



2020 ALTERNATIVE URBAN AREAWIDE REVIEW UPDATE

I-35E CORRIDOR AUAR UPDATE

LINO LAKES, MN

APRIL 15, 2020

Prepared for:
City of Lino Lakes
600 Town Center Parkway
Lino Lakes, MN 55014

WSB PROJECT NO. 015144-000



I-35E CORRIDOR AUAR UPDATE

This document provides for an update to the Lino Lakes I-35E Corridor AUAR. The original AUAR was completed in 2005. Updates were adopted in 2010 and 2015. This document serves as the 2020 five-year update. An abbreviated version of the EAW questionnaire form has been used for this update to assist in the review of this AUAR Update. The following figures and appendices are included in this Update.

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1. **Project title:** Lino Lakes I-35E Corridor AUAR Update

2. **Proposer:** NA

3. **RGU City of Lino Lakes**

Contact person: Michael Grochala
Title: Community Development Director
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Phone: (651) 982-2427
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4. **Reason for EAW Preparation:** (check one)

NA

5. **Project Location:**

County: Anoka

City/Township: Lino Lakes

6. **Project Description:**

Overview

The City of Lino Lakes adopted the I-35E Corridor AUAR in conformance with Minnesota Rules 4410 in 2005. The City has subsequently updated the AUAR every five years. The AUAR study area is approximately 4,500 acres and is located in the northeastern portion of the City as shown in **Figure 1**.

Development Scenarios

Three development scenarios were included in the 2005 AUAR and Updates. The City has since updated its 2040 Comprehensive Plan and reviewed the scenarios. Three updated scenarios are included in this update and are consistent with the original AUAR. These revised scenarios are within the original density thresholds of the original AUAR.

Revised Scenario 1 – Draft 2040 Full Build Out Land Use

This scenario is in conformance with the current, draft 2040 Comprehensive Plan. This scenario has a higher industrial use and less residential than the Revised Scenario 2. It is still within the assumptions of the original AUAR. **Table 1** provides a summary of this uses for this scenario.

Figure 2 shows the studied land uses.

Revised Scenario 2

This scenario has higher residential and commercial land use, with less industrial than Revised Scenario 1. It is still within the assumptions of the original AUAR. **Table 1** provides a summary of this uses for this scenario. **Figure 3** shows the studied land uses.

2030 Comprehensive Plan

To address comments obtained during the AUAR Update comment period, the current 2030 Comprehensive Plan scenario has been included. This scenario is in conformance with the currently approved Comprehensive Plan. It is the lowest in terms of residential development, has slightly less commercial development, and similar industrial development anticipated to the other two scenarios. **Figure 4** shows the 2030 Comprehensive Plan land use.

Table 1: Summary of 2005 and 2020 AUAR Scenarios

Land Use	2005 AUAR Scenarios (Old Scenarios)	2020 Scenarios (Revised Scenarios)
	Scenario 1	Revised Scenario 1
Residential (units)	2,237	4,888
Commercial (sf)	2,985,733	5,084,819
Industrial (sf)	11,175,035	12,817,289
	Scenario 2	Revised Scenario 2
Residential (units)	5,715	7,403
Commercial (sf)	5,617,890	5,306,914
Industrial (sf)	9,570,045	10,053,499
	Scenario 3	2030 Comprehensive Plan
Residential (units)	8,659	2,455
Commercial (sf)	4,141,554	3,228,667
Industrial (sf)	5,829,722	10,128,296

Development timing is dependent on market conditions and is anticipated to continue over the next 5-40 years. Some development has occurred within the study area as shown in **Figure 5**.

Planned Infrastructure

Development in the study area will require infrastructure improvements. The analysis for the stormwater, water, wastewater, and traffic have been updated as part of this AUAR Update to evaluate the revised scenarios. These analyses are included in the appendices.

Stormwater: The stormwater analysis was updated based on the revised development scenarios. Additionally, rules and regulations have changed over the years regarding stormwater management in the study area since the original AUAR was completed. Stormwater will be required to be managed based on local, regional, and state water resource rules. The updated analysis indicates that runoff volumes will be reduced by approximately 70% compared to existing conditions based on implementation of stormwater management controls. This will also reduce downstream pollutant loading. **Appendix B** contains the stormwater management analysis.

Water: The projected water demands for the revised scenarios have remained within the parameters discussed in the original AUAR. These scenarios are anticipated to increase the annual water use above the current authorized appropriated volume for the City, similarly as anticipated in the original AUAR. The mitigation measures for water appropriation and use have been reviewed and minor revisions were made. **Appendix C** contains the water appropriation analysis.

Wastewater: Wastewater within the study area would be conveyed with existing and future sanitary sewer and then directed to two Metropolitan Council Environmental Services (MCES) interceptors. Wastewater is then conveyed through the regional collection system to the Metropolitan Wastewater Treatment Plant. The revised analysis projects less wastewater flow than anticipated in the original AUAR. The mitigation measures have been revised and no changes were needed with this Update. **Appendix D** contains the wastewater management analysis.

Traffic: The traffic analysis was updated based on the revised scenarios. This incorporated the current existing conditions and projected 2040 conditions. The analysis shows that future traffic generated with the revised development scenarios will be less than those assumed in the original AUAR. No changes to the mitigation measures are needed. **Appendix E** contains the traffic analysis.

Approved Development within the Study Area

Since the 2015 AUAR Update, some anticipated development did not occur, and some projects were constructed within the study area. **Figure 5** shows the areas that have developed in the study area. Since the 2015 Update, the following has occurred in the study area:

- Watermark: Phase 1 for Watermark (formerly planned as the Hardwood Creek Site) is under development. The full plan includes a total of 864 residential units (692 single family and 172 townhomes).
- Distribution Alternatives: A 402,000 SF distribution facility was completed in 2016.
- 21st Avenue: A ½ mile extension of 21st Avenue was completed in 2016.
- Eastside Villas: A 32 lot single-family subdivision is under construction.
- Main Street Shoppes: A 9,000 SF multi-tenant commercial building was completed.
- Moon Marsh and Main Street Villages that were noted in previous updates were not constructed and their permits expired.

AUAR Mitigation Plan

The mitigation plan that has been developed as part of the AUAR process has been revised with this Update. It is included in **Appendix H**.

7. **Cover types:** Estimate the acreage of the site with each of the following cover types before and after development:

The original AUAR sites the Minnesota Land Cover Classification System (MLCCS). This data is applicable today. Some areas as shown in **Figure 5** have developed. The land cover continues to be consistent with the original AUAR with planted or cultivated areas, urban areas, wooded and shrub areas, and wetlands.

The Conservation Design Framework outlined in the AUAR has continued to be carried forward in the mitigation plan. This framework outlines open space and corridor space where some areas would be preserved, and some areas would be reviewed for development that could be inclusive to open space.

- 8. Permits and approvals required:** List all known local, state and federal permits, approvals, certifications, and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing, and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Unit of Government	Type of Application	Status
Federal		
Army Corps of Engineers	Section 404 Permit	To be Applied for
State		
Minnesota Environmental Quality Board	Environmental Assessment (AUAR)	In progress
Minnesota Pollution Control Agency	Section 401 Water Quality Certificate	To be Applied for
	NPDES/SDS General Permit	To be Applied for
	Sanitary Sewer Extension Permit	To be Applied for
State Historic Preservation Office	Cultural Resources Review	To be Applied for
Minnesota Department of Transportation	Use of or Work within MnDOT right of way	To be Applied for
	Drainage Permit	To be Applied for
Minnesota Department of Natural Resources	Water Appropriations Permit	To be Applied for
	Preliminary Well Construction Assessment	To be Applied for
	Public Waters Work Permit	To be Applied for
	General Permit 97-0005 for Temporary Water Appropriations (need if more than 10,000 gpd of water is appropriated)	To be applied for, if necessary
Minnesota Department of Health	Watermain Extension Approval	To be Applied for
	Sanitary Sewer Extension Permit Approval	To be Applied for
	Well Location and Construction Approval	To be Applied for
Regional		
Rice Creek Watershed District	Erosion and Sediment Control Plan Approval	To be Applied for
	Stormwater Management Plan Approval	To be Applied for
	Wetland Delineation Boundary Confirmation	To be approved upon completion of wetland delineation
	Certificate of Wetland Exemption	To be Applied for
	Wetland Impact/Replacement Application	To be approved upon completion of wetland delineation

Unit of Government	Type of Application	Status
Metropolitan Council	Sanitary Sewer Service Connection Approval	To be Applied for
County		
Anoka County	County Roadway Access Permits	To be Applied for
Local		
City of Lino Lakes	Site Plan Approval	To be Applied for
	AUAR and Mitigation Plan Approval	Ongoing
	Planned Unit Development Approval	To be Applied for
	Preliminary Plat Approval	To be Applied for
	Final Plat (multiple) Approval	To be Applied for
	Grading, Excavation and Foundation Permits (multiple)	To be Applied for
	Building Permits (multiple)	To be Applied for
	Sanitary Sewer Connection Permit (multiple)	To be Applied for
	Municipal Water Connection Permit (multiple)	To be Applied for
	Use Permit – Floodplain District	To be Applied for
	City Roadway Access/Crossing Permits	To be Applied for
	Comprehensive Plan Amendment(s)	To be Applied for

9. Land use:

No significant changes to the original AUAR are noted for this section. The surrounding land uses are residential, highway, commercial, industrial, agricultural, and open space. The scenarios are consistent with development that has occurred in the area and compatible with adjacent land uses.

10. Geology, soils, and topography/land forms:

The soils and geology of the study area have not changed from the original AUAR. The area is within the Anoka Sandplain and has a flat topography. The Anoka County Soil Survey shows numerous types of soils in the study area including loamy fine sands, fine sandy loams, and hydric soils in wetland areas.

11. Water Resources:

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

- i. **Surface water – lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

Surface water in the study area remains the same as the original AUAR and includes numerous wetlands and water bodies. Of note continues to be Peltier Lake (#2000400), Rondeau Lake (#2001500), Clearwater Creek (#82006a), and Hardwood Creek (#0213a). Based on a review of information from the MPCA, impaired waters in the study area include:

- Peltier Lake
- Clearwater Creek

- Hardwood Creek

Additional information can be found in **Appendix B** which contains an updated analysis of stormwater management for the study area.

- ii. **Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.**

As indicated in the original AUAR, the study area has shallow groundwater. Additional information about groundwater can be found in **Appendix C**.

- b. **Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.**

- i. **Wastewater – For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.**
 - 1) **If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.**
 - 2) **If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.**
 - 3) **If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.**

Updated analysis on the wastewater system can be found in **Appendix D**.

- ii. **Stormwater – Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.**

Updated analysis on the stormwater impacts system can be found in **Appendix B**.

- iii. **Water appropriation – Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use, and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.**

Updated analysis on water system impacts can be found in **Appendix C**.

iv. Surface Waters

- a) Wetlands – Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.**
- b) Other surface waters – Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.**

Impacts to wetlands and surface waters include potential impacts associated with filling or draining as development occurs. These impacts were contemplated in the original AUAR. Estimates of wetland impact for the study area are difficult to anticipate without specific site plans. However, these impacts are anticipated to be typical of development and are subject to local, state, and federal wetland rules through the Rice Creek Watershed District, Wetland Conservation Act, US Corps of Engineers, Minnesota Department of Natural Resources, and the Minnesota Pollution Control Agency. Hardwood Creek and Peltier Lake are impaired waters. Impacts will need to meet the sequencing requirements or water quality regulations and wetland replacement and/or treatment may be needed. Replacement could occur on-site or through the purchase of wetland banking credits. No significant difference in analysis from the original AUAR is needed for this Update.

12. Contamination/Hazardous Materials/Wastes:

- a. Pre-project site conditions – Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.**

No significant changes to existing conditions in relation to existing contamination or hazards have occurred based on a review of “What’s In My Neighborhood.” A summary of the review is included in **Appendix G**.

- b. Project related generation/storage of solid wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.**

There are no changes from the original AUAR in terms of solid waste assumptions.

- c. Project related use/storage of hazardous materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.**

As indicated in the original AUAR, there is the potential for location gas stations to be included as development occurs with the appropriate land use and zoning per scenario. A gas station or convenience store would have underground storage tanks. There may also be light industrial development that includes storage of diesel fuel for operations. These types of developments would be required to meet all other state and federal permitting and guidance for operations.

- d. Project related generation/storage of hazardous wastes – Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.**

Generation of significant amounts of hazardous wastes are not anticipated with development of either of the scenarios. Waste generated will be of similar nature to residential, light industrial, and commercial uses and will be required to comply with applicable state laws.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.**
- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-____) and/or correspondence number (ERDB-20200206) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.**
- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.**
- d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.**

Information from the DNR Natural Heritage Information Database was obtained for the AUAR Update. This information is similar to the information obtained in the previous updates and the original AUAR. The mitigation plan contains measures that acknowledge the natural resource features in the area. The DNR NHIS information is included in **Appendix F**.

14. Historic properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The State Historic Preservation Office was contacted regarding historic resources in the area. The resources are similar to past updates (**Appendix F**). The City has a robust review for cultural resources when development is proposed, and the mitigation plan is adequate to address this issue.

15. Visual:

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

No changes from previous AUARs.

16. Air:

a. Stationary source emissions – Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

Not applicable to an AUAR.

b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

An updated traffic study is included in **Appendix E**. The traffic generation is within the parameters of the original AUAR.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

No changes from the original AUAR.

17. Noise:

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

No changes from the original AUAR.

18. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.
- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system.
If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance.
- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

An updated traffic study is included in **Appendix E**.

19. Cumulative potential effects: (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

NA to AUAR

20. Other potential environmental effects: If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No additional environmental effects have been identified.

Appendix A

Figures

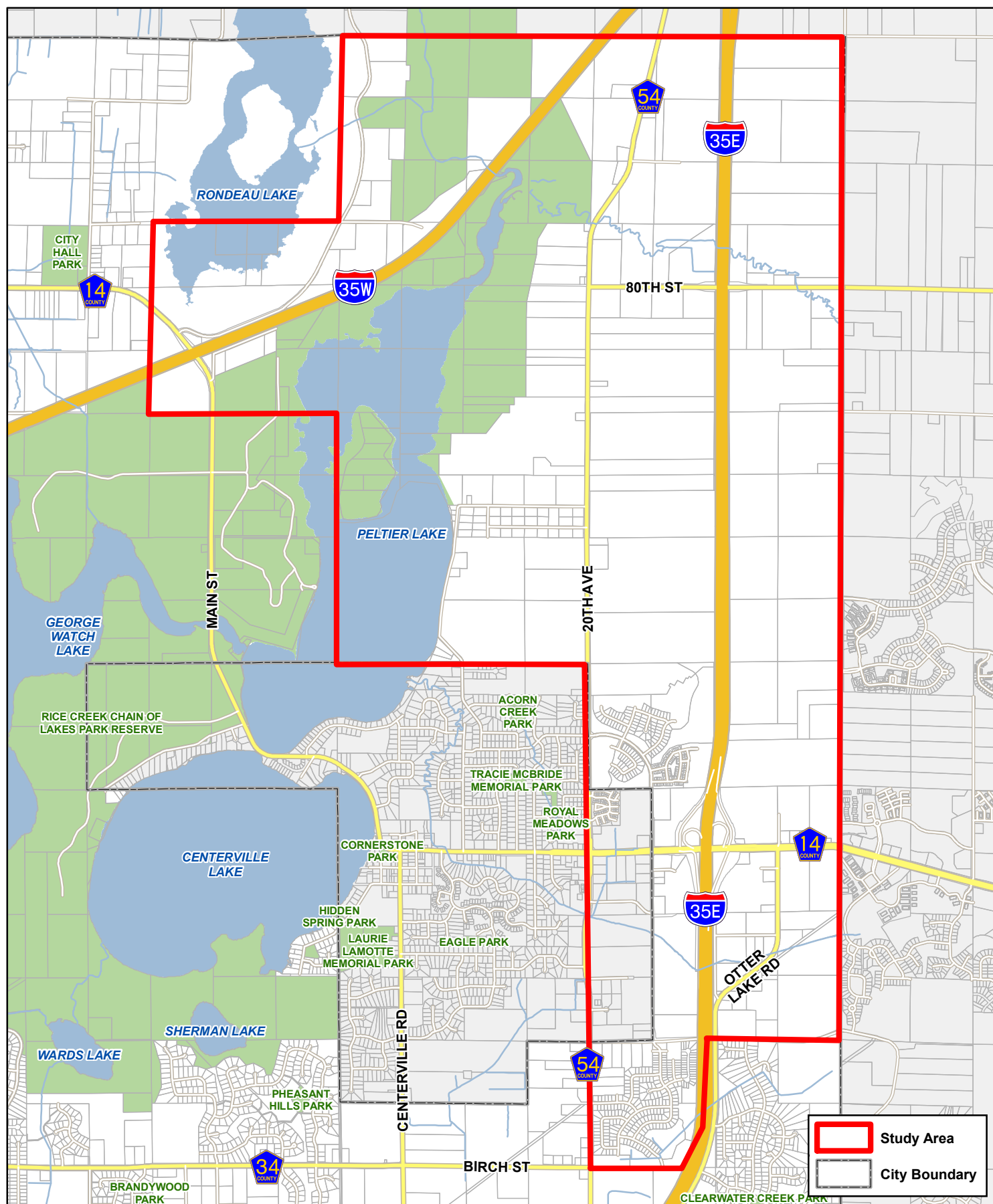
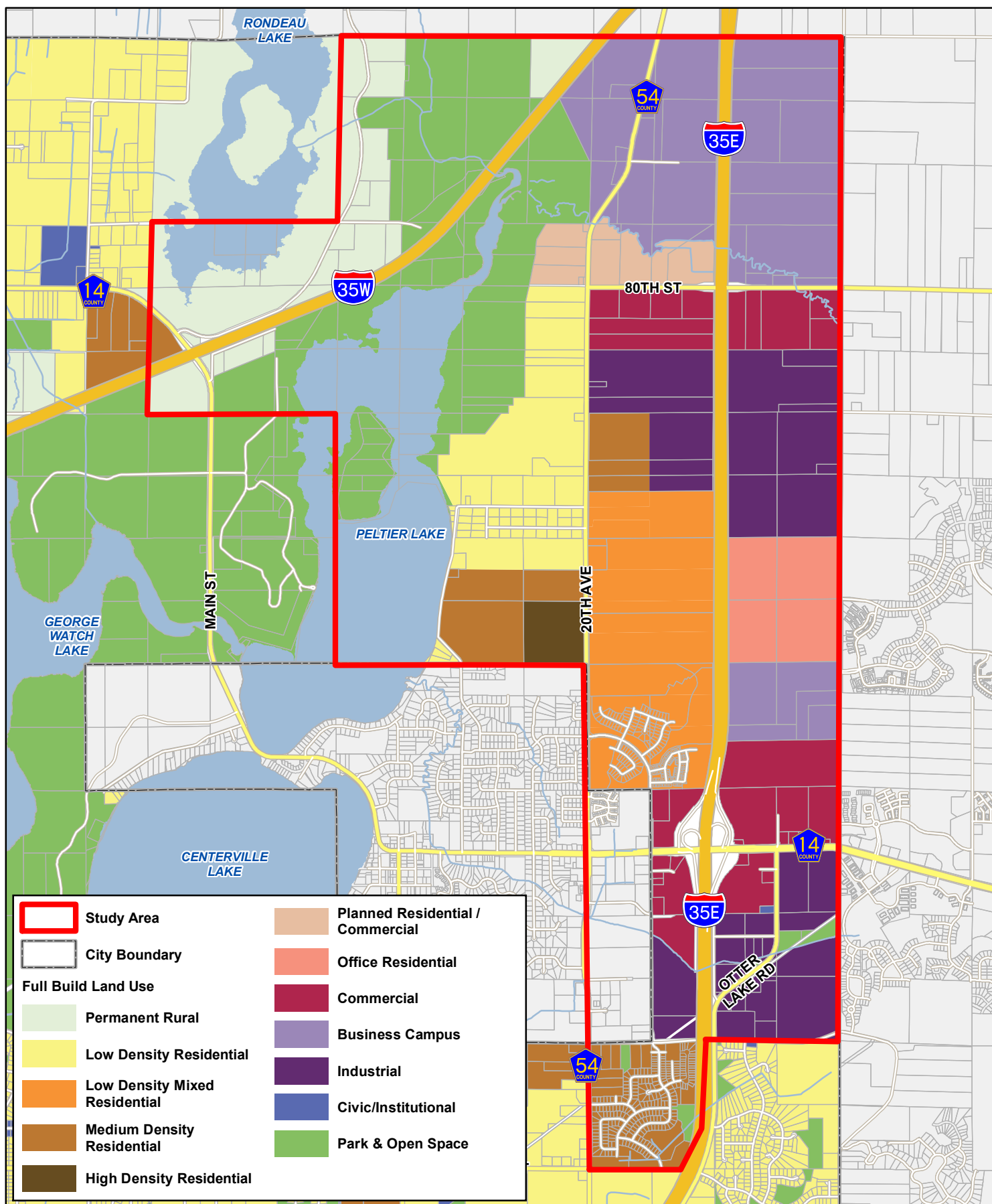


