The status of this site is listed as inactive.

If excavation is planned in the vicinity the identified adjoining Leak or VIC sites it is possible contaminated soils and/or groundwater will be encountered that will require management during construction. Prior to constructing any improvements, a subsurface investigation may be warranted in the vicinity of the adjoining Leak and VIC sites to assess contamination concentrations (if any) that will be encountered during construction.

As shown by the list above, the actual number of adjoining sites that warrant potential investigation is fairly limited given the number of sites potentially identified. Adjoining sites are particularly important on smaller projects where the impact is more limited. On larger projects that would add travel lanes, significantly change corridor geometrics or add an interchange, the property within 500 feet of the

TH 11 Existing Land Use and Environmental Conditions

corridor becomes more important to review. Additional leak sites within 500 feet of the corridor include the following:

- Site 10: Residence, 314 7th Avenue NE, Roseau
- Site 14: Residence, 107 Riverview Drive SE, Warroad
- Site 28: Rem Roseau, 208 2nd Avenue NE, Roseau
- Site 31: Residence, 210 2nd Street NW, Roseau
- Site 60: Borgen Implement, Atlantic Ave E, Badger
- Site 63: D&E Sports Shop, 202 E Lake Street, Warroad
- Site 77: Residence, 210 4th Street S, Greenbush
- Site 78: Warroad High School, 510 Cedar Ave, Warroad