



City of Duluth

Council Chambers, City
Hall

Meeting Agenda Planning Commission.

Council Chambers

Tuesday, January 13, 2026

5:00 PM

Council Chambers

CALL TO ORDER AND ROLL CALL

APPROVAL OF PLANNING COMMISSION MINUTES

[PL 25-1209](#) Planning Commission Meeting Minutes 12/09/25

Attachments: [12-9-25 PC Minutes \(not approved yet\).pdf](#)

PUBLIC COMMENT ON ITEMS NOT ON AGENDA

CONSENT AGENDA

[PLSUB-2512-0016](#) Minor Subdivision at 010-4500-03900 (N 59th Ave W) [RO]

Attachments: [PLSUB-2512-0016 Staff Report with Attachments.pdf](#)

[PLVAC-2512-0012](#) Vacation of Slopes and Fills Easement at 404 E 5th St by Hanft Fride PA [CH]

Attachments: [PLVAC-2512-0012 Staff Report with Attachments.pdf](#)

[PLVAR-2512-0015](#) Variance to Shoreland Setbacks for the Chester Creek Ski Chalet and Addition by LHB Inc. [RO]

Attachments: [PLVAR-2512-0015 Staff Report with Attachments.pdf](#)

[PLVAR-2512-0016](#) Variance to Side Yard Setbacks at 702 S 63rd Ave W by Theresa Corey [CH]

Attachments: [PLVAR-2512-0016 Staff Report with Attachments.pdf](#)

OTHER BUSINESS

[PLEAW-2511-0002](#) Final AUAR Order for the Downtown Duluth AUAR

Attachments: [Final AUAR Order_DowntownDuluth.pdf](#)
[Downtown Duluth_Scoping EAW Narrative-Appendices \(1\).pdf](#)

[PLSUB-2510-0013](#) Request to Waive Subdivision Regulations for Housing and Redevelopment Authority (HRA) of Duluth at Harbor Highlands

Attachments: [PLSUB-2510-0013 Memo and Attachments.pdf](#)

COMMUNICATIONS

Land Use Supervisor Report

Heritage Preservation Commission Report

City of Duluth Planning Commission

December 9th, 2025 – City Hall Council Chambers
Meeting Minutes

Call to Order

President Gary Eckenberg called to order the special meeting of the city of Duluth Planning Commission at 5:00 p.m. on Wednesday, December 9th, 2025, in the Duluth city hall council chambers.

Roll Call

Attendance:

Members Present: Nik Bayuk, Jason Crawford, Gary Eckenberg, Brian Hammond, Danielle Rhodes, Dave Sarvela, and Andrea Wedul

Members Absent: Chris Adatte and Kate Van Daele

Staff Present: Nick Anderson, Amanda Mangan, Jenn Moses, Chris Lee, Jason Mozol, Christian Huelsman, Reina Owecke, Ariana Dahlen, and Sam Smith

Approval of Planning Commission Minutes

Planning Commission Special Meeting – November 12th, 2025 –

MOTION/Second: Bayuk/Sarvela approved

VOTE: (7-0)

Public Comment on Items Not on Agenda

N/A

Consent Agenda

PLIUP-2510-0043 Interim Use Permit for a Vacation Dwelling Unit at 30 N 25th Ave W by Elisabeth Mohn [CH]

PLIUP-2511-0044 Interim Use Permit for a Vacation Dwelling Unit at 420 S 18th Ave E by Mitchell Ruter [CL]

PLSUB-2510-0014 Minor Subdivision at 3705 Piedmont Ave by Bluemoon Properties [JM]

PLVAC-2509-0008 Vacation of Right-of-Way at 10 94th Ave W by Sumair Sheikh [CH]

MOTION/Second: Sarvela/Wedul approve as per staff recommendations

VOTE: (7-0)

Public Hearings

PLVAR-2511-0014 Variance to Shoreland Regulations for a Stormwater Basin at Palm St by City of Duluth Engineering [JM]

Staff: Jason Mozol addressed the commissioners. He distributed some aerial photos of the subject site and gave a presentation for both Palm St items simultaneously. City Engineering is proposing to reconstruct and expand the capacity of an existing stormwater basin within the channel of Brewery Creek. Both a shoreland variance and special use permit are required for this project. Much of what is being proposed will bring the site closer to looking like what it used to look like back when it was first constructed. Early development of Central Entrance corridor moved Brewery Creek from its original course to roughly its current location. MNDOT developed Palm St in the 1980's. During that project, Brewery Creek was further channelized, and the current stormwater basin was constructed. The basin has gone largely unmaintained since and has been filled with sediment, contaminants like salt, and vegetation.

The city took ownership in 2022 with the intent of moving forward with this project.

Downstream sections of Brewery Creek in the Hillside neighborhood have repeatedly been damaged by flooding events, and this project will contribute to mitigating those impacts.

"Smart" controls will also be installed to allow for the efficient dewatering of the storage volume of the pond, enabling increased storage capacity during storms, by dynamically managing the basin's water levels based on real-time data and weather forecasts.

A special use permit is required since this is considered a major utility infrastructure, which is a special use in this zone district. The project needs to meet comprehensive plan goals. One of the policies calls for the improvement of Duluth's resiliency to flooding and natural disasters, and a strategy to accomplishing that policy is to promote retention of stormwater above the bluff line to reduce flooding risks through land development controls and establishment of watershed-based storm water detention measures. This project accomplishes this strategy and is consistent with the comprehensive plan. The project must also comply with all other zoning regulations, which include landscaping and tree preservation requirements, buffer requirements, Mozol went over the variance criteria for the project. The existing basin is taking on excess stormwater generated from the adjacent Central Entrance roadway and is no longer adequately sized for large storm events. The rehabilitation and capacity expansion of the existing basin is required to address downstream flooding and erosion control within the Brewery Creek watershed. The location of the parcel is entirely within the Brewery Creek shoreland zone, and the size is restricted by development on all sides. The basin itself will have direct benefits to the watershed by mitigating downstream flooding and erosion and treating stormwater for pollutants and sedimentation. Reconstruction will also remediate contaminated soils currently in the basin and establish a design that will be easier to remove pollutants in the future. The applicant is also proposing to plant trees and shrubs around the perimeter of the basin and revegetate areas within the basin with plugs and seed mixes of native plants. Staff recommends approval for both applications.

Commissioners: Wedul asked staff to clarify how the existing contaminants are being remediated and asked how the "smart" control components operate. She also asked if this project is designed to meet any specific goals.

Rhodes asked if there will be impacts to the bike lane on Palm St.

Staff: Mozol believes that the project is designed to mitigate the general flooding issues in Brewery Creek by increasing storm water retention, but he deferred to the project team for more specific details.

Applicant: Heidi Bringman, senior landscape architect and wetland specialist with LHB, addressed the commissioners. She has been working on this project with Ryan Granlund from city engineering.

Ryan Granlund addressed the commissioners. He is a utility program coordinator, and he oversees the city's stormwater program.

One of his primary tasks is to implement stormwater management measures. Salt will not be remediated from the project as it is typically transported and diluted in the water and very little remains in the sediment. A more common occurrence is that fine grain sediment that are leftover and deposited in stormwater ponds can have heavy metals. Granlund stated that he does not have the report on contaminants, but he knows that the levels are sufficient enough to be considered contaminated and therefore need to be removed.

The purpose of the "smart" system is to help with flood issues by retaining more stormwater during rainfall events. The "smart" control system will drain the deeper section of the pond leading up to a rain event, so it will act more like an anticipatory system to release water prior to a rain event.

Commissioners: Wedul asked if the Ohio Buckeye trees along the bike path could be removed from that area as they pose an overhead hazard due to the large nuts that fall from their branches. Sarvela noted an error in the file number for this item in the staff report and requested that staff reflect the correct file number in the record.

Applicant: Granlund responded that the bike trail will be reconstructed as part of this project without those types of trees. Fruit-bearing trees will be placed elsewhere on the site to provide benefits to the wildlife.

Public: No speakers.

Motion/second: Crawford/Bayuk approve as per staff recommendation with conditions listed in the staff report.

Vote: (7-0)

PLSUP-2511-0065 Special Use Permit for a Stormwater Basin at Palm St by City of Duluth Engineering [JM]

Motion/second: Bayuk/Wedul approve as per staff recommendation with conditions listed in the staff report.

Vote: (7-0)

PLEAW-2511-0002 Public Hearing for Comments on the Scoping EAW for the Downtown Duluth AUAR

Staff: Jenn Moses addressed the commissioners. At the November meeting, she gave a presentation on the downtown AUAR process. The first step was for planning commissioners to approve the Scoping EAW, which was accomplished at the November meeting. The purpose of the scoping EAW is to make sure the development scenarios, existing conditions, and the scope of analysis is correct before the next step can be taken. The scoping EAW has a 30-day public comment period, which started on November 25th and ends on December 26th.

During the 30-day public comment period, a public hearing must take place. Tonight, the public hearing will be held, and all comments pertaining to the Scoping EAW will be collected. State statute says that the comments should be substantive, they should address the accuracy and completeness of the Scoping EAW document, they could suggest additional or alternative development scenarios that staff should analyze, or suggest relevant issues that may warrant further investigation in the AUAR document. Comments can be made verbally or in writing, and staff will share all comments received with the consultant working on the AUAR.

Later, staff will be working with the consultant to prepare a draft AUAR, which will present all of the findings of the analysis that is being laid out now. There will be a second public hearing during the draft AUAR phase. At that point, all the potential environmental impacts of the project will be laid out, and people will be welcome to submit comments then.

During the third phase, staff will take any comments that were submitted regarding the draft AUAR, address the comments, finalize the document, and bring it back to planning commissioners for approval. No action is needed tonight, but commissioners are welcome to submit comments.

Commissioners: Commissioner Hammond believes that the project boundaries should be expanded to include two critical areas. The first area he feels should be included in the regional exchange district. The current proposed boundaries are close to that district, but they are not exact. The regional exchange district opens up some development tools for the city, so he believes it should be included in the AUAR.

The current proposed boundary includes Lot D, but it should also include the rest of the harbor waterfront through up canal park, which would include Pier B, the festival park area, the DECC, and canal park. All these additional areas have significant undeveloped parcels that are good targets for development.

Public: No speakers.

Communications

Land Use Supervisor (LUS) Report – No report.

Heritage Preservation Commission (HPC) Report – Wedul stated that HPC met Monday December 8th. There was a presentation on Belanger building, which previously came through planning commission for an adaptive reuse project. There was also a presentation on the national historical designation application for Lincoln Park. The application is for the park itself, not the Lincoln Park neighborhood. SHPO will review the application early next year, then a public comment period will be held, and if all is approved it will be given the national historical designation.

Adjournment

Meeting adjourned at 5:38 p.m.

Respectfully,

Jenn Moses, Manager
Planning & Economic Development



Planning & Development Division
Planning & Economic Development Department

Room 160
 411 West First Street
 Duluth, Minnesota 55802

218-730-5580

planning@duluthmn.gov

File Number	PLSUB-2512-0016		Contact	Reina Owecke, rowecke@duluthmn.gov	
Type	Minor Subdivision		Planning Commission Date	January 13, 2025	
Deadline for Action	Application Date	December 1, 2025	60 Days	January 30, 2026	
	Date Extension Letter Mailed	December 16, 2025	120 Days	March 31, 2026	
Location of Subject	Corner of N 59 th Ave W and Nicollet St				
Applicant	Just Housing SBC		Contact	Rachel Wagner	
Agent	Just Housing SBC		Contact	Rachel Wagner	
Legal Description	010-4500-03900				
Site Visit Date	December 31, 2025		Sign Notice Date	N/A	
Neighbor Letter Date	N/A		Number of Letters Sent	N/A	

Proposal

Applicant is requesting to subdivide the existing parcel to create two buildable parcels in the R-1 district.

Recommended Action: Staff recommends approval.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Residential	Traditional Neighborhood
North	R-2	Residential	Traditional Neighborhood
South	R-1	Residential	Traditional Neighborhood
East	R-1	Residential	Traditional Neighborhood
West	R-2 and I-G	Residential, Industrial	Traditional Neighborhood, Neighborhood Mixed Use

Summary of Code Requirements:

50-33.1 General: All subdivision plats and replats, and all registered land surveys, shall create lots, streets and walkways and open spaces consistent with the requirements of the zone district within which the land is located.

50-37.5.D.1. Minor Subdivision. The planning commission shall approve the application if it determines that: (a) The lot or lots to be subdivided or combined have frontage on an improved public street; (b) Each proposed lot meets the minimum zoning requirements of the district that it is in; (c) If an existing structure on a lot complies with the requirements of this Chapter, then after the minor subdivision structures on each of the resulting lots will still comply with the requirements of this Chapter; and (d) If one or more of the existing lots, or a structure on one or more of those lots, does not comply with the requirements of this Chapter, the proposed relocation will not create any new nonconformity or increase any existing nonconformity between the requirements of this Chapter.

50-14.5-1 R-1 minimum lot area: 4,000 square ft for a one family dwelling, 2,000 sq ft per family for a two-family dwelling, and 2,500 sq ft for a townhouse unit; minimum lot frontage: 40 ft for one or two family and 20 ft for townhomes.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Principle #1 – Reuse previously developed lands – This subdivision provides the opportunity for infill residential development within an existing neighborhood on land that has been impacted by surrounding residential development.
Principle #5 – Promote Reinvestment in Neighborhoods – This subdivision will allow the applicant to build infill housing in the neighborhood.

Future Land Use: Traditional Neighborhood – Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood. Includes many of Duluth’s older neighborhoods, infill projects, neighborhood extensions, and new traditional neighborhood areas.

History: The existing parcel has never been developed upon and has remained vacant.

Review and Discussion Items:

Staff finds:

1. Applicant is requesting a Minor Subdivision to divide one parcel into two separate parcels. Just Housing SBC is the acting agent, and the land is owned by Divine Konnections Inc. The proposed lots are both currently vacant and undeveloped.
2. Lots created by this subdivision are subject to the zoning requirements of the R-1 district in UDC Table 50-14.5-1. Both parcels will meet the minimum lot area requirements with Lot 1 having 5,025 square feet and Lot 2 having 4,350 square feet.
3. Both parcels have the required street frontage along Nicollet St, with a proposed 67 feet for Lot 1 and 58 feet for Lot 2.
4. Both lots have access to gas, water and sanitary sewer utilities in the streets and alleys surrounding the site.
5. No public, agency, or other City comments were received.
6. Approval of this Minor Subdivision signifies that City of Duluth UDC standards are met. St. Louis County may have additional requirements. This subdivision approval lapses if deeds are not recorded with St. Louis County within 180 days. Applicant must provide the City with proof of recording.

Staff Recommendation:

Based on the above findings, Staff recommends that Planning Commission approve the Planning Review with the following conditions:

1. Appropriate deeds be filed with St. Louis County within 180 days. Prior to recording the deed that results from this adjustment, the Planning Division will need to stamp the deed, indicating compliance with the local zoning code.
2. Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission approval; however, no such administrative approval shall constitute a variance from the provisions of Chapter 50.

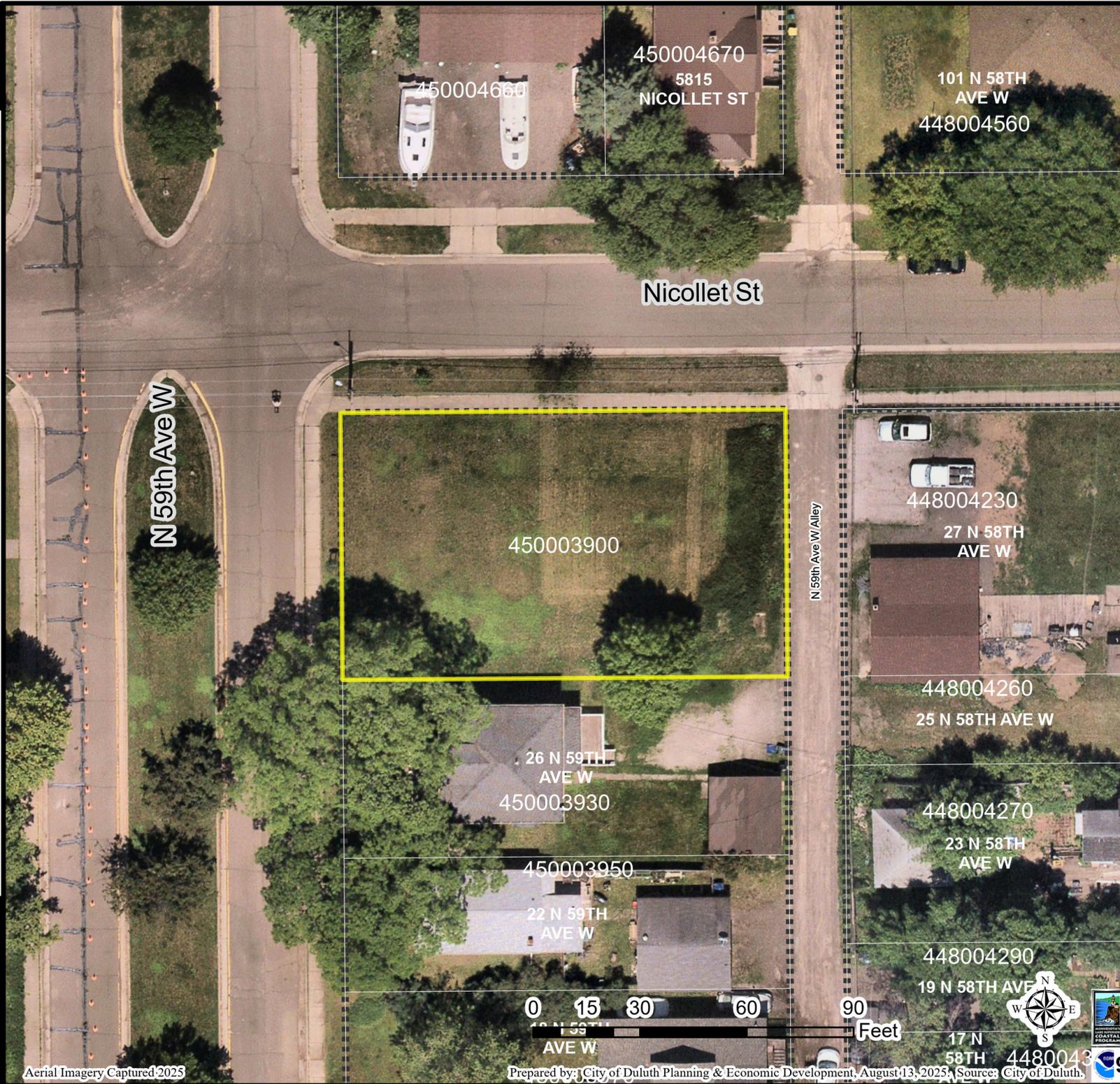


PLSUB-2512-0016

Minor Subdivision
010-4500-03900 (N 59th Ave W)

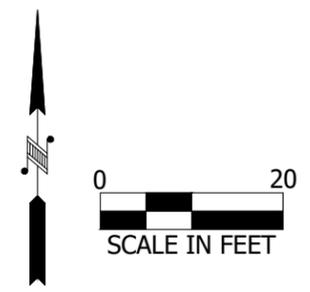
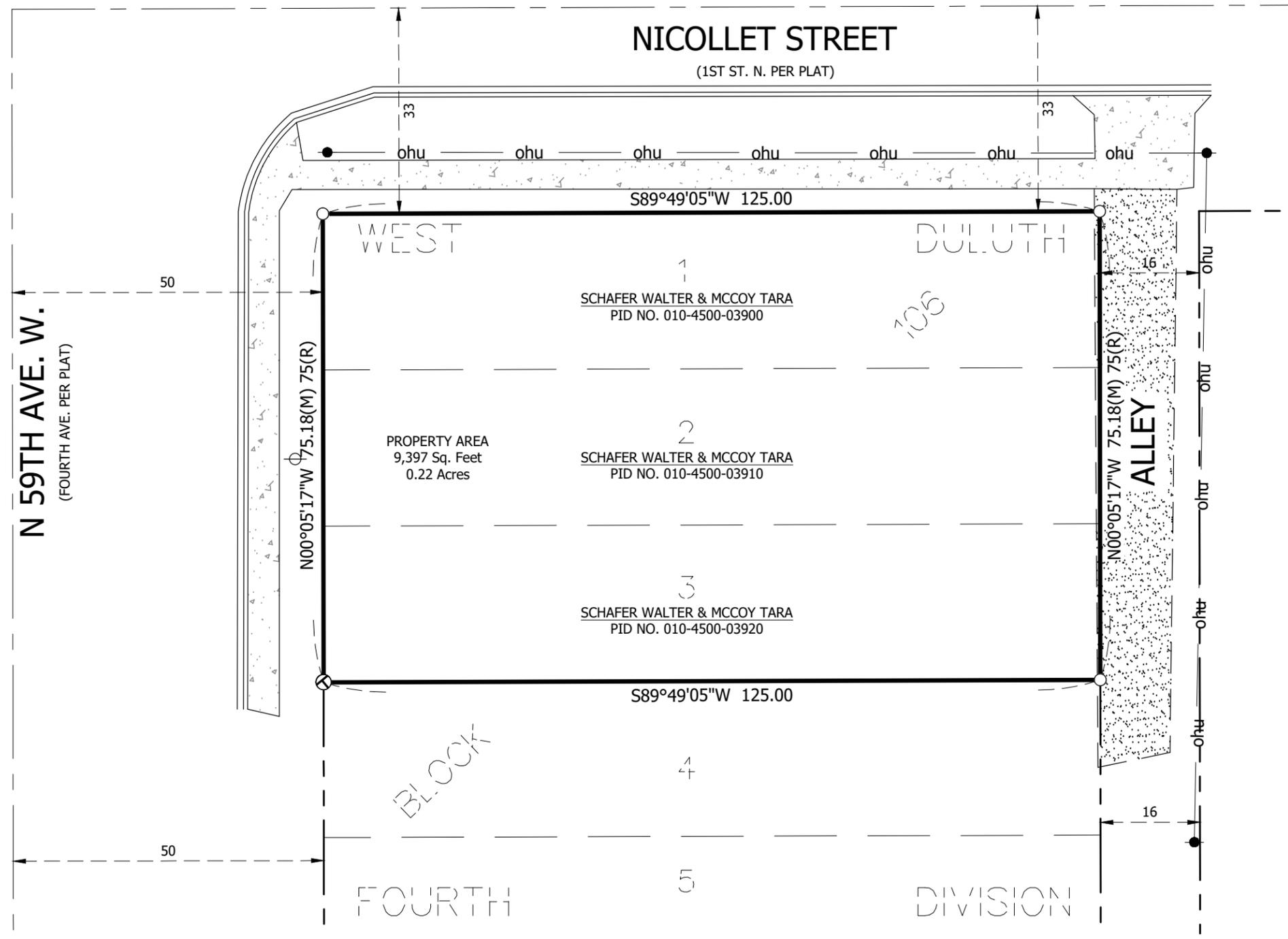
The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

Aerial Imagery Captured 2025



Prepared by: City of Duluth Planning & Economic Development, August 13, 2025. Source: City of Duluth.





LEGEND

	CONCRETE SURFACE	(M)-FIELD MEASURED DIMENSION
	GRAVEL SURFACE	(R)-RECORD DIMENSION
	SIGN	ohu OVERHEAD UTILITIES
	FOUND T-STAKE MONUMENT	— CENTER LINE
	SET CAPPED REBAR RLS. NO. 49505	- - - RIGHT OF WAY LINE
	UTILITY POLE	— BOUNDARY LINE AS SURVEYED
		— EXISTING PLAT LINE

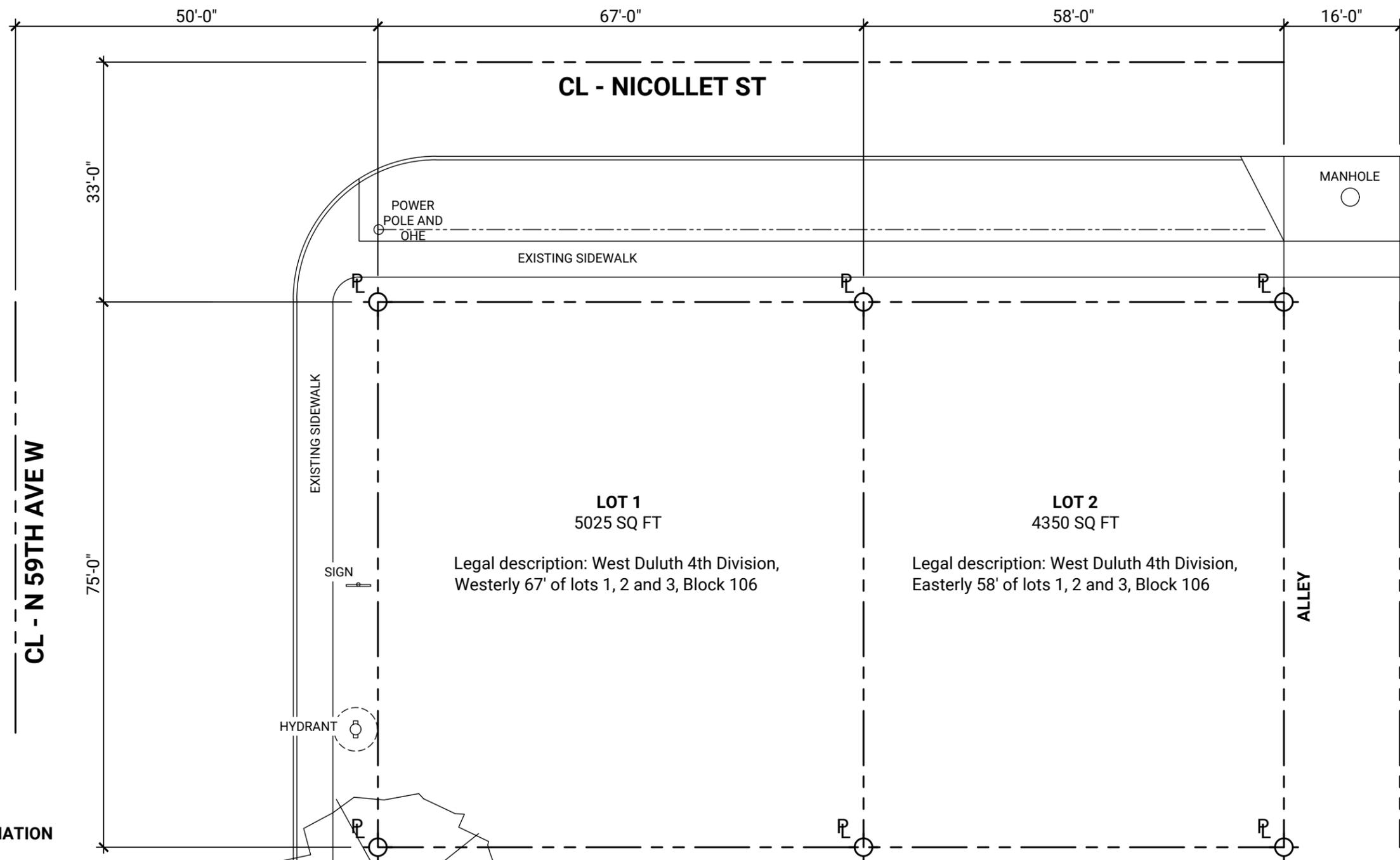
LEGAL DESCRIPTION PER DOCUMENT NO. 1473719

Lots 1, 2, and 3, Block 106, West Duluth Fourth Division, St. Louis County, Minnesota

SURVEYOR'S NOTES

1. THIS SURVEY HAS BEEN PREPARED WITHOUT BENEFIT OF A TITLE COMMITMENT OR TITLE OPINION. A TITLE SEARCH FOR RECORDED OR UNRECORDED EASEMENTS WHICH MAY BENEFIT OR ENCUMBER THIS PROPERTY HAS NOT BEEN COMPLETED BY ALTA LAND SURVEY COMPANY. THE SURVEYOR ASSUMES NO RESPONSIBILITY FOR SHOWING THE LOCATION OF RECORDED OR UNRECORDED EASEMENTS OR OTHER ENCUMBRANCES NOT PROVIDED TO THE SURVEYOR AS OF THE DATE OF THE SURVEY.
2. BEARINGS ARE BASED ON THE ST. LOUIS COUNTY TRANSVERSE MERCATOR COORDINATE SYSTEM OF 1996. (NAD 83 2011)
3. NO SPECIFIC SOILS INVESTIGATION HAS BEEN COMPLETED ON THIS LOT BY ALTA LAND SURVEY COMPANY. THE SUITABILITY OF SOILS TO SUPPORT THE SPECIFIC STRUCTURE PROPOSED IS NOT THE RESPONSIBILITY OF ALTA LAND SURVEY COMPANY OR THE SURVEYOR.