Figure 1 - Project Location
I-35 Corridor AUAR Project
Lino Lakes, MN



**Figure 2 - Revised Scenario 1
Draft 2040 Full Build Out Land Use**

I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



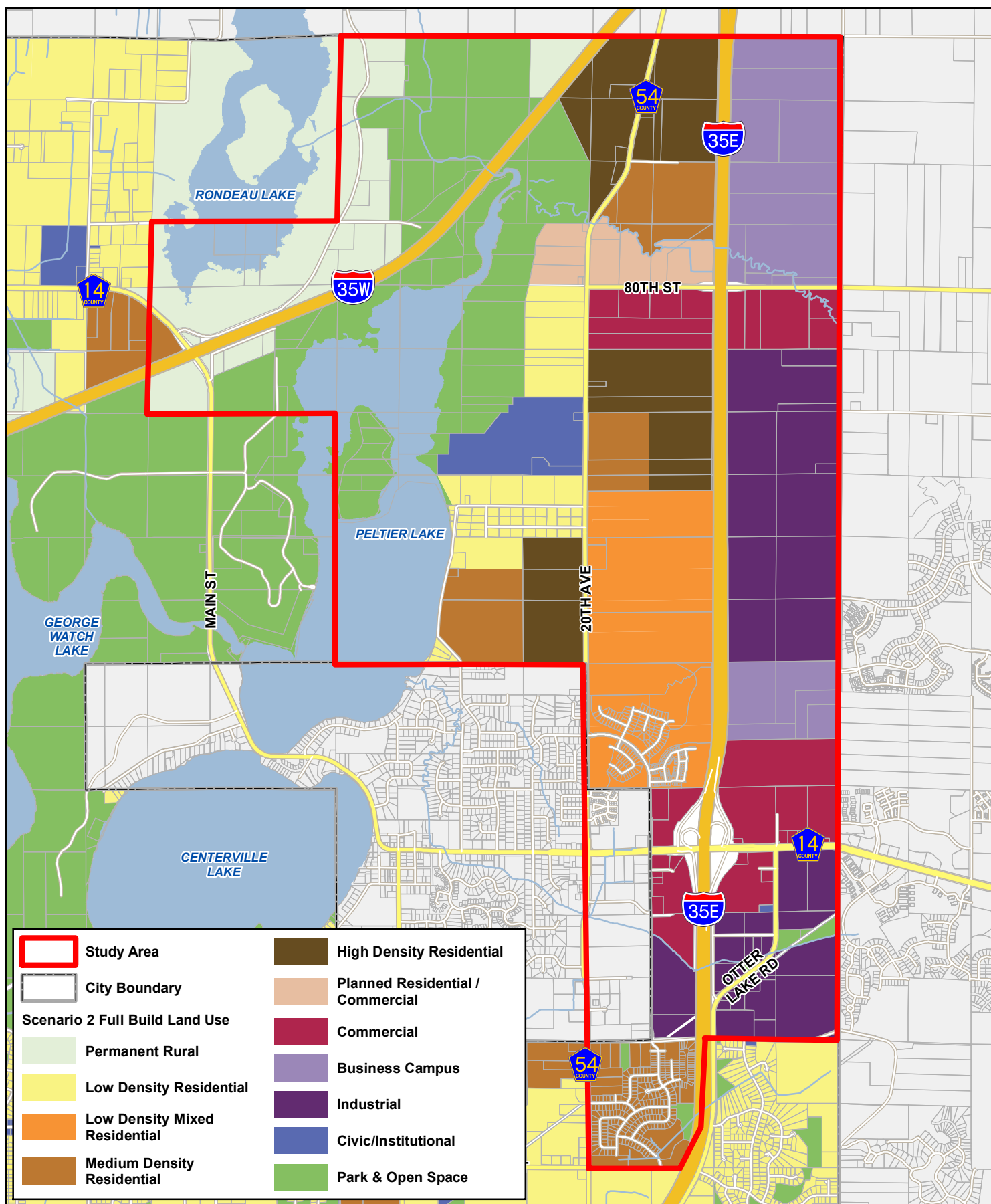


Figure 3 - Revised Scenario 2

I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



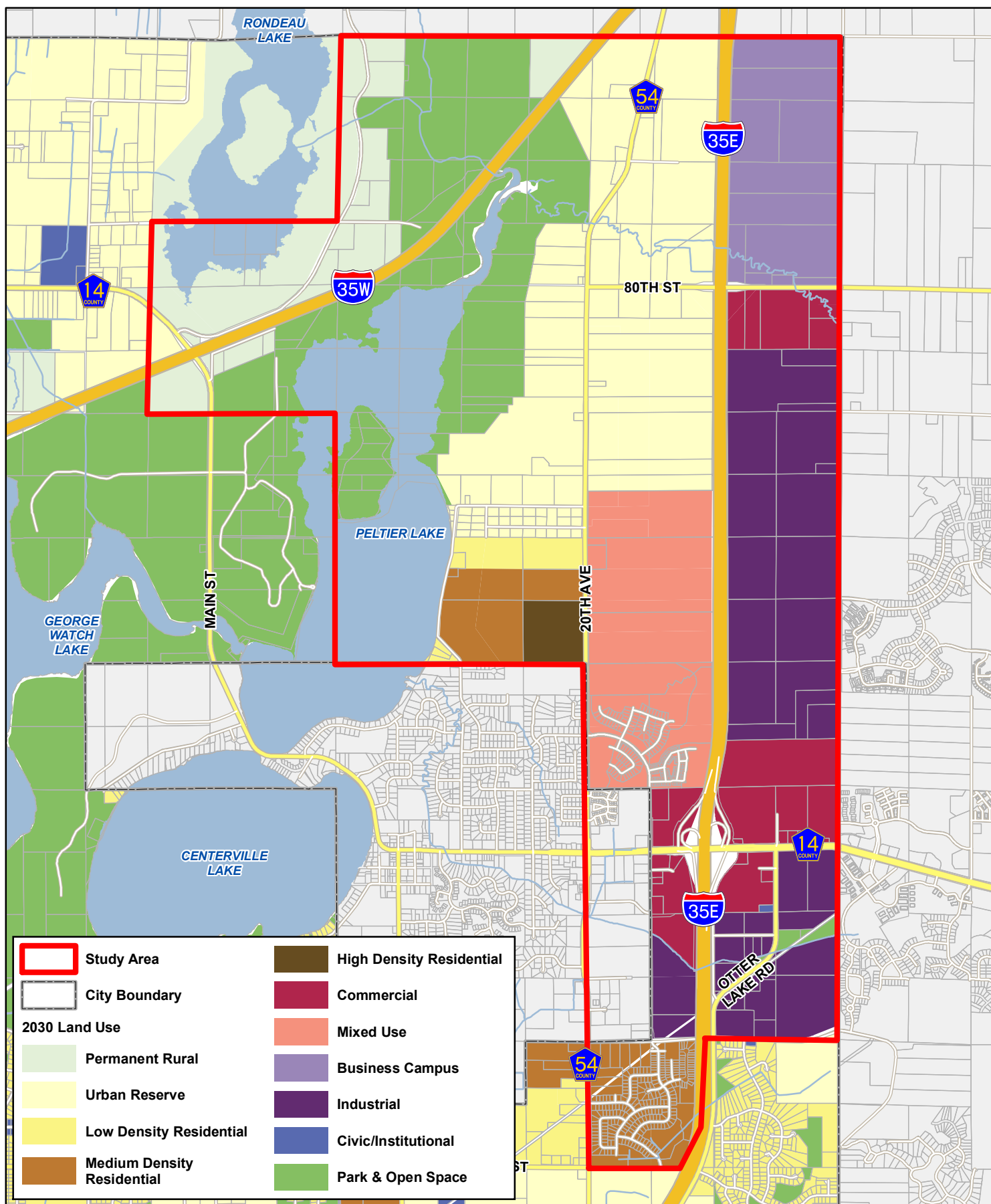


Figure 4 - 2030 Comp Plan
I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



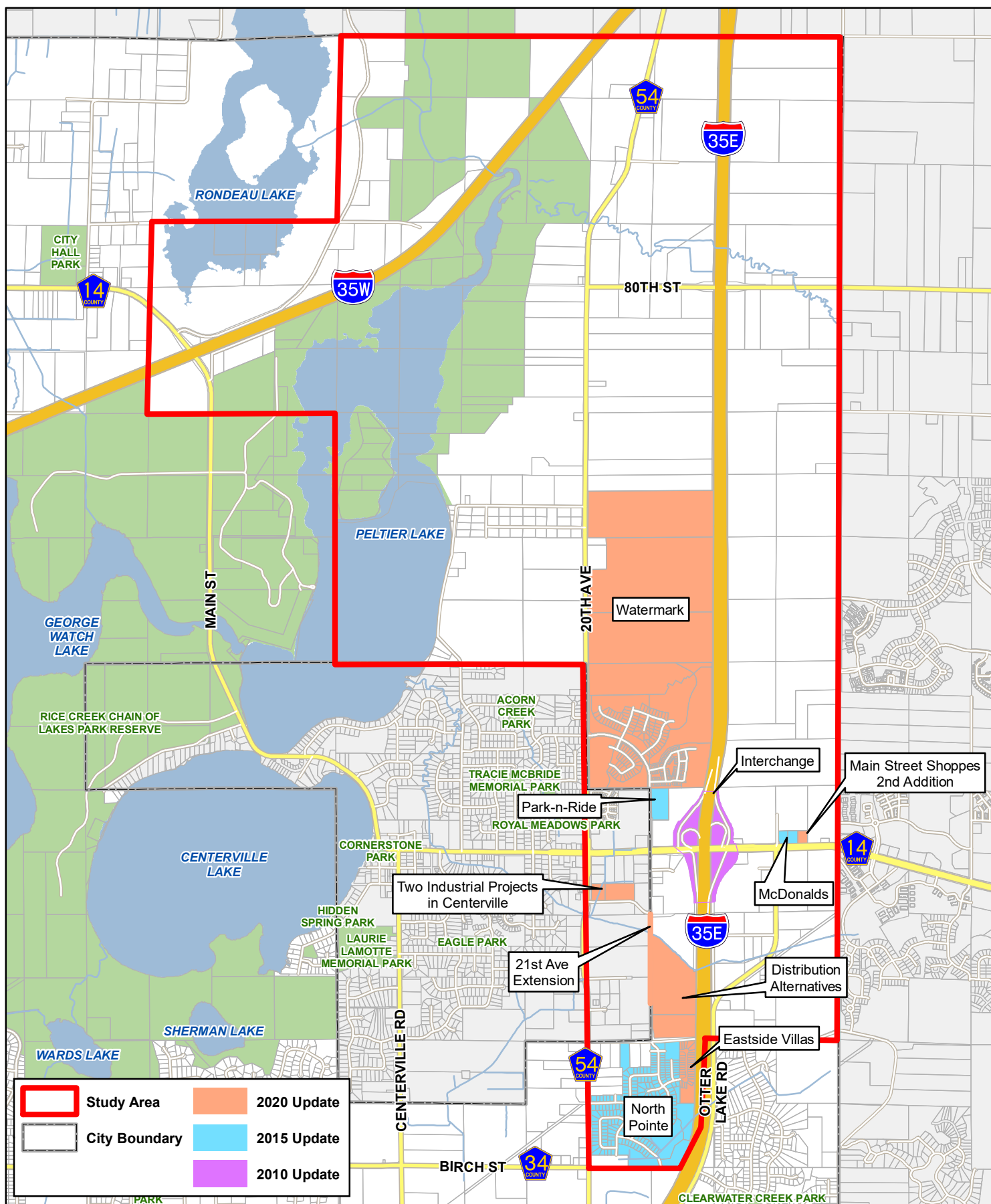
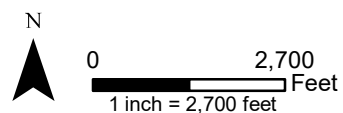


Figure 5 - Developments Map
I-35 Corridor AUAR Project
Lino Lakes, MN



Appendix B
Stormwater Management Memo

Final Technical Memorandum

To: Michael Grochala, City of Lino Lakes

From: Madison Rogers, WSB
Andi Moffatt, WSB

Date: April 8, 2020

Re: Stormwater Management – I-35 Corridor AUAR
City of Lino Lake, Minnesota
WSB Project No. R-015144-000

INTRODUCTION

The original Alternative Urban Areawide Review (AUAR) was completed and approved in September 2005. The AUAR analyzed the stormwater impacts of the three development scenarios. Based on the analysis, a Mitigation Plan was developed.

AUAR updates are required every five years from the original date of the approved AUAR. Updates were prepared in 2010 and 2015. Each assumed no change in the proposed development land use scenarios and included discussion of mitigation improvements that had been completed at the time. Since the 2015 AUAR update was prepared, the City has completed an updated Comprehensive Plan. This AUAR Update includes review of three revised scenarios.

The information and analysis outlined within this memo is intended to complete a portion of the AUAR Update related to Item # 11.ii – Water Resources – Stormwater related to revising of the three revised scenarios. This memo is intended to update the stormwater analysis provided in the original AUAR where applicable.

WATER RESOURCES – STORMWATER

- ii. *Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.*

Procedures and Methods Followed

The procedures and methods used to estimate the runoff volumes and pollutants loads within the AUAR were based on the Natural Resource Conservation Service (NRCS) runoff curve number method and event mean concentration pollutant values from the Minnesota Stormwater Manual. Any development within the study area will be required to meet the stormwater standards of the City of Lino Lakes and Rice Creek Watershed District (RCWD). These standards include:

- Promote volume control and groundwater recharge.
- Protect water quality from nutrients, heavy metals, and other urban pollutants.

- Protect life, public and private property, and the natural resources from damage resulting from runoff and the dangers associated with flooding.

Existing Conditions

The study area currently consists of agricultural area, rural residential, and park and open space areas. The impervious surface is primarily made up of the existing roadways. The major roads include 20th Avenue, 80th Street, County Road 14, and Interstates 35E and 35W.

There are four major watersheds within the study area. The west and central portion of the study area is part of the Peltier subwatershed. The north part of the study area is within the Hardwood Creek subwatershed and Upper Rice Creek subwatershed, and the southeast part is within the Clearwater Creek subwatershed. All of these subwatersheds drain to Peltier Lake through tile drain or county ditch systems.

Future development will need to address any requirements that are established due to current regulatory standards adopted by the RCWD, City of Lino Lakes, and Minnesota Pollution Control Agency (MPCA).

The MPCA has listed three water resources within the study area as impaired: Peltier Lake, Hardwood Creek, and Clearwater Creek. Peltier Lake and Hardwood Creek have approved Total Maximum Daily Load (TMDL) that provides additional guidance and requirements for pollutant loads.

Approximately 68% of the study area consists of Group D soils, and the remaining area consists of Group A and B soils. These soil ratings are based on hydrologic soil classifications with A soils having high infiltration rates even when thoroughly wetted. The infiltration rates for A soils range from 0.8 to 1.63 inches per hour (Minnesota Stormwater Manual). These soils consist chiefly of deep, well drained to excessively drained sands and gravel. Group A soils have a high rate of water transmission, therefore resulting in a low runoff potential. Group B soils have moderate infiltration rates ranging from 0.3 to 0.6 inches per hour when thoroughly wetted. Group B soils consist of deep moderately well to well drained soils with moderately fine to moderately coarse textures. Infiltration is very low in areas with Group D soils, and the design of infiltration basins is not recommended in areas with Group D soils (per the MPCA National Pollution Discharge Elimination System Construction General Permit).

Proposed Conditions

The three revised scenarios were considered in this analysis in the proposed conditions. Due to the conceptual nature of the development scenarios, the Land Use type classifications for each scenario were evaluated using curve numbers from the NRCS. The existing conditions and three proposed revised land use scenarios were evaluated. Stormwater management for any scenario can be provided through a combination of wet detention ponds and infiltration and filtration features. Achieving volume reduction and pollutant reduction through the use of infiltration may be challenging for a majority of the study area due to a majority D soils with low infiltration rates, and a high groundwater table. Stormwater management via green infrastructure such as stormwater reuse will be encouraged by the City of Lino Lakes and RCWD to achieve volume reduction and pollutant removal requirements.

Local Stormwater Management Requirements

Stormwater management within the future development of the study area must be in conformance with local requirements of the City of Lino Lakes, RCWD, and MPCA. Some requirements are more stringent than others. However, the development in the study area will need to demonstrate that all local standards are being met under proposed stormwater management techniques. The following is a summary of major stormwater management requirements:

- **Rice Creek Watershed District**

The RCWD rules (approved December 14, 2016) require that for rate control, proposed peak runoff rates shall not exceed existing for the 2, 10, 100-year 24-hour rainfall events. Proposed projects must not adversely affect off-site water levels or resources supported by local recharge, or increase potential for off-site flooding, during or after construction.

The RCWD requires a water quality treatment volume depending on the area of new or reconstructed impervious surface. Applicants can use BMPs including infiltration, water reuse, filtration, and stormwater ponds to achieve the required water quality treatment volume. Each BMP design variation has a different pollutant removal factor, and applicants must provide sufficient treatment volume depending on the BMP used for the site. The RCWD has an approved Comprehensive Stormwater Management Plan (CSMP) for a portion of the AUAR area (*Northeast Lino Lakes Drainage Area CSMP*). This purpose of the CSMP is to present an alternative means to meet the RCWD rules. Projects within the CSMP area must conform to design requirements detailed in the CSMP report as applicable.