<p style="font-size: small;">I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.</p> <p style="text-align: center;"><i>David R. Evanson</i> David R. Evanson MN License #49505</p> <p style="font-size: x-small;">DATE: 02-08-2024</p>	CERTIFICATE OF SURVEY		 <small>PHONE: 218-727-5211 LICENSED IN MN & WI WWW.ALTLANDSURVEYDULUTH.COM</small>
	<p>CLIENT: TARA MCCOY</p> <p>ADDRESS: XX N 59TH AVENUE WEST DULUTH, MN 55807</p> <p>DATE: 02-08-2024</p>	<p>REVISIONS:</p>	



Just Housing
 2201 W 1st Street
 Duluth, MN 55806
 218-722-4323
 just-housing.org

**COMFORT AND JOY
 DUPLEXES**

Divine Konnections, Inc.
 2122 Woodland Ave
 Duluth, MN 55803
 218-940-0480

DATE:12/1/25

EXISTING SITE INFORMATION

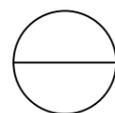
Parcel ID: 010-4500-03900

Legal Description: West Duluth 4th Division,
 Lots 1,2, and 3, Block 106
 Corner of N 59th Ave W and Nicollet St.
 Proposed development will face Nicollet.

Zoning: R-1 (Residential - Traditional)

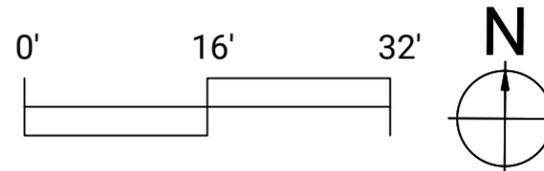
**R-1 DIMENSIONAL STANDARDS,
 TWO FAMILY DWELLING**

Minimum Lot Area per Family: 2,000 sq ft
Minimum Lot Frontage: 40'



PLAT PLAN: PROPOSED MINOR SUBDIVISION

1/16"=1'-0"





Planning & Development Division
Planning & Economic Development Department

Room 160
 411 West First Street
 Duluth, Minnesota 55802

☎ 218-730-5580

✉ planning@duluthmn.gov

File Number	PLVAC-2512-0012	Contact	Christian Huelsman, chuelsman@duluthmn.gov	
Type	Vacation of Slopes and Fills Easement	Planning Commission Date	January 13, 2025	
Deadline for Action	Application Date	December 9, 2025	60 Days	February 7, 2025
	Date Extension Letter Mailed	December 11, 2025	120 Days	April 8, 2026
Location of Subject	404 E 5 th St			
Applicant	St. Mary's Medical Center	Contact		
Agent	Hanft Fride PA	Contact	Terri Crossmon	
Legal Description	PIN: 010-1010-01710 and 010-1010-01760			
Site Visit Date	December 30, 2025	Sign Notice Date	December 29, 2025	
Neighbor Letter Date	December 19, 2025	Number of Letters Sent	48	

Proposal:

The applicant has requested to vacate a slopes and fill easement along the south side of E 5th St, between N 4th Ave E and N 5th Ave E in the East Hillside neighborhood.

Recommended Action: Staff recommends that Planning Commission recommend approval to City Council with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-2	Parking Lot	Traditional Neighborhood
North	R-2	Residential	Traditional Neighborhood
South	F-6	Office (vacant)	Institutional
East	R-2	Parking Lot	Traditional Neighborhood
West	R-2	Minor Utility	Traditional Neighborhood

Summary of Code Requirements:

Vacation of public rights of way and/or easements require a Planning Commission public hearing with a Recommendation to City Council. City Council action is to approve or deny by resolution. Resolutions approving either a full or partial vacation require a 6/9's vote of the council.

UCD Sec. 50-37.6.C – The Planning Commission shall review the proposed vacation, and Council shall approve the proposed vacation, or approve it with modifications, if it determines that the street, highway, or easement proposed for vacation:

1. Is not and will not be needed for the safe and efficient circulation of automobiles, trucks, bicycles, or pedestrians or the efficient supply of utilities or public services in the city;
2. Where the street terminates at a waterfront or shoreline, the street is not and will not be needed to provide pedestrian or recreational access to the water;
3. Is not otherwise needed to promote the public health, safety, or welfare of the citizens of Duluth.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Future Land Use – Traditional Neighborhood: Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood.

History: The slopes and fill easement was platted as a part of Duluth Proper First Division West Third Street. Slopes and fill easements were common when properties were first being developed, especially in the Hillside neighborhoods. The land was previously a residential use. The properties had been used as accessory parking lots for St. Mary’s Medical Center until 2023.

Review and Discussion Items:

Staff finds that:

1. The applicant is requesting to vacate an entire platted slopes and fill easement along the platted and developed E 5th St, as described in the attached exhibit. All the vacated area is within the plat of Duluth Proper 1st Division.
2. A slopes and fill easement allows for activities like excavation and grading to accommodate public infrastructure. Such easements were common in early plats of Duluth to allow for infrastructure in places of steep slopes.
3. The City Engineering office has reviewed the proposed vacation and has indicated it does not expect to need the area for future utilities or drainage.
4. The proposed vacation will allow the owner to make property improvements – specifically exterior landscaping area for the proposed Brae View affordable senior housing development by One Roof Community Housing.
5. The easement is no longer needed for the E 5th St, and the City has determined it will not be needed by the City for the promotion of public health, safety, or welfare of the citizens of Duluth.
6. A Petition to Vacate Street, Alley, or Easement was requested by the applicant, the sole adjacent owner.
7. Vacating the easement will not impact or deny access to other property owners.
8. No city, public or agency comments were received.
9. Vacations of rights of way and easements lapse unless the vacation is recorded with the county recorder within 90 days after final approval. The vacation recording is facilitated by the City of Duluth.

Staff Recommendation:

Based on the above findings, Staff recommends that Planning Commission recommend approval of the vacation with the following conditions:

- 1) The vacation must be recorded within 90 days of final approval by City Council or such approval will lapse.
- 2) The vacation must be approved with a 6/9 vote from City Council.



PLVAC-2512-0012

Vacation of Slopes & Fills Easement
404 E 5th St

Legend

- Lots
- County Parcel Data
- Zoning Boundaries
- Road or Alley ROW

Vacation

- Proposed Vacation Area

ROW

- Road, Active - currently in use
- Slopes and Fills Easement

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

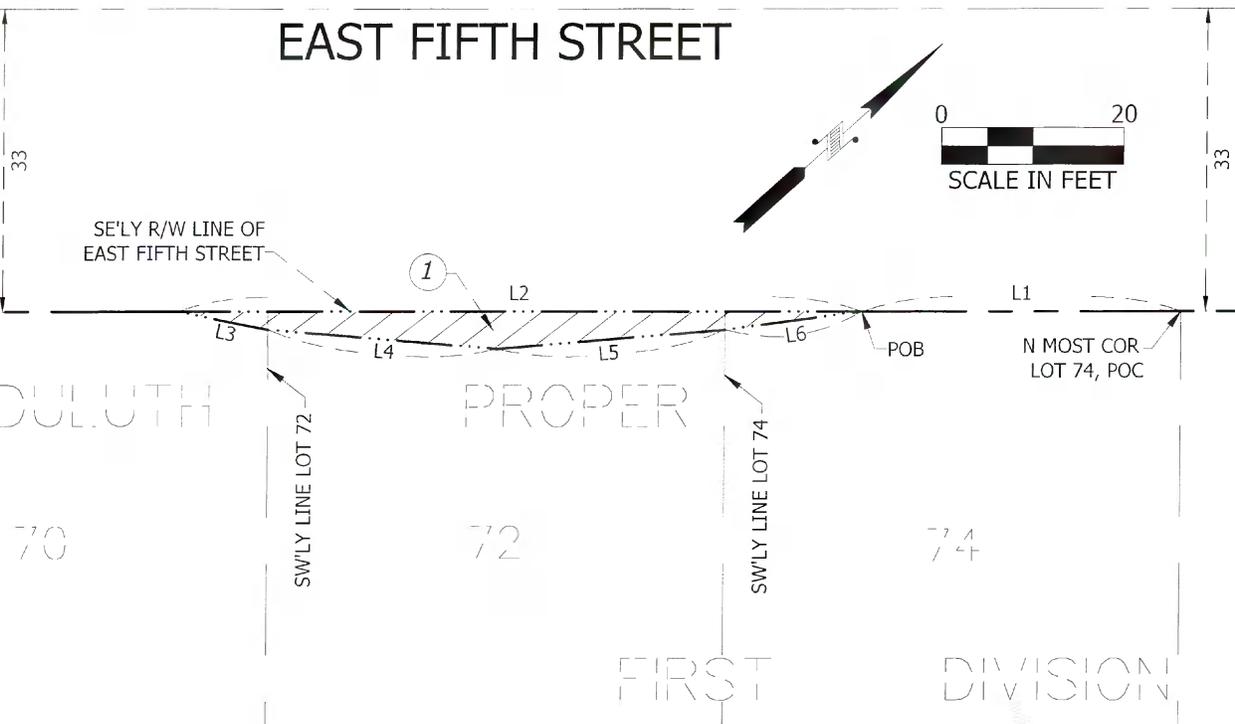


Aerial Imagery Captured 2025

Prepared by: City of Duluth Planning & Economic Development, January 2, 2026, Source: City of Duluth.



EAST FIFTH STREET



LINE	BEARING	DISTANCE
L1	S41°37'52"W	35.11
L2	S41°37'52"W	75.11
L3	N52°56'25"E	10.20
L4	N46°25'19"E	25.14
L5	N36°50'23"E	25.14
L6	N34°02'10"E	15.13

LEGAL DESCRIPTION OF SLOPE EASEMENT VACATION

All that part of Lots 70, 72 and 74, DULUTH PROPER FIRST DIVISION, EAST FIFTH STREET, according to the recorded plat thereof, St. Louis County, Minnesota described as follows:

Commencing at the North most corner of said Lot 74; thence on an assumed bearing of South 41 degrees 37 minutes 52 seconds West, along the Southeasterly right of way line of said East Fifth Street 35.11 feet to the point of beginning; thence continue South 41 degrees 37 minutes 52 seconds West, along said Southeasterly right of way line 75.11 feet; thence North 52 degrees 56 minutes 25 seconds East 10.20 feet to the Southwesterly line of said Lot 72; thence North 46 degrees 25 minutes 19 seconds East 25.14 feet; thence North 36 degrees 50 minutes 23 seconds East 25.14 feet to the Southwesterly line of said Lot 74; thence North 34 degrees 02 minute 10 seconds East 15.13 feet to the point of beginning. Said parcel contains 178 square feet.

LEGEND

-  EASEMENT VACATION AREA
-  R/W-RIGHT OF WAY
-  POC-POINT OF COMMENCEMENT
-  POB-POINT OF BEGINNING
-  CENTER LINE
-  RIGHT OF WAY LINE
-  EASEMENT VACATION LINE
-  EXISTING PLAT LINE

Approved by the City Engineer of the City of Duluth, MN this 10th day of Dec 20 25

By 

SURVEYOR'S NOTES

1. PORTION OF LOTS 70, 72 AND 74, DULUTH PROPER FIRST DIVISION, EAST FIFTH STREET CONDEMNED BY THE CITY OF DULUTH FOR SLOPE EASEMENT PER INSTRUMENT RECORDED IN THE OFFICE OF THE ST. LOUIS COUNTY RECORDER ON MAY 10, 1890 IN BOOK C OF CONDEMNATION PLATS, PAGE 211.
2. THIS IS NOT A BOUNDARY SURVEY.

VACATION EXHIBIT

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.


David R. Evanson
MN License #49505

CLIENT: ONE ROOF COMMUNITY HOUSING REVISIONS:

ADDRESS: EAST 5TH STREET
DULUTH, MN 55805

DATE: 11-11-2025

JOB NO: 24-048 SHEET 1 OF 1

 **ALTA**
LAND SURVEY COMPANY

PHONE: 218-727-5211
LICENSED IN MN & WI
WWW.ALTLANDSURVEYDULUTH.COM

PETITION TO VACATE STREET ALLEY OR UTILITY EASEMENT

Name: St. Mary's Medical Center

Description of street, alley, or easement to vacate:

Easement of slopes as evidenced by Condemnation Plat filed May 10, 1890, in the office of the County Recorder in Book C of Plats, page 211 located in parts of Lots 70, 72 and 74, DULUTH PROPER FIRST DIVISION, EAST FIFTH STREET, St. Louis County, Minnesota.

A copy of said Condemnation Plat is attached hereto. The easement to be vacated is shown on and described in the Certificate of Survey prepared by ALTA Land Survey Company attached hereto.

My request for this vacation is to (indicate purpose of vacation): Petitioner requests this vacation for redevelopment purposes, including a mixed-use condominium consisting of affordable housing and daycare. The easement interferes with the proposed site plan and vacation of the easement is a requirement to insure the MHFA loan closing. In this regard, attached is a copy of the site plan showing that use of this easement to manage stormwater runoff or drainage would compromise the integrity of the proposed structure (and landscaping). Also attached is a copy of the relevant pages of the title commitment evidencing the requirement to vacate this easement. No public infrastructure is located within the easement area. Petitioner owns 100% of the land burdened by the easement and 100% of the land abutting the easement area.

The City of Duluth will not need this street, alley, or easement in the future because: Neither the City nor any private utility company will require use of the slopes easement because no public infrastructure is located in the easement area and Petitioner owns 100% interest of the land burdened by this easement.

PLEASE TAKE NOTICE: Pursuant to Section 50-37.6 of the Duluth City Code, the above-identified applicant(s) petition the Duluth City Counsel to vacate the street, alley, or easement described in the attached legal description.

This petition is made upon the following facts and reasons (identify the actual basis and reasons supporting the petition)¹:

1. Petitioner owns 100% of the land burdened by the easement and 100% of the land abutting the easement area.
2. The subject slopes easement is not and will not be needed for the safe and efficient circulation of automobiles, trucks, bicycles or pedestrians or the efficient supply of utilities or public services in the city.
3. The slopes easement is not otherwise needed to promote the public health, safety or welfare of the citizens of Duluth.
4. The vacation requested will allow for the redevelopment of the property, including affordable housing and daycare.

¹ In order to vacate a public easement it must be demonstrated that the easement is useless for the purpose for which it was dedicated.

This petition is supported by a majority of the person(s) who own a majority of the lineal frontage of the land abutting upon the portion of the public easement proposed to be vacated. A copy of the signature of these persons is attached hereto and made a part hereof.²

The petitioner(s) agree to provide the city with a plat of the easement(s) as required by Section 50-37.6B(3) of the Duluth City Code upon approval of the vacation. We understand that the vacation cannot occur without the submission of the required plat. We understand that the cost of producing the plat is the responsibility of the petitioner(s). We also understand that the approval will lapse and be of no effect if the plat and clerk certification is not recorded with the county recorder within 90 days after final approval.

Signature(s): Ken J. B.
_____, as Vice President, Finance
of St. Mary's Medical Center

Date: December 2, 2025.

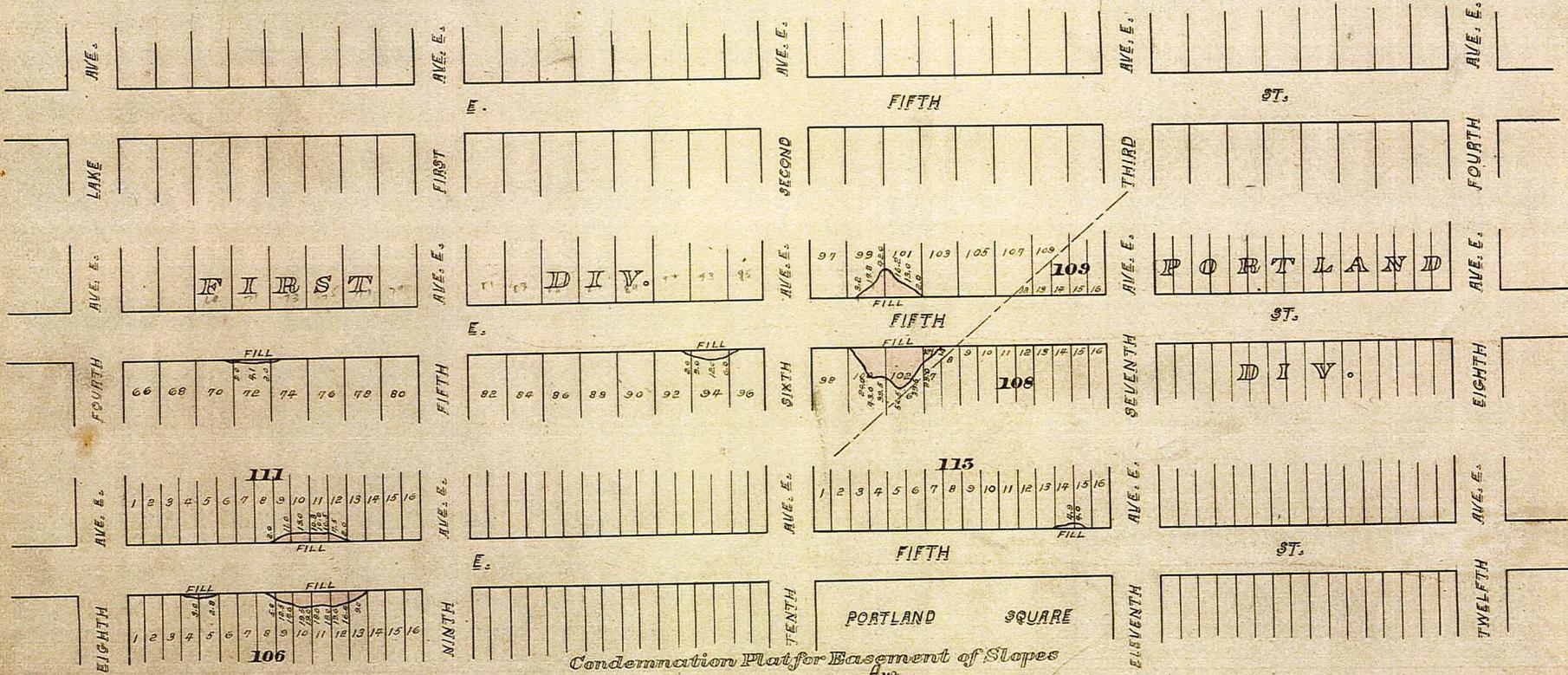
Notice: This is public data.

² If a property is owned in joint tenancy or by tenants in common, each individual with an ownership interest will be counted to determine if a majority of owners have signed the petition. An owner cannot sign for another owner unless legally authorized to do so, i.e. power of attorney, trustee, or court approved guardianship or conservatorship.

Petition Signature Form

We, the undersigned, do hereby request that the City of Duluth consider vacating: Slopes easement

Name (Print)	Signature	Property Address	Lot # (if known)
Kevin S. Boren		404 E 5th St.	Lots 70, 72 and 74,
			DULUTH PROPER,
			1ST DIVISION, EAST
			FIFTH STREET



Condemnation Plat for Easement of Slopes
 on 5th St. from Lake Ave. to 12th Ave. E.
 Duluth Minn.

#6194
 Filed, May 10th 1890 @ 4 P. M.



Planning & Development Division
Planning & Economic Development Department

Room 160
 411 West First Street
 Duluth, Minnesota 55802

218-730-5580

planning@duluthmn.gov

File Number	PLVAR-2512-0015	Contact	Reina Owecke, rowecke@duluthmn.gov	
Type	Variance from Shoreland Setbacks	Planning Commission Date	January 13, 2026	
Deadline for Action	Application Date	December 9, 2025	60 Days	February 7, 2026
	Date Extension Letter Mailed	December 16, 2025	120 Days	April 8, 2026
Location of Subject	1801 E Skyline Pkwy			
Applicant	LHB	Contact	Brandee Lian	
Agent		Contact		
Legal Description	010-2710-03910			
Site Visit Date	December 31, 2025	Sign Notice Date	December 30, 2025	
Neighbor Letter Date	December 18, 2025	Number of Letters Sent	2	

Proposal

The applicant proposes to reconstruct the Chester Creek Ski Chalet, by using the existing foundation. The project includes a new deck and minor additions to upper portions of the chalet, which require a variance to the shoreland setbacks.

Recommended Action: Staff recommends that Planning Commission approve the variance with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	P-1	Park	Open Space
North	P-1 and R-2	Park, Residential	Open Space, Traditional Neighborhood
South	P-1	Park	Open Space
East	P-1	Park	Open Space
West	R-2 and MU-I	Residential, Mixed Use	Urban Residential, Institutional

Summary of Code Requirements:

Sec. 50-37.9.C – General Variance Criteria (paraphrased): Granting of variances of any kind is limited to situations where, due to characteristics of the applicant’s property, enforcement of the ordinance would cause the landowner practical difficulties.

Sec. 50-37.9.L – Standards for variances in shorelands: No variance shall be granted that compromises the general purposes or intent of Section 50-18.1.D or results in adverse consequences to the environment. Variances shall include a requirement for the applicant to mitigate the impacts of the variance on shoreland areas

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Principle #1 – Reuse previously developed land – The proposed ski chalet reconstruction will be a reuse of existing building stock and will direct new investment to a site that will have the potential to perform at a higher level than its current state.

Principle #2 – Declare the necessity and secure the future of undeveloped places – Open spaces are integral to Duluth’s community; the reconstruction of the ski chalet will further encourage recreation and contribute to Duluth’s economic value.

Principle #10 – Take actions that enhance the environment, economic, and social well-being of the community – Reusing the chalet’s existing foundation will reduce consumption of resources and avoid significant ground disturbance in a fragile shoreland.

Future Land Use – Open Space: High natural resource or scenic value, with substantial restrictions and development limitations. Primarily public lands but limited private use is anticipated subject to use and design controls. Examples include: city parks and recreation areas, primary viewsheds, shorelands of the lake and streams, wetlands and floodplains, and high-value habitat.

History: The Chester Bowl Ski Chalet (Thom Storm Chalet) was built between 1973-1974 as part of the Chester Bowl ski area’s effort to support community recreation in Duluth. It has long served as the central hub for community skiing and outdoor recreation, supporting youth programs, events, and gatherings for generations. Over time, the chalet became an essential space for the Chester Bowl Improvement Club’s mission of fostering community through outdoor activity. By the early 2020s, however, the building had fallen into disrepair, became too small for growing programming demands, and lacked proper accessibility. In response, the City of Duluth and the Chester Bowl Improvement Club secured funding to support a complete renovation and expansion of the facility to meet the park’s growing needs.

Review and Discussion Items:

Staff finds that:

- 1) The applicant is seeking a shoreland variance in order to reconstruct and expand the Chester Bowl Ski Chalet in its existing location. The plans propose a first and second story addition, a new deck, and new gravel paths to access the parking area and other infrastructure.
- 2) The applicant requests to reduce the required structure setback from 150’ to 47’ to allow for the reconstruction of the chalet in its existing location by using the existing foundation.
- 3) Variance Criteria #1 (exceptional narrowness, shallowness, or shape): The subject property and existing chalet location exhibits unique constraints due to the narrowness of the developable area within Chester Park. The ski chalet is constructed on a limited area of buildable land situated between the steep valley slope and Chester Creek, leaving little opportunity to shift the structure outside of the 150’ shoreland setback without encroaching into steep slopes, mature forests, or other areas unsuitable for construction. Because the existing foundation predates current shoreland setback standards and occupies the only feasible building footprint within the constrained topography, strict application of the setback standard would prevent reasonable use of the property and reinvestment in a long-standing public facility.
- 4) Variance Criteria #2 (circumstances unique to the property, not created by the property owner): Circumstances necessitating a shoreland variance are unique to the property and were not created by the applicant or the City. The ski chalet was originally constructed in the early 1970s within the narrow valley floor of Chester Creek, at a time when current shoreland setback standards did not apply. The combination of the steep surrounding topography, the fixed location of the original foundation that is to be reused, and the functional need for the chalet to remain near the existing ski hill infrastructure creates conditions that are inherent to the site rather than the result of any action by the property owner or the City.
- 5) Variance Criteria #3 (circumstances are peculiar to this property and do not apply generally to other land or buildings): The circumstances prompting this request are unique to Chester Park and do not generally apply to other properties within the shoreland. The existing chalet was constructed in the early 1970s, predating the current shoreland setback standards. The chalet is situated within an established recreational complex that relies on its proximity to Chester Creek for functional access to the ski hill, trail system, and park operations. Because the chalet serves as essential infrastructure for a historic and topographically constrained public park, its location cannot be reasonably shifted outside the shoreland setback without undermining its intended public use. These

conditions are specific to this site and are not shared by private parcels or developable land within the City.

- 6) Variance Criteria #4 (proposes to use in a reasonable manner not permitted by code): The proposed project represents a reasonable use of the property that is consistent with its long-standing and historic function as a public recreation facility, even though the current code does not permit a structure within the shoreland setback. Rebuilding and modestly expanding the ski chalet on its original foundation allows the structure to continue serving essential operational, educational, and community purposes associated with the ski hill and year-round park programming. The proposed improvements do not introduce intensified uses beyond what has existed for decades; rather, they update an aging facility to meet current accessibility and service needs. Given the sites' physical restraints and public use of the facility, the proposal constitutes an appropriate reinvestment in an established community asset.
- 7) Variance Criteria #5 (not impair light/air, increase congestion, or impair public safety or property values). The proposed shoreland variance will not impair light or air, increase congestion, or negatively affect public safety or property values. The ski chalet reconstruction and expansion will occur entirely within the existing developed footprint and will not introduce new structures or uses that would alter natural light, air, or views within the park. Because the reconstructed ski chalet will serve park users, no increase in congestion is anticipated. The project proposal will incorporate current building code and accessibility standards which will enhance overall public safety. This reinvestment of a long-standing public amenity is expected to maintain or improve the value of the park without adverse impacts on surrounding properties.
- 8) Variance Criteria #6 (will not impair intent of this Chapter or alter the essential character of the locality). The requested shoreland variance will not impair the intent of the shoreland regulations or alter the essential character of the locality. The essential character of the area will not be altered since the use of the property or building is not changing. As a result, the proposal upholds the Chapter's intent to protect natural resources and community character while allowing the continued use of an existing public facility.
- 9) Standards for variances in shorelands (does not compromise intent of shoreland regulations and mitigates impacts). The proposed shoreland variance will not result in adverse consequences because the applicant will mitigate the impacts of construction within the shoreland areas by the restoration of all disturbed turf areas, and the removal and replacement of six trees. In addition, this expansion is part of several years of master planning and projects within the park, which included realigning the stream to follow a more natural alignment, and significant streambank restoration and plantings in the vicinity of the chalet. In 2016, a major bank-stabilization project was completed along Chester Creek to repair damage from the 2012 flood and protect nearby infrastructure. The work focused on reinforcing eroded streambanks, improving channel stability, and preventing further sediment loss with native plantings and seeding. This previous work will remain intact during construction.
- 10) Staff find the applicant has demonstrated practical difficulty due to the necessity for expanding the structure in its longstanding location to maintain safe operations, meet accessibility and code requirements, and continue providing core recreational services to the community. Strict compliance with the shoreland setback would prevent reasonable use of the ski chalet and impair the facility's essential public function.
- 11) Per UDC Section 50-37.1.N, approved variances lapse if the project or activity authorized by the permit or variance is not begun within one-year.

Staff Recommendation:

Based on the above findings, Staff recommends that Planning Commission approve the permit subject to the following conditions:

- 1) The project must be constructed and limited to the plans submitted with the application.
- 2) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission review; however, no such administration approval shall constitute a variance from the provisions of Chapter 50.



PLVAR-2512-0015

Variance to Shoreland Setbacks
Chester Park Ski Chalet



The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

Aerial Imagery Captured 2025



Prepared by: City of Duluth Planning & Economic Development, August 13, 2025, Source: City of Duluth.