- **City of Lino Lakes**

The City's Stormwater, Erosion, and Sediment Control Ordinance (adopted October 26, 2015) requires proposed development to maintain or decrease runoff volume and flow frequency, duration and peak runoff rates. Proposed development must also increase infiltration or filtration opportunities, maintain existing flow patterns, and provide storage of stormwater runoff on site. Stormwater BMPs must provide infiltration where feasible, but if infiltration is shown as not feasible for a site due to physical or contamination limitations, then another stormwater BMP may be used. Water discharged to BMPs shall be pretreated to National Urban Runoff Program (NURP) standards.

- **National Pollution Discharge Elimination System (NPDES) Standards**

The MPCA is responsible for implementing NPDES standards. The NPDES requirements in the AUAR area will be from the NPDES Construction General Permit (effective August 1, 2018) and the NPDES Municipal Separate Storm Sewer System (MS4) Permit (effective August 1, 2013).

The NPDES Construction General Permit will require that for sites replacing pervious surfaces with one acre or more of impervious surface, a water quality volume equivalent to 1 inch of runoff from the new impervious surface should be treated. This can be met through wet sedimentation basins, infiltration/filtration, or regional ponding. There are three impaired waterbodies within the study area, and sites that are within one mile of impaired water bodies require additional BMPs.

The NPDES MS4 permit requires permittees to provide post-construction water quality standards adopted at the local level. The NPDES MS4 Permit is currently drafted and out for public review (available for comment through January 11, 2020). The MS4 permit will require permittees to meet the requirements of future TMDLs. Currently there is a TMDL Implementation Plan proposed for discharges to Peltier Lake and Hardwood Creek, they are identified as the Peltier Lake and Centerville Lake TMDL and the Hardwood Creek Impaired Biota (Fish) and Dissolved Oxygen TMDL. Depending on the location and proximity to impaired waters, development within the AUAR area may need to complete an anti-degradation analysis for the impaired water.

Water Quantity and Quality Analysis

A water quantity and quality analysis was completed for the existing and proposed conditions within the study area. This quantitative analysis uses the NRCS runoff curve number method to calculate runoff and the results are summarized in **Table 1** and **Table 2**.

Table 1 summarizes the total runoff volumes for each development scenario compared to the existing condition.

Table 1. Existing and Proposed Annual Runoff Volumes¹

	Existing conditions (AC-FT)	2020 Scenario 1 w/o Volume Reduction (AC-FT)	2020 Scenario 1 with Volume Reduction ² (AC-FT)	2020 Scenario 2 w/o Volume Reduction (AC-FT)	2020 Scenario 2 with Volume Reduction ² (AC-FT)	2020 Comp Plan (2030) w/o Volume Reduction (AC-FT)	2020 Comp Plan (2030) with Volume Reduction ² (AC-FT)
AUAR Area	11,201	11,363	3,326	11,381	3,328	11,383	4,678

¹Annual runoff volumes are based on an average of 32 inches of rainfall for the state of Minnesota.

²1.1 inches represents approximately 90% of all rain events in Minnesota (Minnesota Minimal Impact Design Standards, MPCA), therefore volume reduction of 90% was assumed in all land use areas for proposed scenarios, except Permanent Rural, Urban Reserve and Right-of-Way, which are assumed to not require any future stormwater management.

Table 2 summarizes the total pollutant loads for each development scenario compared to the existing condition.

Table 2. Total Suspended Solids and Total Phosphorus Annual Loads

	Pollutant ¹	Existing conditions	2020 Scenario 1 w/o Volume Reduction	2020 Scenario 1 with Volume Reduction	2020 Scenario 2 w/o Volume Reduction	2020 Scenario 2 with Volume Reduction	2020 Scenario 2 w/o Volume Reduction	2020 Scenario 2 with Volume Reduction
AUAR Area	TSS (tons/yr)	906	946	299	957	301	925	372
	TP (lbs/yr)	8,522	8,407	3,059	8,573	3,076	8,344	4,679

¹Pollutant loading was determined using Event Mean Concentration values from the MPCA Stormwater Manual, based on Land Use classification for the AUAR area.

To achieve compliance with regulatory requirements, future development must provide annual volume and pollutant load reductions in the amounts required by Local Stormwater Management Regulations and comply with the TMDL. The values presented in **Tables 1** and **2** show the estimated annual volume and pollutant load reductions based on the conceptual analysis, and don't include any site-specific constraints for individual developments within the AUAR area.

Potential Impact to Downstream Receiving Waters

The analysis within the AUAR area shows that the runoff volumes will be reduced by approximately 70 percent for each of the three revised land use scenarios as compared to existing conditions. This is achieved through implementing City of Lino Lakes, RCWD, and NPDES volume reduction requirements. This reduction in runoff translates directly to the reduction in pollutant loads shown in **Table 2**.

Review and Update of the Mitigation Plan

The table below provides the mitigation plan for stormwater management. These mitigation measures have been reviewed and revised as needed for this AUAR Update.

Table 3. Water Quantity and Quality Mitigation Plan

Item No.	Mitigation Description	Update
17.3	Require stormwater management systems to be developed in accordance with the current version of the <i>Rice Creek Watershed District Rules</i> (these rules assist in achieving the goals of the Resource Management Plan – 3) and all other local, state, and federal stormwater management requirements.	Updated to be inclusive of the current version of the rules. The RCWD rules are intended to meet the goals of the Resource Management Plan-3 that was included in the 2010 AUAR Update.

Appendix C
Water Appropriation Memo

Final Technical Memorandum

To: Michael Grochala, City of Lino Lakes

From: Jon Christensen, WSB
Andi Moffatt, WSB

Date: April 8, 2020

Re: Water Appropriations – I-35 Corridor AUAR
City of Lino Lakes, Minnesota
WSB Project No. R-015144-000

INTRODUCTION

The original Alternative Urban Areawide Review (AUAR) was completed and approved in September 2005. The AUAR analyzed the stormwater impacts of the three development scenarios. Based on the analysis, a Mitigation Plan was developed.

AUAR updates are required every five years from the original date of the approved AUAR. Updates were prepared in 2010 and 2015. Each assumed no change in the proposed development land use scenarios and included discussion of mitigation improvements that had been completed at the time. Since the 2015 AUAR update was prepared, the City has completed an updated Comprehensive Plan. This AUAR Update includes review of three scenarios.

The information and analysis outlined within this memo is intended to complete a portion of the AUAR Update related to Item # 11.b.iii – Water Resources – Water Appropriation related to revising of the three scenarios. This memo is intended to update the water analysis provided in the original AUAR where applicable.

WATER RESOURCES – WATER APPROPRIATIONS

11.b.iii - Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

Existing Conditions

Currently, the majority of the study area is served by private wells. The Minnesota Well Index indicates there are approximately 90 wells within the study area which are nearly all for domestic use. No information is available regarding these private wells beyond the Minnesota Well Index.

The municipal water supply system has a DNR water appropriation permit. The water distribution system exists in the southern portion of the study area and currently extends north of Main Street on either side of I-35E. The system will continue to be extended as development progresses.

The southern portion of the study area overlaps with a moderate vulnerability portion of the City of Lino Lakes Drinking Water Supply Management Area (DWSMA) that is delineated in the City's Wellhead Protection Plan.

The geology of the City's existing wells is consistent with other communities in the Twin Cities Metro Area. The Paleozoic sedimentary rocks around the Twin Cities Metro area have three primary aquifers (in descending order): Prairie du Chien–Jordan, Tunnel City-Wonewoc (formerly the Franconian-Ironton-Galesville (FIG)), and Mt. Simon-Hinckley. Each of these are separated by a confining layer that essentially separates the aquifers.

The Prairie du Chien–Jordan aquifer is the highest yielding aquifer in the Metro Area. Although these two formations have different names and are geologically different, the two units have been shown to be hydraulically connected. All of the City's existing production wells are located in the Prairie du Chien–Jordan aquifer, and all future wells are anticipated to be as well.

Existing and future water demands for the entire City are detailed in the City's 2040 Comprehensive Water Supply Plan (Plan). Future infrastructure needs for the City, encompassing the AUAR study area, were developed in the Plan. A future well field was preliminarily located within the study area.

The water system currently has six wells and two water towers. Tower No. 3 is currently under construction, and Well No. 7 is under investigation. Well capacities range from 600 gallons per minute (gpm) to 1,800 gpm. The existing system firm capacity (with the largest well out of service) is 4,350 gpm.

From 2014-2018, the City averaged a total water demand of 79 gallons per capita per day and a maximum day to average day ratio (peaking factor) of 2.8. For the existing population served of approximately 18,000, this results in an average day demand of 1.42 million gallons per day (MGD) and a maximum day demand of 3.98 MGD.

Proposed Conditions

Three possible development scenarios were considered. These were revised from the 2005 Original AUAR. The 2040 Comprehensive Plan corresponds to revised Scenario 1. Scenario 2 has also been revised. The third scenario considered is the 2030 Comprehensive Plan Scenario. Based on the planned land uses for each scenario, the projected water demand is summarized below. New development within the study area will connect to the municipal water system.

2020 Scenario 1

The projected water demands within the study area for 2020 Scenario 1 are shown in **Table 1**. There are a number of properties within the southern portion of the study area that already receive municipal water, so these areas have been removed from the areas listed in **Table 1**.

Table 1. Projected Water Demand for 2020 Scenario 1

Land Use Type	Area (acres)	Density (units/acre)	Demand Assumption (gpd/acre) *	Average Day Demand (gpd)	Max Day Demand (gpd)
Low Density Sewered Residential	282.6	2.3	449	126,752	354,906
Low Density Mixed Residential	376.9	3.5	683	257,234	720,257
Medium Density Residential	180.5***	5.0	975	175,968	492,710
High Density Residential	39.0	7.0	1,365	53,257	149,119
Planned Residential / Commercial**	89.9	9.0	1,378	123,902	346,926
Office Residential**	139.5	5.0	988	137,747	385,692
Mixed Use	0.0	2.3	449	0	0
Commercial	348.9***	N/A	1,000	348,907	976,940
Business Campus****	624.0	N/A	1,000	623,978	2,047,138
Industrial	472.4***	N/A	1,000	472,434	1,322,815
Civic/Institutional	1.0	N/A	750	775	2,169
Urban Reserve	0.0	N/A	N/A	N/A	N/A
Permanent Rural	358.1	N/A	N/A	N/A	N/A
Park & Open Space	837.5	N/A	N/A	N/A	N/A
Right-of-Way	3.7	N/A	N/A	N/A	N/A
Total	3,754.1	N/A	N/A	2,320,954	6,798,672

*Based on residential per capita water use of 62.5 gallons per capita per day (historical average from 2014-2018) and 3.12 persons per household (projected 2020 household size per Comp Plan).

**Assumes 50% residential and 50% commercial development.

***Areas for properties within the southern portion of the study area that already receive municipal water have been removed.

****Includes contingency for higher intensity max day water demands.

2020 Scenario 2

The projected water demands within the study area for Scenario 2 are shown in **Table 2**. There are a number of properties within the southern portion of the study area that already receive municipal water, so these areas have been removed from the areas listed in **Table 2**.

Table 2. Projected Water Demand for 2020 Scenario 2

Land Use Type	Area (acres)	Density (units/acre)	Demand Assumption (gpd/acre) *	Average Day Demand (gpd)	Max Day Demand (gpd)
Low Density Sewered Residential	173.2	2.3	449	77,698	217,555
Low Density Mixed Residential	376.9	3.5	683	257,234	720,257
Medium Density Residential	240.9***	5.0	975	234,853	657,588
High Density Residential	391.1	7.0	1,365	533,908	1,494,942
Planned Residential / Commercial**	89.9	9.0	1,378	123,902	346,926
Office Residential**	0.0	5.0	988	0	0
Mixed Use	0.0	2.3	449	0	0
Commercial	348.9***	N/A	1,000	348,907	976,940
Business Campus****	362.6	N/A	1,000	362,561	1,315,171
Industrial	480.3***	N/A	1,000	480,285	1,344,797
Civic/Institutional	90.9	N/A	750	68,195	190,947
Urban Reserve	0.0	N/A	N/A	N/A	N/A
Permanent Rural	358.1	N/A	N/A	N/A	N/A
Park & Open Space	837.5	N/A	N/A	N/A	N/A
Right-of-Way	3.7	N/A	N/A	N/A	N/A
Total	3,754.1	N/A	N/A	2,487,544	7,265,123

*Based on residential per capita water use of 62.5 gallons per capita per day (historical average from 2014-2018) and 3.12 persons per household (projected 2020 household size per Comp Plan).

**Assumes 50% residential and 50% commercial development.

***Areas for properties within the southern portion of the study area that already receive municipal water have been removed.

****Includes contingency for higher intensity max day water demands.

2030 Comprehensive Plan Scenario

The projected water demands within the study area for the 2030 Comp Plan Scenario are shown in **Table 3**. There are a number of properties within the southern portion of the study area that already receive municipal water, so these areas have been removed from the areas listed in **Table 3**.

Table 3. Projected Water Demand for 2030 Comp Plan Scenario

Land Use Type	Area (acres)	Density (units/acre)	Demand Assumption (gpd/acre) *	Average Day Demand (gpd)	Max Day Demand (gpd)
Low Density Sewered Residential	47.1	2.3	449	21,124	59,148
Low Density Mixed Residential	0.0	3.5	683	0	0
Medium Density Residential	140.6***	5.0	975	137,068	383,791
High Density Residential	39.0	7.0	1,365	53,253	149,107
Planned Residential / Commercial**	0.0	9.0	1,378	0	0
Office Residential**	0.0	5.0	988	0	0
Mixed Use	374.0	2.3	449	167,739	469,669
Commercial	293.0***	N/A	1,000	292,962	820,293
Business Campus****	276.8	N/A	1,000	276,826	1,075,113
Industrial	572.9***	N/A	1,000	572,888	1,604,086
Civic/Institutional	1.0	N/A	750	775	2,169
Urban Reserve	820.0	N/A	N/A	N/A	N/A
Permanent Rural	361.3	N/A	N/A	N/A	N/A
Park & Open Space	824.4	N/A	N/A	N/A	N/A
Right-of-Way	4.0	N/A	N/A	N/A	N/A
Total	3,754.2	N/A	N/A	1,522,635	4,563,377

*Based on residential per capita water use of 62.5 gallons per capita per day (historical average from 2014-2018) and 3.12 persons per household (projected 2020 household size per Comp Plan).

**Assumes 50% residential and 50% commercial development.

***Areas for properties within the southern portion of the study area that already receive municipal water have been removed.

****Includes contingency for higher intensity max day water demands.

All three scenarios will trigger the need for additional municipal water supply infrastructure. The additional wells and storage needed are summarized in **Table 4**. The storage needs assume that Water Tower No. 3 (1.5 MG) will be constructed and in use by the time of development.

Table 4. Supply and Storage Summary

	Existing System	With Scenario 1	With Scenario 2	With 2030 Comp Plan
Average Day Demand (MGD)	1.42	3.74	3.91	2.94
Maximum Day Demand (MGD)	3.98	10.78	11.25	8.54
Additional Wells Required	N/A	3 to 4	3 to 4	2
Additional Storage Required (MG)	N/A	0 to 0.3	0 to 0.4	N/A

The City's existing authorized appropriation volume is 900 million gallons per year (MGY), and the City's historical water use from 2014-2018 was 470 MGY. All three scenarios are projected to increase the annual water use beyond 900 MGY. Therefore, the City will likely require an amendment to its appropriation volume prior to full build out of the study area. The City's historical water use shows a decreasing trend in per capita use, which will likely decrease these projections by the time of development.

Water Demand Projection Comparison

Table 5 summarizes the projected average water demands from the 2005 Original AUAR and this 2020 AUAR Update for the scenarios outlined above.

Table 5. Comparison of Average Water Demand Projections

Scenario	2005 Original AUAR	2020 AUAR Update
Scenario 1	1.86 MGD	2.32 MGD
Scenario 2	2.45 MGD	2.49 MGD
Scenario 3	2.61 MGD	N/A
2030 Comp Plan	N/A	1.52 MGD

The projected water demands have remained within the parameters discussed in the original AUAR. The expansion and layout of the water supply system will generally conform to the layout identified in the 2005 Original AUAR. The 2005 Original AUAR identified the need for 1.0 MG of additional storage, approximately four additional wells, and trunk and lateral watermain. Water Tower No. 3 (1.5 MG) is currently under construction, and this AUAR Update reiterates the need for three to four additional wells. Computer modeling completed as part of the City's 2040 Comprehensive Plan Update confirmed the adequacy of the planned 16-inch trunk watermain loop.

Review and Update of the Mitigation Plan

The table below provides the mitigation plan for water appropriations. These mitigation measures have been reviewed and revised as needed for this AUAR Update.

Table 6. Water Use

Item No.	Mitigation Description	Update
13.1	Monitor water usage and do not permit new development to proceed if it exceeds the capacity of the water supply and distribution system.	This mitigation measure is ongoing.
13.2	Construct the water supply and distribution system in accordance with Minnesota Department of Health standards and with the goals, policies, and recommendations set forth in the City's Comprehensive Water Supply Plan.	This mitigation measure is ongoing.
13.3	As necessary, amend the City's Comprehensive Water Supply Plan and Capital Improvement Plan to be consistent with any future amendments or updates to the Comprehensive Plan that would necessitate expansions or alterations to the water system.	This mitigation measure is ongoing. No updates have been needed to date for the study area.
13.4	Follow the adopted Wellhead Protection Plans for Lino Lakes and Centerville. As necessary, amend the City's Wellhead Protection Plan for new wells.	This mitigation measure is ongoing.
13.5	Require abandoned private wells to be sealed in compliance with the Minnesota Department of Health regulations.	This mitigation measure is ongoing.
13.6	Require that the installation of any private individual wells be constructed and installed in accordance with the Minnesota Department of Health regulations (Minnesota Well Code).	This mitigation measure is ongoing.
13.7	Continue to implement the City's adopted water conservation policies which are intended to attenuate peak water demands throughout the City.	This mitigation measure is ongoing.
13.8	Mitigation will be regulated through the City's development approval and permitting process. Proposed master development plans, planned unit development and subdivision applications, plats, and/or site plans must	This mitigation measure is ongoing.

Item No.	Mitigation Description	Update
	address relevant water conservation mitigation measures prior to final approval by the City. Implementation of mitigation measures will be assured through developer agreements with the City, which will require a financial security for land and infrastructure improvements and/or revoke the right to acquire building permits and/or certificates of occupancy until all relevant mitigation measures have been addressed.	

Appendix D
Wastewater Management Memo

Final Technical Memorandum

To: Michael Grochala, City of Lino Lakes

From: Jon Christensen, WSB
Andi Moffatt, WSB

Date: April 8, 2020

Re: Wastewater Management – I-35 Corridor AUAR
City of Lino Lakes, Minnesota
WSB Project No. R-015144-000

The original Alternative Urban Areawide Review (AUAR) was completed and approved in September 2005. The AUAR analyzed the wastewater impacts of the three development scenarios. Based on the analysis, a Mitigation Plan was developed.

AUAR updates are required every five years from the original date of the approved AUAR. Updates were prepared in 2010 and 2015. Each assumed no change in the proposed development land use scenarios and included discussion of mitigation improvements that had been completed at the time. Since the 2015 AUAR update was prepared, the City has completed an updated Comprehensive Plan. This AUAR Update includes review of three scenarios.

The information and analysis outlined within this memo is intended to complete a portion of the AUAR Update related to Item # 11.b.i – Water Resources – Wastewater related to revising of the three scenarios. This memo is intended to update the wastewater analysis provided in the original AUAR where applicable.