THIS SQUARE APPEARS 1/2" x 1/2"
ON FULL SIZE SHEETS

01/02/2025 SHORELAND VARIANCE APPLICATION
NO DATE ISSUED FOR

NO DATE REVISION

PRELIMINARY
NOT FOR CONSTRUCTION
01-02-2025

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PROJECT NAME:
**CHESTER BOWL
CHALET**
1801 E. SKYLINE PARKWAY
DULUTH, MN

DRAWING TITLE:
**SHORELAND RESTORATION
VEGETATION PLAN**

DRAWN BY: BES
CHECKED BY: HSB
PROJ. NO.: 155582
DRAWING NO.:

L100



1 SHORELAND RESTORATION VEGETATION PLAN
Scale: 1"=10'

SHORELAND RESTORATION NOTES

- GENERAL NOTES:**
- PER MINNESOTA DEPARTMENT OF NATURAL RESOURCES (DNR), THE ORDINARY HIGH WATER MARK IS 1090.00 ELEVATION.
 - A PORTION OF CHESTER CREEK WAS DAMAGED DURING THE 2012 FLOOD. AS A RESULT OF THE DAMAGE, A CREEK RESTORATION PROJECT WAS INITIATED BY THE CITY IN 2016 AND WAS FUNDED BY THE DNR.
 - THE RESTORATION WORK WAS PERFORMED BY THE SOUTH ST. LOUIS SOIL AND WATER CONSERVATION DISTRICT IN 2017. GOALS OF THE RESTORATION PROJECT INCLUDED RE-ALIGNMENT OF THE STREAM TO PREVENT FLOW BACKUPS, STABILIZATION OF THE STREAM AND ITS ASSOCIATED ENBANKMENTS, REMOVAL OF OLD DAMS THAT WERE DAMAGED AND/OR NO LONGER FUNCTIONING APPROPRIATELY, PROVIDING ENHANCED TROUT HABITAT, PRESERVATION OF HISTORICAL VALUES, AND INCREASING OVERALL RESILIENCE TO FUTURE FLOODING.
 - THE SLOPE STABILIZATION PLANTING AREA IMMEDIATELY IN FRONT OF THE CHESTER BOWL CHALET WAS RECENTLY PLANTED AS A PART OF THE RESTORATION PROJECT, AND WILL REMAIN 100% INTACT. SEE ATTACHED RESTORATION PLANS FOR ADDITIONAL INFORMATION.
 - MINIMAL GRADING MODIFICATIONS ARE REQUIRED FOR THIS PROJECT AS THE SURROUNDING SITE WILL MOSTLY REMAIN THE SAME. HOWEVER, CONSTRUCTION ACTIVITIES TO REMOVE THE EXISTING STRUCTURE AND REPLACE WITH A NEW BUILDING ON THE SAME FOUNDATION WILL REQUIRE TEMPORARY LAND DISTURBANCES. SHORELAND VEGETATION MITIGATION MEASURES WILL INCLUDE RESTORATION OF ALL TURF AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.
 - A TOTAL OF SIX (6) TREES WILL NEED TO BE REMOVED TO ACCOMMODATE THE CONSTRUCTION OF THE NEW BUILDING, AND ARE ILLUSTRATED IN THE PLAN ABOVE. THESE TREES WILL BE REQUIRED TO BE REPLACED AS PART OF THE CITY'S TREE REPLACEMENT PLAN. LOCATIONS FOR THE NEW TREES WITHIN CHESTER PARK ARE YET TO BE DETERMINED WITH THE CITY, OWNER AND A/E TEAM. (PLEASE NOTE: REPLACEMENT TREES WITHIN THE IMMEDIATE WORK AREA AND SHORELAND ZONE ARE NOT DESIRED DUE TO VISIBILITY AND SAFETY CONCERNS ASSOCIATED WITH THE SKI HILL OPERATIONS).

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
SHRUBS				
	CR	2	Cornus sericea / Red Twig Dogwood	#5 CONT.
	TW	4	Taxus x media 'Taunton' / Taunton Yew	#1 CONT
GROUND COVERS				
	NB	6,640 sf	Northern Boulevard Seed Mix	Seed



Planning & Development Division
Planning & Economic Development Department

Room 160
 411 West First Street
 Duluth, Minnesota 55802

218-730-5580

planning@duluthmn.gov

File Number	PLVAR-2512-0016	Contact	Christian Huelsman, chuelsman@duluthmn.gov	
Type	Variance from Side Yard Setbacks	Planning Commission Date	January 13, 2016	
Deadline for Action	Application Date	December 14, 2025	60 Days	February 12, 2026
	Date Extension Letter Mailed	December 22, 2025	120 Days	April 13, 2026
Location of Subject	702 S 63 rd Ave W			
Applicant	Theresa Corey	Contact		
Agent	Armella Bijold	Contact		
Legal Description	010-2360-00290			
Site Visit Date	December 30, 2025	Sign Notice Date	December 29, 2025	
Neighbor Letter Date	December 19, 2025	Number of Letters Sent	22	

Proposal

The applicant proposes to construct a 26' x 32.2' garage in the side yard area on the property.

Recommended Action: Staff recommends that Planning Commission approve the variance with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Residential	Traditional Neighborhood/Open Space
North	R-1	Residential	Traditional Neighborhood/Open Space
South	R-1	Residential	Traditional Neighborhood/Open Space
East	R-1	Park/Trail	Open Space
West	R-1	Residential	Traditional Neighborhood

Summary of Code Requirements:

Sec. 50-37.9.C – General Variance Criteria (paraphrased): Granting of variances of any kind is limited to situations where, due to characteristics of the applicant’s property, enforcement of the ordinance would cause the landowner practical difficulties.

Sec. 50-37.9.H – When the application is for the reduction of a required front, rear or side yard setback, the commission may require the submission of a landscaping and buffering plan, and may require that all required landscaping or buffering, or landscaping and buffering of equal effectiveness, be installed within the reduced setback area. Decorative fencing and decorative wall structures may be proposed where more intense vegetated landscaping will not provide adequate mitigation of impacts on adjacent properties. The commission shall only approve the variance if the landscaping and buffering will mitigate impacts on adjacent properties as effectively as those required by Sections 50-25 and 50-26.

Comprehensive Plan Governing Principle and/or Policies and Current History (if applicable):

Governing Principle #1- Reuse previously developed land- The project is proposed on property that is previously impacted by the surrounding residential development.

Future Land Use – Traditional Neighborhood (front yard area): Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood;

Open Space (side and rear yard areas): Lands with substantial restrictions. Primarily public lands but limited private use is anticipated subject to use and design controls. Includes low-intensity private or public uses, recreation areas with single use and destination, and land with a high natural resource and scenic values.

History: The property is currently occupied by a single-family home, built in 2006 on vacant land. It was previously developed earlier in the 20th Century.

Review and Discussion Items:

Staff finds that:

- 1) The applicant proposes to construct an attached 26' x 32.2' garage off the north wall of the house within the corner side yard structure setback of the unimproved portion of Natchez Street.
- 2) The applicant is requesting to reduce the required corner side yard structure setback from 15' to 3.3'.
- 3) The subject property is located downhill, 1'-15' in elevation below from S 63rd Ave W. Construction of a garage in the rear yard area would be impractical, where the property slopes toward the Western Waterfront Trail and St. Louis River.
- 4) Staff finds the applicant has demonstrated practical difficulty due to a majority of the north corner side yard area falling within the structure setback. Further, the south side yard falls within area that runs downhill toward the neighboring residential property. Existing city wastewater facilities within the Natchez Street right-of-way are to be retained for replacement. Neither Planning nor Engineering support vacation of street right-of-way that terminates at a waterfront or shoreline.
- 5) The applicant's practical difficulty was not created by the landowner but is due to the location of the existing home that was developed within 29.2' of the unimproved Natchez Street right-of-way.
- 6) The variance will not alter the essential character of the neighborhood, and an attached, two-car garage is a reasonable use of the property where many homes have attached, two-car garages at similar scale. Construction of an attached garage to the north wall of the house reduces its distance from St Louis River. There is no other reasonable location to place the garage on the property.
- 7) The variance allowing a reduction of a setback will not impair an adequate supply of light and air to adjacent properties.
- 8) The proposal will not increase congestion in public streets or unreasonably diminish or impair established property values within the surrounding areas.
- 9) *Standards for variances to reduce setbacks.* The provision of a landscaping/buffering plan is an optional requirement per Sec. 50-39.7.H, which is not deemed necessary due to the unimproved Natchez Street right-of-way to the north and the Western Waterfront Trail linear park to the east. Staff recommends that approval of this variance be conditioned that a Shoreland Permit be approved prior to issuance of a building permit.
- 10) No comments from the public, agencies or other City departments were received.
- 11) Per UDC Section 50-37.1.N, approved variances lapse if the project or activity authorized by the permit or variance is not begun within one-year.

Staff Recommendation:

Based on the above findings, Staff recommends that Planning Commission approve the permit subject to the following conditions:

- 1) The project must be constructed and limited to the plans submitted with the application, allowing a garage that extends no more than 26' from the north wall of the home.
- 2) Prior to building permit approval, a Shoreland Permit must be approved before construction may begin.
- 3) Prior to completed construction of the proposed garage, the existing driveway must be surfaced in a dust free, hard surface material such as concrete or bituminous, or pervious paving materials, in order to meet parking design standards for residential district parking areas required by Section 50-24.5.A.
- 4) Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission review; however, no such administration approval shall constitute a variance from the provisions of Chapter 50.



PLVAR-2512-0016

Variance from Side Yard Setbacks
702 S 63rd Ave W

Legend

Zoning Boundaries

Road or Alley ROW

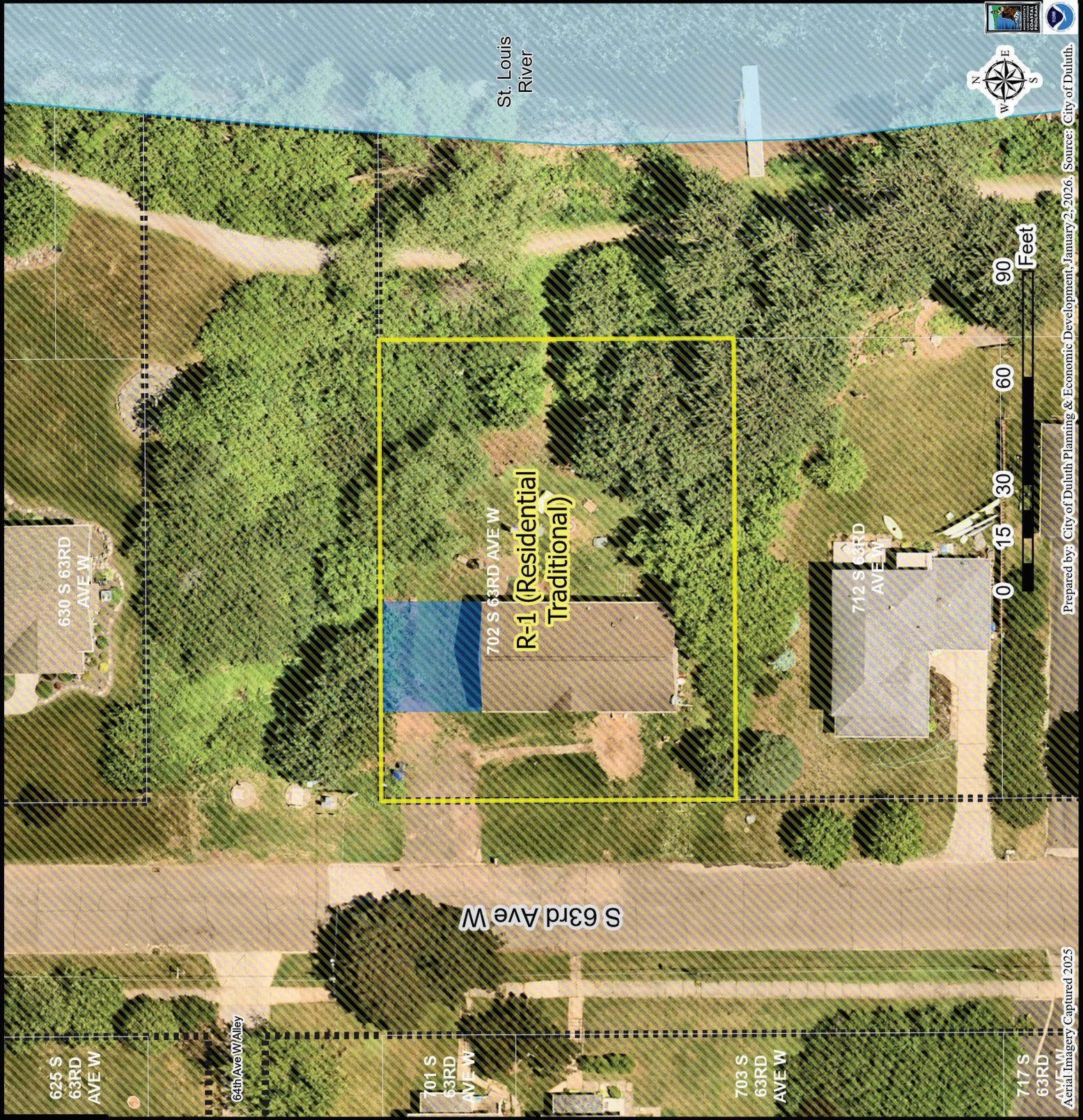
County Parcel Data

UDC Zoning

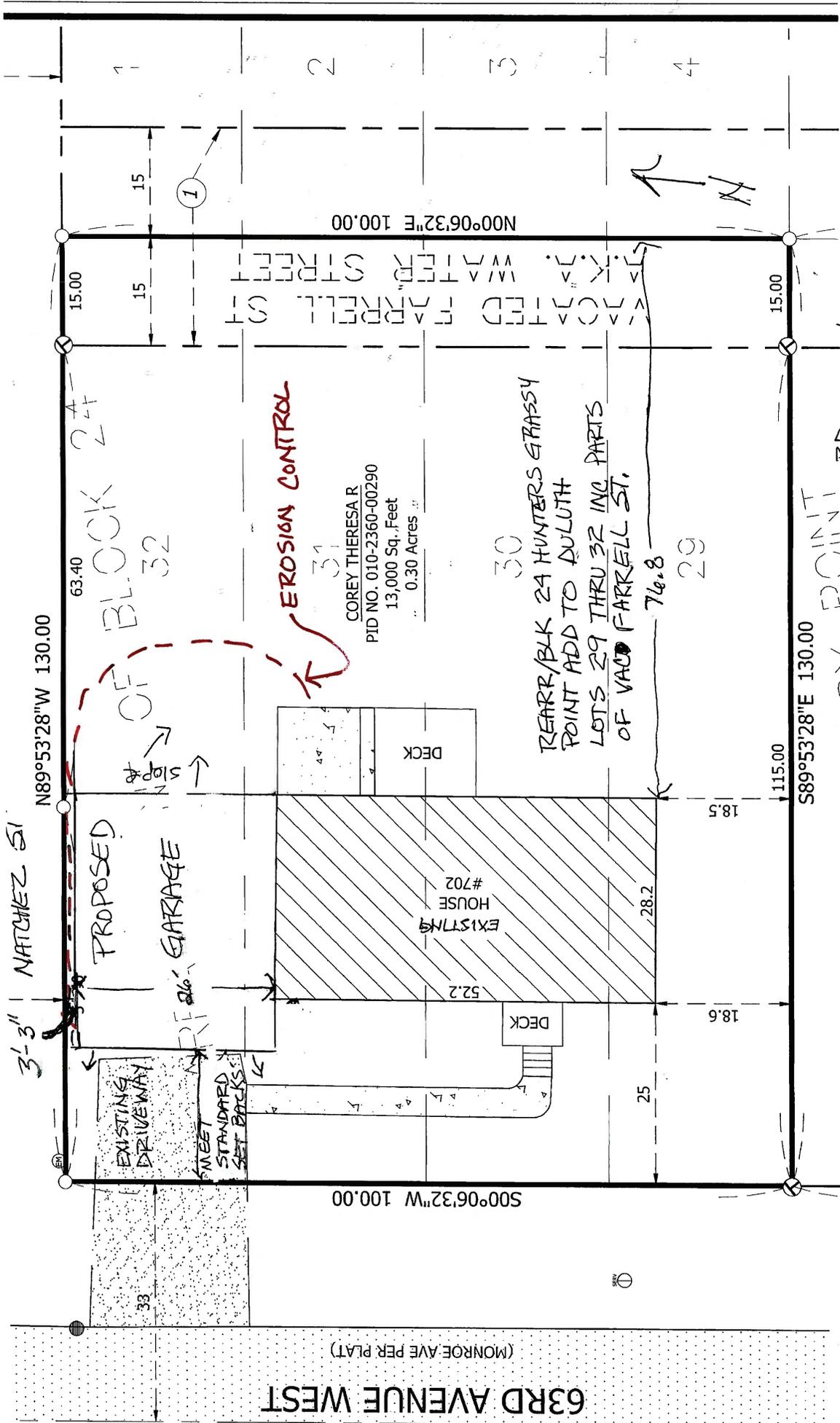
R-1 (Residential Traditional)

Variance

Variance Area



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63RD AVENUE WEST
(MONROE AVE PER PLAT)

S00°06'32"W 100.00

N89°53'28"W 130.00

S89°53'28"E 130.00

N00°06'32"E 100.00

OF BLOCK 32

EROSION CONTROL

31
COREY THERESA R.
PID NO. 010-2360-00290
13,000 Sq. Feet
0.30 Acres

30

REAR/BLK 24 HUNTERS GRASSY
POINT ADD TO DULUTH
LOTS 29 THRU 32 INC PARTS
OF VAC FARRELL ST.

29

3'-3" NATCHEZ ST

PROPOSED GARAGE

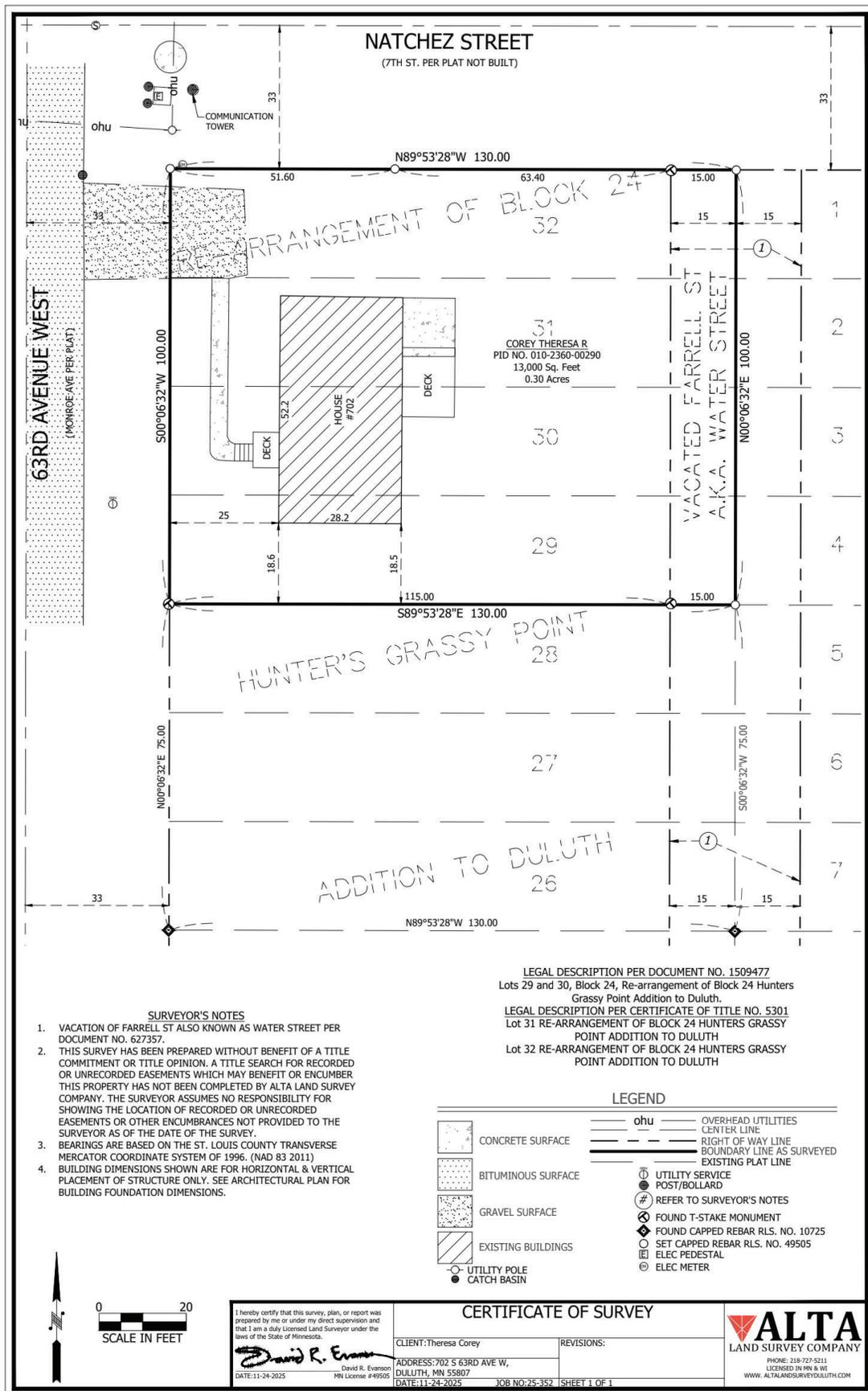
EXISTING DRIVEWAY
MEET STREET
STANDARD SET BACKS

DECK

EXISTING HOUSE #702

DECK

SITE PLAN 702 S. 63RD AVE W
SCALE 1"=12'
R-1 ZONE





Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802



218-730-5580



planning@duluthmn.gov

DATE: January 05, 2026
TO: Interested Parties (Including Minnesota Environmental Quality Board Distribution List)
FROM: Jenn Moses, Planning Manager
SUBJECT: Final Order for the Downtown Duluth Alternative Urban Areawide Review (AUAR)

(PLEAW-2511-0002)

The City initiated this AUAR in anticipation that the downtown area could see significant infill and redevelopment within the coming years, including areas that are within the City's shoreland area and would require environmental review and sensitivity. The AUAR is meant to plan for this development in a holistic manner, understanding that there are environmental benefits of development within an already dense urban area, and that environmental impacts are not contained to one site but rather are best studied and mitigated with a broader lens.

The purpose of the AUAR is to help the City adequately plan for this redevelopment and provide a mitigation plan for how the City and future developers will manage the environmental impacts. The City of Duluth is the Responsible Governmental Unit (RGU) and the Proposer for the AUAR.

The City has elected to designate subareas within the broader AUAR area to facilitate the process of studying and planning mitigation for 354 acres of the City's urban core, which is comprised of many different uses and forms of development. The four subareas include:

- **Lot D Subarea:** Located at 500-1000 Railroad Street in the Bayfront District.
- **1st Street Subarea:** Generally, bound by 2nd Street to the north, 3rd Avenue East to the east, Interstate 35 (I-35) to the south, Mesaba Avenue to the west.
- **Essentia Subarea:** Generally, bound by 6th Street to the north, 7th Avenue East to the east, I-35 to the south and 3rd Avenue E to the west.
- **Secondary Subarea:** Generally, bound by 5th Street to the north, 14th Avenue East to the east, London Road to the south and 7th Avenue East to the west.

This document constitutes the Final Order for Review. The Scoping Document was published on November 25, 2025, for review and comment as part of the AUAR process as described in Minnesota Rules, part 4410.3610, subpart 5a. A public hearing was held by the Planning Commission on December 9, 2025.

Attachment A provides responses to all comments received on the Scoping Document by the December 26, 2025 deadline. Attachment B provides the comment letters received on the Scoping Document. By

www.duluthmn.gov

The City of Duluth is an Equal Opportunity Employer.

approval of this order, comment responses are accepted and will be forwarded to commenters along with this Final Order for Review.

AUAR Area

The AUAR area includes an approximately 354-acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding Hillside neighborhood, as well as the proposed “Lot D” development in the Bayfront area in the City of Duluth, St. Louis County, Minnesota (see Figure 1). At the request of the Planning Commission during the December 9, 2025 meeting, two additional areas were added into the AUAR area boundary to align more closely with the Medical Regional Exchange District.

Development Scenarios

Two development scenarios will be considered as part of the Draft AUAR which include one scenario that encompasses the existing conditions as a comparison to the maximum development scenario which is consistent with the growth planned for in the City’s adopted Comprehensive Plan (Imagine Duluth 2035 – Forward Together). The maximum development scenario plans generally for mixed use (commercial and residential) redevelopment of key sites within the broader downtown area. Figure 2 and Figure 3 depict Scenario B (Existing Conditions) and Scenario A (Maximum Development), respectively.

Table 1: AUAR Development Scenarios

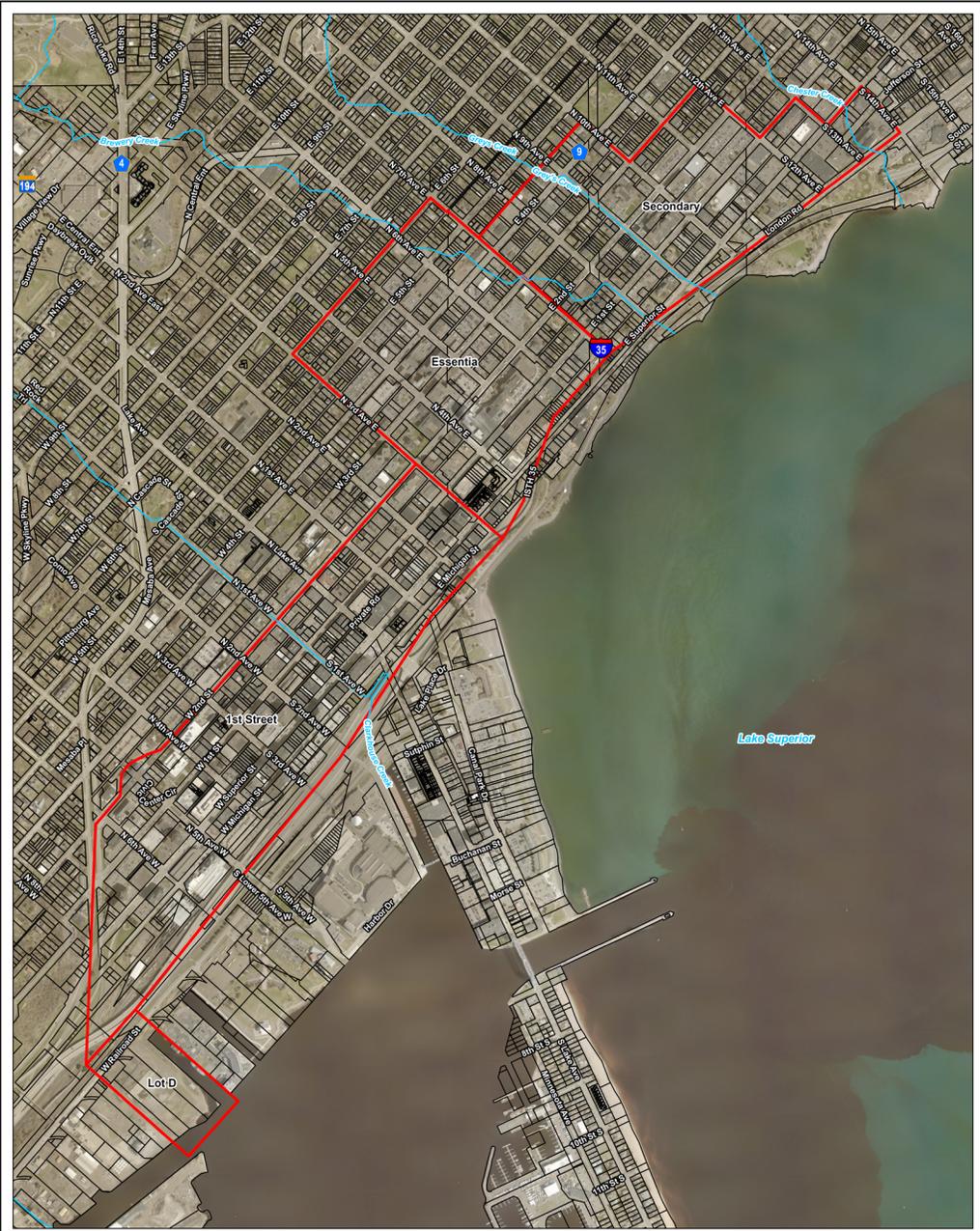
Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Total Project Acreage	Total approx. 354	Total approx. 354
Linear Project length	Not applicable (N/A)	N/A
Residential building area (in square feet)	2,146,000	4,516,000
Commercial building area (in square feet)	6,003,000	6,073,000
Industrial building area (in square feet)	67,000	67,000
Institutional building area (in square feet)	4,160,000	4,435,000
Other uses – Tourism (in square feet)	540,000	869,000
Total Project Square Footage	12,916,000	15,960,000
Lot D Subarea		
Subarea Acreage	Approx. 19	Approx. 19
Residential building area (in square feet)	0	802,000
Commercial building area (in square feet)	0	0
Industrial building area (in square feet)	0	0
Institutional building area (in square feet)	0	0
Other uses – Tourism (in square feet)	0	93,000
Total Project Square Footage	0	895,000
Structure height (feet)	0	Up to 120 ft. (approx. 10 stories)
Essentia Subarea		
Subarea Acreage	Approx. 97	Approx. 97
Residential building area (in square feet)	618,000	1,568,000
Commercial building area (in square feet)	1,209,000	1,259,000
Industrial building area (in square feet)	14,000	14,000
Institutional building area (in square feet)	2,475,000	2,750,000
Other uses – Tourism (in square feet)	174,000	410,000
Total Project Square Footage	4,490,000	6,001,000
Structure height (feet)	Up to 18 stories (St. Mary's Medical Center)	Up to 200 ft. (approx. 20 stories)
1st Street Subarea		
Subarea Acreage	Approx. 141	Approx. 141
Residential building area (in square feet)	808,000	1,300,000
Commercial building area (in square feet)	3,985,000	4,005,000
Industrial building area (in square feet)	30,000	30,000
Institutional building area (in square feet)	48,000	48,000
Other uses – Tourism (in square feet)	312,000	312,000
Total Project Square Footage	5,183,000	5,695,000

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Structure height (feet)	Up to 15 stories (Alworth Building)	Up to 200 ft. (approx. 20 stories)
Secondary Subarea		
Subarea Acreage	Approx. 98	Approx. 98
Residential building area (in square feet)	720,000	846,000
Commercial building area (in square feet)	809,000	809,000
Industrial building area (in square feet)	23,000	23,000
Institutional building area (in square feet)	1,637,000	1,637,000
Other uses – Tourism (in square feet)	54,000	54,000
Total Project Square Footage	3,243,000	3,369,000
Structure height (feet)	Up to 114 ft. (St. Luke's Hospital)	Up to 200 ft. (approx. 20 stories)

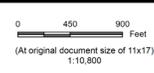
Staff Recommendation

Staff recommend that the Planning Commission adopt the Final Order for Review to prepare the Downtown Duluth Draft AUAR.

Figure 1: AUAR Area



- Legend**
- ~ City of Duluth Streams
 - AUAR Area
 - Parcel Boundary



Project Location
 1500, #14W, 522, 27 & 34
 C. of Duluth, St. Louis Co., MN

Client/Project
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
 2

Title
 Project Location Aerial Map

Notes
 1. Coordinate System: NAD 1983 HARN Adj. MN St. Louis CS98 Feet
 2. Data Sources: Stantec; City of Duluth, St. Louis Co., MNDOT
 3. Background: 2023 St. Louis Co.

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

Figure 2: Development Scenario A – Existing Conditions

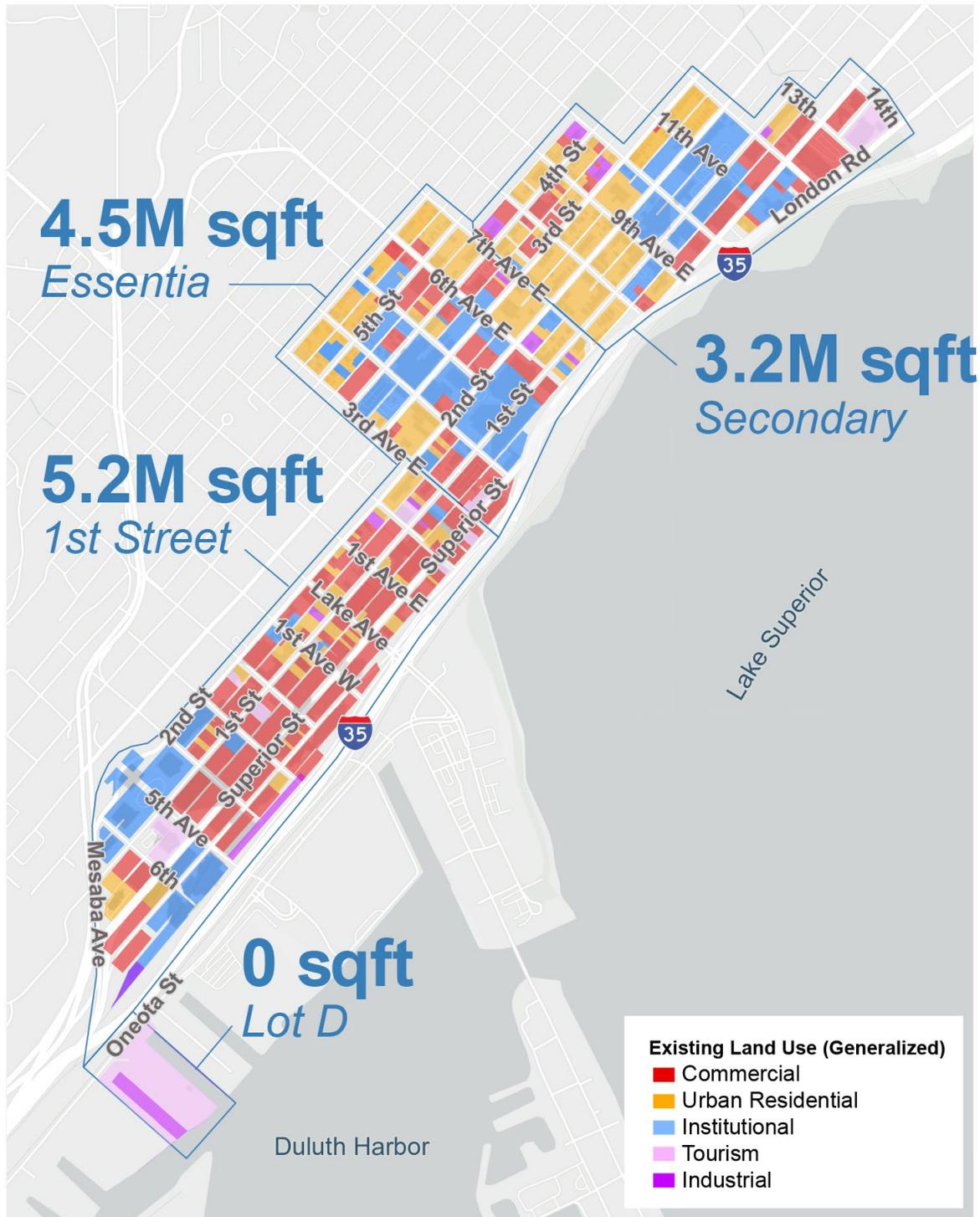
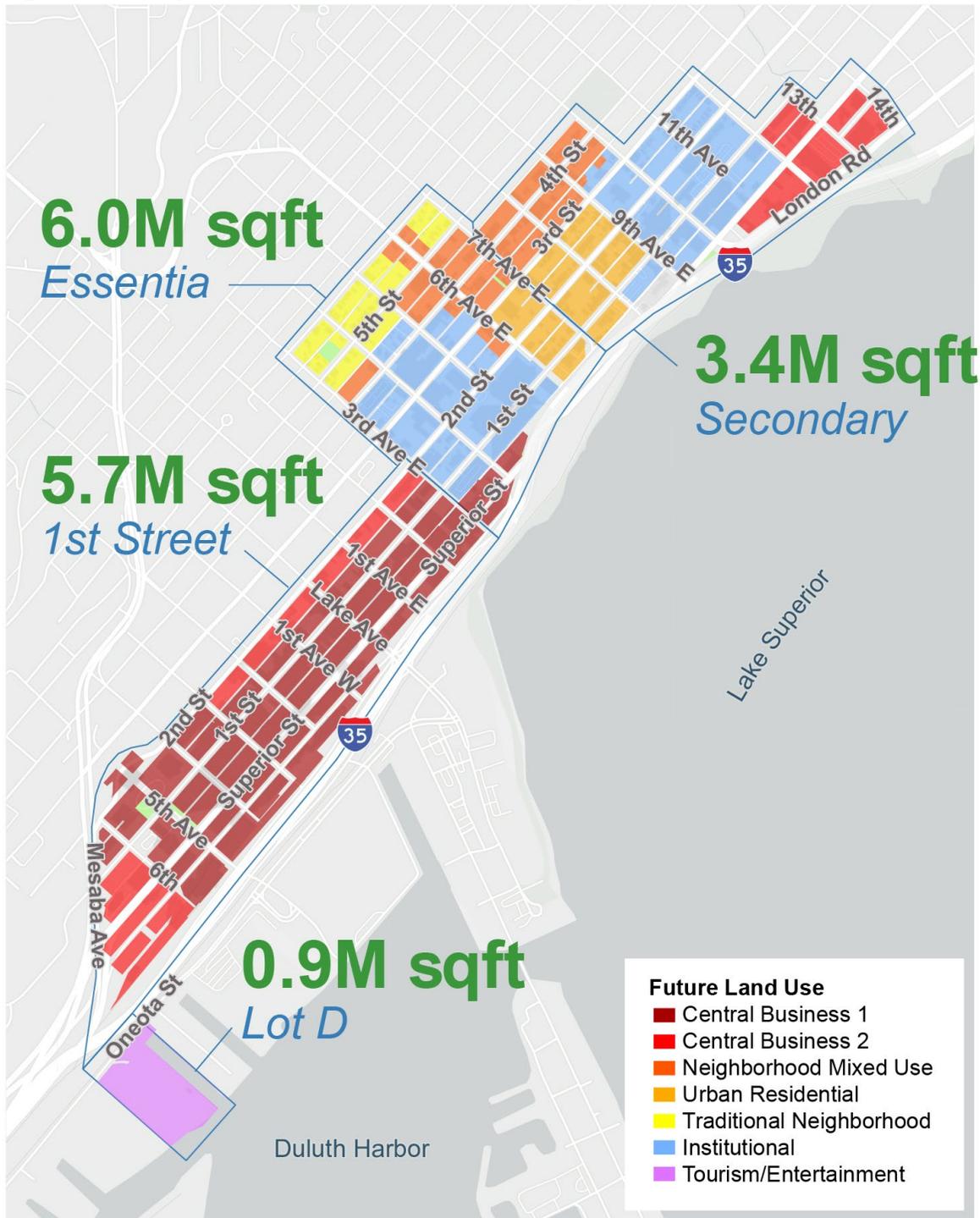


Figure 3: Development Scenario B – Maximum Development



Attachment A – Scoping EAW Responses to Comments

Attachment A – Scoping EAW Responses to Comments

The Scoping Environmental Assessment Worksheet (EAW) for the Downtown Duluth Alternative Urban Areawide Review (AUAR) was prepared and published for public comment in accordance with the Minnesota Rules, part 4410.3610, subpart 5a. The purpose of the Scoping EAW was to provide information, seek input on the proposed scope of analysis for the AUAR, establish the boundaries of the AUAR, and identify the development scenarios to be analyzed through this review.

The Scoping EAW was published on November 25, 2025, and distributed to the Environmental Quality Board (EQB) and persons and agencies on the official EQB distribution list in accordance with EQB rules.

Notices concerning the availability of the document and comment period were posted in the Duluth News Tribune on November 29, 2025, December 6, 2025, December 13, 2025, and December 20, 2025. The document was made available in the Duluth City Hall (411 West First Street, Duluth, MN 55802) and on the City’s website at <https://duluthmn.gov/planning-development/land-use-zoning-and-applications/environmental-reviews/>. The Duluth City Planning Commission held a public hearing on December 9, 2025. The 30-day comment period expired on December 26, 2025.

The RGU must consider all timely and substantive comments received when finalizing the order for review in accordance with Minnesota Rules part 4410.3610, Subpart 5a(C). As required by MN Rules, the RGU has provided replies to comments that are substantive. Four agency and one citizen comment letters were received on the Scoping EAW. Comments received by these agencies and the public are summarized below by commenter and subject matter. Copies of all comment letters submitted are included in Attachment B in the order shown below.

Agency/Organization/Citizen	Letter Dated	Signatory
U.S. Army Corps of Engineers (USACE)	November 25, 2025	Andrew Chambers, Regulatory Lead Project Manager
Minnesota Department of Agriculture (MDA)	December 12, 2025	Michael Zastoupil, Agricultural and Food Systems Planner
Minnesota Department of Natural Resources (DNR)	December 22, 2025	Jessica Parson, Northeast Regional Environmental Assessment Ecologist
Minnesota Department of Transportation (MnDOT)	December 26, 2025	Maren Webb, MPP, Principal Planner, District 1
Commentor #1 -	December 5, 2025	Diane Desotelle

None of the comments received suggested alternative development scenarios to the two described in the Scoping EAW. Therefore, the Draft AUAR will analyze the development scenarios presented in the Scoping EAW.

Item 7. Climate Adaptation and Resilience

1. **Comment:** Where is the reference and guidance from the City's Climate Action Plan?

Commentor: Commenter #1 - Desotelle

Response: The Draft AUAR will include a discussion of the City's Climate Action Plan and adaptation considerations identified in the plan.

2. **Comment:** Potential adaptations should include green roofs, heat pumps, solar, tree plantings for shade etc. Any they should be required to meet the City's climate action goals.

Commentor: Commenter #1 - Desotelle

Response: Refer to the response to Comment #1.

3. **Comment:** and they [potential adaptations] will reflect the goals of the city's climate action plan

Commentor: Commenter #1 - Desotelle

Response: Refer to the response to Comment #1.

Item 8. Cover Types

1. **Comment:** [...] and support goals of the city's comp plan, climate plan, parks plan and natural resources mgmt. program plan [pertaining to future land cover for Scenario B]

Commentor: Commenter #1 - Desotelle

Response: Plans will be evaluated in the Draft AUAR under Item 10 (land use). The Draft AUAR will highlight places where there are any incompatibilities between adopted plans, such as those mentioned in the comment, and the proposed development scenarios. Incompatibilities will be addressed through mitigation proposed in the Draft AUAR.

Item 10. Land Use

1. **Comment:** [...] MDA believes that opportunities exist for the inclusion of local food production within the Downtown Duluth AUAR. Community gardens would fit well into areas designated for Neighborhood Mixed Use, Urban Residential, and Open Space throughout the AUAR. A community garden would also add value in Lot D next to the multi-family housing units. Rooftop gardens and Controlled Environment Agriculture (also known as indoor agriculture) could be incorporated into any of the business districts as well. Making space for a small urban farm next to the healthcare facilities in the Institutional areas could fit well with Essentia Health or Aspirus St. Luke's produce

prescription or other nutrition programs in the future. Urban farms typically require more zoning changes to allow for structures like hoop houses, greenhouses, etc.

Finally, setting aside land for local food production in the Downtown Duluth AUAR can help the City of Duluth advance further in the GreenStep Cities program through Best Practice #27: Local Food as well as the new Gold Leaf Challenge.

Commentor: MDA

Response: The development scenarios studied in this AUAR in no way prohibit the ability for willing developers or entities to include local food production in their developments or properties. While the City cannot require private landowners to consider local food production, it can encourage this type of use by adding flexibility to the zoning code. Local food production will be considered as an optional mitigation measure in both Item 7 Climate and Resilience and Item 10 Land Use.

2. **Comment:** [Add] The St. Louis River Area of Concern Plan, Duluth Natural Resources Mgmt Program Plan, Duluth Stormwater Plan and Duluth Climate Action Plan

Commentor: Commenter #1 - Desotelle

Response: These plans will be added to the list of plans reviewed in the Draft AUAR.

Item 12. Water Resources

1. **Comment:** If the proposal involves activity in navigable waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (Section 10). Section 10 prohibits the construction, excavation, or deposition of materials in, over, or under navigable waters of the United States, or any work that would affect the course, location, condition, or capacity of those waters, unless the work has been authorized by a Department of the Army permit.

If the proposal involves discharge of dredged or fill material into waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act (CWA Section 404). Waters of the United States include navigable waters, their tributaries, and adjacent wetlands (33 CFR § 328.3). CWA Section 301(a) prohibits discharges of dredged or fill material into waters of the United States, unless the work has been authorized by a Department of the Army permit under Section 404. Information about the Corps permitting process can be obtained online at <http://www.mvp.usace.army.mil/regulatory>.

The Corps evaluation of a Section 10 and/or a Section 404 permit application involves multiple analyses, including (1) evaluating the proposal's impacts in accordance with the National Environmental Policy Act (NEPA) (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) in the case of a Section 404 permit, determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

If an application for a Corps permit has not yet been submitted, the project proposer may request a pre-application consultation meeting with the Corps to obtain information regarding the data, studies or other information that will be necessary for the permit evaluation process. A pre-application consultation meeting is strongly recommended if the proposal has substantial impacts to waters of the United States, or if it is a large or controversial project.

Commentor: USACE

Response: Potential Section 10 and/or Section 404 permit requirements are identified in Table 6, Permits and Approvals of the Scoping EAW. The Draft AUAR will include a discussion of the potential permit requirements pertaining to waters of the United States and includes these in the mitigation plan.

2. **Comment:** Public waters rules state that fill may not exceed more than a minimum encroachment, change, or damage to the environment. Minnesota Rule 6115.0190 Subpart 3B states that placement of fill within public waters strictly to create upland is prohibited. Minnesota Rule 6115.0191 Subpart 4 includes requirements for reclaiming shoreline lost to erosion. Typically, no more than 400 square feet may be reclaimed unless the loss of shoreline is a threat to health and safety through the impending loss or damage to existing shoreline development; or the loss occurred because of changes in water levels caused by artificial manipulation not more than 5 years prior. There is no existing shoreline development at risk on Lot D and the shoreline eroded more than 5 years ago. The failed portions of the historic seawall should be considered for removal from the public water as part of the project because they no longer serve public interest, and they could be hazardous to navigation.

Commentor: DNR

Response: Comment noted. Public water rules pertaining to shoreline reclamation and placing of fill within Public Waters will be described in the Draft AUAR. Proposed improvements to the existing seawall along Lot D are conceptual. Preliminary design of the proposed seawall improvements has not been completed. At the time that the design of the seawall improvements project is underway, the City and the design team will coordinate with the DNR to ensure that proposed improvements adhere to state shoreline rules.

3. **Comment:** The concept plan shows large areas of impervious surface within the shore impact zone in the form of plazas. It would be more appropriate for these areas to be replaced with green space and shoreland buffers. Native shoreline vegetation provides several benefits that impervious surfaces do not including slowing stormwater runoff; absorbing wind/wave energy; filtering nutrients/pollutants; limiting suspended sediments; and providing fish and wildlife habitat. The concept plan also shows an impervious walkway within the shore impact zone around the perimeter of the site. It is not clear if this walkway is for public use. Please clarify if the walkway is intended to be open to public use, or if it is intended as private infrastructure. Additionally, please identify if there are other areas of the site/waterfront that will be accessible by the public.

Because the site is no longer under industrial use and there appears to be no need for direct shoreland docking around the entire perimeter of the site, the shoreline could be re-naturalized. This could include utilizing a soft (native plantings) or hybrid shoreline (native plantings and riprap) design approach rather than reconstructing a seawall. These design approaches could both address shoreline erosion and give the shoreline a more natural appearance consistent with shoreland goals/standards.

The draft AUAR should address how the waterfront will be utilized at the site. This includes anticipated waterfront recreation and watercraft mooring needs. Docks and mooring spaces should be minimized because these structures privatize public space and increase traffic/crowding of surface waters. Excessive amounts of these structures can also be detrimental to fish habitat. Please note, a DNR public waters work permit may be required if certain dock/mooring standards are not met. Please continue close coordination with Bri Speldrich as these plans are developed.

Commentor: DNR

Response: Perpetual use of Slip No. 3 by abutting landowners is designated and permitted by right in the Bay Front Division plat. While the City understands the ecological benefits of creating natural shoreline, historic preservation concerns related to the Slips No. 1, 2, and 3 Historic District, eligible for listing in the National Register of Historic Places (NRHP), must also be considered. It is anticipated that redevelopment of Lot D and the associated seawall improvements will be closely coordinated with the Minnesota State Historic Preservation Office (SHPO) and Duluth Heritage Preservation Committee (HPC).

The Lot D concept plan, proposed by Inland Development Partners, is a preliminary concept and specific details on the potential plaza, walkway, and waterfront access have not been determined. At this time, it is anticipated that a public walkway and waterfront access may be proposed, similar to the waterfront access and walkways constructed at the adjacent Pier B Hotel within the past ten years. Extending the City's existing local pedestrian network and ensuring compliance with federal, state, and local historic preservation requirements will be an important consideration in the future redevelopment of Lot D.

The City will continue to closely coordinate with the DNR, as the proposed design of the Lot D redevelopment project and associated seawall improvements develops to identify opportunities to utilize native vegetation and natural shoreline where feasible and address the DNR's concerns related to shoreline restoration and aquatic habitat.

4. **Comment:** The environmental effects of the following should be disclosed and evaluated further, and may be required for permitting:
- Number and size of mooring spaces anticipated for the site
 - Number of mooring spaces that will be utilized by residents/hotel guests and the number that will be utilized by non-residential or non-lodging commercial uses (restaurants, bars, etc.)

- The layout and square footage of docks
- Total maneuvering area needed for watercraft
- Future creation/excavation of new slips
- Water recreation facilities or ancillary services (boat ramps, rentals, saunas, etc.)
- Changes in impervious surface; (with a goal of no net increase)
- Expand upon noxious weed prevention and management plans
- Expand upon potential for increased traffic and use of nearby parks, trails, and other facilities and identify if additional considerations (such as trail erosion or stream sedimentation) should be mitigated.

Commentor: DNR

Response: The Draft AUAR will include preliminary information based on the Lot D concept plan, including approximately impervious surface area changes, waterfront plaza, connections to the public walkway network, and mitigation measures pertaining to noxious weed prevention and management. The specific details of the proposed reconstruction of the existing seawall, potential water recreation facilities, and proposed dock details are not available at this time as the Lot D project design has not advanced to a point where this has been determined. The AUAR mitigation plan will identify a need to coordinate with the DNR as the design develops and identify state and federal permit requirements pertaining to impacts to waters of the United States and DNR Public Waters.

- 5. Comment:** In a previous early coordination meeting in which MN DNR staff attended, it was noted that commercial vessels may temporarily moor at this site. There was also discussion of extending the Lakewalk to this site and potentially re-excavating historic Slip 4. These activities are likely to have public water impacts, require additional permitting, and their environmental effects should be addressed in the draft AUAR.

Commentor: DNR

Response: The potential for boat slip access to Lot D and extending the existing Bayfront Walkway to Lot D may be considered as the redevelopment project advances. Currently, the re-excavation of historic Slip No. 4 is not proposed.

Item 14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

- 3. Comment:** MNDNR Issued a Natural Heritage Review letter, MCE #2025-00850, for this project on December 12, 2025 (see attached). It appears that there are rare features and state-listed species in the vicinity of the project. Please follow all guidance outlined in the Natural Heritage Review Letter.

Commentor: DNR

Response: The DNR's Natural Heritage Review letter (MCE #2025-00850) was received and will be incorporated into the Draft AUAR.

Item 17. Air

1. **Comment:** There is opportunity to consider reduced traffic in areas to not only increase walker/biker/disability and DTA services, but to reduce emissions and noise in some corridors

Commentor: Commenter #1 - Desotelle

Response: Comment noted. The Draft AUAR will discuss opportunities for expanding alternative transportation modes to the AUAR subareas. Scenario B evaluates opportunities to increase residential development in downtown core. Redevelopment and infill development of the downtown inherently provides opportunities to reduce vehicle emissions by increasing population density near major employers and commercial areas, where pedestrian/bicyclist infrastructure may be utilized as an alternative to personal vehicles.

Item 18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

1. **Comment:** And the City's Climate Action Plan

Commentor: Commenter #1 - Desotelle

Response: The Draft AUAR will include a discussion of the City's Climate Action Plan and adaptation considerations identified in the plan.

2. **Comment:** [And] renewable energy, heat pumps

Commentor: Commenter #1 - Desotelle

Response: The Draft AUAR will include a number of potential adaptation measures that may be appropriate to consider as specific projects are proposed within the AUAR area, including renewable energy and heat pumps.

3. **Comment:** and the city's greenhouse gas reduction goals

Commentor: Commenter #1 - Desotelle

Response: The Draft AUAR will acknowledge the City's greenhouse gas reduction goals in addition to goals at the state-level.

Item 19. Noise

1. **Comment:** Please add issues related to long term lower level dBA and vibrations especially next to residential areas. These issues can greatly impact human health as well.

Commentor: Commenter #1 – Desotelle

Response: Low frequency noise is sound at frequencies of less than 200 hertz (Hz). This type of sound is often described as a “rumble” and typically associated with gas combustion turbines and other sources such as helicopters, pumps, fans, etc. C-weighted (dBC) sound levels are a better indicator of presence of high sound levels at the frequencies than A-weighted sound levels. The State of Minnesota does not have dBC noise limits. As stated in the Scoping EAW, no data center or heavy industrial uses are considered in the development scenarios, that may potentially warrant a more detailed evaluation of noise impacts, such as low frequency noise.

Development Scenario B primarily proposes multi-family residential uses along with some hotel, commercial/office, and retail uses. Proposed residential uses would be considered sensitive noise receptors and would not generate significant new sources of noise. Further, noise generated by residential uses would be negligible compared to existing sources of noise in the downtown such as traffic noise associated with Interstate 35 (I-35) and other roadways, and industrial, commercial, and event activities along the waterfront and downtown. Therefore, proposed residential and commercial uses do not necessitate a quantitative noise analysis. Additionally, no road improvements that would be considered a Type I Project are proposed as part of the development scenarios; therefore, a traffic noise analysis is not warranted.

- 2. Comment:** Please add issues beyond law compliance related to research from long term lower lever dBA and vibrations especially next to residential areas. These issues can greatly impact human health as well as residents on east coast are noticing with increase of data centers.

Commentor: Commenter #1 - Desotelle

Response: Refer to the preceding response to noise comment # 1.

Item 20. Transportation

- 3. Comment:** On page 46, under 20a. Transportation, it is recommended that the new proposed access into the Lot D development is considered with the Traffic Impact Study (TIS).

Commentor: MnDOT

Response: Comment noted. A traffic impact study for the proposed Lot D Redevelopment Project will be included in the Draft AUAR.

- 4. Comment:** On page 46, under 20a. Transportation, please be sure to include data for portion 5): availability of transit and/or other alternative transportation modes.

In relation to alternative transportation modes (walking, biking, etc.) and Lot D, Geno’s Walk (BR# 69885, pedestrian bridge over I-35) will be significantly rehabbed Summer 2026. The stairs to Railroad St will be removed under this project, maintaining the ADA accessible connection/ramp.

Commentor: MnDOT

Response: Comment noted. The Draft AUAR will discuss transit and/or other alternative transportation modes. Information received pertaining to the planned improvements to Geno’s Walk

(Bridge No. 69885) and ADA improvements to the stairs and Railroad Street will be included in the Draft AUAR.

Comment: On page 33, under Proposed Conditions for stormwater, there is reference to large-scale sediment channels under I-35. It is not clear whether these will be looked at specifically with this process. The document references that they "...were constructed to manage runoff generated from all the public roads, however, these channels also receive runoff that drains down the hillside from 6th Avenue West to 1st Avenue East."

Commentor: MnDOT

Response: The Draft AUAR will include a discussion of existing drainage features within the AUAR area and anticipated Stormwater BMP improvements needed to treat stormwater runoff associated with the proposed redevelopment (Scenario B). Specific improvements to existing sediment channels under I-35 are not proposed as part of the development scenarios evaluated in the Draft AUAR.

Attachment B – Comment Letters

Sejkora, Erin

From: Chambers, Andrew R CIV USARMY CEMVP (USA)
<Andrew.R.Chambers@usace.army.mil>
Sent: Tuesday, November 25, 2025 8:15 AM
To: Sejkora, Erin
Cc: Jason Mozol
Subject: RE: Downtown Duluth Scoping EAW - Comment Period Notification

You don't often get email from andrew.r.chambers@usace.army.mil. [Learn why this is important](#)

Erin,

Thanks for coordinating with the Corps on this one.

If the proposal involves activity in navigable waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (Section 10). Section 10 prohibits the construction, excavation, or deposition of materials in, over, or under navigable waters of the United States, or any work that would affect the course, location, condition, or capacity of those waters, unless the work has been authorized by a Department of the Army permit.

If the proposal involves discharge of dredged or fill material into waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act (CWA Section 404). Waters of the United States include navigable waters, their tributaries, and adjacent wetlands (33 CFR § 328.3). CWA Section 301(a) prohibits discharges of dredged or fill material into waters of the United States, unless the work has been authorized by a Department of the Army permit under Section 404. Information about the Corps permitting process can be obtained online at <http://www.mvp.usace.army.mil/regulatory>.