WATER RESOURCES – WASTEWATER

Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

- i. *Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.*
 - 1) *If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.*
 - 2) *If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.*
 - 3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.*

Existing Conditions

Within the City of Lino Lakes, there are approximately 5,200 connections to the municipal sanitary sewer system. Of the 5,200 connections to the public sanitary sewer system, most are single family residential with some multi-family residential, commercial/ industrial, and institutional connections. The City has approximately 1,705 properties that are served by on-site septic systems. Based on Metropolitan Council Environmental Services (MCES) meter data from 2014-2018, the City's existing average daily wastewater flow is 1.04 million gallons per day (MGD).

Since the wastewater generated within the City of Lino Lakes is primarily from residential units, the wastewater characteristics are assumed to be of typical domestic strength. **Table 1** is a summary of the estimated existing wastewater characteristics for Lino Lakes.

Table 1. Estimated Existing Wastewater Characteristics and Total Average Loading

Parameter	Concentration (mg/L)	Average Load (lbs/day)
Biochemical Oxygen Demand	220	1,909
Total Suspended Solids	220	1,909
Ammonia – Nitrogen	25	217
Total Phosphorous	8	69

Wastewater generated within the City is collected by a series of laterals, trunk sewer mains, and lift stations and is then directed to one of three interceptor sewers that are owned, operated, and maintained by MCES (Interceptors 9106, 8361, and 9708). Wastewater is then conveyed through the MCES regional collection system to the Metropolitan WWTP. The Metropolitan WWTP has a design capacity of 314 MGD and currently receives an average daily flow of 191 MGD.

Proposed Conditions

Three possible development scenarios were considered. The 2040 Comprehensive Plan corresponds to revised Scenario 1. Scenario 2 has also been revised. The third scenario considered is the 2030 Comprehensive Plan Scenario. The projected wastewater flow for each scenario is based on the planned land uses as described below.

The municipal collection system currently extends to Main Street on either side of I-35E. The municipal trunk sewers will continue to be extended as development progresses. As detailed in the 2040 Comprehensive Sanitary Sewer Plan, development within Sanitary Sewer District 3 and 5 will require at least one large regional lift station and several smaller lift stations.

The majority of the wastewater generated within the study area will discharge to MCES Interceptor 802325 which is currently stubbed at the City boundary at the intersection of Main Street and Elmcrest Avenue. The remainder will discharge to MCES Interceptor 7651 which currently serves the existing Sanitary Sewer District 3. All of the flow generated within the study area will be conveyed through the MCES regional collection system to the Metropolitan WWTP.

2020 Scenario 1

The proposed development within the study area for revised Scenario 1, the assumed wastewater flow for each land use type, and the projected wastewater flow for that development are summarized in **Table 2**. There are a number of properties within the southern portion of the study area that are already sewered, so these areas have been removed from the areas listed in **Table 2**.

Table 2. Projected Average Daily Flow for 2020 Scenario 1

Land Use Type	Area (acres)	Density (units/acre)	Flow Assumption (gpd/acre)	Average Flow (gpd)
Low Density Sewered Residential	282.6	2.3	414	117,002
Low Density Mixed Residential	376.9	3.5	630	237,447
Medium Density Residential	180.5**	5.0	900	162,432
High Density Residential	39.0	7.0	1,260	49,160
Planned Residential / Commercial*	89.9	9.0	1,210	108,836
Office Residential*	139.5	5.0	850	118,567
Mixed Use	0.0	2.3	414	0
Commercial	348.9**	N/A	800	279,126
Business Campus***	624.0	N/A	800	799,182
Industrial	472.4**	N/A	800	377,947
Civic/Institutional	1.0	N/A	600	620
Urban Reserve	0.0	N/A	N/A	N/A
Permanent Rural	358.1	N/A	N/A	N/A
Park & Open Space	837.5	N/A	N/A	N/A
Right-of-Way	3.7	N/A	N/A	N/A
Total	3,754.1	N/A	N/A	2,250,319

*Assumes 50% residential and 50% commercial development.

**Areas for properties within the southern portion of the study area that are already sewered have been removed.

***Includes contingency for higher intensity wastewater flow.

Table 3 summarizes the projected wastewater flow by MCES connection point under Scenario 1. Note that the flows listed in **Table 3** include only additional flows generated within the study area.

Table 3. Projected Additional Regional Wastewater Flow by MCES Connection Point for 2020 Scenario 1

MCES Interceptor	City Sanitary Sewer District	Average Flow (MGD)	Peak Hourly Flow (MGD)
7651	3	0.62	2.11
802325	5	1.63	4.73

Table 4 summarizes the projected wastewater characteristics and additional loading for the wastewater that will be generated under Scenario 1.

Table 4. Projected Wastewater Characteristics and Additional Total Average Daily Wastewater Loading for 2020 Scenario 1

Parameter	Concentration (mg/L)	Average Load (lbs/day)
Biochemical Oxygen Demand	220	4,131
Total Suspended Solids	220	4,131
Ammonia –Nitrogen	25	469
Total Phosphorous	8	150

2020 Scenario 2

The proposed development within the study area for Scenario 2, the assumed wastewater flow for each land use type, and the projected wastewater flow for that development are summarized in **Table 5**. There are a number of properties within the southern portion of the study area that are already sewered, so these areas have been removed from the areas listed in **Table 5**.

Table 5. Projected Average Daily Flow for 2020 Scenario 2

Land Use Type	Area (acres)	Density (units/acre)	Flow Assumption (gpd/acre)	Average Flow (gpd)
Low Density Sewered Residential	173.2	2.3	414	71,721
Low Density Mixed Residential	376.9	3.5	630	237,447
Medium Density Residential	240.9**	5.0	900	216,787
High Density Residential	391.1	7.0	1,260	492,838
Planned Residential / Commercial*	89.9	9.0	1,210	108,836
Office Residential*	0.0	5.0	850	0
Mixed Use	0.0	2.3	414	0
Commercial	348.9**	N/A	800	279,126
Business Campus***	362.6	N/A	800	590,049
Industrial	480.3**	N/A	800	384,228
Civic/Institutional	90.9	N/A	600	54,556
Urban Reserve	0.0	N/A	N/A	N/A
Permanent Rural	358.1	N/A	N/A	N/A
Park & Open Space	837.5	N/A	N/A	N/A
Right-of-Way	3.7	N/A	N/A	N/A
Total	3,754.1	N/A	N/A	2,435,589

*Assumes 50% residential and 50% commercial development.

**Areas for properties within the southern portion of the study area that are already sewered have been removed.

***Includes contingency for higher intensity wastewater flow.

Table 6 summarizes the projected wastewater flow by MCES connection point under Scenario 2. Note that the flows listed in **Table 6** include only those generated within the study area.

Table 6. Projected Regional Wastewater Flow by MCES Connection Point for 2020 Scenario 2

MCES Interceptor	City Sanitary Sewer District	Average Flow (MGD)	Peak Hourly Flow (MGD)
7651	3	0.64	2.18
802325	5	1.79	5.19

Table 7 summarizes the projected wastewater characteristics and additional loading for the wastewater that will be generated under Scenario 2.

Table 7. Projected Wastewater Characteristics and Additional Total Average Daily Wastewater Loading for 2020 Scenario 2

Parameter	Concentration (mg/L)	Average Load (lbs/day)
Biochemical Oxygen Demand	220	4,471
Total Suspended Solids	220	4,471
Ammonia –Nitrogen	25	508
Total Phosphorous	8	163

2030 Comprehensive Plan Scenario

The proposed development within the study area for the 2030 Comp Plan Scenario, the assumed wastewater flow for each land use type, and the projected wastewater flow for that development are summarized in **Table 8**. There are a number of properties within the southern portion of the study area that are already sewered, so these areas have been removed from the areas listed in **Table 8**.

Table 8. Projected Average Daily Flow for 2030 Comp Plan Scenario

Land Use Type	Area (acres)	Density (units/acre)	Flow Assumption (gpd/acre)	Average Flow (gpd)
Low Density Sewered Residential	47.1	2.3	414	19,499
Low Density Mixed Residential	0.0	3.5	630	0
Medium Density Residential	140.6**	5.0	900	126,524
High Density Residential	39.0	7.0	1,260	49,156
Planned Residential / Commercial*	0.0	9.0	1,210	0
Office Residential*	0.0	5.0	850	0
Mixed Use	374.0	2.3	414	154,836
Commercial	293.0**	N/A	800	234,369
Business Campus***	276.8	N/A	800	521,461
Industrial	572.9**	N/A	800	458,310
Civic/Institutional	1.0	N/A	600	620
Urban Reserve	820.0	N/A	N/A	N/A
Permanent Rural	361.3	N/A	N/A	N/A
Park & Open Space	824.4	N/A	N/A	N/A
Right-of-Way	4.0	N/A	N/A	N/A
Total	3,754.1	N/A	N/A	1,564,776

*Assumes 50% residential and 50% commercial development.

**Areas for properties within the southern portion of the study area that are already sewered have been removed.

***Includes contingency for higher intensity wastewater flow.

Table 9 summarizes the projected wastewater flow by MCES connection point under the 2030 Comp Plan Scenario. Note that the flows listed in **Table 9** include only additional flows generated within the study area.

Table 9. Projected Additional Regional Wastewater Flow by MCES Connection Point for 2030 Comp Plan Scenario

MCES Interceptor	City Sanitary Sewer District	Average Flow (MGD)	Peak Hourly Flow (MGD)
7651	3	0.52	1.77
802325	5	1.04	3.22

Table 10 summarizes the projected wastewater characteristics and additional loading for the wastewater that will be generated under the 2030 Comp Plan Scenario.

Table 10. Projected Wastewater Characteristics and Additional Total Average Daily Wastewater Loading for 2030 Comp Plan Scenario

Parameter	Concentration (mg/L)	Average Load (lbs/day)
Biochemical Oxygen Demand	220	2,873
Total Suspended Solids	220	2,873
Ammonia –Nitrogen	25	326
Total Phosphorous	8	104

Wastewater Projection Comparison

Table 11 summarizes the projected average wastewater flows from the 2005 Original AUAR and this 2020 AUAR Update for the scenarios outlined above. The 2005 Original AUAR used flow assumptions of 274 gpd/unit for residential development and 1,500 gpd/acre for commercial and industrial development. The 2005 flow assumptions were very conservative, so the 2020 flow assumptions used in this update have been revised to agree more closely with metered wastewater flows from the last five years.

Table 11. Comparison of Average Wastewater Flow Projections

Scenario	2005 Original AUAR	2020 AUAR Update
Scenario 1	2.529 MGD	2.250 MGD
Scenario 2	3.646 MGD	2.436 MGD
Scenario 3	3.733 MGD	N/A
2030 Comp Plan	N/A	1.565 MGD

The projected wastewater flows have decreased in this update. Due to topography constraints, the expansion and layout of the sanitary sewer system will generally conform to the layout identified in the 2005 Original AUAR. However, the exact sizing of trunk facilities may be revised based on the most current wastewater flow projections.

Review and Update of the Mitigation Plan

The table below provides the mitigation plan for wastewater management. These mitigation measures have been reviewed and revised as needed for this AUAR Update.

Table 12. Water Quality: Wastewater

Item No.	Mitigation Description	Update
18.1	Monitor wastewater flows and not permit new development to proceed if it exceeds the capacity of the wastewater system.	This mitigation measure is ongoing.
18.2	Construct the major infrastructure improvements needed to expand the capacity of the wastewater system (i.e. lift stations, forcemains, and upgrades to the existing systems) in accordance with the Comprehensive Sanitary Sewer Plan and Capital Improvement Plan.	This mitigation measure is ongoing.
18.3	Adequately phase capacity improvements.	This mitigation measure is ongoing.
18.4	Amend the Comprehensive Sanitary Sewer Plan and Capital Improvement Plan to be consistent with any amendments to the Comprehensive Plan that would necessitate expansions or alterations to the sanitary sewer system and regional capacity needs.	This mitigation measure is ongoing. No updates have been needed to date for the study area.
18.5	Each proposed development will be required to provide a detailed projection of wastewater generation and flows. These calculations will be checked by the City's Engineering Consultant.	This mitigation measure is ongoing.
18.6	The City will create a year-end report to evaluate wastewater increases by major sewer lines and overall system usage in relation to capacity. Results of this assessment will become the targets for growth for the following year.	This mitigation measure is ongoing.

Appendix E
Transportation Memo

Final Technical Memorandum

To: Michael Grochala, City of Lino Lakes

From: Chuck Rickart PE, PTOE, WSB
Andi Moffatt, WSB

Date: April 8, 2020

Re: Transportation – I-35 Corridor AUAR
City of Lino Lakes, Minnesota
WSB Project No. R-015144-000

INTRODUCTION

The original Alternative Urban Areawide Review (AUAR) was completed and approved in September 2005. The AUAR analyzed the transportation impacts of the three development scenarios for the years 2030 and post 2030. Based on the analysis, a Mitigation Plan was developed. Mitigation included adding new roadway connections, intersection control, turn lanes, and widening roads as necessary as development occurs throughout the area.

AUAR updates are required every five years from the original date of the approved AUAR. Updates were prepared in 2010 and 2015. Each assumed no change in the proposed development land use scenarios and included discussion of mitigation improvements that had been completed at the time. In both cases no additional mitigation was recommended. Since the 2015 AUAR update was prepared, the City has completed an updated Comprehensive Plan including a Transportation Plan for the 2040 forecast year.

TRAFFIC AND TRANSPORTATION UPDATE

There have been several developments in the study area that have been approved since the original AUAR was completed in 2005 including:

- Park-and-Ride in the northwest quadrant of I-35E and CSAH 14
- McDonald's restaurant and Main Street Shoppes east of I-35E on CSAH 14
- NorthPointe residential development north of Birch Street between I-35E and CSAH 54
- Watermark residential development west of I-35E, north of CSAH 14
- Clearwater Creek commercial development west of I-35E south of CSAH 14 on 21st Avenue

In addition, there have been roadway improvements completed since the original AUAR including:

- CSAH 14 Improvements west of I-35E
- I-35E at CSAH 14 Interchange Improvements

As previously discussed, three development scenarios were included in the original AUAR and Updates. The City has since updated its Comprehensive Plan and reviewed the scenarios. Two consolidated scenarios are now included in this update and are still consistent with the original AUAR.

Traffic Generation

The original AUAR include traffic generation for the three land use scenarios using the Institute of Transportation Engineers (ITE) "*Trip Generation Manual, 7th Edition*." The traffic generation was prepared for both the 2030 base year and the Post 2030 conditions. For comparison purposes, the Post 2030 conditions were used. **Tables 1 – 3** shows the Post 2030 Traffic Generation from the original AUAR.

Table 1. 2005 AUAR Scenario 1 – City Comprehensive Plan

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Rural Land Use	DU	125	93	127	1,196
Low Density Res	DU	510	383	516	4,880
Med Density Res	DU	1,129	416	496	6,078
High Density Res	DU	473	241	294	3,178
Commercial	SF	2,985,000	5,090	6,773	63,598
Industrial	SF	11,175,000	7,912	8,270	68,872
Total			14,135	16,476	147,802

Table 2. 2005 AUAR Scenario 2 – Commercial / Industrial Emphasis

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Rural Land Use	DU	44	33	44	422
Low Density Res	DU	118	88	119	1,130
Low/Med Density Res	DU	2,419	1,439	1,060	18,662
Med/High Density Res	DU	2,173	954	1,149	13,150
High Density Res	DU	981	490	596	6,458
Commercial	SF	5,617,000	9,577	12,745	119,676
Industrial	SF	9,570,000	6,775	7,082	58,980
Total			19,356	22,795	218,478

Table 3. 2005 AUAR Scenario 3 – Residential Emphasis

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Rural Land Use	DU	43	32	43	412
Low Density Res	DU	118	88	119	1,130
Low/Med Density Res	DU	3,685	2,192	1,614	28,430
Med/High Density Res	DU	3,247	1,425	1,718	19,650
High Density Res	DU	1,566	799	971	10,524
Commercial	SF	4,141,000	7,060	9,396	88,228
Industrial	SF	5,829,000	4,127	4,313	35,924
Total			15,723	18,174	184,298

For this 2020 AUAR Update, the traffic generation was updated based on the revised development scenarios. Traffic generation rates from the current ITE Trip Generation Manual “*Trip Generation Manual, 10th Edition*” were used to determine the updated traffic forecasts. **Table 4, Table 5, and Table 6** show the updated Scenario traffic generation.

Table 4. 2020 AUAR Update Scenario 1 – City 2040 Comprehensive Plan

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Low Density Res	DU	2,335	1,728	2,312	22,042
Med Density Res	DU	1,675	687	838	11,089
High Density Res	DU	678	312	380	4,963
Commercial	SF	5,085,000	3,865	4,831	67,936
Industrial	SF	12,817,000	5,127	4,999	41,014
Total			11,718	13,358	147,044

Table 5. 2020 AUAR Update Scenario 2

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Low Density Res	DU	2,283	1,689	2,260	21,552
Med Density Res	DU	1,977	811	989	13,088
High Density Res	DU	3,143	1,446	1,760	23,007
Commercial	SF	5,307,000	4,033	5,042	77,270
Industrial	SF	10,054,000	4,022	3,921	32,173
Total			12,001	13,971	167,089

Table 6. 2020 AUAR Update Scenario 3 – City 2030 Comprehensive Plan

Land Use	Unit	Size	AM Peak	PM Peak	ADT
Low Density Res	DU	190	140	188	1,794
Med Density Res	DU	1,991	816	996	13,180
High Density Res	DU	273	126	153	1,998
Commercial	SF	3,229,000	2,454	3,068	47,014
Industrial	SF	10,128,000	4,051	3,950	32,410
Total			7,588	8,354	96,396

Comparing the land use scenarios shows that the future traffic generated with the updated land uses will be less than that from the original AUAR. The percent reduction in traffic generation is shown below in **Table 7**.

Table 7. Scenario Comparison

2006 Scenario	2020 Updated Scenario	AM Peak % Reduction	PM Peak % Reduction	ADT % Reduction
Scenario 1	Scenario 1	21%	23%	1%
Scenario 2	Scenario 2	61%	63%	31%
Scenario 3	Scenario 2	31%	30%	10%
Scenario 1	Scenario 3	86%	97%	53%

Traffic Analysis

The Transportation Study completed as part of the original AUAR analyzed the effects the land use scenarios had on the local and regional roadway systems. The analysis was based on existing traffic counts at the time and the Anoka County version of the Metropolitan Council's Travel Demand Forecasting Model.

The Traffic analysis focused on the operation of the primary roadways and their intersections during the peak travel periods (a.m. and p.m. peak hours), which is typically the time when the most severe traffic congestion is incurred. The results found that mitigation improvements would be required for each Scenario for the transportation system to operate at acceptable levels.

Based on the analysis a Mitigation Plan was developed. Mitigation included adding new roadway connections, intersection control, turn lanes and widening roads as necessary as development occurs throughout the area. The improvements were intended to represent the minimum level of infrastructure investment that would be needed to meet acceptable level of service standards. Additional roadway and non-motorized improvements, beyond the minimum level, may be identified to accommodate specific development needs.

Updated traffic forecasts were developed for 2040 and Post 2040 with the Cities "*Draft 2040 Transportation Plan*". The forecasts assumed a roadway network consistent with the AUAR mitigation improvements. **Figure 1** shows the forecasted 2040 and Post 2040 Average Daily Traffic volumes with the future roadway network.

Based on the comparison of the forecasted traffic generation from the AUAR area and the forecasted 2040 traffic volumes, the traffic analysis conducted, and Mitigation Plan recommended with the 2005 AUAR and the 2010 and 2015 updated AUAR's remains valid for this AUAR Update.

Review and Update of the Mitigation Plan

The table below provides the mitigation plan for Transportation. These mitigation measures have been reviewed and revised as needed for this AUAR Update.

Table 7. Transportation

Item No.	Mitigation Description	Update
21.1	Create a monitoring program that closely evaluates traffic impacts from proposed developments within the AUAR area.	Traffic Impact Studies are required for proposed developments showing the impact on the transportation system and consistency with the AUAR.
21.2	Implement traffic mitigation measures as development occurs within the AUAR area. Specific mitigation measures for the three development scenarios are discussed in Item 21 and depicted on Figures 21-8, 21-9, and 21-10. These mitigation measures improve overall traffic operations for the respective development scenarios. The improvements are intended to represent the minimum level of infrastructure investment that would be needed to meet acceptable level of service standards. Additional roadway and non-motorized improvements, beyond the minimum level, may be identified to accommodate specific development needs that are identified within the AUAR area. Primary improvements, regardless of land use scenario, include: 21.2.1 Develop frontage road system in compliance with local, county and state access management guidelines to serve local and regional traffic. 21.2.2 Work with appropriate road authorities to reconstruct and provide additional capacity for CSAH 21. 21.2.3 Work with appropriate road authorities to construct Northerly Bypass with new interchanges at I-35W and I-35E (80th Street East) to improve traffic operations and access to and within the AUAR area. As recommended by FHWA and Mn/DOT, a phasing plan should be established to construct each piece of the Northerly Connector as it becomes necessary to maintain the serviceability of the transportation system.	CSAH 14 improvement was completed in 2009 and noted in the 2010 AUAR Update CSAH 54 with CSAH 14 (formerly CSAH 21) 20th Avenue North intersection improvements were completed and noted in the 2010 AUAR Update. I-35E Interchange reconstruction was completed in 2011. This mitigation measure is complete.

Item No.	Mitigation Description	Update
	<u>Phase Improvement</u> 1. CSAH 14, I-35W to I-35E (funded and programmed for construction) 2. CSAH 14, I-35E Interchange 3. CR 140 (80th Street)/I-35E Interchange 4. CSAH 14 across Peltier Lake (Northerly Bypass/Connector) 5. CSAH 14/I-35W Interchange As part of these improvements, the following steps should be taken as the opportunity is presented: ▪ Inclusion of the northerly bypass and proposed interchanges in future transportation and comprehensive plans ▪ Preservation of right of way through official mapping or other process ▪ Right of way dedication through the platting process	
21.3	Require a traffic impact analysis for all development projects within the AUAR area. The traffic impact analysis will assist the City and other road authorities in determining the appropriate mitigation measures that are required to mitigate impacts of a specific development proposal.	This mitigation measure is ongoing.
21.4	Work with appropriate road authorities to mitigate the impact of the additional traffic on the on the regional system, specifically Interstates 35W and 35E, by reconstructing each to provide a six-lane cross-section consistent with the recommendations outlined in the I-35 IRC. It should be noted that it was determined that an expansion will be necessary even without the development scenarios used in this analysis. As the interstates serve a much larger area, the projected growth of the entire Twin Cities region should warrant expansion by the year 2030.	This mitigation measure is ongoing.
21.5	Prioritize alternative travel modes within the AUAR study area and require project proposers to address alternative travel modes (e.g., buses, bicyclists, and pedestrians) by identifying appropriate accommodations.	This mitigation measure is ongoing.

Item No.	Mitigation Description	Update
21.6	Consider the need for additional infrastructure improvements (see item #21.2) in future updates or amendments to the Comprehensive Plan. Submit the plan update to the appropriate agencies (i.e., FHWA, MnDOT, Met Council, etc.).	This mitigation measure is ongoing.
21.7	Require project proposers to follow all appropriate guidelines and policies related to traffic noise and noise walls.	This mitigation measure is ongoing.
21.8	Require that site plans for each of the developments include measures such as appropriate setback distances, earthen berms, noise walls, and appropriate site design to reduce the impact of traffic noise to residential areas.	This mitigation measure is ongoing.
21.9	Continue to require the implementation of the conditions of approval for the Eagle Brook Church relating to mitigating traffic impacts.	This mitigation measure is ongoing.
21.10	Achieve effective traffic operations within the city by requiring that site plans make use of access management practices to promote safe, effective traffic flow.	This mitigation measure is ongoing.
21.11	Require project proposers to follow the Anoka County Highway Department Development Review Process Manual (updated June 2013).	This mitigation measure is ongoing and has been updated to reflect the newest manual.
21.12	Continue to coordinate capital improvement programming with applicable transportation authorities.	This mitigation measure is ongoing.

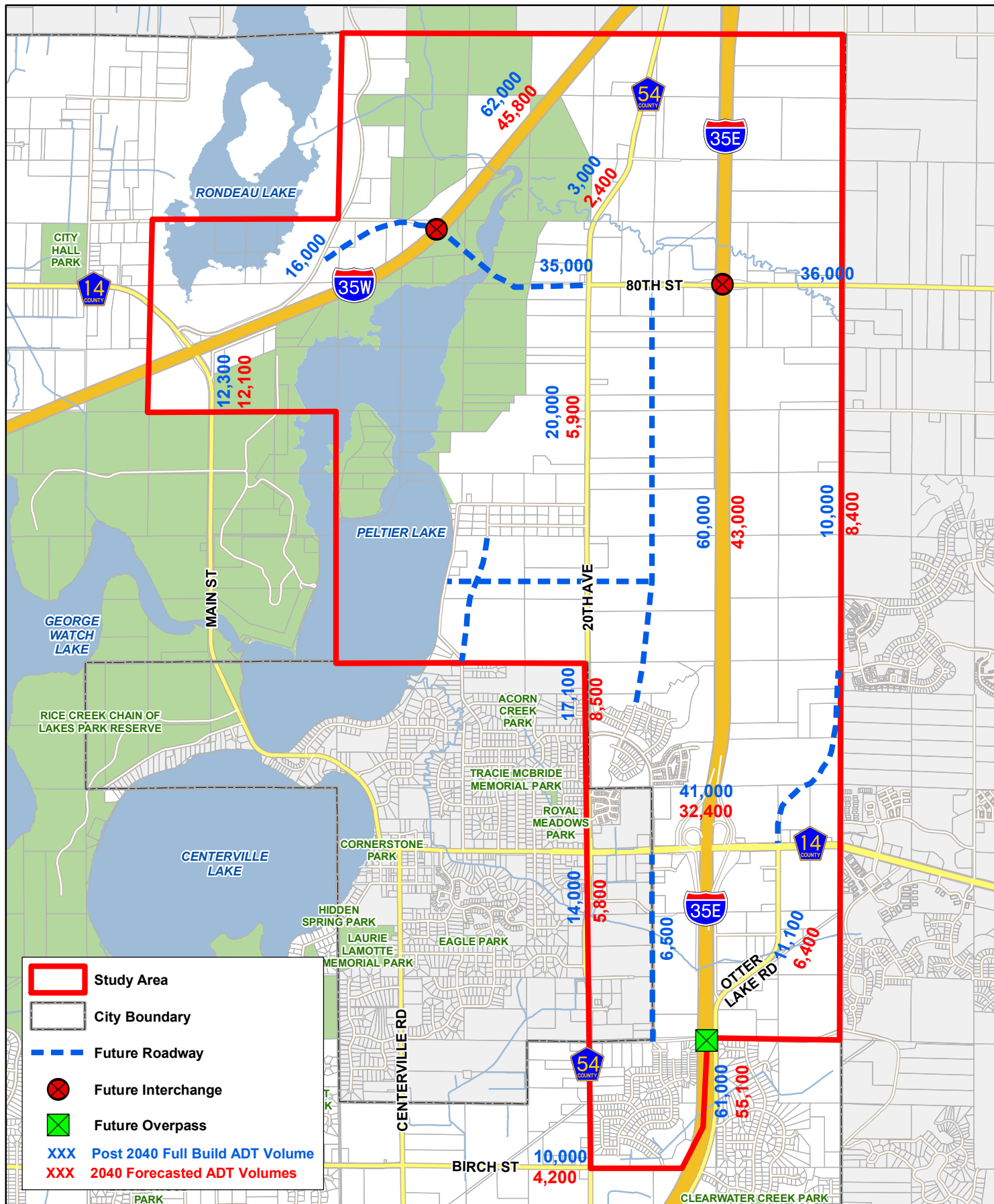


Figure 1 - Transportation
I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



Appendix F
SHPO and DNR Information

HISTORY/ARCHITECTURE INVENTORY
COUNTY CITYTWP
Anoka

Centerville

PROPNAME

ADDRESS

TOWNSHIP RANGE SECTION QUARTER USGS

REPORTNUM NRHP CEF DOE INVENTNUM

house

7238 Main St.

31

22

14 SW-SW

Centerville

AN-2005-1H

AN-CVC-009

house

1695 Sorel Rd.

31

22

22 SW-NW

Centerville

AN-2005-1H

AN-CVC-035

Lino Lakes

Bridge 9830

CSAH 14 over I35 W 2.2 miles NE of Junction TH49

31

22

10 SE-NW

Centerville

AN-LKC-009

Bridge 02802

CR 140 over I 35E 1.5 miles S of Junction TH 35W

31

22

12 NE-NW

Centerville

AN-LKC-011

ARCHAEOLOGICAL SITE LOCATIONS

COUNTY	SITENUM	SITENAME	TOWNSHIP	RANGE	SECTION	XQUARTERS	ACRES	WORKTYPE	DESCRIPT	TRADITION	CONTEXT	ReportNum	Natreg	CEF	DOE
Anoka	21AN0003		31	22	11	C-S-S SE-NE-NW-SE,SE-NE-	6 2		EW, AS	W-1	Ps-2, SO-2	AN-01-11			
	21AN0037	Paul	31	22	10	SW-NE	16 1		AS	W-1					
	21AN0038	Hensel	31	22	22	NA-NW	80 1,2		AS	W-1,PL-2	MW-1, LW-2,PI-2	AN-16-13			
	21AN0039	Wards Lake	31	22	22	W-NW-SW	26 2,1		AS	W-1					
	21AN0040	Cartier	31	22	10	SW-SE-SE	60 1		AS	A-2, W-1	AL-2, HR-1, LW-2	AN-02-03			
	21AN0041		31	22	10	N-S-SW	25 1		AS	W-1	RA-1				
			31	22	10	SE-NW-SW	25 1		AS	W-1	RA-1				
			31	22	10	SW-NE-SW	25 1		AS	W-1	RA-1				
	21AN0049	Dupre	31	22	14	SW-NW-SW	21 1,2		AS	PL-1,A-1,W-1	PI-1,AL-1,HR-2,SO-1,Ka-2				
		Dupre	31	22	14	NW-SW-SW	21 1,2		AS	PL-1,A-1,W-1	PI-1,AL-1,HR-2,SO-1,Ka-2				
	21AN0060	Peltier Island	31	22	11	W-SW	50 2		AS	W-1	MW-1	AN-02-03			
	21AN0067		31	22	3	SW-SE-NE-NW	3 1		AS	A-1					
	21AN0071	(overlaps w/21AN72)	31	22	14	SE-NE-SE-NW	1 1		AS	W-2	MW-2				
	21AN0072	(overlaps w/ 21AN71)	31	22	14	NE-SE-SE-NW	1 1		AS	W-2	MW-2				
	21AN0083		31	22	2	S-NE-SW, N-SE-SW	15 1		AS	W-1					
	21AN0089		31	22	10	C-NE-NW-NW	3 1		LS	A-2					
	21AN0090		31	22	2	C-N-NW-SW	6 1		AS	W-1					
Anoka	21AN0091		31	22		S-NW-NE-NW, N-SW-2 NE-NW	5 1		AS	W-1, O-2					
	21AN0095		31	22	2	SE-SE; E-NW-NE-NE	24 1		AS	W-1	LW-1				
			31	22	11		24 1		AS	W-1	LW-1				
	21AN0128		31	22	22	NE-SE-SW-SW	0.5 1		LS						
	21AN0132	Iverson III	31	22	12	NE-NE	0 5		LS						
	21AN0143		31	22	14	SW-SE-SW	2.4 1		AS,LS	A-3,W-1		AN-97-02			
	21AN0166		31	22	22	NW-SW-SW-SW	1 1		LS						
	21AN0168	Paul Farm (east)	31	22	10	SW-SE	19 1		AS	W-1	RA-1				
	21AN0174	Old Willow	31	22	1	SW-SW-NW-SW	0.1 1		LS						
	21ANd		31	22	14	C-SW	5		LS						



Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155-4025

February 20, 2020

Correspondence # ERDB 20200206

Mr. Matt Unmacht
WSB & Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416

RE: Natural Heritage Review of the proposed 2020 I-35E Corridor AUAR Update,
T31N R22W Sections 1-3, 10-14, 24 & 25; Anoka County

Dear Mr. Unmacht,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, rare features have been documented within the search area (for details, please visit the [Rare Species Guide Website](#) for more information on the biology, habitat use, and conservation measures of these rare species). Please note that the following rare features may be adversely affected by the proposed project:

Ecologically Significant Areas

- Peltier Lake has been identified as a Lake of *High* Biological Significance. Lakes of Biological Significance were ranked as *Outstanding*, *High* or *Moderate* based on unique bird and plant presence. This particular lake has records of a plant species, water-willow (*Decodon verticillatus* var. *laevigatus*), a species of special concern. As such, it is important that effective erosion prevention and sediment control practices be implemented and maintained near the lake throughout the duration of any nearby projects. Indirect impacts, such as the introduction or spread of invasive species, should also be considered and minimized.
- The Minnesota Biological Survey (MBS) has identified multiple Sites of *Moderate* Biodiversity Significance within T31N R22W Sections 2, 10 & 11. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Sites ranked as *Moderate* contain occurrences of rare species and/or moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. These particular Sites contain the following native plant communities:
 - Alder – (Maple – Loosestrife) Swamp
 - Northern Mixed Cattail Marsh

- Red Oak – Sugar Maple – Basswood – (Bitternut Hickory) Forest
- Southern Dry-Mesic Oak (Maple) Woodland
- Tamarack Swamp (Southern)
- Willow – Dogwood Shrub Swamp

(GIS shapefiles of MBS Sites of Biodiversity Significance and DNR Native Plant Communities can be downloaded from the [MN Geospatial Commons](#). Please contact me if you do not have access to the appropriate mapping services.) We encourage you to consider project alternatives that would avoid or minimize disturbance to these ecologically significant areas. Actions to minimize disturbance may include, but are not limited to, the following recommendations:

- Minimize vehicular disturbance in the MBS Sites (allow only vehicles/equipment necessary for construction activities);
 - Do not park equipment or stockpile supplies in the MBS Sites;
 - Do not place spoil within MBS Sites or other sensitive areas;
 - Retain a buffer between proposed activities and the MBS Sites;
 - If possible, conduct the work under frozen ground conditions;
 - Use effective erosion prevention and sediment control measures;
 - Inspect and clean all equipment prior to bringing it to the site to prevent the introduction and spread of invasive species;
 - As much as possible, operate within already-disturbed areas;
 - Revegetate disturbed soil with [native species suitable to the local habitat](#) as soon after construction as possible; and
 - Use only weed-free mulches, topsoils, and seed mixes. Of particular concern are birdsfoot trefoil (*Lotus corniculatus*) and crown vetch (*Coronilla varia*), two invasive species that are sold commercially and are problematic in prairies and disturbed open areas.
- If the Wetland Conservation Act (WCA) is applicable to this project, please note that Prairie Rich Fen may qualify as a “rare natural community” under this Act. Minnesota Rules, part 8420.0515, subpart 3 states that a wetland replacement plan for activities that modify a rare natural community must be denied if the local government unit determines the proposed activities will permanently adversely affect the natural community.

State-listed Species

- Blanding’s turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported in the vicinity of the proposed project. Blanding’s turtles use upland areas up to and over a mile distant from wetlands, waterbodies, and watercourses. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Factors believed to contribute to the decline of this species include collisions with vehicles, wetland drainage and degradation, and the development of upland habitat. Any added fatality can be detrimental to populations of Blanding’s turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels.

For additional information, see the [Blanding’s turtle fact sheet](#), which describes the habitat use and life history of this species. The fact sheet also provides two lists of recommendations for avoiding and minimizing impacts to this rare turtle. Refer to the both list of recommendations for projects within the

AUAR area. The use of [erosion control](#) blanket shall be limited to 'bio-netting' or 'naturalnetting' types, and specifically not products containing plastic mesh netting or other plastic components. Also be aware that hydro-mulch products may contain small synthetic (plastic) fibers to aid in its matrix strength. These loose fibers could potentially re-suspend and make their way into Public Waters. As such, please review mulch products and not allow any materials with synthetic (plastic) fiber additives in areas that drain to Public Waters.

The [Blanding's turtle flyer](#) should be given to all contractors working in the area. If Blanding's turtles are encountered on site, remember Minnesota's Endangered Species Statute (*Minnesota Statutes*, section 84.0895) and associated Rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the take of threatened or endangered species without a permit. If turtles are in imminent danger they must be moved by hand out of harm's way, otherwise they are to be left undisturbed. If any projects include wetland impacts, a Blanding's turtle is encountered, or if further assistance regarding the Blanding's turtle is needed, please contact the DNR Regional Nongame Specialist, Erica Hoaglund (651-259-5772 or Erica.Hoaglund@state.mn.us).

- Trumpeter swans (*Cygnus buccinator*), a state-listed species of special concern, has been documented nesting in the area. During the breeding season, trumpeter swans select small ponds and lakes with extensive beds of cattails, bulrush, sedges, and/or horsetail. Ideal habitat includes about 100 m of open water for take-off, stable levels of unpolluted water, emergent vegetation, low levels of human disturbance, and the presence of muskrat (*Ondatra zibethicus*) houses and American beaver (*Castor canadensis*) lodges for use as nesting platforms. Construction activities near suitable habitat that occur during the breeding season could disrupt nesting swans, if present.
- The Bell's Vireo, (*Vireo bellii*), a state-listed bird species of special concern, has been documented in the area. In Minnesota, Bell's vireo prefers shrub thickets within or bordering open habitats such as grasslands or wetlands. This bird suspends its nests from forks of low branches of small trees or shrubs. If feasible, avoid tree and shrub removal from May 15th through August 15th to avoid disturbance of nesting Bell's Vireo and other birds.

Environmental Review and Permitting

- Please include a copy of this letter in any state or local license or permit application. Please note that measures to avoid or minimize disturbance to the above rare features may be included as restrictions or conditions in any required permits or licenses.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and the project description provided on the NHIS Data Request Form. Please contact me if project details change or for an updated review if construction has not occurred within one year.

The Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. If needed, please contact your [DNR Regional Environmental Assessment Ecologist](#) to determine whether there are other natural resource concerns associated with the proposed project. Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,



Samantha Bump
Natural Heritage Review Specialist
Samantha.Bump@state.mn.us

Links: Rare Species Guide

<http://www.dnr.state.mn.us/rsg/index.html>

DNR Regional Environmental Assessment Ecologist Contact Info

http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html

MBS Sites of Biodiversity Significance

http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html

DNR Native Plant Communities

<http://www.dnr.state.mn.us/npc/index.html>

MN Geospatial Commons

<https://gisdata.mn.gov/>

BWSR Native Vegetation/Seed Mixes

http://www.bwsr.state.mn.us/native_vegetation/

Blanding's Turtle Fact Sheet

http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/factsheet.pdf

Blanding's Turtle Flyer

http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/flyer.pdf

Wildlife Friendly Erosion Control

<http://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>

Cc: Melissa Collins, Leslie Parris, Erica Hoaglund, Kit Elstad-Haveles

Appendix G
Contamination Review Memo

Memorandum

To: Michael Grochala, City of Lino Lakes

From: Ryan Spencer, WSB
Andi Moffatt, WSB

Date: January 31, 2020

Re: Desktop Contamination Review – I-35 Corridor AUAR
Lino Lakes, Minnesota
WSB Project No. R-015144-000

INTRODUCTION

WSB reviewed public database information to identify sites that pose a contamination risk to the Lino Lakes I-35E Corridor located in Lino Lakes, Minnesota (the Project Area). A map showing the Project Area is included as **Figure 1**. The following online databases were reviewed on January 30, 2020 as part of this desktop environmental review:

- Minnesota Pollution Control Agency (MPCA) "What's in My Neighborhood?" website
- Minnesota Department of Agriculture (MDA) "What's in My Neighborhood?" website

This desktop contamination review is not intended to replace a Phase I Environmental Site Assessment (ESA) performed per ASTM E1527-13. WSB did not verify the database information for accuracy. Therefore, further environmental review is recommended prior to performing any follow-up investigation work (e.g. subsurface borings) to verify WIMN source information. Based on this desktop review, the following information is provided:

Project Area Sites

Thirty-three (33) sites were identified at the Project Area (see **Figures 2, 2A, and 2B**). The sites are associated with 50 database listings, summarized below:

- Twenty-one (21) stormwater permit listings (18 construction and 3 industrial);
- Fifteen (15) hazardous waste generator listings. Inclusion on the hazardous waste generator database indicates the site generates hazardous waste requiring a permit;
- Five (5) listings were for sites with aboveground tanks (AST) and/or underground tanks (USTs) but do not directly indicate a petroleum spill or release;
- Two (2) air quality permit listings; and
- One (1) site assessment listing. Site Assessment sites are places where contamination or regulated waste activities have been reported to the MPCA. If it is determined that little or no exposure potential exists and no further remedial actions are planned, the site is closed and listed as inactive.

None of the identified Project Area listings indicate a hazardous material spill or release except for the following six (6) listings:

Site 1 – Rehbein Shop/Office, 6805 20th Avenue South, Centerville, MN

- Leak Site LS0015707: The identified leak was discovered in 2003, consisted of diesel, did not impact groundwater, and was issued site closure by the MPCA in 2006. Site closure does not mean that the site is free of contamination.

Site 5 – Acton Construction, 2209 Phelps Road, Lino Lakes, MN

- Leak Site LS0001284: The identified leak was discovered in 1989, consisted of fuel oil #1 & #2 and leaded gasoline, impacted groundwater, and was issued site closure by the MPCA in 1992. Site closure does not mean that the site is free of contamination.
- Brownfields VP3340: The site entered the Voluntary Investigation and Cleanup (VIC) Program from 1992 to 1997. Brownfields are potentially contaminated sites where the MPCA is assisting with environmental investigations and/or redevelopment activities.
- Brownfields BF0001207: A second VIC listing associated with Site 5 was listed as active from June 2019 to December 2019.

Site 25 – Eagle Trucking Inc, 7087 20th Avenue, Centerville, MN

- Leak Site LS0013133: The identified leak was discovered in 1999, consisted of diesel, and was issued site closure by the MPCA in 2000. Site closure does not mean that the site is free of contamination.

Site 33 – Lakes 1 Stop, 7090 21st Avenue South, Centerville, MN

- Leak Site LS0013380: The identified leak was discovered in 2000, consisted of gasoline, and was issued site closure by the MPCA in 2003. Site closure does not mean that the site is free of contamination.

Adjacent Sites

Ten (10) sites were identified adjacent to the Project Area (see **Figures 2, 2A, and 2B**). The sites are associated with 14 listings, summarized below:

- Two (2) construction stormwater listings;
- Two (2) hazardous waste generator listings. Inclusion on the hazardous waste generator database indicates the site generates hazardous waste requiring a permit;
- Two (2) listings were for sites with USTs but do not directly indicate a petroleum spill or release; and
- One (1) feedlot listing.

None of the listings identified adjacent to the Project Area indicate a hazardous material spill or release except for the following seven (7) listings:

Site 8 – Corner Express, 1990 Main Street, Centerville, MN

- Leak Site LS0018115: The identified leak was discovered in 2010, consisted of unleaded gasoline, impacted groundwater, and was issued site closure by the MPCA in 2011. Site closure does not mean that the site is free of contamination.
- Leak Site LS0020747: The identified leak was discovered in June 2018, consisted of gasoline, and was issued site closure by the MPCA in August 2018. Site closure does not mean that the site is free of contamination.

Site 10 – Jim Stevens Construction, 7007 20th Avenue, Centerville, MN

- Leak Site LS0009694: The identified leak was discovered in 1996, consisted of diesel and gasoline, impacted groundwater, and was issued site closure by the MPCA in 1998. Site closure does not mean that the site is free of contamination.

Site 20 – Hugo 30 Acres, 4330 170th Street North, Hugo, MN

- Brownfields PB4670: The site entered the Petroleum Brownfield (PB) Program from September 2014 to December 2014.
- Brownfields VP31840: A second VIC listing associated with Site 20 was listed as active from September 2014 to January 2015. Brownfields are potentially contaminated sites where the MPCA is assisting with environmental investigations and/or redevelopment activities.

Site 42 – Mcneely Residence, 6687 20th Avenue South, Lino Lakes, MN

- Leak Site LS0015090: The identified leak was discovered in 2003, consisted of fuel oil #1 and #2, impacted groundwater, and was issued site closure by the MPCA in 2005. Site closure does not mean that the site is free of contamination.

Site 43 – Lino Lakes Well #4, 6786 Clearwater Creek Drive, Lino Lakes, MN

- Leak Site LS0014107: The identified leak was discovered in 2000 and was issued site closure by the MPCA in 2003. The type of product released is not known. Site closure does not mean that the site is free of contamination.

Surrounding Area Sites - Within 500 Feet

Three sites (Sites 21, 36, and 41) were identified in the surrounding area (beyond adjacent) within 500 feet of the Project Area and are associated with four (4) listings. The surrounding area listings are for stormwater and hazardous waste permits and do not indicate the presence of contamination.

CONCLUSION

All identified Project Area leaks and VIC listings (Sites 1, 5, 25, and 33) and adjoining leak or VIC/PB listings (Sites 8, 10, 20, 42, and 43) pose a contamination risk if future redevelopment involves excavation activities in the vicinity of these sites. Prior to redevelopment in the vicinity of the identified leak or VIC/PB sites, it is recommended that subsurface environmental investigations be conducted to determine if contaminated soil and/or groundwater will need to be managed during redevelopment.

If evidence of contamination or regulated materials are discovered during construction, it is recommended that WSB's Environmental Group is contacted immediately to ensure all materials are managed in accordance with local, state, and federal regulations. If you have any questions or need additional information, please contact me at 763-231-4854 or rspencer@wsbeng.com.

Enclosures:

Figure 1 – Project Location

Figure 2, 2A, and 2B – MPCA/MDA What's in My Neighborhood Search Results

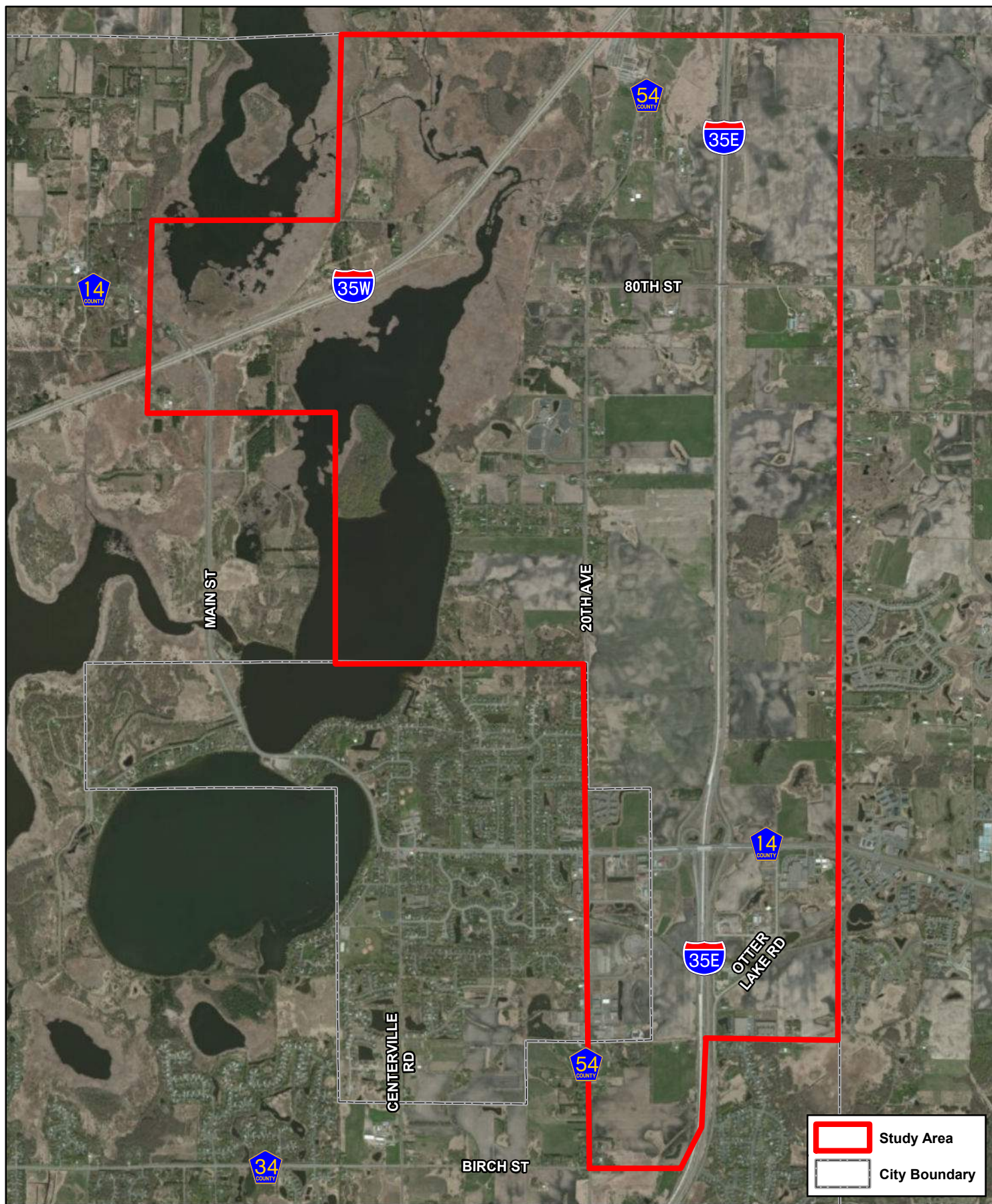


Figure 1 - Project Location

Contamination Review
I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



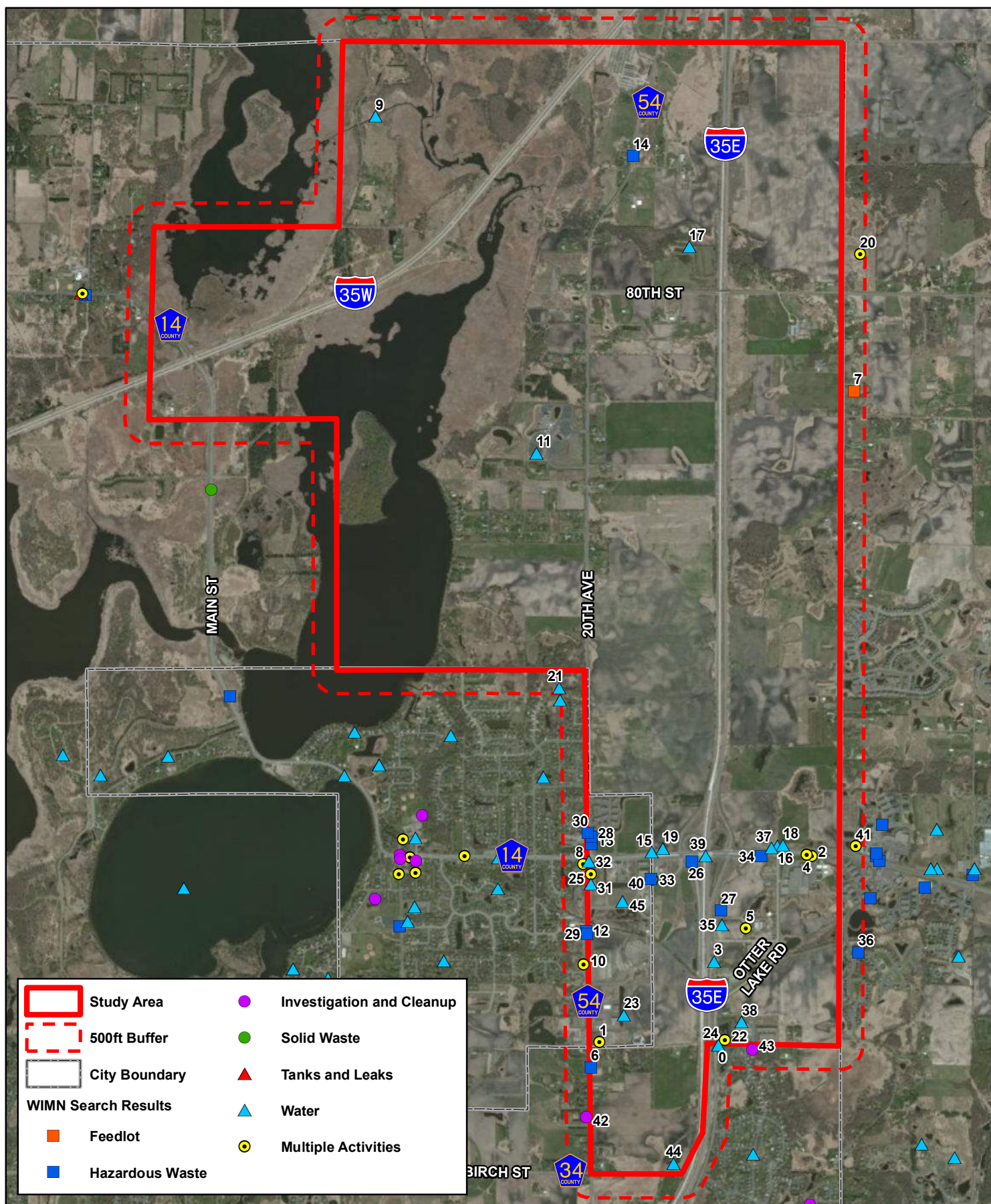


Figure 2 - MPCA/MDA WIMN Search Results

Contamination Review
I-35 Corridor AUAR Project
Lino Lakes, MN



0 2,700 Feet
1 inch = 2,700 feet



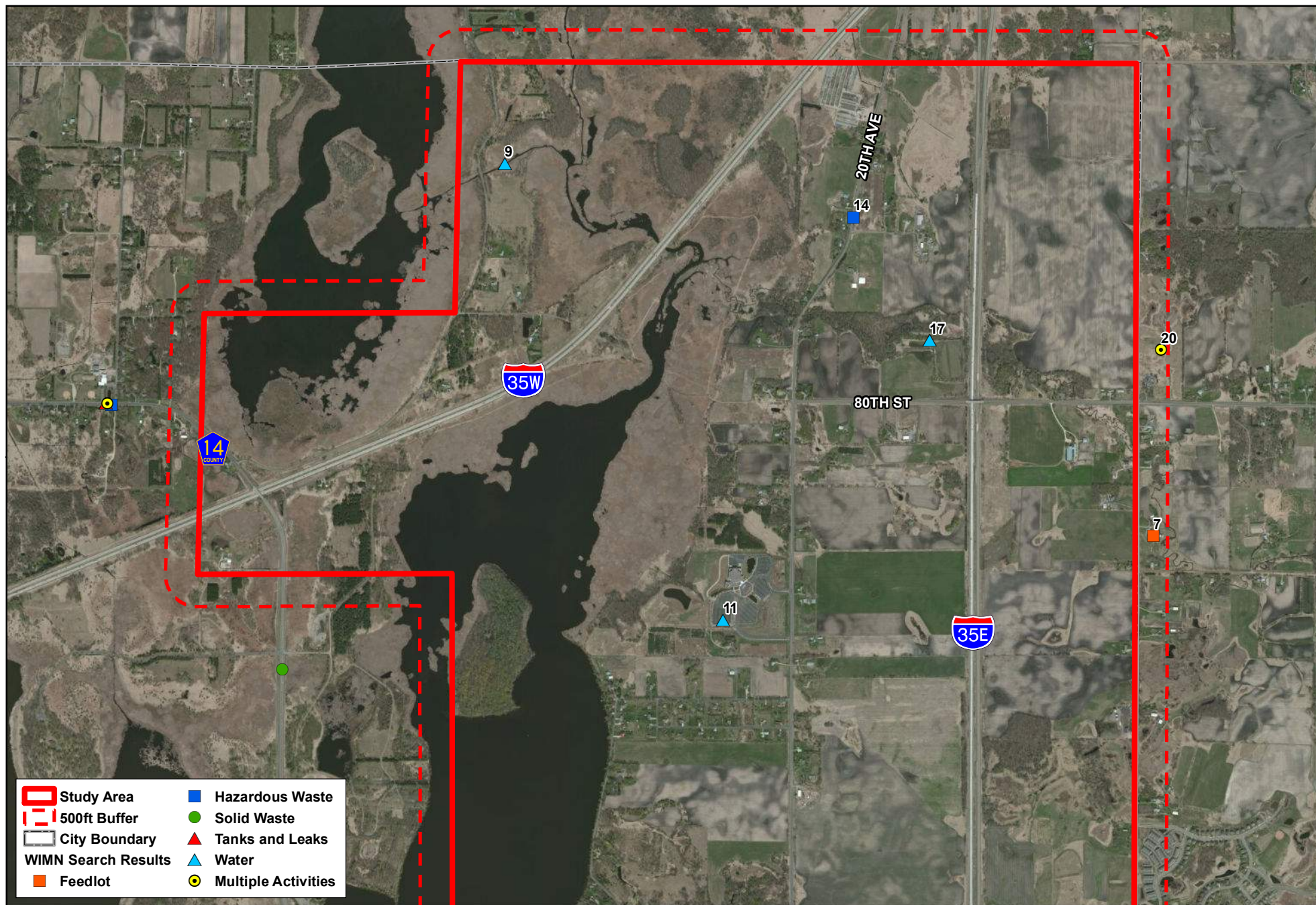


Figure 2A - MPCA/MDA WIMN Search Results
 Contamination Review
 I-35 Corridor AUAR Project
 Lino Lakes, MN