The Corps evaluation of a Section 10 and/or a Section 404 permit application involves multiple analyses, including (1) evaluating the proposal's impacts in accordance with the National Environmental Policy Act (NEPA) (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) in the case of a Section 404 permit, determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

If an application for a Corps permit has not yet been submitted, the project proposer may request a pre-application consultation meeting with the Corps to obtain information regarding the data, studies or other information that will be necessary for the permit evaluation process. A pre-application consultation meeting is strongly recommended if the proposal has substantial impacts to waters of the United States, or if it is a large or controversial project.

Let me know if you want to discuss.

Thanks!

Andy

-- --

Andrew Chambers
Regulatory Lead Project Manager
U.S. Army Corps of Engineers
Duluth Field Office
11 East Superior Street, Suite 260

Duluth, MN 55802
Cell: (218) 393-2837

Information on Corps of Engineers Regulatory Program can be found at:

<https://www.mvp.usace.army.mil/missions/regulatory>

We are pleased to introduce our new paperless communication procedures in Minnesota. Requests for action (pre-application consultations, permit applications, requests for delineation concurrences, requests for jurisdictional determinations, and mitigation bank proposals) should be sent directly to the following email: usace_requests_mn@usace.army.mil <mailto:usace_requests_mn@usace.army.mil>. Please include the county name in the subject line of the email (e.g. Washington County). These changes will improve efficiency, reduce costs and reduce the environmental footprint. Additional information can be found in our public notice located here: <http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>

From: Sejkora, Erin <Erin.Sejkora@stantec.com>

Sent: Friday, November 21, 2025 5:12 PM

To: Sejkora, Erin <Erin.Sejkora@stantec.com>

Cc: jmoses@duluthmn.gov; Jason Mozol <jmozol@duluthmn.gov>; thobbs@duluthmn.gov; Walburg, Lauren <Lauren.Walburg@stantec.com>; Bot, Courtney <Courtney.Bot@stantec.com>

Subject: [Non-DoD Source] Downtown Duluth Scoping EAW - Comment Period Notification

Good afternoon,

The City of Duluth is accepting comments on the Scoping Environmental Assessment Worksheet (EAW) and Draft Order for Review for the Downtown Duluth Alternative Urban Areawide Review (AUAR), which will be published in the EQB Monitor on Tuesday, November 25, 2025.

The AUAR area includes an approximately 335-acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding Hillside neighborhood, as well as the proposed "Lot D" development in the Bayfront area in the City of Duluth, St. Louis County, Minnesota. The City initiated this AUAR in anticipation that the downtown area could see significant infill and redevelopment within the coming years, including areas that are within the City's shoreland area and would require environmental review and sensitivity. The purpose of the AUAR is to help the City adequately plan for this redevelopment and provide a mitigation plan for how the City and future developers will manage the environmental impacts.

An AUAR consists of three steps: Scoping EAW, Draft AUAR and Final AUAR. The Scoping EAW describes issues to be studied in the AUAR and potential data sources to be used in this analysis. The purpose of the Scoping EAW is to provide information to agencies and the public on the proposed scope of the Draft AUAR and to invite feedback on additional analysis or data sources that should be considered in the Draft AUAR. Once the Scoping EAW process and comment period has been completed, a Draft AUAR is prepared.

The Scoping EAW will be available for public comment starting on Tuesday, **November 25, 2025** and will conclude on Friday, **December 26, 2025**.

The Scoping EAW can be viewed online at the City's website:

duluthmn.gov/media/islf24ec/downtown-duluth_scoping-eaw-narrative-appendices_20251114.pdf

Please submit electronic/email comments to Jason Mozol at jmozol@duluthmn.gov with **Downtown Scoping EAW** in the subject line. If submitting comments electronically, please include name and mailing address.

Written comments should be submitted to:

Jason Mozol, Senior Planner
City Hall, Room 160
411 West First Street
Duluth, MN, 55802

The City of Duluth Planning Commission will hold a public hearing for the Scoping EAW during their next meeting on **December 9, 2025 at 5:00 pm** at City Hall location at 411 West First Street, Council Chambers, Duluth, MN 55802.

Please do not hesitate to contact me or Jason Mozol (jmozol@duluthmn.gov) if you have any questions.

Thank you,

Erin Sejkora, AICP
Associate, Project Manager
She/Her

Direct: (763) 252-6802
Mobile: (612) 258-6937
erin.sejkora@stantec.com

 *Upcoming out of office 11/24 - 11/28*

Stantec
One Carlson Parkway North, Suite 100, Plymouth MN 55447-4440, United States



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Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

December 12, 2025

Jason Mozol
City of Duluth
411 West First Street
Duluth, MN 5802

RE: Downtown Duluth Alternative Urban Areawide Review

Dear Mr. Mozol:

The Minnesota Department of Agriculture (MDA) appreciates the opportunity to comment on the proposed Downtown Duluth AUAR.

Background

MDA has historically played a significant role in the preservation of agriculture as an industry and a vocation, as well as preserving the farmland that is the natural resource base of agriculture. We recognize that land use change is inevitable especially within urban areas. Nonetheless, agricultural production, in particular, food crops, can provide economic, environmental, and public health benefits to urban communities. We encourage the planning processes involved in guiding future land use change in Duluth to consider the benefits of incorporating local food production in plans for future development.

Local Food Production

Local food production is an umbrella term for a wide variety of activities that can be classified as either small-scale commercial or recreational. Small-scale commercial farms provide a variety of fresh food to local markets through direct sales to consumers or through sales to schools, restaurants, and retail stores. In areas proposed for commercial, industrial, light industrial, or low-density residential uses, these small businesses can be economically successful on small parcels of 'leftover' land that are oddly shaped or too small for other forms of development. Small farms can also play a role in attracting tourists to these areas.

Recreational local food production typically takes the form of community gardens, often incorporated into park and open space areas within residential areas. Community gardens can improve residents' diet, physical fitness, mental health, and social connectedness, and have even been shown to improve public safety and raise nearby property values.

Additionally, urban agriculture and community gardens can help provide environmental benefits important to cities such as combatting urban heat islands, reducing runoff, sequestering carbon, and supporting pollinators. When perennial crops such as fruit trees and bushes are planted, they can also provide shade and contribute to the tree canopy.

Opportunities within the Southwest Study Area AUAR

MDA believes that opportunities exist for the inclusion of local food production within the Downtown Duluth AUAR. Community gardens would fit well into areas designated for Neighborhood Mixed Use, Urban Residential, and Open Space throughout the AUAR. A community garden would also add value in Lot D next to the multi-family housing units. Rooftop gardens and Controlled Environment Agriculture (also known as indoor agriculture) could be incorporated into any of the business districts as well. Making space for a small urban farm next to the healthcare facilities in the Institutional areas could fit well with Essentia Health or Aspirus St. Luke's produce prescription or other nutrition programs in the future. Urban farms typically require more zoning changes to allow for structures like hoop houses, greenhouses, etc.

Finally, setting aside land for local food production in the Downtown Duluth AUAR can help the City of Duluth advance further in the GreenStep Cities program through Best Practice #27: Local Food as well as the new Gold Leaf Challenge.

If you have any questions about MDA's comments, or would like additional information about local food production, please feel free to contact me.

Sincerely,



Michael Zastoupil

Agricultural and Food Systems Planner

Energy and Environment Section

Ag Marketing & Development Division

651-201-6369

michael.zastoupil@state.mn.us

cc: Stephen Roos, Environmental Planner

Minnesota Department of Natural Resources
Northeast Regional Headquarters
1201 East Highway 2, Grand Rapids, MN 55744

December 22, 2025

Jenn Moses, AICP
Planning Manager
Planning and Development Division
411 W. 1st Street, Room 160
Duluth, MN 55802
(218) 730-5328
jmoses@duluthmn.gov

RE: Downtown Duluth Scoping Environmental Assessment Worksheet (EAW) for forthcoming Draft Alternative Urban Areawide Review (AUAR).

Dear Ms. Moses,

The Minnesota Department of Natural Resources (MNDNR) has conducted a review of the **Downtown Duluth Scoping EAW for the forthcoming Draft AUAR**. We appreciate the opportunity to review this project and encourage project proposers to continue their coordination with MN DNR and other agencies to protect natural resources and recreational opportunities.

Lot D Development

The Lot D development is adjacent to the Duluth Harbor which is a public water. Activities below the ordinary high-water level (OHWL) of public waters are regulated by DNR via the public waters work permit program. This permit is administered by MNDNR Area Hydrologist Bri Speldrich (Bri.Speldrich@state.mn.us).

The loss of public waters is of concern with the proposed Lot D concept plan (page 90). The Saint Louis River Estuary (SLRE) is identified as a lake of outstanding biological significance. Minimizing impacts to this important waterway is important to the fishery and other wildlife that depend on this ecosystem.

Section 10, page 18 of the scoping AUAR states: *“It is anticipated that repair and replacement of the existing seawall would include reclamation of a portion of the land that has eroded and replacement of the dock wall around the entire property.”* Public waters rules state that fill may not exceed more than a minimum encroachment, change, or damage to the environment. Minnesota Rule 6115.0190 Subpart 3B states that placement of fill within public waters strictly to create upland is prohibited. Minnesota Rule 6115.0191 Subpart 4 includes requirements for reclaiming shoreline lost to erosion. Typically, no more than 400 square feet may be reclaimed unless the loss of shoreline is a threat to health and safety though the impending loss or damage to existing shoreline development; or the loss occurred because of changes in water levels caused by artificial manipulation not more than 5 years prior. There is no existing shoreline development at risk on Lot D and the shoreline eroded more than 5 years ago. The failed portions of the historic seawall should be considered for removal from the public water as part of the project because they no longer serve public interest, and they could be hazardous to navigation.

The concept plan shows large areas of impervious surface within the shore impact zone in the form of plazas. It would be more appropriate for these areas to be replaced with green space and shoreland buffers. Native shoreline vegetation provides several benefits that impervious surfaces do not including slowing stormwater runoff; absorbing wind/wave energy; filtering nutrients/pollutants; limiting suspended sediments; and providing fish and wildlife habitat. The concept plan also shows an impervious walkway within the shore impact zone around the perimeter of the site. It is not clear if this walkway is for public use. Please clarify if the walkway is intended to be open to public use, or if it is intended as private infrastructure. Additionally, please identify if there are other areas of the site/waterfront that will be accessible by the public.

Because the site is no longer under industrial use and there appears to be no need for direct shoreland docking around the entire perimeter of the site, the shoreline could be re-naturalized. This could include utilizing a soft (native plantings) or hybrid shoreline (native plantings and riprap) design approach rather than reconstructing a seawall. These design approaches could both address shoreline erosion and give the shoreline a more natural appearance consistent with shoreland goals/standards.

The draft AUAR should address how the waterfront will be utilized at the site. This includes anticipated waterfront recreation and watercraft mooring needs. Docks and mooring spaces should be minimized because these structures privatize public space and increase traffic/crowding of surface waters. Excessive amounts of these structures can also be detrimental to fish habitat. Please note, a DNR public waters work permit may be required if certain dock/mooring standards are not met. Please continue close coordination with Bri Speldrich as these plans are developed.

The environmental effects of the following should be disclosed and evaluated further, and may be required for permitting:

- Number and size of mooring spaces anticipated for the site
- Number of mooring spaces that will be utilized by residents/hotel guests and the number that will be utilized by non-residential or non-lodging commercial uses (restaurants, bars, etc.)
- The layout and square footage of docks
- Total maneuvering area needed for watercraft
- Future creation/excavation of new slips
- Water recreation facilities or ancillary services (boat ramps, rentals, saunas, etc.)
- Changes in impervious surface; (with a goal of no net increase).
- Expand upon noxious weed prevention and management plans.
- Expand upon potential for increased traffic and use of nearby parks, trails, and other facilities and identify if additional considerations (such as trail erosion or stream sedimentation) should be mitigated.

In a previous early coordination meeting in which MN DNR staff attended, it was noted that commercial vessels may temporarily moor at this site. There was also discussion of extending the Lakewalk to this site and potentially re-excavating historic Slip 4. These activities are likely to have public water impacts, require additional permitting, and their environmental effects should be addressed in the draft AUAR.

Rare Features

MNDNR Issued a Natural Heritage Review letter, MCE #2025-00850, for this project on December 12, 2025 (see attached). It appears that there are rare features and state-listed species in the vicinity of the project. Please follow all guidance outlined in the Natural Heritage Review Letter.

Thank you for the opportunity to review the **Downtown Duluth Scoping EAW for the forthcoming Draft AUAR**. Due to the proposed shoreland alterations and public water impacts, MNDNR would appreciate the opportunity for additional coordination as project plans progress.

Please contact me with any additional questions. I can be reached at (218) 328-8826 or via email at: jessica.parson@state.mn.us.

Sincerely,



Jessica Parson
Northeast Regional Environmental Assessment Ecologist
Minnesota Department of Natural Resources

CC:
Lisa Joyal
Bri Speldrich
Dan Wilfond
Darrell Schindler
Greg Root
Jessica Parson



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

December 12, 2025

Erin Sejkora
Stantec

RE: Natural Heritage Review of the proposed **Downtown Duluth AUAR**,
T50N R14W Sections 22, 23, 27, and 34; St. Louis County

Dear Erin Sejkora,

For all correspondence regarding the Natural Heritage Review of this project please include the project ID **MCE-2025-00850** in the email subject line.

As requested, the [Minnesota Natural Heritage Information System](#) has been reviewed to determine if the proposed project has the potential to impact any rare species or other significant natural features. Based on the project details provided with the request, the following rare features may be impacted by the proposed project:

Ecologically Significant Areas

- Lake Superior has been identified as a Lake of *Outstanding* Biological Significance. Lakes of Biological Significance were ranked as *Outstanding, High, or Moderate* based on unique plant and animal presence. Many state-listed species are found within Lake Superior, including rare fish and mussels.

There are other natural resource related issues associated with lakeshore developments besides the potential impacts to rare features. These issues include increased nutrients, pollutants, erosion, and sedimentation resulting in decreased water quality and decreased habitat quality for fish and wildlife. Maintaining native vegetation along lakeshores is one way to reduce these negative impacts. The combination of upland, lakeshore, and aquatic plants creates a buffer zone that provides numerous ecological benefits. Lakeshore and upland plants help stabilize banks and protect the shoreline from erosion by absorbing the forces of wind, waves, and boat traffic. They also filter pollutants that would otherwise drain from the watershed into the lake, thereby protecting water quality. Most noticeably, lakeshore and upland plants provide a variety of vital habitat components for fish and wildlife including food, protection from weather and predators, denning sites and nursery areas for young, perching and sunning sites for birds and turtles, and flyways and travel corridors. Aquatic plants produce oxygen, purify lake water by stabilizing bottom sediments and reducing nutrient cycling, and provide underwater cover for fish. As such, if a native vegetation buffer zone is present within the project boundary, we recommend that it be maintained and enhanced. If not, we recommend that one be established.

For additional information on aquatic plants and lakeshore management, please refer to [Natural Shores](#) and [Natural Buffers & Lakescaping](#). The DNR book *Lakescaping for Wildlife and Water Quality* also covers a wide array of topics associated with managing lakeshore property and includes techniques to prevent shoreline erosion and to restore wildlife habitat, wildflowers, and water quality. Another reference is [Restore Your Shore](#), an online interactive multimedia program that guides users through the process of protecting a natural shoreline or restoring a degraded shore with a natural buffer zone.

- Ecologically Significant Areas can be viewed using the Explore page in [Minnesota Conservation Explorer](#) (MCE) or their GIS shapefiles can be downloaded from the [MN Geospatial Commons](#). To receive a list of Ecologically Significant Areas in the vicinity of your project, create a Conservation Planning Report using the Explore page in MCE.

State-listed Species

- [Peregrine falcons](#) (*Falco peregrinus*), a state-listed species of special concern, have been documented nesting on Greysolon Plaza. In urban areas, peregrine falcons nest on tall buildings, bridges, and smokestacks. Peregrine falcons do not make stick nests, instead their nests are scraped flat areas of rock or on a flat building surface. **Provided this structure will not be impacted by the proposed improvements, it is unlikely that the construction activities will affect these birds.** If the birds exhibit unusual behaviors or other signs of potential distress during construction, especially during the breeding season (April through July), please contact the DNR Regional Nongame Specialist, Gaea Crozier (gaea.crozier@state.mn.us).
- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed nearby, all of Minnesota's bats, including the federally endangered northern long-eared bat ([Myotis septentrionalis](#)), can be found throughout Minnesota. During the active season (approximately April-November) bats roost underneath bark, in cavities, or in crevices of both live and dead trees. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, **the DNR recommends that tree removal be avoided from June 1 through August 15.**
- Please visit the [DNR Rare Species Guide](#) for more information on the habitat use of state-listed species and recommended measures to avoid or minimize impacts.
- Please report incidental sightings of state-listed species via the [DNR Plant and Animal Observation Form](#).

Federally Protected Species

- To ensure compliance with federal law, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online [Information for Planning and Consultation \(IPaC\) tool](#).

Environmental Review and Permitting

- Given the potential presence of state protected species, we encourage submission of Natural Heritage Review requests to ensure avoidance of take for these species and to determine survey needs as individual projects are planned.
- Please include a copy of this letter and the MCE-generated Final Project Report 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 native plant communities, rare species, and other rare features. However, the NHIS is not an exhaustive inventory and does not contain the locations of all rare features in 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 and project description provided with the request. **If project details change or the project has not occurred within one year, please resubmit the project for review within one year of initiating project activities.** Resubmit by selecting *Clone Project as Draft* on the project page in MCE.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential impacts to these rare features. Visit [Natural Heritage Review](#) for additional information regarding this process, survey guidance, and other related information. For information on the environmental review process or other natural resource concerns, please contact your [DNR Regional Environmental Assessment Ecologist](#).

Thank you for consulting us on this matter and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Molly Barrett

Digitally signed by Molly Barrett
Date: 2025.12.12 18:30:00 -06'00'

Natural Heritage Review Specialist

molly.barrett@state.mn.us

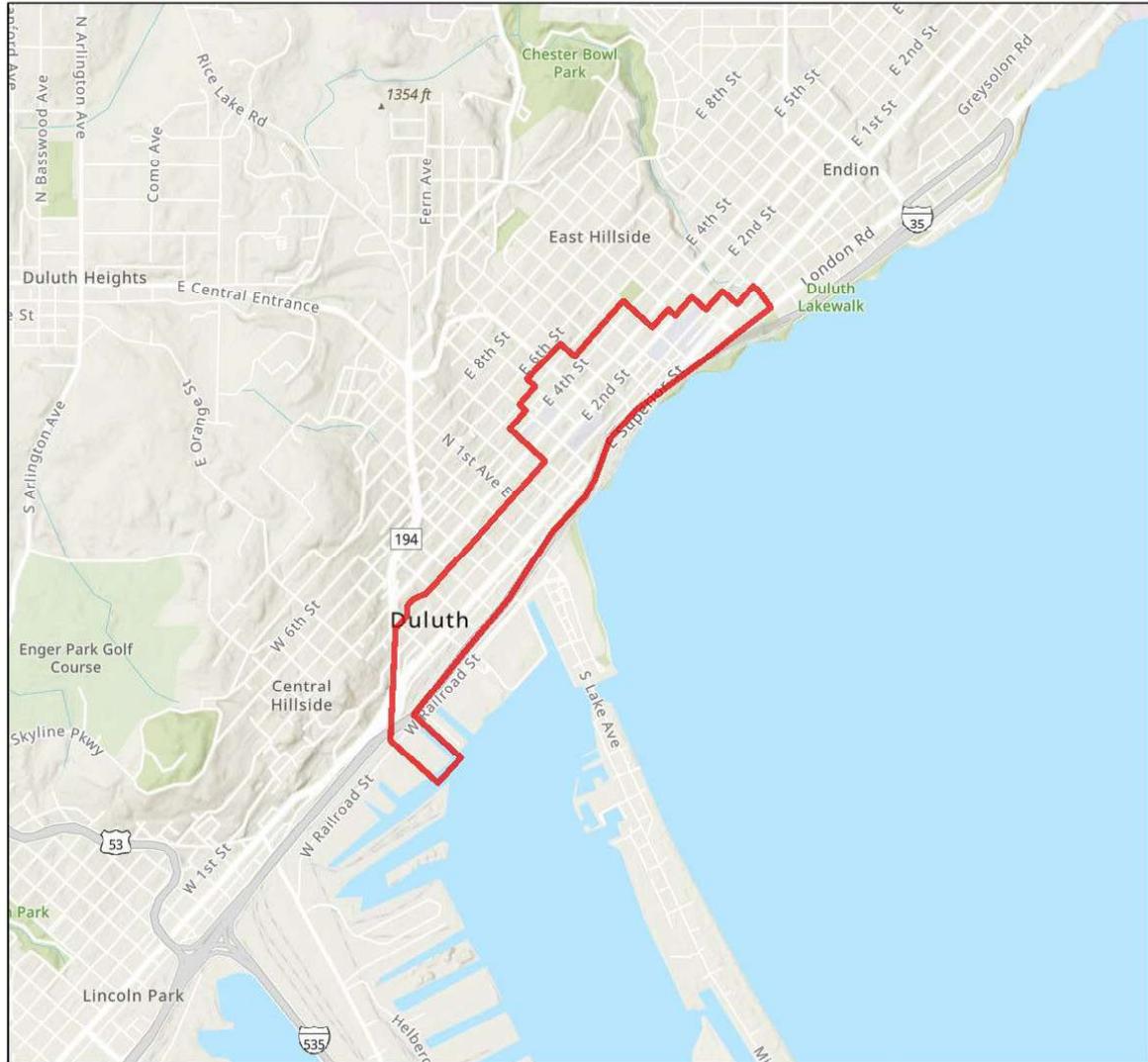
Cc: [Jessica Parson](#), Regional Environmental Assessment Ecologist, Northeast (Region 2)

Cc: [Sophia Musiak](#), Assistant Regional Environmental Assessment Ecologist, Northeast (Region 2)

For more project details, see the MCE-generated Final Project Report, available on the MCE project page.

Downtown Duluth AUAR

USA Topo Basemap With Locator Map



 Project Boundary

Project Type: Development, Mixed Use

Project Size (acres): 334.05

County(s): St. Louis

TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
St. Louis County (MN), MN Dept Natural Resources, Esri, TomTom, Garmin,
SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,



Sejkora, Erin

From: Jenn Moses <jmoses@DuluthMN.gov>
Sent: Friday, December 26, 2025 2:05 PM
To: Jason Mozol; thobbs@duluthmn.gov; Walburg, Lauren; Sejkora, Erin
Subject: FW: Downtown Duluth AUAR Scoping EAW Comments

Jenn Reed Moses, AICP | Manager | **Planning and Development Division** | City of Duluth | 411 W 1st Street Room 160, Duluth, MN 55802 | 218-730-5328 | jmoses@duluthmn.gov | she/her/hers

From: Webb, Maren (She/Her/Hers) (DOT) <Maren.Webb@state.mn.us>
Sent: Friday, December 26, 2025 2:04 PM
To: Jenn Moses <jmoses@DuluthMN.gov>
Cc: Miles, James (DOT) <james.miles@state.mn.us>; Anderson, Bryan (DOT) <bryan.anderson@state.mn.us>
Subject: Downtown Duluth AUAR Scoping EAW Comments

Dear Ms. Moses,

Thank you for the opportunity to comment on the Downtown Duluth Alternative Urban Areawide Review (AUAR) Scoping EAW document. MnDOT District 1 staff have reviewed the document and have the following comments:

- On page 46, under 20a. Transportation, it is recommended that the new proposed access into the Lot D development is considered with the Traffic Impact Study (TIS).
- On page 46, under 20a. Transportation, please be sure to include data for portion 5): availability of transit and/or other alternative transportation modes.
 - o In relation to alternative transportation modes (walking, biking, etc.) and Lot D, Geno's Walk (BR# 69885, pedestrian bridge over I-35) will be significantly rehabbed Summer 2026. The stairs to Railroad St will be removed under this project, maintaining the ADA accessible connection/ramp.
- On page 33, under Proposed Conditions for stormwater, there is reference to large-scale sediment channels under I-35. It is not clear whether these will be looked at specifically with this process. The document references that they "...were constructed to manage runoff generated from all the public roads, however, these channels also receive runoff that drains down the hillside from 6th Avenue West to 1st Avenue East."

Thank you for your time and please reach out with any questions.

Best,
Maren Webb

Maren Webb, MPP
she/her/hers
Principal Planner | District 1

Minnesota Department of Transportation
1123 Mesaba Avenue
Duluth, MN 55811

218-725-2742
maren.webb@state.mn.us
mndot.gov/



Caution: This email originated from outside of Stantec. Please take extra precaution.

Attention: Ce courriel provient de l'extérieur de Stantec. Veuillez prendre des précautions supplémentaires.

Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

Downtown Duluth AUAR Scoping Environmental Assessment Worksheet

**Responsible Governmental Unit: City of Duluth
Proposer: City of Duluth**



Prepared for:
City of Duluth

November 2025

Prepared by:
Stantec Consulting Services Inc.

Project/File:
227708309

For the purpose of the analyses completed as part of the AUAR, it is assumed the full buildout contemplated in Development Scenario B would occur in the next ten years.

f. **Is this Project a subsequent stage of an earlier Project?** Yes No

If yes, briefly describe the past development, timeline and any past environmental review.

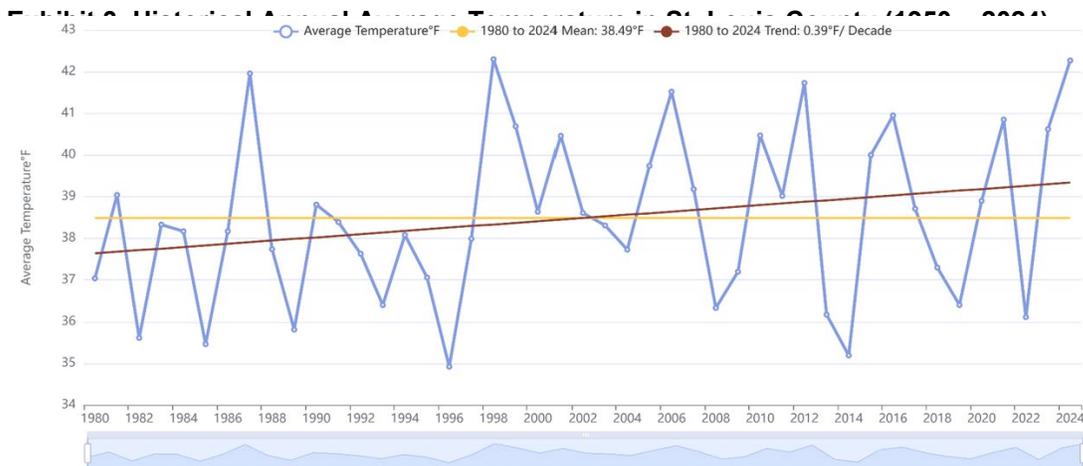
7. **Climate Adaptation and Resilience** *Where is the reference and guidance from the City's Climate Action Plan?*

a. **Describe the climate trends in the general location of the Project (see guidance: Climate Adaptation and Resilience) and how climate change is anticipated to affect that location during the life of the Project.**

In general, Minnesota is anticipated to experience an increase in temperature, precipitation, and more frequent extreme precipitation events resulting from climate change. In Minnesota, annual average temperatures have risen two degrees over the past century and up to three degrees in the northern part of the state. The highest average temperature increases have occurred during the winter. Since 1895, temperatures during the winter have increased at a rate two to three times higher than during the summer. In particular, winter warming rates have risen more sharply in recent decades.³ Current climate warming trends, most notably during the winter, are anticipated to continue.⁴

Heavy rain events have become more frequent in Minnesota and more intense. From 1973 to 2020, Minnesota experienced 17 mega-rain events⁵ with a notable increase since 2000. Of these 17 events, three occurred in the 1970s, two in the 1980s, one in the 1990s, six mega-rain events occurred in the 2000s, four in the 2010s, and one in 2020. Thus, in the past 21 years (2000 to 2020), almost two times as many mega rain events occurred compared to the prior 27 years (1973 to 1999).⁶

Climate trends in St. Louis County parallel the overall statewide trends, indicating Minnesota's climate is becoming warmer and wetter. Exhibit 3 and Exhibit 4 illustrate historical average annual temperature and annual precipitation trends from 1980 to 2024, respectively. During this time period, the county experienced an average annual temperature increase of 0.39 degrees Fahrenheit (°F) per decade and an annual precipitation increase of 0.10 inches per decade.



Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

³ DNR, undated(a). Climate Trends. Available at: https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html. Accessed September 2025.

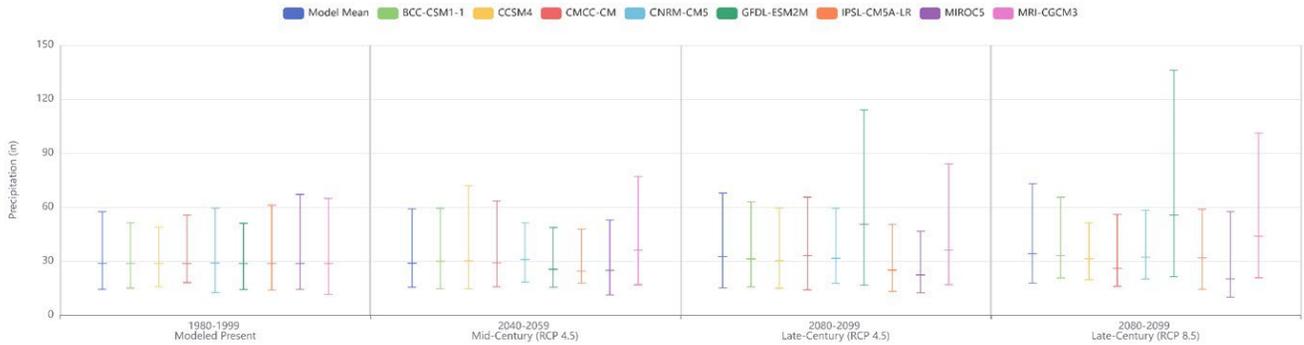
⁴ MnDOT, 2021. Minnesota Go Climate Change Report. Available at: <https://www.minnesotago.org/trends/climate-change>. Accessed September 2025.

⁵ Mega-rain events are defined as events in which six inches of rain covers more than 1,000 square miles and the core of the event tops eight inches. Definition is from the DNR's website cited in footnote 4.

⁶ DNR, 2024(a). Historic Mega-Rain Events in Minnesota. Available at: https://www.dnr.state.mn.us/climate/summaries_and_publications/mega_rain_events.html. Accessed September 2025.

century (2080-2099) model mean of 32.4 inches. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean precipitation of 34.2 inches. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual precipitation would increase by approximately 11.8 percent under the RCP 4.5 scenario and increase by approximately 17.1 percent under the RCP 8.5 scenario.

Exhibit 6. Projected Precipitation in St. Louis County



Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

- b. For each Resource Category in the table below: Describe how the Project’s proposed activities and how the Project’s design will interact with those climate trends. Describe proposed adaptations to address the Project effects identified.**

Table 2 summarizes climate considerations related to the Project and adaptation considerations.

Table 2. Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	<p>Projected climate trends include increasing temperatures, precipitation, and frequency of heavy rainfall events.</p> <p>Minnesota is trending towards warmer temperatures. Urban heat islands occur when impervious surfaces, such as roofs and paved surfaces, absorb heat during the day and release it at night, amplifying the warming trend.</p>	<p>Construction of buildings, parking lots, and other impervious surfaces within the AUAR area may result in minor increases in impervious surface area. Given that the AUAR area consists of a developed, urban environment that is approximately 81 percent impervious, redevelopment would not result in significant increases in impervious surface area compared to existing conditions.</p> <p>Increased impervious surfaces would increase volume of stormwater runoff and potential flooding risk during heavy rain events.</p> <p>Impervious surfaces may create local heat island</p>	<p>Potential adaptations will be identified in the Draft AUAR.</p> <p>Potential adaptations should include, green roofs, heat pumps, solar, tree plantings for shade etc. And they should be required to meet the City’s climate action goals.</p>

Resource Category	Climate Considerations	Project Information	Adaptations
		effects by absorbing heat during daytimes hours and radiating it at night leading to an increase in surface temperatures.	
Land Use	<p>Heavier rainfall expected to bring a higher risk of localized flooding.</p> <p>Increased temperatures may create public health crises primarily for vulnerable communities such as children and the elderly.</p>	<p>The majority of the AUAR area currently consists of urban development and limited grasslands and wooded areas.</p> <p>Any conversion from grasslands and wooded areas to more urban development would increase impervious surfaces and may contribute to local heat island effects.</p>	Potential adaptations will be identified in the Draft AUAR and they will reflect the goals of the city's climate action plan
Water Resources	Addressed in Item 12.		
Contamination/ Hazardous Materials/Wastes	The AUAR area is projected to experience an increase in precipitation and heavy rainfall events.	The redevelopment anticipated in the AUAR is not anticipated to involve the installation of chemical/ hazardous materials storage during operation. The Project may include building demolition.	Potential adaptations will be identified in the Draft AUAR. and they will reflect the goals of the city's climate action plan
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Addressed in Item 14.		

8. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

The majority of the AUAR area (approximately 81 percent) consists of developed, impervious surface areas including buildings, roadways, and parking areas. Limited wooded areas are present within the AUAR area (approximately 0.1 percent) and are primarily characterized as landscape trees and small wooded/vegetated areas adjacent to primarily residential uses. Table 3 and Figure 3, Appendix B summarize cover types within the AUAR area. Table 4 summarizes green infrastructure for each scenario and subarea. Table 5 summarizes tree canopy change information.

AUAR Scope

The cover type analysis will be augmented with aerial photographs and other desktop resources as part of the Draft AUAR. Future land cover for both development scenarios would be evaluated in the Draft AUAR for each subarea. Existing conditions information (Scenario A) is included in the following Tables 3 through 5. These tables would be completed for the maximum development scenario (Scenario B) as part of the Draft AUAR.

Table 3. Cover Types

Cover Types	Scenario A Before (acreage) ¹	Scenario B After (acreage)
Lot D Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and natural resources mgmt program plan
Deep lakes (>2 meters deep)	4.6 (24.8%)	
Wooded/forest	0.5 (2.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.0 (26.9%)	
Green infrastructure total (from table below*)	0.4 (1.9%)	
Impervious surface	8.1 (43.7%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	18.6	
Essentia Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and natural resources mgmt program plan
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	7.6 (9.1%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.2 (6.3%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	70.1 (84.6%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	82.9	
1st Street Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.5%)	Future land cover for Scenario B to be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and stormwater mgmt plan
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	8.8 (6.2%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	8.8 (6.2%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	123.1 (87.1%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	141.4	
Secondary Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and stormwater mgmt plan
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	12.6 (13.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	11.1 (12.1%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	

Cover Types	Scenario A Before (acreage) ¹	Scenario B After (acreage)
Impervious surface	68.0 (74.2%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	91.7	
Total AUAR area		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.2%)	Future land cover for Scenario B to be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and stormwater mgmt plan
Deep lakes (>2 meters deep)	4.6(1.4%)	
Wooded/forest	29.4 (8.8%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	30.1 (9.0%)	
Green infrastructure total (from table below*)	0.4 (0.1%)	
Impervious surface	269.3 (80.5%)	
Stormwater basins	0.0 (0.0%)	
AUAR Area Total	334.5	

¹ Before acreages are approximate and based on Duluth 1-Meter Land Cover 2016.

Table 4. Green Infrastructure

Green Infrastructure	Before (acres)	After
Lot D Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR. and support goals of the city's comp plan, climate plan, parks plan and stormwater mgmt plan
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
Essentia Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0.5*	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
1st Street Subarea		

area (1st Street subarea). The area to the northeast is also within the AUAR area (Secondary subarea). Areas uphill of the Essentia subarea generally consist of lower density housing. Lake Superior is downhill (to the east) from the Essentia Subarea. The Superior Street Boulevard connects over I-35 in this subarea with the Lakewalk along Lake Superior. The North Shore Scenic Drive also intersects this subarea. No cemeteries or prime or unique farmlands are within the subarea.

1st Street Subarea

The 1st Street subarea includes Duluth's historic downtown core, including a mix of office, commercial, hospitality uses, and high density housing. Several surface and structure parking lots are also present within this subarea, along with a limited amount of light industrial uses. Many historic buildings are located within the 1st Street subarea, which are described further in Item 15 of this AUAR. Parks and open spaces within this subarea include Civic Center, Ordean Court, Gateway Park, Rail Park, Minnesota Power Plaza and Lake Superior Plaza. The North Shore Scenic Drive also extends through this subarea. A spur of the Cross City Trail connects through the 1st Street subarea. No cemeteries or prime or unique farmlands are within the subarea.

Secondary Subarea

Existing land uses in the Secondary subarea include high, medium, and low density housing, the Aspirus St. Lukes Hospital campus, and a mix of commercial uses mostly located along Superior Street. Land use in the southwest portion of the subarea generally coincides with the Essentia subarea described above and uses to the north are mostly residential. Lake Superior is generally to the east. The Lakewalk, Leif Erikson Park and the Rose Gardens are adjacent to the subarea. No cemeteries or prime or unique farmlands are within the subarea.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.**

AUAR Scope

Several plans will be reviewed and summarized in the Draft AUAR. These plans include:

- Imagine Duluth 2035 (City's Comprehensive Plan)
- Essential Spaces – Duluth Parks, Recreation, Open Space & Trails Plan
- Duluth Parks and Recreation Master Plan
- Duluth Trail and Bikeway Plan
- 2023 Downtown Housing Study
- 2025 Duluth Housing Needs Analysis (city-wide)
- Vision Northland Master Plan
- Duluth Market Study (Cushman Wakefield)
- Lot D – Minnesota Finance Plan
- **The St. Louis River Area of Concern Plan, Duluth Natural Resources Mgmt Program Plan, Duluth Stormwater Plan and Duluth Climate Action Plan**

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.**

AUAR Scope

Lot D Subarea

Lot D is zoned MU-W Mixed Use Waterfront. A large portion of the Lot D subarea is also within the City's shoreland overlay zone associated with the Duluth/Superior Harbor Shoreline. Zoning surrounding this subarea includes industrial to the southwest and west, and MU-W to the northeast. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B

standard), designated in June 1994.²⁷

AUAR Scope

The Draft AUAR will include a qualitative vehicle emissions assessment conducted in accordance with MnDOT air quality analysis guidance.²⁸ It is not anticipated that a quantitative air quality analysis for CO or MSATs would be required. *There is opportunity to consider reduced traffic in areas to not only increase walker/biker/diability and DTA services, but to reduce emissions and noise in some corridors*

- 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 17a). 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.***

AUAR Scope

Dust and odors may be of concern during construction of future development projects. The Draft AUAR will document city ordinances and codes pertaining to dust and odors and identify sensitive receptors in the vicinity of the AUAR area. Minimization and mitigation strategies for the AUAR area will be developed.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

- a. *GHG Quantification: For all proposed Projects, provide quantification and discussion of Project GHG emissions. Include additional rows in the tables as necessary to provide Project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.***

AUAR Scope

The Minnesota Environmental Quality Board's (EQB's) EAW climate adaptation and resilience guidance (June 2024)²⁹ *and the City's Climate Action Plan* will be used to develop the carbon footprint for the Draft AUAR. Greenhouse gas emissions will be calculated for existing conditions (baseline, development Scenario A) and the construction and operation of Development Scenario B. Land use changes will also be included in the greenhouse gas quantification.

Readily available emission calculation tools such as U.S. EPA's Simplified Greenhouse Gas Emissions Calculator (SGEC) Tool or other acceptable methods would be used for the calculations. The SGEC Tool uses building square footage to estimate natural gas and electricity usage for various building types. Construction emissions would be calculated for each development scenario based on the number and type of mobile equipment needed. Greenhouse gas emissions from the equipment exhaust would be calculated using U.S. EPA emission factors.

Summary tables will be provided for the development scenarios, summarizing construction and operation emissions.

- b. *GHG Assessment***

- i. *Describe any mitigation considered to reduce the Project's GHG emissions.***

²⁷Environmental Protection Agency. EPA Green Book. Updated August 2025. Available at: https://www3.epa.gov/airquality/greenbook/anayo_mn.html. Accessed September 2025.

²⁸ MnDOT. Air Quality Process. <http://www.dot.state.mn.us/project-development/subject-guidance/air-quality/process.html>. Accessed September 2025.

²⁹ EQB. Environmental Assessment Worksheet (EAW) Guidance. June 2024 https://www.eqb.state.mn.us/sites/eqb/files/2024_eaw_climate_guidance_2.pdf. Accessed September 2025.

AUAR Scope

Reductions in greenhouse gas emissions associated with Development Scenario B compared to the baseline Development Scenario A will be described in the Draft AUAR. Potential mitigation measures will be identified, such as energy efficient lighting or other building efficiency specifications, **renewable energy, heat pumps**. Specific mitigation measures would be identified at the time that specific projects are proposed within the AUAR.

- ii. **Describe and quantify reductions from selected mitigation, if proposed to reduce the Project's GHG emissions. Explain why the selected mitigation was preferred.**

AUAR Scope

Potential opportunities for GHG emissions reductions will be qualitatively evaluated as part of the Draft AUAR. At the time that specific projects are proposed within the AUAR and design details are available, potential GHG emissions reductions may be quantified.

- iii. **Quantify the proposed Projects predicted net lifetime GHG emissions (total tons/# of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.**

AUAR Scope

The net lifetime greenhouse gas emissions will be presented for development scenarios, along with a discussion of how the scenarios affect the state's **and the city's** greenhouse gas reduction goals.

19. 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.

In accordance with the EQB's AUAR guidance document³⁰, it is not required to address construction noise unless there is some unusual reason to do so. No unusual circumstances are anticipated for the development scenarios that would warrant conducting a quantitative noise analysis.

The State of Minnesota's noise rules (Minn. Rules Ch. 7030) establish noise limits by noise area classifications (NACs) based on land use at the location of the person that hears noise. The MPCA enforces noise standards at industrial facilities for which it has issued an air permit. MnDOT is responsible for state highway noise mitigation and coordinates with the Federal Highway Administration (FHWA) and the MPCA to evaluate road projects for noise impacts and possible mitigation measures.

Noise impacts in Minnesota are evaluated by measuring and/or modeling the noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the loudest scenario. These numbers are identified as the L10 and L50 levels, respectively. The L10 value is the noise level that is exceeded for a total of 10 percent, or six minutes, of an hour. The L50 value is the noise level that is exceeded for a total of 50 percent, or 30 minutes, of an hour.

For traffic noise analyses, traffic volume, types of vehicles, operating speed, topography, and distance from the road to the receptor influences the traffic noise level at the receptor. The sound level decreases as distance from a source increases. A general rule regarding sound level decrease due to increasing distance from a line source (roadway) that is commonly used is: beyond approximately 50 feet from the sound source, each doubling of distance from the line source over hard ground (such as pavement or water) will reduce the

³⁰ EQB. Alternative Urban Area-wide Review Documents: Recommended Content and Format. Updated September 2008. <https://www.eqb.state.mn.us/sites/default/files/documents/AUAR%20guidance%20%28form%29%20-9-09.pdf>

3) *Conformance to State noise standards*

Minnesota’s noise pollution rules³¹ are based on statistical measurements that describe noise levels over a one-hour monitoring period. Two key values are used: L₁₀, the sound level exceeded 10 percent of the time (equivalent to six minutes per hour), and L₅₀ the sound level exceeded 50 percent of the time (30 minutes per hour). The rules do not establish an absolute maximum noise level.

For residential locations (Noise Area Classification 1), the daytime limits (7:00 a.m. – 10:00 p.m.) are 65 dBA for L₁₀ and 60 dBA for L₅₀ while the nighttime limits (10:00 p.m. – 7:00 a.m.) are 55 dBA for L₁₀ and 50 dBA for L₅₀. In practice, this means that during a one-hour period, daytime noise levels cannot exceed 65 dBA for more than 10 percent of the time or 60 dBA for more than 50 percent of the time. Table 12 provides a summary of the Noise Area Classifications and associated standards. *Please add issues related to long term lower level dBA and vibrations especially next to residential areas. These issues can greatly impact human health as well.*

NAC	Common land use associated with the Noise Area Classification	Daytime (dBA)		Nighttime (dBA)	
		L ₁₀	L ₅₀	L ₁₀	L ₅₀
1	Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services	65	60	55	50
2	Retail, business and government services, recreational activities, transit passenger terminals	70	65	70	65
3	Manufacturing, fairgrounds and amusement parks, agricultural and forestry activities	80	75	80	75

NACs are determined by the land use at the location where the noise is received, which does not always correspond to the zoning designation of the area. As a result, noise generated by an industrial facility adjacent to residential properties is subject to NAC 1 standards if it can be heard on those residential parcels.

By state law, all future development within the AUAR area must comply with Minnesota’s noise standards. In addition, future land uses must comply with local noise requirements under Duluth’s Legislative Code, which incorporates the City’s ordinances. *Please address issues beyond law compliance related to research from long term lower level dBA and vibrations especially next to residential areas. These issues can greatly impact human health as well as residents on east coast are noticing with increase of data centers.*

AUAR Scope

Area-specific evaluations in the Draft AUAR will assess whether operational noise from maximum development could approach NAC limits. Where necessary, design strategies (setbacks, orientation,

- 4) ~~and setbacks~~ or operational measures will be identified to maintain compliance.

Maximum development would likely increase background noise levels. However, these changes are anticipated to remain consistent with those of a typical urban environment. Quality of life considerations would focus on residential livability in adjacent hillside neighborhoods, lodging and residential uses in Canal Park, the sensitivity of medical campus operations within the Essentia Health Medical Campus, and recreational use of the waterfront and Lakewalk.

AUAR Scope

The Draft AUAR will evaluate the potential quality of life impacts resulting from operational noise generated by the development scenarios. Mitigation strategies will be identified as applicable.

³¹ More information on Minnesota Noise rules, [Minn. Rules Ch. 7030](https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf), may be found at: <https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf>

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
Lot D Subarea (2 Resources)			
SL-DUL-00056	Huron-Portland Cement	Building	8th Ave. W. and waterfront
SL-DUL-02441	U.S. Coast Guard Cutter Sundew	Structure (Boat)	Waterfront (No address)
Essentia Subarea (134 Resources)			
SL-DUL-04120	Bridge 69817	Transportation, Road-Related (Vehicular)	Michigan Street and I-35 Interchange
SL-DUL-00212	Mutual Auto Company-Bresnan Communications	Commerce/Trade, Specialty Store	302 Superior St. E.
SL-DUL-00213	Burrell and Harmon Metal Work	Commerce/Trade, Specialty Store	308 Superior St. E.
SL-DUL-00214	Hotel Florham	Commerce/Trade, Specialty Store	310-312 Superior St. E.
SL-DUL-00215	Northwest Cadillac Company	Commerce/Trade, Specialty Store	314 Superior St. E.
SL-DUL-00180	Commercial building	Commerce/Trade, Specialty Store	309-317 Superior St. E.
SL-DUL-00216	McNamara Automobiles	Commerce/Trade, Specialty Store	318 Superior St. E.
SL-DUL-00217	Buffalo Saloon	Commerce/Trade, Specialty Store	320 Superior St. E.
SL-DUL-00815	Monte Carlo Apartments	Domestic, Multiple Dwelling	324-326 E. Superior St.
SL-DUL-00814	Commercial building	Commerce/Trade, Specialty Store	322 Superior St. E.
SL-DUL-00181	Carlson Bakery	Commerce/Trade, Specialty Store	319 Superior St. E.
SL-DUL-00182	Vacant lot - Paul Bunyan Printing	Commerce/Trade, Specialty Store	321 Superior St. E.
SL-DUL-00183	Parker Millinery	Commerce/Trade, Specialty Store	323 Superior St. E.
SL-DUL-00184	The Voyageur Motel	Domestic, Hotel	331 Superior St. E.
SL-DUL-00817	Mathiason Tire Company	Commerce/Trade, Specialty Store	400 Superior St. E.
SL-DUL-00819	Kenzen Used Cars	Commerce/Trade, Specialty Store	410 Superior St. E.
SL-DUL-00821	Branch's Hall	Commerce/Trade, Specialty Store	416 Superior St. E.
SL-DUL-00822	Kenzen Auto Sales	Commerce/Trade, Specialty Store	430 Superior St. E.
SL-DUL-00116	House	Domestic, Single Dwelling	311 1st St. E.
SL-DUL-00818	Dodge Block	Commerce/Trade, Specialty Store	401-407 Superior St. E.
SL-DUL-00115	brownstone apartments	Domestic, Multiple Dwelling	309 1/2 1st St. E.
SL-DUL-00117	Duplex	Domestic, Multiple Dwelling	315 1st St. E.
SL-DUL-00118	Duplex	Domestic, Multiple Dwelling	317 1st St. E.
SL-DUL-00244	Harbor View Apartments	Domestic, Multiple Dwelling	17-19 North 4th Ave. E.
SL-DUL-00119	New York apartments	Domestic, Multiple Dwelling	319-321 1st St. E.
SL-DUL-00121	Duplex	Domestic, Multiple Dwelling	323 1st St. E.
SL-DUL-01075	Kellerhais Auto Body	Domestic, Secondary Structure	402 1st St. E.
SL-DUL-00122	House	Domestic, Single Dwelling	325 1st St. E.
SL-DUL-00245	Harbor View Apartments	Domestic, Multiple Dwelling	21-23 North 4th Ave. E.
SL-DUL-00820	Arrowhead Glass Company	Commerce/Trade, Specialty Store	415 Superior St. E.
SL-DUL-00246	Harbor View Apartments	Domestic, Multiple Dwelling	25-27 North 4th Ave. E.
SL-DUL-00088	First Presbyterian Church	Religion, Religious Facility	302 2nd St. E.
SL-DUL-00089	Portland Apartments	Domestic, Multiple Dwelling	316 2nd St. E.
SL-DUL-00123	House	Domestic, Single Dwelling	331 1st St. E.
SL-DUL-01077	Duplex	Domestic, Multiple Dwelling	408-410 1st St. E.
SL-DUL-01076	House	Domestic, Single Dwelling	406 1st St. E.
SL-DUL-00247	Harbor View Apartments	Domestic, Multiple Dwelling	29-31 North 4th Ave. E.
SL-DUL-00248	Harbor View Apartments	Domestic, Multiple Dwelling	33-35 North 4th Ave. E.
SL-DUL-01079	Berkely Apartments	Domestic, Multiple Dwelling	416-420 1st St. E.
SL-DUL-00090	house-Almquist insurance	Domestic, Single Dwelling	320 2nd St. E.
SL-DUL-01078	Warehouse	Commerce/Trade, Warehouse	412 1st St. E.
SL-DUL-00249	House	Domestic, Single Dwelling	109 North 4th Ave. E.
SL-DUL-01266	Grandview Manor	Domestic, Multiple Dwelling	301 2nd St. E.
SL-DUL-01080	House	Domestic, Single Dwelling	422 1st St. E.
SL-DUL-01081	House	Domestic, Single Dwelling	424 1st St. E.
SL-DUL-00091	House	Domestic, Single Dwelling	322 2nd St. E.
SL-DUL-01082	Duluth Auto Body	Domestic, Secondary Structure	426-428 1st St. E.
SL-DUL-00092	Miller-Dawn Medical	Health Care, Medical Business/Office	330 2nd St. E.
SL-DUL-02813	Temple Adas Israel Synagogue	Religion, Religious Facility	302 E 3RD ST
SL-DUL-03942	Bridge 69821 (Brewery Historic District Tunnel/ Superior West Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 4th and 6th Avenues East
SL-DUL-01419	Apartments	Domestic, Multiple Dwelling	301-307 3rd St. E.
SL-DUL-01422	St. Anne's Home	Domestic, Multiple Dwelling	330 3rd St. E.
SL-DUL-01268	House	Domestic, Single Dwelling	420 2nd St. E.
SL-DUL-01420	Apartments	Domestic, Multiple Dwelling	317 3rd St. E.
SL-DUL-01592	Messiah Lutheran Church	Religion, Religious Facility	4th St. and 3rd Ave. E.
SL-DUL-01074	Commercial building	Commerce/Trade, Specialty Store	401 1st St. E.
SL-DUL-01267	Shoreview Apartments	Domestic, Multiple Dwelling	401 2nd St. E.
SL-DUL-01083	Hampshire Apartments	Domestic, Multiple Dwelling	514-518 1st St. E.
SL-DUL-02815	Essentia Health-Duluth Clinic 3rd Street Building & Parking Ramp	Health Care, Clinic	400 E 3RD ST

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-02814	St. Mary Star of the Sea Catholic Church (St. Mary's Polish Catholic Church)	Religion, Religious Facility	325 E 3RD ST
SL-DUL-03751	Essentia Health	Health Care	400 3rd St E
SL-DUL-02008	House	Domestic, Single Dwelling	329 North 4th Ave. E.
SL-DUL-01593	Jeffrey Black Building	Commerce/Trade, Specialty Store	332 4th St. E.
SL-DUL-03746	Commercial building	Commerce/Trade, Specialty Store	532 1st St E
SL-DUL-01084	Peerless Auto Body	Domestic, Secondary Structure	532 1st St. E.
SL-DUL-01270	Miller-Dawn Hospital	Health Care, Hospital	504 2nd St. E.
SL-DUL-02816	St. Mary's Hospital	Health Care, Hospital	407 E 3RD ST
SL-DUL-01269	House	Domestic, Single Dwelling	501 2nd St. E.
SL-DUL-02817	Kaarbos Auto Repair	Commerce	331 4th Street East
SL-DUL-01594	Commercial building	Commerce/Trade, Specialty Store	401 4th St. E.
SL-DUL-03750	Unknown	-	620 1st St E
SL-DUL-01085	Apartment	Domestic, Multiple Dwelling	601-603 E 1st St
SL-DUL-01087	House	Domestic, Single Dwelling	610 1st St. E.
SL-DUL-01088	Commercial Building	Commerce/Trade, Specialty Store	614 E 1st St
SL-DUL-03679	Apartment	Domestic, Multiple Dwelling	605 E 1st St
SL-DUL-01425	Ashtabula Apartments	Domestic, Multiple Dwelling	502 3rd St. E.
SL-DUL-03747	Duplex	Domestic, Multiple Dwelling	601-603 1st St E
SL-DUL-03748	Duplex	Domestic, Multiple Dwelling	605 1st St E
SL-DUL-03749	Duplex	Domestic, Multiple Dwelling	607-609 1st St E
SL-DUL-01086	Apartments	Domestic, Multiple Dwelling	607-609 E 1st St
SL-DUL-01595	Commercial building	Commerce/Trade, Specialty Store	407 4th St. E.
SL-DUL-01271	House	Domestic, Single Dwelling	517 2nd St. E.
SL-DUL-01868	Apartments	Domestic, Multiple Dwelling	110-114 N 6th Ave E
SL-DUL-02818	Goering Bldg.	-	413 4th Street East
SL-DUL-01092	Expert Tire (Commercial Building)	Commerce/Trade, Specialty Store	624 E 1st St
SL-DUL-02819	Beschenbossel Building	-	415 4th Street East
SL-DUL-01272	Daugherty Funeral Home	Funerary, Mortuary	600 2nd St. E.
SL-DUL-01089	House	Domestic, Multiple Dwelling	619 E 1st St
SL-DUL-01427	Johnson Mortuary	Funerary, Mortuary	514 3rd St. E.
SL-DUL-01704	Evergreen Apartments	Domestic, Multiple Dwelling	402-404 5th St. E.
SL-DUL-01091	Double House	Domestic, Multiple Dwelling	621-623 E 1st St
SL-DUL-01090	House	Domestic, Single Dwelling	621 1st St. E.
SL-DUL-01596	The Barber	Commerce/Trade, Specialty Store	419 4th St. E.
SL-DUL-04087	Commercial Building	Commerce/Trade, Business	421 East 4th Street
SL-DUL-01007	Vermillion Trail Marker	-	Washington Ave. & 1st St.
SL-DUL-01093	Double House	Domestic, Multiple Dwelling	629 E 1st St
SL-DUL-01873	House	Domestic, Single Dwelling	119 North 7th Ave. E.
SL-DUL-01870	Gloria Dei Church	Religion, Religious Facility	219 North 6th Ave. E.
SL-DUL-03617	Swedish Evangelical Lutheran Church	Religion, Religious Facility	219 N. 6th Ave. E.
SL-DUL-01426	Fifth Avenue Apartments	Domestic, Multiple Dwelling	503 3rd St. E.
SL-DUL-02820	Bell Apartment	Domestic, Multiple Dwelling	502 E 4th St.
SL-DUL-01274	House (parish center)	Religion, Religious Facility	620 E 2nd St
SL-DUL-02838	Commercial building	Commerce/Trade, Specialty Store	512-514 4th St E
SL-DUL-01273	House	Domestic, Single Dwelling	617 2nd St. E.
SL-DUL-02822	Daugherty Bldg.	Commerce/Trade, Specialty Store	516 E 4th St.
SL-DUL-01279	Twelve Holy Apostles Greek Orthodox Church	Religion, Religious Facility	632 E 2nd St
SL-DUL-02836	Bartholdi Block	Commerce/Trade, Specialty Store	501 4th Street East
SL-DUL-03614	SMDC Health System building	-	412 N. 5th Ave. E.
SL-DUL-03615	Commercial Building	Commerce	520 E. 4th St.
SL-DUL-01275	House	Domestic, Single Dwelling	621 E 2nd St
SL-DUL-01277	House	Domestic, Single Dwelling	629 2nd St. E.
SL-DUL-01278	House	Domestic, Single Dwelling	631 2nd St. E.
SL-DUL-03616	Commercial Building	Commerce	526 E. 4th St.
SL-DUL-02823	Potswald Block	Commerce/Trade, Specialty Store	522 E 4th St.
SL-DUL-02821	Tufia Bldg.	Commerce/Trade, Specialty Store	513 E 4th St.
SL-DUL-01276	House	Domestic, Single Dwelling	627 2nd St. E.
SL-DUL-01429	Kohagen Flats	Domestic, Multiple Dwelling	632 E 3rd St
SL-DUL-03602	Grocery Store	Commerce	610 E. 4th St.
SL-DUL-01428	Schaf Flats	Domestic, Multiple Dwelling	631 3rd St. E.
SL-DUL-03601	Commercial Building and Gas Station	Commerce	619 E. 4th St.
SL-DUL-03613	Auto Repair - Retail Store	Commerce	531 E. 5th St.
SL-DUL-03618	Brewery Creek Culvert	Transportation, Road-Related (Vehicular)	unknown
SL-DUL-01709	House	Domestic, Single Dwelling	618 5th St. E.
SL-DUL-03693	Brooks Terrace	Domestic, Multiple Dwelling	621 E 4th St

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-03612	Automotive Parts Headquarters Inc.	Commerce	502 N. 6th Ave. E.
SL-DUL-03611	House	Domestic	609 E. 5th St.
SL-DUL-01711	House	Domestic, Single Dwelling	620 5th St. E.
SL-DUL-01712	Krause Building	Domestic, Multiple Dwelling	624-626 E 5th St
SL-DUL-03610	2 Houses	Domestic, Multiple Dwelling	613 E. 5th St.
SL-DUL-01708	Duplex	Domestic, Multiple Dwelling	617 E 5th St
SL-DUL-01710	Duplex	Domestic, Multiple Dwelling	619 E 5th St
SL-DUL-03609	House	Domestic	623 E. 5th St.
SL-DUL-03608	House	Domestic	627 E. 5th St.
SL-DUL-03607	House	Domestic	629 E. 5th St.
1st Street Subarea (249 Resources)			
SL-DUL-04109	Bridge 69818S	Transportation, Road-Related (Vehicular)	I-35 between Mesaba Avenue and 5th Avenue West
SL-DUL-03038	Bridge 69840	Transportation, Road-Related (Vehicular)	0.2 MI N OF JCT TH 35 (carries MN 194 NB over SUPERIOR ST(MSAS171))
SL-DUL-00959	Bible House Building	Commerce/Trade, Business	715 Superior St. W.
SL-DUL-00958	Lenox Place	Domestic, Multiple Dwelling	701 Superior St. W.
SL-DUL-04107	Bridge 69818B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-03115	Gateway Tower	Domestic, Multiple Dwelling	600 Superior St W
SL-DUL-00957	Gateway Towers Apartments	Domestic, Multiple Dwelling	600-612 Superior St. W.
SL-DUL-04110	Bridge 69870A	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-00658	Duluth Union Depot	Transportation, Rail-Related	506 Michigan St.
SL-DUL-03040	69870	Transportation, Road-Related (Vehicular)	unknown
SL-DUL-04111	Bridge 69870B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-02465	William Crooks Locomotive	Transportation, Rail-Related	Duluth Union Depot - 506 Michigan St.
SL-DUL-03113	Parking Structure	Landscape, Parking Lot	N/A Michigan St W
SL-DUL-00955	Radison Duluth Hotel	Domestic, Hotel	505 Superior St. W.
SL-DUL-00953	Ordean Building	Commerce/Trade, Business	424 Superior St. W.
SL-DUL-01240	Gerald W. Heaney Federal Building & US Courthouse/US Custom House/ US Post Office/Civic Center Station	Government, Post Office	515 1st St. W.
SL-DUL-02375	Duplicate Number - See SL-DUL-01240	Government, Government Office	unknown
SL-DUL-00952	Duluth Business University Building	Commerce/Trade, Specialty Store	418 Superior St. W.
SL-DUL-02504	Bridge L6125	Transportation, Road-Related (Vehicular)	Skyway Michigan St. .1 miles east of 5th Ave. W
SL-DUL-00951	Commercial building	Commerce/Trade, Specialty Store	404 Superior St. W.
SL-DUL-01239	Duluth Herald & News Tribune	Commerce/Trade, Business	424 1st St. W.
SL-DUL-00954	KDLH TV	Commerce/Trade, Business	425 Superior St. W.
SL-DUL-00950	Palladis Building	Commerce/Trade, Business	403 Superior St. W.
SL-DUL-00948	Providence Building	Commerce/Trade, Financial Institution	332 Superior St. W.
SL-DUL-01238	Duluth Water & Gas Department Offices	Commerce/Trade, Business	414 1st St. W.
SL-DUL-02373	Soldiers and Sailors Monument	Recreation and Culture, Monument/Marker	unknown
SL-DUL-00947	Medical Arts Building	Health Care, Medical Business/Office	324 Superior St. W.
SL-DUL-00949	Phoenix Building	Commerce/Trade, Specialty Store	333 Superior St. W.
SL-DUL-01236	Duluth Water & Gas Warehouse	Social, Meeting Hall	408-410 1st St. W.
SL-DUL-00943	Torrey Building	Commerce/Trade, Business	314-316 Superior St. W.
SL-DUL-01235	Duluth Athletic Club	Social, Meeting Hall	402 1st St. W.
SL-DUL-02372	St. Louis County Courthouse	Government, Courthouse	unknown
SL-DUL-03953	Bridge 93729 (Skyway)	Transportation, Road-Related (Vehicular)	Skyway Bridge
SL-DUL-00941	Moore Memorial Building	Commerce/Trade, Specialty Store	312 Superior St. W.
SL-DUL-00946	Commercial building	Commerce/Trade, Specialty Store	323 Superior St. W.
SL-DUL-00939	Alworth Building	Commerce/Trade, Specialty Store	306-310 Superior St. W.
SL-DUL-00945	Duluth Common Exchange	Commerce/Trade, Specialty Store	321 Superior St. W.
SL-DUL-00940	Boyce Drug	Commerce/Trade, Specialty Store	306 Superior St. W.
SL-DUL-00944	Black Steer	Commerce/Trade, Restaurant	319 Superior St. W.
SL-DUL-00937	Lonsdale Building	Commerce/Trade, Professional	302 Superior St. W.
SL-DUL-00204	Duluth City Hall	Government, City Hall	132 Superior St. E.
SL-DUL-00942	Bagley & Company	Commerce/Trade, Specialty Store	313-315 Superior St. W.
SL-DUL-01237	Duluth City Hall	Government, City Hall	411 1st St. W.
SL-DUL-01234	J.J. Summers Agency	Commerce/Trade, Specialty Store	322 1st St. W.
SL-DUL-00218	Norwest Bank Building	Commerce/Trade, Financial Institution	230 Superior St. W.
SL-DUL-01233	Northwest Bell Telephone Company	Commerce/Trade, Specialty Store	322 1st St. W.
SL-DUL-02651	Winthrop Building	Commerce/Trade, Specialty Store	325-333 1st St. W
SL-DUL-01230	Commercial building	Commerce/Trade, Specialty Store	314 1st St. W.
SL-DUL-00938	Commercial building	Commerce/Trade, Specialty Store	303-305 Superior St. W.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00219	Duluth Hardware Company/Smith, Farwell & Steele Building	Commerce/Trade, Financial Institution	222 Superior St. W.
SL-DUL-00220	The Herald Building	Commerce/Trade, Specialty Store	220 Superior St. W.
SL-DUL-01232	Commercial building	Commerce/Trade, Specialty Store	321-323 1st St. W.
SL-DUL-01228	Duluth YMCA	Recreation and Culture, Sports Facility	302 1st St. W.
SL-DUL-00221	Watterworth & Fee Block	Commerce/Trade, Specialty Store	218 Superior St. W.
SL-DUL-00222	Clague & Prindle Block	Commerce/Trade, Specialty Store	216 Superior St. W.
SL-DUL-01231	Central Garage	Recreation and Culture, Sports Facility	315 1st St. W.
SL-DUL-02770	Duluth Transit Authority (DTA) Transit Center - Skyway Entrance	Government, Government Office	214 Superior St. W.
SL-DUL-00223	Commercial Building (razed)	Commerce/Trade, Specialty Store	214 Superior St. W.
SL-DUL-02771	Ace Hardware	Commerce/Trade, Specialty Store	212 Superior St. W.
SL-DUL-00936	Lyric Block	Commerce/Trade, Specialty Store	209 Superior St. W.
SL-DUL-02772	West Hotel	Domestic, Hotel	210 Superior St. W.
SL-DUL-00225	Commercial building	Commerce/Trade, Specialty Store	208 Superior St. W.
SL-DUL-00224	Commercial building	Commerce/Trade, Specialty Store	210-212 Superior St. W.
SL-DUL-01229	Elk's Club-Court house bldg	Commerce/Trade, Specialty Store	309-311 1st St. W.
SL-DUL-00226	Argone Hotel	Domestic, Hotel	206 Superior St. W.
SL-DUL-01227	Duluth Board of Trade	Commerce/Trade, Business	301-307 1st St. W.
SL-DUL-00227	Sellwood Building	Commerce/Trade, Specialty Store	202 Superior St. W.
SL-DUL-00074	Commercial building	Commerce/Trade, Specialty Store	226-232 1st St. W.
SL-DUL-00073	Commercial building	Commerce/Trade, Specialty Store	222-224 1st St. W.
SL-DUL-02503	Bridge 92849	Transportation, Road-Related (Vehicular)	Skyway Michigan St. E of 3rd Ave W
SL-DUL-00185	First Bank Place	Commerce/Trade, Financial Institution	130 Superior St. W.
SL-DUL-01226	Wolvyn Building	Commerce/Trade, Specialty Store	225-231 1st St. W.
SL-DUL-00068	Salvation Army	Commerce	118 North 3rd Ave. W.
SL-DUL-01224	LeTourneau Printing Company	Commerce/Trade, Specialty Store	219-221 1st St. W.
SL-DUL-00186	commercial building-Saw Mill unpainted furniture	Commerce/Trade, Specialty Store	120 Superior St. W.
SL-DUL-01223	Armstead Building	Commerce/Trade, Specialty Store	217 1st St. W.
SL-DUL-00934	Commercial building	Commerce/Trade, Specialty Store	118 Superior St. W.
SL-DUL-00935	First Bank Place	Commerce/Trade, Financial Institution	131 Superior St. W.
SL-DUL-02006	Northwestern Bank of Commerce Drive-In	Commerce/Trade, Financial Institution	23 North 2nd Ave. W.
SL-DUL-00188	Commercial building - Swor Shoes	Commerce/Trade, Specialty Store	114 Superior St. W.
SL-DUL-01221	Central Club Café	Commerce/Trade, Specialty Store	213-215 1st St. W.
SL-DUL-00228	Commercial building	Commerce/Trade, Specialty Store	125-127 Superior St. W.
SL-DUL-00189	F.W. Woolworth	Commerce/Trade, Specialty Store	104-106 Superior St. W.
SL-DUL-00154	Gately Store	Commerce/Trade, Specialty Store	123 Superior St. W.
SL-DUL-00155	Walgreen's Drug Store	Commerce/Trade, Specialty Store	121 Superior St. W.
SL-DUL-00069	Peter Pan Cleaners	Commerce/Trade, Specialty Store	122 North 3rd Ave. W.
SL-DUL-01220	Gilbert Building	Commerce/Trade, Specialty Store	209-211 1st St. W.
SL-DUL-01219	Altman Clothing	Commerce/Trade, Specialty Store	201-207 1st St. W.
SL-DUL-00156	George Gray Department Store	Commerce/Trade, Department Store	113-119 Superior St. W.
SL-DUL-00190	Harbor Building	Commerce/Trade, Specialty Store	102 Superior St. W.
SL-DUL-00153	Commercial building - North shore bank of commerce	Commerce/Trade, Specialty Store	129-131 Superior St. W.
SL-DUL-00231	Parking ramp (Nonextant)	Landscape, Parking Lot	16-20 North 2nd Ave. W.
SL-DUL-00071	Natchios Greek Restaurant	Commerce/Trade, Restaurant	109 North 2nd Ave. W.
SL-DUL-00157	Aster Theatre	Recreation and Culture, Theater	109 Superior St. W.
SL-DUL-00070	Leone's Cleaners and Tailors	Commerce/Trade, Specialty Store	115 North 2nd Ave. W.
SL-DUL-00230	Commercial building	Commerce/Trade, Financial Institution	202 1st St. W.
SL-DUL-00093	Bayha and Company Furniture	Commerce/Trade, Business	131 1st St. W.
SL-DUL-00229	Commercial building	Commerce/Trade, Specialty Store	105 Superior St. W.
SL-DUL-02390	Young Women's Christian Association of Duluth (YWCA)	Social, Civic	202 2nd St. W.
SL-DUL-04116	Bridge 69816E	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange
SL-DUL-00124	Commercial building	Commerce/Trade, Specialty Store	118-138 1st St. W.
SL-DUL-00126	Pasek Pharmacy, Jerry Lee's Restaurant, commercial building	Commerce/Trade, Specialty Store	114-116 1st St. W.
SL-DUL-00125	Deluxe Coney Island-Rowley Building	Commerce/Trade, Specialty Store	112 1st St. W.
SL-DUL-00191	Great Northern Power Company/Minnesota Power & Light	Industry/Processing/Extraction, Extractive Facility	30 W Superior St
SL-DUL-00158	Hunter Building	Commerce/Trade, Specialty Store	31 Superior St. W.
SL-DUL-00159	Commercial building	Commerce/Trade, Specialty Store	29 Superior St. W.
SL-DUL-02004	Gulleson Shoe Store	Commerce/Trade, Specialty Store	21 North 1st Ave. W.
SL-DUL-00127	Ideal Market & Bakery	Commerce/Trade, Specialty Store	102 1st St. W.
SL-DUL-01212	Rowley Building	Commerce/Trade, Specialty Store	108 1st St. W.
SL-DUL-00072	Auto Garage	Transportation, Road-Related (Vehicular)	120-122 North 2nd Ave. W.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00160	Commercial building	Commerce/Trade, Specialty Store	25 Superior St. W.
SL-DUL-02391	Duplicate Number - See SL-DUL-000127 (Ideal Market & Bakery)	Commerce/Trade, Specialty Store	102 1st St W
SL-DUL-00094	Gershgol Grocery	Commerce/Trade, Specialty Store	123 1st St. W.
SL-DUL-00233	Action Pawn and Gopher Shoe Repair	Commerce/Trade, Specialty Store	16-18 North 1st Ave. W.
SL-DUL-00075	Duplicate Number - See SL-DUL-00072 (Auto Garage)	Transportation, Road-Related (Vehicular)	120 2nd St. W.
SL-DUL-00236	Crown Christian Center	Religion, Religious Facility	13-15 Lake Ave. N.
SL-DUL-00234	Printing Express	Commerce/Trade, Specialty Store	22-26 North 1st Ave. W.
SL-DUL-00096	Frederick Hotel	Commerce/Trade, Specialty Store	105 W 1st St.
SL-DUL-00095	Columbia Block-Norman's Bar Bldg	Commerce/Trade, Specialty Store	113-115 1st St. W.
SL-DUL-00161	Commercial Building	Commerce/Trade, Specialty Store	21-23 Superior St. W.
SL-DUL-00164	Wirth Building	Commerce/Trade, Specialty Store	13 Superior St. W.
SL-DUL-00128	Pearson Block-Duluth Liquor	Commerce/Trade, Specialty Store	26-32 1st St. W.
SL-DUL-00162	Commercial building-sportsman's headquarters	Commerce/Trade, Specialty Store	17-23 Superior St. W.
SL-DUL-00101	European Bakery-New England Hotel	Commerce/Trade, Specialty Store	109-111 W 1st St.
SL-DUL-00097	East End Ice and Coal- Life House Youth Center	Commerce/Trade, Specialty Store	31 1st St. W.
SL-DUL-00129	Cantonese House-commercial building	Commerce/Trade, Specialty Store	24 1st St. W.
SL-DUL-00166	Norris-MacDougal Block	Commerce/Trade, Specialty Store	5-7 Superior St. W.
SL-DUL-00163	Commercial Building	Commerce/Trade, Specialty Store	15 Superior St. W.
SL-DUL-04117	Bridge 69816F	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange
SL-DUL-00098	commercial building-Life House Youth Center	Commerce/Trade, Specialty Store	29 1st St. W.
SL-DUL-00130	Young at Heart	Commerce/Trade, Specialty Store	22 1st St. W.
SL-DUL-00800	Commercial building	Commerce/Trade, Specialty Store	3-9 Superior St. E.
SL-DUL-00167	Bell and Eyster	Commerce/Trade, Specialty Store	3 Superior St. W.
SL-DUL-00803	Old Jolly Fisher Restaurant	Commerce/Trade, Specialty Store	27 Superior St. E.
SL-DUL-00066	Merrit and Hector Printers	Commerce/Trade, Specialty Store	108-114 North 1st Ave. W.
SL-DUL-00131	E.F. Berg Hotel Supplies	Commerce/Trade, Specialty Store	20 1st St. W.
SL-DUL-00251	Plaunt Company Plumbing	Commerce/Trade, Specialty Store	121-123 North 1st Ave. W.
SL-DUL-00168	Poirier's Boots and Shoes	Commerce/Trade, Specialty Store	1 Superior St. W.
SL-DUL-00099	Arthurs Formal Wear	Commerce/Trade, Specialty Store	25 1st St. W.
SL-DUL-00132	Sanitary Plumbing-Glenwood trophy	Commerce/Trade, Specialty Store	18 1st St. W.
SL-DUL-00165	Silberstein and Bondy Dry Goods Company	Commerce/Trade, Specialty Store	9-11 Superior St. W.
SL-DUL-00252	Chum Drop-In Center	Social, Civic	125 N. 1st Ave. W
SL-DUL-00237	Commercial building-Bayly building	Commerce/Trade, Specialty Store	17-19 Lake Ave. N.
SL-DUL-00193	Vacant lot	Recreation and Culture, Theater	16 Superior St. E.
SL-DUL-00238	Nortun Lodge #126 Sons of Norway	Social, Meeting Hall	21-23 Lake Ave. N.
SL-DUL-02644	Parking lot	Landscape, Parking Lot	9-23 1st St. W.
SL-DUL-00133	Bridgeman & Russell	Commerce/Trade, Specialty Store	14-16 1st St. W.
SL-DUL-00067	Commercial Electric Company	Commerce/Trade, Specialty Store	118 North 1st Ave. W.
SL-DUL-00135	Spina Building-Dreamland bar;Willis Supply Co./Shishka Bar	Commerce/Trade, Specialty Store	2-8 1st St. W.
SL-DUL-00134	Bridgeman-Russell Block	Commerce/Trade, Specialty Store	10-16 1st St. W.
SL-DUL-00235	Tremont Hotel	Domestic, Hotel	12 Lake Ave. N.
SL-DUL-00076	Commercial building - Duluth Teachers Credit Union	Commerce/Trade, Specialty Store	28 2nd St. W.
SL-DUL-00196	Wieland Block	Commerce/Trade, Specialty Store	26 Superior St. E.
SL-DUL-00194	J. J. Costello Hardware and Stoves	Commerce/Trade, Specialty Store	22-24 Superior St. E.
SL-DUL-00169	Commercial building	Commerce/Trade, Specialty Store	13 Superior St. E.
SL-DUL-00136	First Bank Drive-In	Commerce/Trade, Financial Institution	10 1st St. E.
SL-DUL-03922	Bridge 69857	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park
SL-DUL-00802	Jeronimus Floral	Commerce/Trade, Specialty Store	11 1/2 Superior St. E.
SL-DUL-00170	Commercial building	Commerce/Trade, Specialty Store	17 Superior St. E.
SL-DUL-00801	Bridgemen's	Commerce/Trade, Specialty Store	11 Superior St. E.
SL-DUL-00171	Commercial building	Commerce/Trade, Specialty Store	21 Superior St. E.
SL-DUL-00100	HBJ Publications Inc	Commerce/Trade, Specialty Store	1-7 1st St. W.
SL-DUL-00172	Commercial building - music center	Commerce/Trade, Specialty Store	23-25 Superior St. E.
SL-DUL-00078	Duluth Masonic Temple	Social, Meeting Hall	4 2nd St. W.
SL-DUL-00197	Hayes Block	Commerce/Trade, Specialty Store	30-38 Superior St. E.
SL-DUL-00198	Astoria Hotel-Northern lights/Chinese Dragon	Commerce/Trade, Specialty Store	102-108 Superior St. E.
SL-DUL-02645	Granite retaining wall	Landscape, Street Furniture/Object	9 1st St. E.
SL-DUL-00137	Commercial building	Commerce/Trade, Specialty Store	18 1st St. E.
SL-DUL-00173	Last place on earth	Commerce/Trade, Specialty Store	29-33 Superior St. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00103	Interstate Auto	Commerce/Trade, Specialty Store	5-7 1st St. E.
SL-DUL-00138	Duluth Candy Factory	Commerce/Trade, Specialty Store	20 1st St. E.
SL-DUL-01208	Hockin Furniture Co.	Commerce/Trade, Specialty Store	5 1st St. W. (formerly 1 - 7 W 1st St)
SL-DUL-00102	Builders Exchange Building	Commerce/Trade, Specialty Store	1-3 1st St. E.
SL-DUL-02353	Granada Theater	Recreation and Culture, Theater	109 Superior St. E.
SL-DUL-00139	Commercial building - Duluth Teachers Retirement Fund	Commerce/Trade, Specialty Store	22 1st St. E.
SL-DUL-00804	Granada News & Book	Commerce/Trade, Specialty Store	111 Superior St. E.
SL-DUL-00805	China Night Restaurant	Commerce/Trade, Restaurant	113 Superior St. E.
SL-DUL-00199	Vacant lot - Sears parking lot	Commerce/Trade, Specialty Store	110-116 Superior St. E.
SL-DUL-00174	Grand Hotel	Domestic, Hotel	101-105 Superior St. E.
SL-DUL-00200	Peterson Buffet-chamber of commerce	Commerce/Trade, Specialty Store	118 Superior St. E.
SL-DUL-00807	C.H. Oppel Block	Commerce/Trade, Restaurant	117 Superior St. E.
SL-DUL-00201	Delray Hotel	Commerce/Trade, Specialty Store	120 Superior St. E.
SL-DUL-01071	Singer and Associates	Commerce/Trade, Specialty Store	26 E. 1st St.
SL-DUL-00808	Commercial building	Commerce/Trade, Specialty Store	119 Superior St. E.
SL-DUL-02646	US Bank Parking Garage	Landscape, Parking Lot	2-28 1st St. E
SL-DUL-01072	Corner Cafe	Commerce/Trade, Specialty Store	35 1st St. E.
SL-DUL-00202	Service Motor Company, Drivers' Union Hall	Commerce/Trade, Specialty Store	124 Superior St. E.
SL-DUL-00152	Duplex	Domestic, Multiple Dwelling	316 1st St. E.
SL-DUL-00104	Salo Building-Dunlap Building	Commerce/Trade, Specialty Store	15-17 1st St. E.
SL-DUL-00203	Duluth City Jail	Government, Correctional Facility	126 Superior St. E.
SL-DUL-00810	Commercial building	Commerce/Trade, Specialty Store	123 Superior St. E.
SL-DUL-00106	Sher Brothers and Company	Commerce/Trade, Specialty Store	25 1st St. E.
SL-DUL-00080	Chatham Apartments	Domestic, Multiple Dwelling	10 2nd St. E.
SL-DUL-00175	Parking ramp, Fond-du-Luth Casino	Transportation, Road-Related (Vehicular)	107-123 Superior St. E.
SL-DUL-02648	Hobart Manufacturing Company	Commerce/Trade, Specialty Store	31 1st St. E
SL-DUL-00240	Duluth Steam Bath	Commerce/Trade, Specialty Store	18-20 North 1st Ave. E.
SL-DUL-01073	Mobil Service - Frenchy's	Commerce/Trade, Specialty Store	101 East 1st St.
SL-DUL-01853	House	Domestic, Single Dwelling	117 North 1st Ave. E.
SL-DUL-00105	Parking lot	Transportation	19-23 1st St. E.
SL-DUL-01854	Amity Furniture Restoration	Commerce/Trade, Specialty Store	123 North 1st Ave. E.
SL-DUL-00140	Yale Laundry-H & J (stge)	Commerce/Trade, Specialty Store	30-32 1st St. E.
SL-DUL-01211	Commercial building (razed)	Commerce/Trade, Specialty Store	106-110 1st St. W.
SL-DUL-00107	Lake Superior Liquors-commercial building	Commerce/Trade, Specialty Store	27-35 1st St. E.
SL-DUL-02505	Fire Hall #1	Government, Fire Station	22 East Second St
SL-DUL-01214	Coney Island	Commerce/Trade, Specialty Store	110 1st St. W.
SL-DUL-00205	Knudsen Automobile Company Building	Commerce/Trade, Specialty Store	202 Superior St. E.
SL-DUL-00176	Sears, Roebuck and Company	Commerce/Trade, Department Store	125-131 Superior St. E.
SL-DUL-00141	Toverilla Hotel-First Street Exchange	Commerce/Trade, Specialty Store	102-108 1st St. E.
SL-DUL-00142	Union Fur Company/Thorsell-Nesgoda Garage	Commerce/Trade, Specialty Store	110-112 1st St. E.
SL-DUL-00144	Gray Brothers Bakery-Duluth auto sales	Commerce/Trade, Specialty Store	118-120 1st St. E.
SL-DUL-00206	Interstate Auto Company	Commerce/Trade, Specialty Store	206-214 Superior St. E.
SL-DUL-03923	Bridge 69858	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park
SL-DUL-02647	Parking lot	Landscape, Parking Lot	101-121 1st St. E
SL-DUL-00177	Masonic Temple Opera House	Recreation and Culture, Music Facility	201-205 Superior St. E.
SL-DUL-00239	Apartment	Domestic, Multiple Dwelling	114 N. 1st Ave. E
SL-DUL-00143	Moose 505 Lodge-International Harvester Company	Social, Meeting Hall	114-116 1st St. E.
SL-DUL-00145	Model Laundry	Commerce/Trade, Specialty Store	126 1st St. E.
SL-DUL-01858	Carter Hotel	Domestic, Hotel	17-25 North 2nd Ave. E.
SL-DUL-00178	NorShor Theatre-Orpheum Service Garage	Commerce/Trade, Specialty Store	207-213 Superior St. E.
SL-DUL-02354	Jimmy's Used Cars	Commerce/Trade, Specialty Store	27 North 2nd Ave. E.
SL-DUL-00208	Gannon Auto Supplies	Commerce/Trade, Specialty Store	216-218 Superior St. E.
SL-DUL-00812	Sunnyside Cafe	Commerce/Trade, Specialty Store	214 Superior St. E.
SL-DUL-00108	Northwest Radio	Commerce/Trade, Specialty Store	123 1st St. E.
SL-DUL-02649	Clayton Jackson McGhie Memorial	Landscape, Park	130 1st St. E
SL-DUL-00241	Orpheum Theatre	Recreation and Culture, Theater	8-12 North 2nd Ave. E.
SL-DUL-00210	Rockhill Buick Company-St. Louis Cty health Dept.	Commerce/Trade, Specialty Store	222 Superior St. E.
SL-DUL-00083	House	Domestic, Single Dwelling	108 2nd St. E.
SL-DUL-00243	Duluth Cleaners and Dyers	Commerce/Trade, Specialty Store	16-18 North 2nd Ave. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00084	Commercial building	Commerce/Trade, Specialty Store	112 2nd St. E.
SL-DUL-00109	Surplus electronics-commercial building	Commerce/Trade, Specialty Store	125 1st St. E.
SL-DUL-00211	Jacob Kohn Autos and Television Center Building	Commerce/Trade, Specialty Store	228-230 Superior St. E.
SL-DUL-00147	Jenswold Motor Company-Sturm brothers supply Co.	Commerce/Trade, Specialty Store	202-206 1st St. E.
SL-DUL-02550	KBIR TV	Commerce/Trade, Specialty Store	230 E. Superior St.
SL-DUL-00209	Albert Salter Saloon	Commerce/Trade, Specialty Store	220 Superior St. E.
SL-DUL-03874	Pastoret Terrace	Domestic, Multiple Dwelling	101-107-109-111-113 N 2nd Ave E
SL-DUL-00085	House	Domestic, Single Dwelling	118 2nd St. E.
SL-DUL-00148	Parisian Dry Cleaners	Commerce/Trade, Specialty Store	208 1st St. E.
SL-DUL-00149	Motor Mart	Commerce/Trade, Specialty Store	210 1st St. E.
SL-DUL-00110	Pastoret Terrace	Commerce/Trade, Specialty Store	127-129 1st St. E.
SL-DUL-00150	Duluth Ford Exchange	Commerce/Trade, Specialty Store	214-216 1st St. E.
SL-DUL-00151	Turner Automobiles	Commerce/Trade, Specialty Store	218-222 1st St. E.
SL-DUL-00111	Shrine Temple	Social, Meeting Hall	201-207 1st St. E.
SL-DUL-00086	St. Regis Apartments	Domestic, Multiple Dwelling	117-129 North 2nd Ave. E.
SL-DUL-00179	Hotel Duluth	Domestic, Hotel	219-231 Superior St. E.
SL-DUL-00112	Peterson Building-Scarlett Feed Store	Commerce/Trade, Specialty Store	213-215 1st St. E.
SL-DUL-02650	Parking lot	Landscape, Parking Lot	226-232 1st St. E
SL-DUL-00113	Union Gospel Mission-Martin Hotel	Commerce/Trade, Specialty Store	217-219 1st St. E.
SL-DUL-00114	Johnson Supply Co. -commercial building	Commerce/Trade, Specialty Store	231 1st St. E.
SL-DUL-00087	King Manor	Domestic, Multiple Dwelling	222 2nd St. E.
Secondary Subarea (80 Resources)			
SL-DUL-03941	Bridge 69820 (Jay Cooke Plaza Tunnel/Superior East Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 8th and 9th Avenues East
SL-DUL-01096	House	Domestic, Multiple Dwelling	712 E 1st St
SL-DUL-01098	Double House	Domestic, Multiple Dwelling	718-720 E 1st St
SL-DUL-01871	Apartment	Domestic, Multiple Dwelling	116 N 7th Ave E
SL-DUL-01095	Double House	Domestic, Multiple Dwelling	709-711 E 1st St
SL-DUL-01100	Apartments	Domestic, Multiple Dwelling	722-724 E 1st St
SL-DUL-01094	House	Domestic, Single Dwelling	707 1st St. E.
SL-DUL-01872	Duplex	Domestic, Multiple Dwelling	118-120 N 7th Ave E
SL-DUL-00831	Sir Benedict's Tavern on the Lake	Commerce/Trade, Specialty Store	805 E Superior St
SL-DUL-01874	Duplex	Domestic, Multiple Dwelling	122 N 7th Ave E
SL-DUL-01097	Adams	Domestic, Multiple Dwelling	715 E 1st St
SL-DUL-01280	Williams Apartments	Domestic, Multiple Dwelling	702-704 E 2nd St
SL-DUL-01099	St. Elmo Building	Domestic, Multiple Dwelling	721 E 1st St
SL-DUL-01101	Oxford Building	Domestic, Multiple Dwelling	725-727 E 1st St
SL-DUL-00581	Jay Cooke Monument	Recreation and Culture, Monument/Marker	London Rd. & Superior St.
SL-DUL-03682	Hollywood	Domestic, Multiple Dwelling	708-710 E 2nd St
SL-DUL-01102	Berkshire Apartments	Domestic, Multiple Dwelling	731 E 1st St
SL-DUL-00832	Kitchi Gammi Club	Social, Meeting Hall	831 E Superior St
SL-DUL-01281	Apartment	Domestic, Multiple Dwelling	711 E 2nd St
SL-DUL-01282	Apartments	Domestic, Multiple Dwelling	713-717 E 2nd St
SL-DUL-01283	Apartment	Domestic, Multiple Dwelling	719 E 2nd St
SL-DUL-01877	Duplex	Domestic, Multiple Dwelling	118-120 N 8th Ave
SL-DUL-01878	Apartment	Domestic, Multiple Dwelling	122-126 N 8th Ave E
SL-DUL-01103	Lafayette Apartments	Domestic, Multiple Dwelling	815 E 1st St
SL-DUL-01106	United Baptist Christian Church	Religion, Religious Facility	830 E 1st St
SL-DUL-01879	Duplex	Domestic, Multiple Dwelling	128-130 N 8th Ave E
SL-DUL-01104	Apartment	Domestic, Multiple Dwelling	821 E 1st St
SL-DUL-01430	House	Domestic, Single Dwelling	707 E 3rd St
SL-DUL-01286	House	Domestic, Single Dwelling	824 E 2nd St
SL-DUL-01105	Greysolon Apartments	Domestic, Multiple Dwelling	823-833 1st St E
SL-DUL-01431	House	Domestic, Single Dwelling	711 3rd St. E.
SL-DUL-01284	Duplex	Domestic, Multiple Dwelling	812-814 E 2nd St
SL-DUL-01107	Karpeles Manuscript Library	Recreation and Culture, Museum	902 E 1st St
SL-DUL-01875	Apartments	Domestic, Multiple Dwelling	318 North 7th Ave. E.
SL-DUL-01882	Kimball Flats	Domestic, Multiple Dwelling	109-111 N 9th Ave E
SL-DUL-03165	House	Domestic, Multiple Dwelling	814 E. 2nd St.
SL-DUL-01285	House	Domestic, Single Dwelling	822 E 2nd St
SL-DUL-01599	Willow Apartment	Domestic, Multiple Dwelling	702-712 E 4th St
SL-DUL-03816	Duplex	Domestic, Multiple Dwelling	801-803-805 2nd St E
SL-DUL-03030	Rowhouse	Domestic, Multiple Dwelling	121 North 9th Ave. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-01288	Row Flats	Domestic, Multiple Dwelling	826-834 E 2nd St
SL-DUL-03031	Rowhouse	Domestic, Multiple Dwelling	123 North 9th Ave. E.
SL-DUL-03032	Rowhouse	Domestic, Multiple Dwelling	125 North 9th Ave. E.
SL-DUL-01880	Apartments	Domestic, Multiple Dwelling	301 N 8th Ave E
SL-DUL-01600	Henry Halkman Store & Flats	Commerce/Trade, Specialty Store	701-705 E 4th St
SL-DUL-01883	Row Flats	Domestic, Multiple Dwelling	119-125 N 9th Ave E
SL-DUL-01881	Duplex	Domestic, Multiple Dwelling	305-307 N 8th Ave E
SL-DUL-01108	Albemarle Apartments	Domestic, Multiple Dwelling	914-916 1st St. E.
SL-DUL-03694	House	Domestic, Single Dwelling	716 E 4th St
SL-DUL-03676	Yorkleigh	Domestic, Multiple Dwelling	1017 London Rd
SL-DUL-01110	Apartments	Domestic, Multiple Dwelling	926-926 1/2 1st St. E.
SL-DUL-01287	Apartment	Domestic, Multiple Dwelling	825-827 E 2nd St
SL-DUL-03820	Apartment Building	Domestic, Multiple Dwelling	810-812 3rd St E
SL-DUL-03695	Duplex	Domestic, Multiple Dwelling	720 E 4th St
SL-DUL-03821	Apartment Building	Domestic, Multiple Dwelling	820-822 3rd St E
SL-DUL-04002	Bridge L6130	Transportation, Road-Related (Vehicular)	PLAZA over MSAS 148(10TH AVE E)
SL-DUL-03677	First Lutheran ELCA	Religion, Religious Facility	1100 E Superior St
SL-DUL-01432	House	Domestic, Single Dwelling	831 E 3rd St
SL-DUL-03734	Melrose	Domestic, Multiple Dwelling	402-414 N 8th Ave E
SL-DUL-04123	Mechanical Building	Other, (Blank)	1121 London Road
SL-DUL-01434	Jefferson School	Domestic, Multiple Dwelling	916 E 3rd St
SL-DUL-03832	Duplex	Domestic, Multiple Dwelling	822-824 4th St E
SL-DUL-03831	Duplex	Domestic, Multiple Dwelling	811 4th St E
SL-DUL-01291	House	Domestic, Single Dwelling	1020 2nd St. E.
SL-DUL-01884	Apartment	Domestic, Multiple Dwelling	312-314 N 9th Ave E
SL-DUL-00582	Apartments	Domestic, Multiple Dwelling	1121-1123 London Rd.
SL-DUL-01289	House	Domestic, Single Dwelling	1007-1009 2nd St. E.
SL-DUL-01293	House	Domestic, Single Dwelling	1030 2nd St. E.
SL-DUL-00833	Louis S. Loeb House	Domestic, Single Dwelling	1123 Superior St. E.
SL-DUL-01436	St. Paul's German Evangelical Lutheran Church	Religion, Religious Facility	932 E 3rd St
SL-DUL-01290	Duplex	Domestic, Multiple Dwelling	1017-1019 2nd St. E.
SL-DUL-01435	Apartments	Domestic, Multiple Dwelling	929-931 E 3rd St
SL-DUL-01292	Apartments	Domestic, Multiple Dwelling	1021-1025 2nd St. E.
SL-DUL-01113	House	Domestic, Single Dwelling	1131 1st St. E.
SL-DUL-01111	House	Domestic, Single Dwelling	1115 1st St. E.
SL-DUL-03696	Double House	Domestic, Multiple Dwelling	920-922 E 4th St
SL-DUL-00192	Bijou Theater	Commerce/Trade, Specialty Store	12-14 Superior St. E.
SL-DUL-01294	Apartment	Domestic, Multiple Dwelling	1106 E 2nd St
SL-DUL-01601	House	Domestic, Single Dwelling	915 4th St. E.
SL-DUL-03683	Apartment	Domestic, Multiple Dwelling	1031 E 2nd St
SL-DUL-01602	Apartments	Domestic, Multiple Dwelling	932 4th St. E.
SL-DUL-01603	Mandan Block	Commerce/Trade, Specialty Store	926-932 E 4th St
SL-DUL-03877	Rowhouse	Domestic, Multiple Dwelling	201-203-205-207 N 11th Ave E
SL-DUL-01112	William Heimbach House	Domestic, Single Dwelling	1123 1st St. E.
SL-DUL-01895	Hillman Realty & House	Commerce/Trade, Specialty Store	20 N 12th Ave E
SL-DUL-03684	Apartment	Domestic, Multiple Dwelling	1108-1110 E 2nd St
SL-DUL-03685	Apartment	Domestic, Multiple Dwelling	1112-1114 E 2nd St
SL-DUL-01297	Apartment	Domestic, Multiple Dwelling	1120-1124 E 2nd St
SL-DUL-01114	Chester Terrace Apartments	Domestic, Multiple Dwelling	1210-1232 E 1st St
SL-DUL-00583	Duluth Armory	Defense, Arms Storage	1301-1305 London Rd