0 2,000
 Feet
 1 inch = 2,000 feet



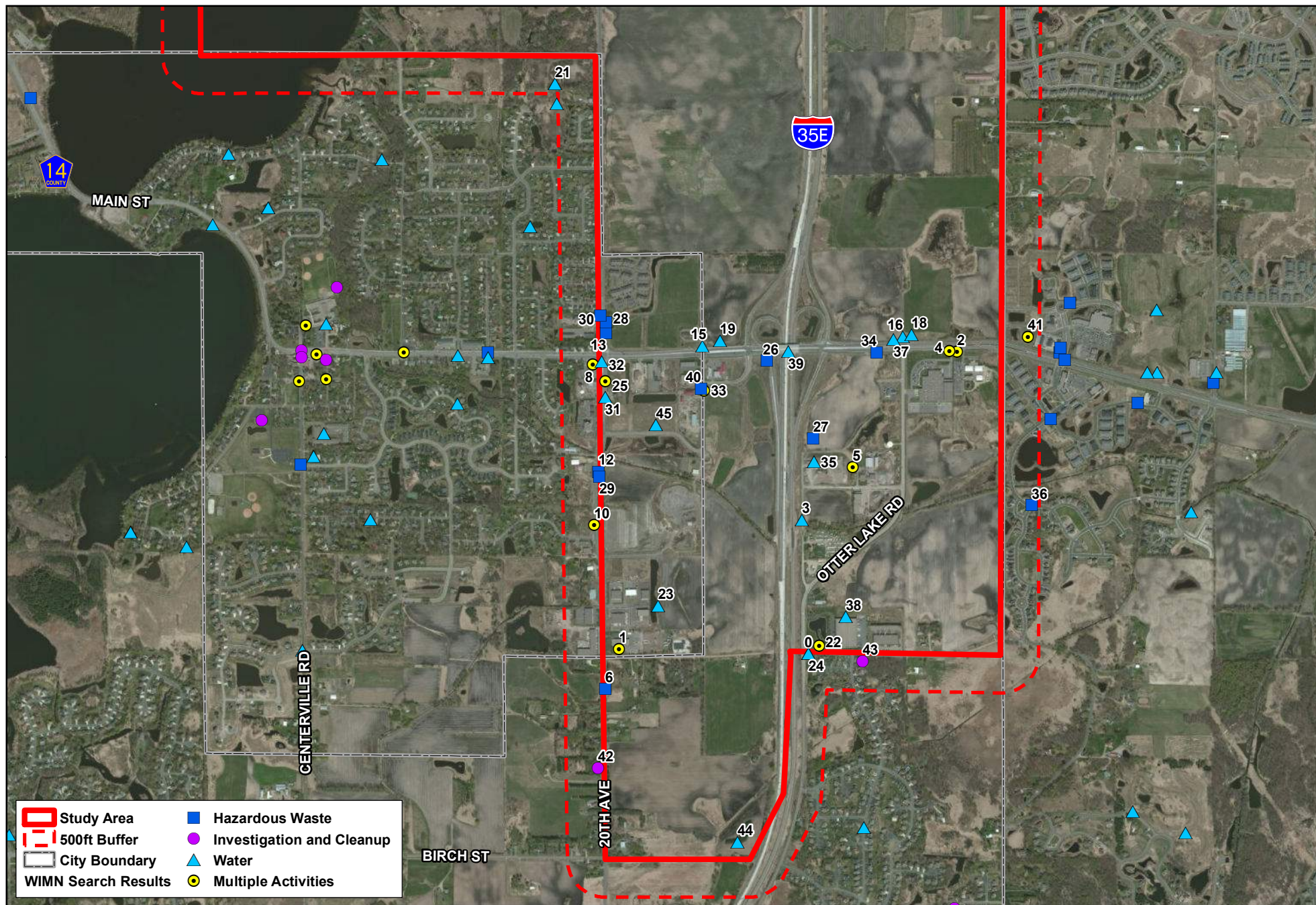


Figure 2B - MPCA/MDA WIMN Search Results
 Contamination Review
 I-35 Corridor AUAR Project
 Lino Lakes, MN



0 1,700
 Feet
 1 inch = 1,700 feet



Appendix H

Mitigation Plan

MITIGATION PLAN

The AUAR Mitigation Plan is outlined below.

ITEM 8. PERMITS AND APPROVALS REQUIRED

As projects are proposed, the project proposer will be required to obtain permits and approvals. Projects proposed since the original AUAR have obtained proper approvals. Additional permits that may not be listed here may also be required.

Unit of Government	Type of Application	Status
Federal		
Army Corps of Engineers	Section 404 Permit	To be Applied for
Federal Highway Administration	Interchange Access Request	To be Applied for
State		
Minnesota Environmental Quality Board	Environmental Assessment (AUAR)	In progress
Minnesota Pollution Control Agency	Section 401 Water Quality Certificate	To be Applied for
	NPDES/SDS General Permit	To be Applied for
	Sanitary Sewer Extension Permit	To be Applied for
State Historic Preservation Office	Cultural Resources Review	To be Applied for
Minnesota Department of Transportation	Use of or Work within MnDOT right of way	To be Applied for
	Drainage Permit	To be Applied for
Minnesota Department of Natural Resources	Water Appropriations Permit	To be Applied for
	Preliminary Well Construction Assessment	To be Applied for
	Public Waters Work Permit	To be Applied for
	General Permit 97-0005 for Temporary Water Appropriations (need if more than 10,000 gpd of water is appropriated)	To be applied for, if necessary
Minnesota Department of Health	Watermain Extension Approval	To be Applied for
	Sanitary Sewer Extension Permit Approval	To be Applied for
	Well Location and Construction Approval	To be Applied for
Regional		
Rice Creek Watershed District	Erosion and Sediment Control Plan Approval	To be Applied for

Unit of Government	Type of Application	Status
	Stormwater Management Plan Approval	To be Applied for
	Wetland Delineation Boundary Confirmation	To be approved upon completion of wetland delineation
	Certificate of Wetland Exemption	To be Applied for
	Wetland Impact/Replacement Application	To be approved upon completion of wetland delineation
Metropolitan Council	Sanitary Sewer Service Connection Approval	To be Applied for
County		
Anoka County	County Roadway Access Permits	To be Applied for
	Roadway Plan Approval on County Roads	To be Applied for
Local		
City of Lino Lakes	Site Plan Approval	To be Applied for
	AUAR and Mitigation Plan Approval	Ongoing
	Planned Unit Development Approval	To be Applied for
	Preliminary Plat Approval	To be Applied for
	Final Plat (multiple) Approval	To be Applied for
	Grading, Excavation and Foundation Permits (multiple)	To be Applied for
	Building Permits (multiple)	To be Applied for
	Sanitary Sewer Connection Permit (multiple)	To be Applied for
	Municipal Water Connection Permit (multiple)	To be Applied for
	Use Permit – Floodplain District	To be Applied for
	City Roadway Access/Crossing Permits	To be Applied for
	Comprehensive Plan Amendment(s)	To be Applied for

ITEM 11. FISH, WILDLIFE, ECOLOGICALLY SENSITIVE RESOURCES

Item No.	Mitigation Description	Update
11.1	Implement the Conservation Design Framework (CDF, see Figure 10-3), which includes conservation of “Core” and “Outlier” habitat areas, buffering these natural resources, and establishing greenway corridors throughout the AUAR area to provide connectivity for ecological and wildlife corridors, regional stormwater collection and conveyance, and passive recreational opportunities.	This mitigation measure is ongoing.
11.2	Add the “Core” and “Outlier” habitat areas to the City’s <i>Parks, Natural Open Space/Greenways, and Trail System Plan</i> map.	This has been added to Fig 2-9 in the Comprehensive Plan.
11.3	Require public land dedication of priority natural open space areas through the subdivision process.	This mitigation measure is ongoing.
11.4	Require that cash in lieu of public land dedication for subdivisions within the AUAR area be spent within the AUAR area to purchase, restore, and/or maintain priority natural open space areas.	This mitigation measure is ongoing.
11.5	Consider provisions for conserving “Other” habitat areas (see Figure 10-2) during the development review process.	This mitigation measure is ongoing.
11.6	Establish mechanisms for ecological restoration, management, stewardship, and education.	This mitigation measure is ongoing and implemented through the Comprehensive Wetland Protection and Management Plan.
11.7	Provide for turtle and other wildlife passage by continuing to require surmountable curbing in new residential developments and encouraging ecologically sensitive site design.	This mitigation measure is ongoing. Residential developments that have occurred within the study area have all incorporated surmountable curbs.
11.8	Consult with the DNR and/or US Fish and Wildlife Service to determine appropriate mitigation strategies for activities near the Bald Eagle’s nests within the AUAR area before development occurs within the vicinity of the nests, including reviewing recommended disturbance limit guidelines developed by the DNR.	This mitigation measure is ongoing.
11.9	Continue to enforce the Peltier Lake No-Wake Zone ordinance and establish buffers to protect the Peltier Lake Heron Rookery.	This mitigation measure is ongoing.

Item No.	Mitigation Description	Update
11.9A	The City will limit development within 300 meters of the edge of a heron colony and not allow disturbance in or near colonies from March to August.	Measure was included in original AUAR within the text.
11.10	Require rare plant surveys, by qualified personnel, prior to development in wetland areas and of areas of banded soils between muck soils and adjacent Isanti, Soderville, or Zimmerman soil map units. These surveys shall be conducted by qualified professionals at an appropriate time of year to identify the rare plants.	This mitigation measure is ongoing.
11.11	Encourage ecologically sensitive design and construction practices for the proposed northerly bypass that would connect I-35W and I-35E.	This mitigation measure is ongoing.
11.12	Implement the Conservation Design Framework (CDF) of the AUAR (Figure 10-3 and 10-2). The CDF includes consideration of: • Conservation of the most ecologically significant natural resources within the AUAR area (in particular, the “Core” and “Outlier” habitats as shown in Figure 10-2 of the original AUAR). • Protection of ecologically significant natural resources from adjacent land uses by implementing buffering. • Connection of ecologically significant natural resources via multi-functional greenway corridors.	Measure was included in original AUAR within the text.

ITEM 12. WATER RESOURCES: WETLANDS

Item No.	Mitigation Description	Update
12.1	Delineate wetlands in accordance with the Corps of Engineers Wetlands Delineation Manual and classify wetlands according to Wetlands of the United States (Circular 39) and Wetlands and Deepwater Habitats of the United States.	This mitigation measure is ongoing.
12.2	Follow sequencing process of wetland avoidance, minimization, rectification, and mitigation as outlined in the Wetland Conservation Act (WCA) if wetlands area altered.	This mitigation measure is ongoing.
12.3	Apply for applicable wetland permits to obtain authorization for wetland alterations under WCA and Section 404 prior to project construction if development activities will impact a jurisdictional wetland.	This mitigation measure is ongoing.
12.4	Mitigate areas of wetland impacts according to the requirements of the Wetland Conservation Act.	This mitigation measure is ongoing.
12.5	Submit wetland permit applications and replacement plans, as appropriate, to the Minnesota Board of Water and Soil Resources, Rice Creek Watershed District, and the City of Lino Lakes.	This mitigation measure is ongoing.
12.6	Follow the requirements for wetland alterations delineated by the Rice Creek Watershed District (RCWD).	This mitigation measure is ongoing.
12.7	Minimize or avoid totally any filling of public waters through careful design.	This mitigation measure is ongoing.

ITEM 13. WATER USE

Item No.	Mitigation Description	Update
13.1	Monitor water usage and do not permit new development to proceed if it exceeds the capacity of the water supply and distribution system.	This mitigation measure is ongoing.
13.2	Construct the water supply and distribution system in accordance with Minnesota Department of Health standards and with the goals, policies, and recommendations set forth in the City's Comprehensive Water Supply Plan.	This mitigation measure is ongoing.
13.3	As necessary, amend the City's Comprehensive Water Supply Plan and Capital Improvement Plan to be consistent with any future amendments or updates to the Comprehensive Plan that would necessitate expansions or alterations to the water system.	This mitigation measure is ongoing. No updates have been needed to date for the study area.
13.4	Follow the adopted Wellhead Protection Plans for Lino Lakes and Centerville. As necessary, amend the City's Wellhead Protection Plan for new wells.	This mitigation measure is ongoing.
13.5	Require abandoned private wells to be sealed in compliance with the Minnesota Department of Health regulations.	This mitigation measure is ongoing.
13.6	Require that the installation of any private individual wells be constructed and installed in accordance with the Minnesota Department of Health regulations (Minnesota Well Code).	This mitigation measure is ongoing.
13.7	Continue to implement the City's adopted water conservation policies which are intended to attenuate peak water demands throughout the City.	This mitigation measure is ongoing.
13.8	Mitigation will be regulated through the City's development approval and permitting process. Proposed master development plans, planned unit development and subdivision applications, plats, and/or site plans must address relevant water conservation mitigation measures prior to final approval by the City. Implementation of mitigation measures will be assured through developer agreements with the City, which will require a financial security for land and infrastructure improvements and/or revoke the right to acquire building permits and/or certificates of occupancy until all relevant mitigation measures have been addressed.	This mitigation measure is ongoing.

ITEM 15. WATER SURFACE USE

Item No.	Mitigation Description	Update
15.1	Consider restricting individual lake access and dock construction along public and private shorelands by encouraging the use of clustered access and dock facilities.	This mitigation measure is ongoing.

ITEM 16. EROSION AND SEDIMENTATION

Item No.	Mitigation Description	Update
16.1	Require project proposers to acquire NPDES/SDS General Stormwater Permit for Construction Activity from the MPCA prior to initiating earthwork.	This mitigation measure is ongoing.
16.2	Require project proposers to meet the erosion and sediment control regulations in all applicable regulations, ordinances and rules of the City and MPCA, and Rice Creek Watershed District.	This mitigation measure is ongoing.
16.3	Require project proposers to minimize runoff, improve the quality of runoff, and provide erosion control through BMPs and other low impact development techniques.	This mitigation measure is ongoing.
16.4	Provide construction oversight to ensure designed sediment and erosion control measures are being implemented.	This mitigation measure is ongoing.
16.5	Implement the Conservation Design Framework (CDF, Figure 10-3).	This mitigation measure is ongoing.

ITEM 17. WATER QUALITY: SURFACE WATER RUNOFF

Item No.	Mitigation Description	Update
17.3	Require stormwater management systems to be developed in accordance with the current version of the <i>Rice Creek Watershed District Rules</i> (these rules assist in achieving the goals of the Resource Management Plan – 3) and all other local, state, and federal stormwater management requirements.	Updated to be inclusive of the current version of the rules. The RCWD rules are intended to meet the goals of the Resource Management Plan-3 that was included in the 2010 AUAR Update.

ITEM 18. WATER QUALITY: WASTEWATER

Item No.	Mitigation Description	Update
18.1	Monitor wastewater flows and not permit new development to proceed if it exceeds the capacity of the wastewater system.	This mitigation measure is ongoing.
18.2	Construct the major infrastructure improvements needed to expand the capacity of the wastewater system (i.e. lift stations, forcemains, and upgrades to the existing systems) in accordance with the Comprehensive Sanitary Sewer Plan and Capital Improvement Plan.	This mitigation measure is ongoing.
18.3	Adequately phase capacity improvements.	This mitigation measure is ongoing.
18.4	Amend the Comprehensive Sanitary Sewer Plan and Capital Improvement Plan to be consistent with any amendments to the Comprehensive Plan that would necessitate expansions or alterations to the sanitary sewer system and regional capacity needs.	This mitigation measure is ongoing. No updates have been needed to date for the study area.
18.5	Each proposed development will be required to provide a detailed projection of wastewater generation and flows. These calculations will be checked by the City's Engineering Consultant.	This mitigation measure is ongoing.
18.6	The City will create a year-end report to evaluate wastewater increases by major sewer lines and overall system usage in relation to capacity. Results of this assessment will become the targets for growth for the following year.	This mitigation measure is ongoing.

ITEM 19. SOIL AND GROUNDWATER CONTAMINATION

Item No.	Mitigation Description	Update
19.1	Require the removal of all tanks and associated underground piping in accordance with applicable state and federal laws.	This mitigation measure is ongoing.
19.2	Require that any party that may discover residual petroleum contamination shall follow state law and report the information to the MPCA for further investigation and potential remediation.	This mitigation measure is ongoing.

ITEM 21. TRANSPORTATION

Item No.	Mitigation Description	Update
21.1	Create a monitoring program that closely evaluates traffic impacts from proposed developments within the AUAR area.	Traffic Impact Studies are required for proposed developments showing the impact on the transportation system and consistency with the AUAR.
21.2	Implement traffic mitigation measures as development occurs within the AUAR area. Specific mitigation measures for the three development scenarios are discussed in Item 21 and depicted on Figures 21-8, 21-9, and 21-10. These mitigation measures improve overall traffic operations for the respective development scenarios. The improvements are intended to represent the minimum level of infrastructure investment that would be needed to meet acceptable level of service standards. Additional roadway and non-motorized improvements, beyond the minimum level, may be identified to accommodate specific development needs that are identified within the AUAR area. Primary improvements, regardless of land use scenario, include: 21.2.1 Develop frontage road system in compliance with local, county, and state access management guidelines to serve local and regional traffic. 21.2.2 Work with appropriate road authorities to reconstruct and provide additional capacity for CSAH 21.	CSAH 14 improvement was completed in 2009 and noted in the 2010 AUAR Update CSAH 54 (formerly CSAH 21) 20th Avenue North intersection improvements were completed and noted in the 2010 AUAR Update. I-35E Interchange reconstruction was completed in 2011. This mitigation measure is complete.

Item No.	Mitigation Description	Update
	21.2.3 Work with appropriate road authorities to construct Northerly Bypass with new interchanges at I-35W and I-35E (80th Street East) to improve traffic operations and access to and within the AUAR area. As recommended by FHWA and Mn/DOT, a phasing plan should be established to construct each piece of the Northerly Connector as it becomes necessary to maintain the serviceability of the transportation system. <u>Phase Improvement</u> 1. CSAH 14, I-35W to I-35E (funded and programmed for construction) 2. CSAH 14, I-35E Interchange 3. CR 140 (80th Street)/I-35E Interchange 4. CSAH 14 across Peltier Lake (Northerly Bypass/Connector) 5. CSAH 14/I-35W Interchange As part of these improvements, the following steps should be taken as the opportunity is presented: • Inclusion of the northerly bypass and proposed interchanges in future transportation and comprehensive plans • Preservation of right of way through official mapping or other process • Right of way dedication through the platting process	
21.3	Require a traffic impact analysis for all development projects within the AUAR area. The traffic impact analysis will assist the City and other road authorities in determining the appropriate mitigation measures that are required to mitigate impacts of a specific development proposal.	This mitigation measure is ongoing.

Item No.	Mitigation Description	Update
21.4	Work with appropriate road authorities to mitigate the impact of the additional traffic on the on the regional system, specifically Interstates 35W and 35E, by reconstructing each to provide a six-lane cross-section consistent with the recommendations outlined in the I-35 IRC. It should be noted that it was determined that an expansion will be necessary even without the development scenarios used in this analysis. As the interstates serve a much larger area, the projected growth of the entire Twin Cities region should warrant expansion by the year 2030.	This mitigation measure is ongoing.
21.5	Prioritize alternative travel modes within the AUAR study area and require project proposers to address alternative travel modes (e.g., buses, bicyclists, and pedestrians) by identifying appropriate accommodations.	This mitigation measure is ongoing.
21.6	Consider the need for additional infrastructure improvements (see item #21.2) in future updates or amendments to the Comprehensive Plan. Submit the plan update to the appropriate agencies (i.e., FHWA, MnDOT, Met Council, etc.).	This mitigation measure is ongoing.
21.7	Require project proposers to follow all appropriate guidelines and policies related to traffic nose and noise walls.	This mitigation measure is ongoing.
21.8	Require that site plans for each of the developments include measures such as appropriate setback distances, earthen berms, noise walls, and appropriate site design to reduce the impact of traffic noise to residential areas.	This mitigation measure is ongoing.
21.9	Continue to require the implementation of the conditions of approval for the Eagle Brook Church relating to mitigating traffic impacts.	This mitigation measure is ongoing.
21.10	Achieve effective traffic operations within the city by requiring that site plans make use of access management practices to promote safe, effective traffic flow.	This mitigation measure is ongoing.
21.11	Require project proposers to follow the Anoka County Highway Department Development Review Process Manual (updated June 2013).	This mitigation measure is ongoing and has been updated to reflect the newest manual.
21.12	Continue to coordinate capital improvement programming with applicable transportation authorities.	This mitigation measure is ongoing.

ITEM 25. CULTURAL RESOURCES / FARMLANDS

Item No.	Mitigation Description	Update
25.1	Consult the map that shows areas with a high potential for archaeological sites when development applications are submitted for review. Given the sensitive nature of this information, this map cannot be included in the AUAR document, nor can it be made available to the public. If a development application falls within an area that is considered to have a high potential for archaeological sites, the City will require that the following steps and procedures involved in the identification and analysis of any archaeological sites is followed prior to development: ▪ Conduct a Phase I archaeological survey within the area of potential effect (APE). The objective of the archaeological fieldwork is to determine if there are archaeological sites in the areas identified as having high potential for such and define the extent of those sites that may be impacted by development plans. ▪ Conduct a Phase II archaeological survey. If archaeological resources are uncovered within the APE that may be eligible for listing on the National Register of Historic Places (NRHP) a Phase II survey should be conducted. The objective of the investigation is to determine whether archaeological resources are eligible for listing on the NRHP. ▪ Plan for avoidance or conduct Phase III data recovery. If a significant archaeological site is identified that will be impacted by development, avoidance is recommended. If this is not possible, then a data recovery of the site should occur. ▪ If human remains are recovered at any time during archaeological investigation or development, all activities must stop, and consultation initiated with the Office of the State Archaeologist and Minnesota Indian Affairs Council.	This mitigation measure is ongoing.

Item No.	Mitigation Description	Update
25.2	Consider preservation of agricultural heritage sites by implementing thoughtful interpretive planning. As development plans for the two Century Farms come to fruition, the City can encourage landscaping and other amenities that reflect the agricultural heritage of this city. In addition, the City can continue to reflect the agricultural heritage of the community in public buildings and gathering places (for example, City Hall reflects elements of the community's agricultural heritage).	This mitigation measure is ongoing.

ITEM 27. COMPATIBILITY WITH PLANS

Item No.	Mitigation Description	Update
27.1	Use the information contained in the AUAR during future considerations of updates or amendments to the adopted Comprehensive Plan and Zoning Ordinance. Any future consideration of amendments or updates to the Comprehensive Plan and Ordinances would follow the City's set procedures and guidelines for such amendments.	The City has completed the 2040 Comprehensive Plan.
27.2	Require that tools such as clustering, buffering, and/or screening be incorporated into future development plans to mitigate potential land use conflicts.	This mitigation measure is ongoing.

Appendix I
Responses to Comments

Comment	Response
March 13, 2020 Michael Grochala, Community Development Director City of Lino Lakes 600 Town Center Parkway Lino Lakes, MN 55014 RE: City of Lino Lakes, I-35E Corridor Alternative Urban Areawide Review (AUAR) 2020 Update Metropolitan Council Review File No. 19528-5 Metropolitan Council District No. 11 Dear Mr. Grochala: The Metropolitan Council received the City of Lino Lakes AUAR Update for the I-35E Corridor on February 25, 2020. The City adopted the Final AUAR for the I-35E Corridor on September 26, 2005. Pursuant to Minnesota Rules 4410.3610 Subp. 7, an AUAR must be updated every five years in order to remain valid. The Council reviewed a previous AUAR Update for the I-35E Corridor on July 14, 2015. Council staff have conducted a review of the I-35E Corridor AUAR 2020 Update to determine its accuracy and completeness in addressing regional concerns. The staff review has concluded that the AUAR Update is not complete; and its mitigation plans do not reflect scenarios that are likely or conform to either the <i>2040 Transportation System Plan</i> or the <i>2040 Regional Parks Policy Plan</i> (RPPP). Council staff offer the following comments: 9. Land Use / Appendix A (Michael Larson, 651-602-1407) The AUAR Update is not complete because <i>Revised Scenario 1 – 2040 Comprehensive Plan</i> does not reflect the comprehensive plan that is currently in effect (Minn. Rules 4410.3610, subp 3). The AUAR Update incorrectly asserts that Scenario 1 reflects the "current, adopted Comprehensive Plan." The City of Lino Lakes submitted its proposed 2040 comprehensive plan (2040 Plan) for review by the Metropolitan Council on November 27, 2019. On December 20, 2019, the Council found the 2040 Plan incomplete for review. The City of Lino Lakes can only adopt its Plan following authorization by the Metropolitan Council, which has not yet occurred. Until that time, the City's 2030 comprehensive plan remains in effect. The Council also does not consider Scenario 1, as presented, to be consistent with the 2040 Plan submitted for Council review. Scenario 1 reflects a build-out of the City's Urban Reserve that is located west of I-35E and east of Rice Creek Chain of Lakes Regional Park Reserve. The City's proposed 2040 Land Use Plan (Figure 3-2) does not show development in this location prior to 2040. The City may present a build-out scenario, but not as one that represents the comprehensive plan. The remaining land uses shown in Scenario 1 appear to be consistent with 2040 Plan Figure 3-2. 1. 390 Robert Street North Saint Paul, MN 55101-1805 P. 651.602.1000 TTY. 651.291.0904 metrocouncil.org An Equal Opportunity Employer 	1. The 2030 Comprehensive Plan scenario has been added into the AUAR Update. The traffic, sewer, water, and stormwater technical memos has been reviewed and updated to include this scenario in the appendices. This has been added to the AUAR Update in response to this comment.

Comment	Response
Michael Grochala, City of Lino Lakes March 13, 2020 Page 2 9. Land Use / 11. Water Resources / 13. Fish, wildlife, etc. (Emmett Mullin, 651-602-1360) The proposed mitigation measures of a westward extension of 80th Street (County Road 140) and an interchange with I-35W does not conform to the <i>2040 Regional Parks Policy Plan</i>. The Rice Creek Chain of Lakes Park Reserve is owned and operated by Anoka County and has a Metropolitan Council-approved master plan that was originally developed in 1975 and revised in 1999. In 2003, 2012, and 2013, the master plan was amended to adjust the boundaries of the park reserve to what is existing today. The 5,300 acre Rice Creek Chain of Lakes Park Reserve is one of the largest in the seven-county metropolitan area and contains some of the most significant native wildlife habitat and water resources in the region. It is also rich in cultural resources with several known significant archaeological sites within its boundary. The original AUAR acknowledges that the proposed transportation improvements would have impacts on the Park Reserve. However, it asserts that these mitigation measures would have lesser impacts than an alternative of increasing the capacity of CSAH 14 (Main Street). Council staff believe that there has been insufficient study of alternatives to make this determination. 18. Traffic and Transportation / Appendix E (Russ Owen, 651-602-1724) As with the original AUAR, the proposed mitigation of transportation demand includes a proposed westward expansion of 80th Street (County Road 140) through Rice Creek Chain of Lakes Regional Park Reserve, including new interchanges of this roadway at I-35E and I-35W. These interchanges are not included in either the current or increased revenue scenarios of the <i>2040 Transportation Policy Plan</i>. The likelihood of an interchange at I-35W are diminished by potential findings in an Environmental Impact Statement for the interchange, which would inevitably include both Section 4(f) and Section 6(f) evaluation. Although the original AUAR acknowledged the need for further environmental review required by state and federal agencies, the mitigation plan should consider alternative local and regional connections that do not have such obvious environmental constraints or programmatic obstacles. If you have any questions or need further information, please contact the listed technical reviewer or Michael Larson, Principal Reviewer, at 651-602-1407. Sincerely,  LisaBeth Barajas, Director Community Development Division CC: Minnesota Environmental Quality Board Todd Sherman, Development Reviews Coordinator, MnDOT - Metro Division Susan Vento, Metropolitan Council District No. 11 Michael Larson, Sector Representative / Principal Reviewer Raya Esmaeili, Reviews Coordinator N:\CommDev\LPA\Communities\Lino Lakes\Letters\Lino Lakes 2020 AUAR\35E Corridor 19528-5.docx	2. As part of the long-term planning process, the City of Lino Lakes is anticipating the future need for 80th Street to connect to the west. The planned timing for this connection is post 2040. The City recognizes the need to begin this dialogue between the Met Council and Anoka County and therefore has indicated this future road connection in its transportation plan and in this AUAR. This project could be subject to a separate environmental review process and would be evaluated for environmental review at that time. 3. We understand that these improvements are not identified by Met Council <i>2040 Transportation Policy Plan</i>. However, the City has identified the improvements in the current 2040 Comprehensive Plan update in the "Post-2040" conditions. It is also understood that as the area develops these improvements or other improvements would be considered. If environmental review for the future roadway connection is required, it will be completed at that time.

Comment	Response
520 Lafayette Road North St. Paul, Minnesota 55155-4194 651-296-6300 800-657-3864 Use your preferred relay service info.pca@state.mn.us Equal Opportunity Employer March 12, 2020 Michael Grochala Community Development Director City of Lino Lakes 600 Town Center Parkway Lino Lakes, MN 55014 Re: I-35E Corridor Alternative Urban Areawide Review Update Dear Michael Grochala: Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) Update for the I-35E Corridor project (Project) in the city of Lino Lakes, Anoka County, Minnesota. The Project consists of a large mixed-use development area. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility or other interests, the MPCA staff has the following comments for your consideration. <u>Contamination/Hazardous Materials/Wastes (Item 12)</u> As noted in the AUAR Update, the MPCA database <i>What's In My Neighborhood?</i> identified the presence of several properties near the Project area with actual or potential soil and/or groundwater contamination. State law requires that persons properly manage contaminated soil and water they uncover or disturb - even if they are not the party responsible for the contamination. Developers considering construction on or near contaminated properties should begin working early in their planning process with the MPCA's Brownfields Program to receive necessary technical assistance in managing contamination. For some properties, special construction might be needed to prevent the further spreading of the contamination and/or prevent vapors from entering buildings or utility corridors. Information regarding the Brownfields Program can be found at: https://www.pca.state.mn.us/waste/brownfields. If contamination is found, it must be reported immediately to the state duty officer at 651-649-5451 or 800-422-0798. 1. <u>Noise (Item 17)</u> The 2005 AUAR discusses traffic noise and the impacts of noise on certain wildlife. Although the responsible governmental unit is not required to consider noise as part of this assessment, the MPCA recommends that they revisit traffic-related noise (2005 AUAR p. 97-100). The Minnesota Department of Transportation and the Federal Highway Administration have updated their noise modeling since 2005. Other noise concerns can be addressed on a case-by-case basis upon development. For noise related questions, please contact Fawkes Steinwand at 651-757-2327 or Fawkes.Steinwand@state.mn.us. 2. <u>Transportation (Item 18)</u> The original AUAR was completed in 2005 and analyzed three scenarios for development for the years 2030 and post 2030. Mitigation plans developed included adding new roadway connections, intersection control, turn lanes, and widening roads as necessary. Based on the comparison of the forecasted traffic generation from the AUAR area and the forecasted 2040 traffic volumes, the traffic analysis conducted, and Mitigation Plan recommended with the 2005 AUAR and the 2010 and 2015 updated AUAR's remains 3.	1. Comment noted. 2. As the area develops the traffic noise will be addressed on a case by case basis. 3. Comment noted.

Comment	Response
Michael Grochala Page 2 March 12, 2020 valid for this AUAR update. Many of the mitigation measures outlined in the previous update were completed in the past few years and there are several mitigation measures that are currently ongoing. Please contact Mehjabeen Rahman at Mehjabeen.Rahman@state.mn.us if you have any questions. We appreciate the opportunity to review this Project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this AUAR Update, please contact me by email at Karen.kromar@state.mn.us or by telephone at 651-757-2508. Sincerely,  Karen Kromar Project Manager Environmental Review Unit Resource Management and Assistance Division KK:bt cc: Dan Card, MPCA, St. Paul Fawkes Steinwand, MPCA, St. Paul Mehjabeen Rahman, MPCA, St. Paul	

Comment

March 13, 2020

Mr. Michael Grochala
Community Development Director
City of Lino Lakes
600 Town Center Pkwy
Lino Lakes, MN 55014

RE: AUAR Update: I-35E Corridor
T31 R22 S1, 2, 3, 10, 11, 12, 13
Lino Lakes, Anoka County
SHPO Number: 2020-1179

Dear Mr. Grochala:

Thank you for the opportunity to comment on this AUAR Update. We note that we did not review the initial AUAR nor any subsequent updates, so we have not commented on this development area in the past.

Due to the nature and location of the proposed project, we recommend that a Phase I archaeological survey be completed. The survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation. The survey should include an evaluation of eligibility for the National Register of Historic Places for any properties that are identified. For a list of consultants who have expressed an interest in undertaking such surveys, please visit the website preservationdirectory.mnhs.org, and select "Archaeologists" in the "Search by Specialties" box.

We will reconsider the need for survey if the project area can be documented as previously surveyed or disturbed. Any previous survey work must meet contemporary standards. **Note:** plowed areas and right-of-way are not automatically considered disturbed. Archaeological sites can remain intact beneath the plow zone and in undisturbed portions of the right-of-way.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800. If this project is considered for federal financial assistance, or requires a federal permit or license, then review and consultation with our office will need to be initiated by the lead federal agency. Be advised that comments and recommendations provided by our office for this review may differ from findings and determinations made by the federal agency as part of review and consultation under Section 106.

If you have any questions regarding our review of this project, please contact our Environmental Review Program at (651) 201-3285.

Sincerely,

A handwritten signature in black ink that reads 'Sarah J. Beimers'.

Sarah J. Beimers
Environmental Review Program Manager

MINNESOTA STATE HISTORIC PRESERVATION OFFICE
50 Sherburne Avenue ■ Administration Building 203 ■ Saint Paul, Minnesota 55155 ■ 651-201-3287
mn.gov/admin/shpo/ ■ mnshpo@state.mn.us
AN EQUAL OPPORTUNITY AND SERVICE PROVIDER

Response

1. An extensive cultural resource review was completed with the original AUAR. The mitigation plan requires Phase I studies within sites that fall within areas of high potential for archaeological sites. These are mitigation measures 25.1 and 25.2.

2. Comment Noted.

1.

2.

Comment	Response
Mr. Grochala, The DNR has reviewed the I-35E Corridor AUAR Update and would like to provide the following comments: 1. Page 2, Water. When planning for additional municipal water supply infrastructure, please apply for a Preliminary Well Construction Assessment through MPARS, MNDNR's online permitting and reporting system. The City of Lino Lakes is required to request the amendment of the City of Lino Lakes DNR Water Appropriation Permit 1985-6168 at least 6-12 months prior to exceeding the authorized volume of DNR Water Appropriation Permit 1985-6168. 2. Page 3, Approved Development. Please note that a DNR Water Appropriation Permit is required for the pumping of groundwater, pond water, or surface water in volumes that exceed 10,000 gallons per day, or one million gallons per year, to allow grading, building construction, pond construction, stream crossing construction and the construction of utilities. 3. Page 5, Water Resources. Under Section 11.a.i., please include MNDNR Public Waters Inventory numbers for Peltier Lake, Rondeau Lake, Clearwater Creek, and Hardwood Creek. 4. Page 6, Stormwater. The DNR urges the City of Lino Lakes to consider using stormwater to irrigate landscaping as a means of conserving groundwater. Minnesota Statutes exempt stormwater use from DNR Water Appropriation Permit requirements. 5. Page 7, Surface Waters. Under Section 11.b.iv., please include MNDNR in the list of agencies under which future projects affecting water resources may be regulated. 6. Page 7, Surface Waters. Please note that Hardwood Creek and Peltier Lake are impaired waters. Every effort must be made to reduce further impact to these public waters. The planned increase in impervious surfaces will also increase the amount of road salt used in the project area. Chloride released into local lakes and streams does not break down, and instead accumulates in the environment, potentially reaching levels that are toxic to aquatic wildlife and plants. Consider promoting local business and city applicator participation in the Smart Salting Training offered through the Minnesota Pollution Control Agency. More information and resources can be found at this website. Many winter maintenance staff who have attended the Smart Salting training — both from cities and counties and from private companies — have used their knowledge to reduce salt use and save money for their organizations. 7. Page 8, Fish, wildlife, plant communities, and sensitive ecological resources (rare features). Items 13.a-d. do not provide any discussion of natural resources. The 2/20/2020 Natural Heritage letter was not included in AUAR attachments. Please see a copy of this letter (attached to this email) and include it, and a discussion of its contents, in the AUAR and Mitigation Plan. The City of Lino Lakes contains many natural resources which could be impacted by this project. 8. Appendix C, Water Appropriation Memo, Page 5. Appendix C indicates that the City of Lino Lakes will need to construct an additional three wells to serve the growth in	1. The City will obtain any necessary permits and reviews for city-lead projects. The Preliminary Well Construction Assessment has been added to Item 8 in the Update and the Mitigation Plan. 2. Comment noted. This permit was listed in the AUAR Update. 3. These PWI numbers have been added to the Update. 4. Comment note. This will be taken into consideration as development is proposed in the study area. 5. The DNR has been added to this section. 6. These waters have been noted as impaired in this section. 7. The DNR NHIS letter has been added to the Update in the appendix and referenced in this section. The information from the NHIS system is similar to information obtained during the original AUAR and its subsequent updates. The mitigation plan acknowledges the areas contained within the Minnesota Biological Survey Sites of Biological Significance. 8. This Assessment has been added to the AUAR and Mitigation Plan as noted in Response #1 above.

population of the City of Lino Lakes. Please note that the DNR will need to conduct a “Well Construction – Preliminary Assessment” for each of the new wells within 6-12 months prior to the construction of the well.

9. The majority of the area covered by the I-35E AUAR is within the Drinking Water Supply Management Area of the City of Lino Lakes. This is an area where groundwater pollution will enter the water system of the City of Lino Lakes within 10 years of the initial contamination event. Care should be taken in the handling of potential pollutants in this area.
10. Due to entanglement issues with small animals, use of erosion control blankets throughout the project should be limited to ‘bio-netting’ or ‘natural netting’ types, and specifically not products containing plastic mesh netting or other plastic components. These are Category 3N or 4N in the 2016 & 2018 MnDOT Standards Specifications for Construction. Also be aware that hydro-mulch products may contain small synthetic (plastic) fibers to aid in its matrix strength. These loose fibers could potentially re-suspend and make their way into Public Waters. As such, please review mulch products and do not allow any materials with synthetic (plastic) fiber additives in areas that drain to Public Waters.

Thank you for the opportunity to comment. Please let me know if you have any questions.

Thank you,

Melissa Collins

Regional Environmental Assessment Ecologist | Ecological and Water Resources

Pronouns: She/her

Minnesota Department of Natural Resources

1200 Warner Road

St. Paul, MN 55106

Phone: 651-259-5755

Email: melissa.collins@state.mn.us

mndnr.gov



9. This comment is noted.

10. The comment is noted and will be reviewed when development is proposed in the study area.