Downtown Duluth AUAR Scoping Environmental Assessment Worksheet

**Responsible Governmental Unit: City of Duluth
Proposer: City of Duluth**



Prepared for:
City of Duluth

November 2025

Prepared by:
Stantec Consulting Services Inc.

Project/File:
227708309

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Appendices

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- Appendix D: FEMA FIRMette
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- Appendix G: USFWS IPaC Unofficial Species List and DNR NHIS Review Letter
- Appendix H: MnSHIP Sites within the AUAR area

December 2022 version

Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at: <https://www.eqb.state.mn.us/>. The EAW form provides information about a Project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Introduction

An Alternative Urban Areawide Review (AUAR) is an alternative to an Environmental Impact Statement (EIS) that responds to the items in the EAW form to the level of analysis similar to an EIS. Minnesota Rules Chapter 4410.3610, subp. 4 states that "the content and format [of an AUAR document] must be similar to that of an EAW but must provide for a level of analysis comparable to that of an EIS for impacts typical of urban residential, commercial warehousing, and light industrial development and associated infrastructure."

An AUAR consists of three steps: Scoping EAW, Draft AUAR and Final AUAR. The Scoping EAW describes issues to be studied in the AUAR and potential data sources to be used in this analysis. The purpose of the Scoping EAW is to provide information to agencies and the public on the proposed scope of the AUAR and to invite feedback on any additional analysis or data sources that should be included in the AUAR. Once the Scoping EAW process and comment period has been completed, a Draft AUAR is prepared that reflects the comments received.

The revised EAW form (December 2022 version) was used to conduct and document this scoping EAW for the Downtown Duluth AUAR. The twenty-two items in the EAW form provide information about the proposed development scenarios within the AUAR area, existing conditions, existing plans, potential issues to explore through the AUAR process, and specific methodologies for special studies that will be conducted for the AUAR (i.e., the scope of the Traffic Impact Study). The EAW and AUAR Guidelines provide additional details and resources for completing the EAW form for an AUAR and conducting the AUAR review process.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title

Downtown Duluth Alternative Urban Areawide Review (AUAR)

2. Proposer

Proposer:	City of Duluth
Contact person:	Tricia Hobbs
Title:	Executive Director, Duluth Economic Development Authority (DEDA)
Address:	411 W. 1 st Street
City, State, ZIP:	Duluth, MN 55802
Phone:	(218) 730-5322
Email:	thobbs@duluthmn.gov

3. Responsible Governmental Unit (RGU)

RGU Agency: City of Duluth
Contact person: Jenn Moses, AICP
Title: Planning Manager
Address: Planning and Development Division
411 W. 1st Street, Room 160
City, State, ZIP: Duluth, MN 55802
Phone: (218) 730-5328
Email: jmoses@DuluthMN.gov

4. Reason for EAW Preparation

Required: Discretionary:
 EIS Scoping (AUAR) Citizen petition
 Mandatory EAW RGU discretion
 Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

Minnesota Rules 4410.3610, Subpart 1 allow for eligible projects to be reviewed through the AUAR procedures instead of the EAW and EIS procedures. Pursuant to Minnesota Rules Chapter 4410.3610, Subpart 5a additional procedures are required when certain large specific projects are reviewed. This Scoping EAW has been prepared in accordance with these procedures to guide the Draft AUAR. Minnesota Rules Chapter 4410.4300 Subpart 32 and 4410.4400 Subpart 21 pertain to the Development Scenario B (Maximum Development Scenario).

5. Project Location

County: Saint Louis

City/Township: Duluth

PLS Location (¼, ¼, Section, Township, Range): Township 50 North, Range 14 West, Section 22, 23, 27, 34

Watershed (81 major watershed scale): St. Louis River and Lake Superior - South

GPS Coordinates: Latitude 46.790583, Longitude -92.095905

Tax Parcel Number: Appendix A provides a list of parcels within each of the four AUAR subareas.

At a minimum attach each of the following to the EAW:

- County map showing the general location of the Project;
See Figure 1 and Figure 2, Appendix B
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating Project boundaries (photocopy acceptable); and
See Figure 1, Appendix B
- Site plans showing all significant Project and natural features. Pre-construction site plan and post-construction site plan.
See Exhibits 1 and 2 (development scenarios) and Lot D Concept Plan in Appendix C
- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the Project during the life of the Project (as detailed below in item 7. Climate Adaptation and Resilience).

See data sources provided in Item 7 of this document.

6. Project Description

a. Provide the brief Project summary to be published in the EQB Monitor, (approximately 50 words).

The City of Duluth is preparing an AUAR for an approximately 335 acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding Hillside neighborhood, as well as the proposed “Lot D” development in the Bayfront area. The purpose of this AUAR is to prepare for infill or redevelopment of key sites within this broader area. Two development scenarios will be evaluated as part of the AUAR which include an existing conditions scenario and a maximum mixed use (commercial and residential) redevelopment scenario consistent with the City’s adopted Comprehensive Plan.

b. Give a complete description of the proposed Project and related new construction, including infrastructure needs. If the Project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities

Existing Conditions

The AUAR area is an urban environment within the City of Duluth, St. Louis County, Minnesota, consisting of a traditional downtown commercial and business district (East and West Superior Street), a medical campus (Essentia), and some high-density residential areas with local streets and sidewalks, as well as an interstate highway corridor and railroad. The AUAR area includes businesses focused on hospitality such as restaurants, bars, hotels, and shopping. Some sections of the AUAR area remain undeveloped due to the discontinuation and removal of previous commercial and light industrial activities. The natural environment primarily features landscaped vegetation with limited lawn space or mature trees, except for the approximately two miles of the Lake Superior shoreline, which functions as a seaport within the Great Lakes Region.

Proposed Project

Proposed AUAR Development Scenarios

Two development scenarios will be considered as part of the AUAR which include one scenario that encompasses the existing conditions as a comparison to the maximum development scenario which is consistent with the growth planned for in the City’s adopted Comprehensive Plan (Imagine Duluth 2035 – Forward Together¹). The maximum development scenario plans generally for mixed use redevelopment of key sites within the broader downtown area.

The purpose of the AUAR is to help the City adequately plan for this redevelopment and provide a mitigation plan for how the City and future developers will manage the environmental impacts. The City initiated this AUAR in anticipation that the downtown area could see significant infill and redevelopment within the coming years, including areas that are within the City’s shoreland area and would require environmental review and sensitivity. The AUAR is meant to plan for this development in a holistic manner, understanding that there are environmental benefits of development within an already dense urban area, and that environmental impacts are not contained to one site but rather are best studied and mitigated with a broader lens.

The City has elected to designate subareas within the broader AUAR area to facilitate the process of studying and planning mitigation for 335 acres of the City’s urban core, which is comprised of many different uses and forms of development. The four subareas include:

¹ City of Duluth. Imagine Duluth 2035 – Forward Together. Adopted June 25, 2018. https://duluthmn.gov/media/rtgk5tin/imagine-duluth-2035-combined_website_temp.pdf

- Lot D Subarea (500-1000 Railroad Street in the Bayfront District)
- 1st Street Subarea (generally bounded by 2nd Street to the north, 3rd Avenue East to the east, Interstate 35 (I-35) to the south, Mesaba Avenue to the west)
- Essentia Subarea (generally bounded by 5th Street to the north, 7th Avenue East to the east, I-35 to the south and 3rd Avenue E to the west)
- Secondary Subarea (generally bounded by 5th Street to the north, 14th Avenue East to the east, London Road to the south and 7th Avenue East to the west)

These subarea boundaries are shown in Exhibit 1 and Exhibit 2 below.

Development Scenario A: Existing Conditions

Exhibit 1 depicts Development Scenario A. The following paragraphs describe the existing conditions for the four subareas. Table 1 identifies existing building area assumptions for Development Scenario A based on available parcel data.

Lot D Subarea

The Lot D subarea was historically a light industrial site, with its most notable past use as a manufacturing and cold storage facility. Today, the site is the last piece of undeveloped commercial waterfront in the City of Duluth, which has remained vacant for more than three decades. Complicating factors in the redevelopment of the site include a collapsing seawall, a massive cement slab, and contaminated soil. The Lot D subarea is roughly 19 acres and includes surrounding site context and roads.

While the site was historically developed, for the purposes of this analysis, the site is considered vacant. The site is currently owned by the Duluth Economic Development Authority (DEDA). DEDA has a predevelopment agreement with Inland Development Partners (Inland) for the development rights to Lot D. Lot D is located on Railroad Street between the Pier B hotel and Compass Minerals, a salt packaging plant.

Essentia Subarea

The Essentia subarea is mostly occupied by the Essentia Health Medical Campus and Benedictine Sisters of the St. Scholastica Monastery properties. Construction of the new Essentia Health – St. Mary’s Medical Center at 402 East 2nd Street was recently completed to bring to fruition Vision Northland, a \$900 million investment seeking to transform the Essential Health Medical Campus. The demolition of the former St. Mary’s Medical Center at 407 East 3rd Street was also recently completed. The Essentia subarea includes about 141 acres and 4.3 million square feet of mostly institutional (medical campus) and other commercial and residential uses. Several existing surface parking lots within the subarea will become surplus with the consolidation of the Essentia campus.

1st Street Subarea

The 1st Street subarea encompasses the City of Duluth’s historic downtown core. The area is about 83 acres and includes nearly 5.2 million square feet of commercial, office, urban residential, hospitality and tourism, institutional (churches and government offices), and a limited amount of industrial development. The built form is urban in nature, with buildings ranging from one to sixteen stories in height. In addition to the built square footage in the 1st Street subarea, there are many surface and structured parking lots and some vacant land or unoccupied buildings.

Secondary Subarea

The Secondary subarea includes an eclectic mix of uses including high, medium, and low-density housing, the Aspirus St. Lukes Hospital campus, and a mix of commercial uses mostly located along Superior Street. Like the Essentia Health campus, Aspirus St. Luke’s is also underway with a hospital modernization and expansion project. The Secondary subarea includes roughly 92 acres and 3.3 million

square feet of mostly residential, institutional (medical campus) and other commercial uses.

Development Scenario B: Maximum Development (Mixed Use) Scenario

Proposed development considered in Development Scenario B for this AUAR consists of a mix of commercial/office, retail, and residential uses in the AUAR area. Development Scenario B does not include heavy industrial and data center uses. Additionally, it is noted that future projects proposed within the AUAR area would be subject to the AUAR eligibility criteria pursuant to Minn. R. 4410.3610, Subp. 1.

Lot D Subarea

As mentioned above, the landowner of the Lot D area is DEDA, which has a predevelopment agreement with Inland for the development rights to Lot D. Inland has created a concept plan for a multi-phased mixed use multifamily and hospitality redevelopment. This concept plan is the basis for the maximum development scenario for this subarea. The planned redevelopment includes two buildings of market rate multifamily apartments, constructed over two phases and totaling 802,000 square feet. The maximum redevelopment scenario also includes a hotel totaling about 93,000 square feet.

In addition to the planned development, there are several site preparation activities which will occur within the subarea including repair and reconstruction of the deteriorated seawall, removal of the cement slab, and remediation and encapsulation of soil contamination. Table 1 and Exhibit 2 detail the Lot D subarea maximum development scenario. Appendix C provides Inland's preliminary Lot D Concept Plan.

Essentia Subarea

The Essentia subarea maximum development scenario is based generally on the plans that Essentia Health and the Benedictine Sisters of the St. Scholastica Monastery have for redevelopment of excess properties made available by the consolidation of the campus and parking lots. This includes 18 properties across a roughly 16-block campus. The Duluth Market Study² completed by Cushman Wakefield in March 2023 plans for the following maximum development potential for these 18 properties: more than 600 new housing units, 50,000 square feet of retail space, up to 480 hotel rooms and 275,000 square feet of medical office and classroom space. This information is the basis for the maximum development scenario in this subarea, as shown in Table 1 and Exhibit 2.

1st Street Subarea

Within the 1st Street subarea, there are two DEDA owned sites that will be available for redevelopment in the near-term. These include the former Pastoret Terrace building and the former Shoppers Parking Ramp and adjacent New Garrick Building (Pineapple Building). The maximum development scenario for these sites includes mixed-use development with residential and retail space. In addition to these properties, there is potential for underutilized properties in the downtown area to be redeveloped into a mix of uses, including housing. Scenario B plans for the maximum amount of development that 1st Street subarea may see for the next ten years. Given that the AUAR will be updated every five years, as required by state statute, there is an opportunity to update these assumptions regularly as development expectations shift.

For the next ten year period, the maximum development scenario for the 1st Street subarea assumes a 30 percent increase in residential development and a small increase in commercial development from existing conditions. This assumes that much of the major redevelopment in the downtown area is mixed use, including mostly housing and some new commercial development. Table 1 and Exhibit 2 detail the 1st Street subarea maximum development scenario.

Secondary Subarea

While there are no major plans currently proposed by landowners, developers, or the City for redevelopment within the Secondary subarea, it is anticipated that some redevelopment may occur within

² Cushman & Wakefield. Duluth, Minnesota Market Study. March 2023.

the next ten years. Given the investments in the Aspirus St. Luke's Hospital, and the heavily residential nature of the area, it is anticipated that this may be an attractive area for housing redevelopment. The maximum development scenario for this subarea assumes that the area could see a 20 percent increase in residential development over the next ten years. As with the 1st Street subarea, which also lacks clear development expectations, there is an opportunity with each AUAR Update to reevaluate these assumptions as development expectations shift. Table 1 and Exhibit 2 detail the Secondary subarea maximum development scenario.

Exhibit 1. Development Scenario A – Existing Conditions

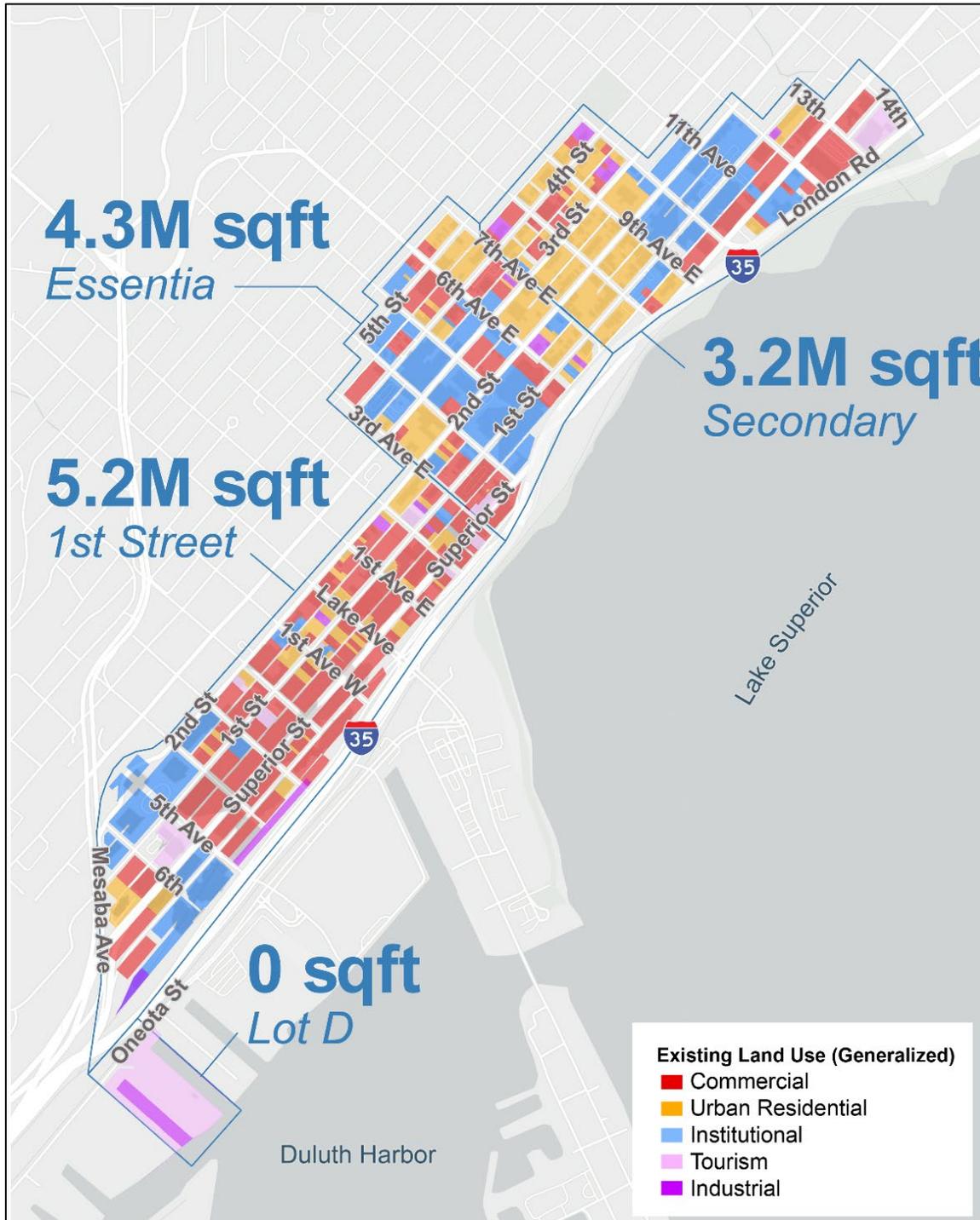
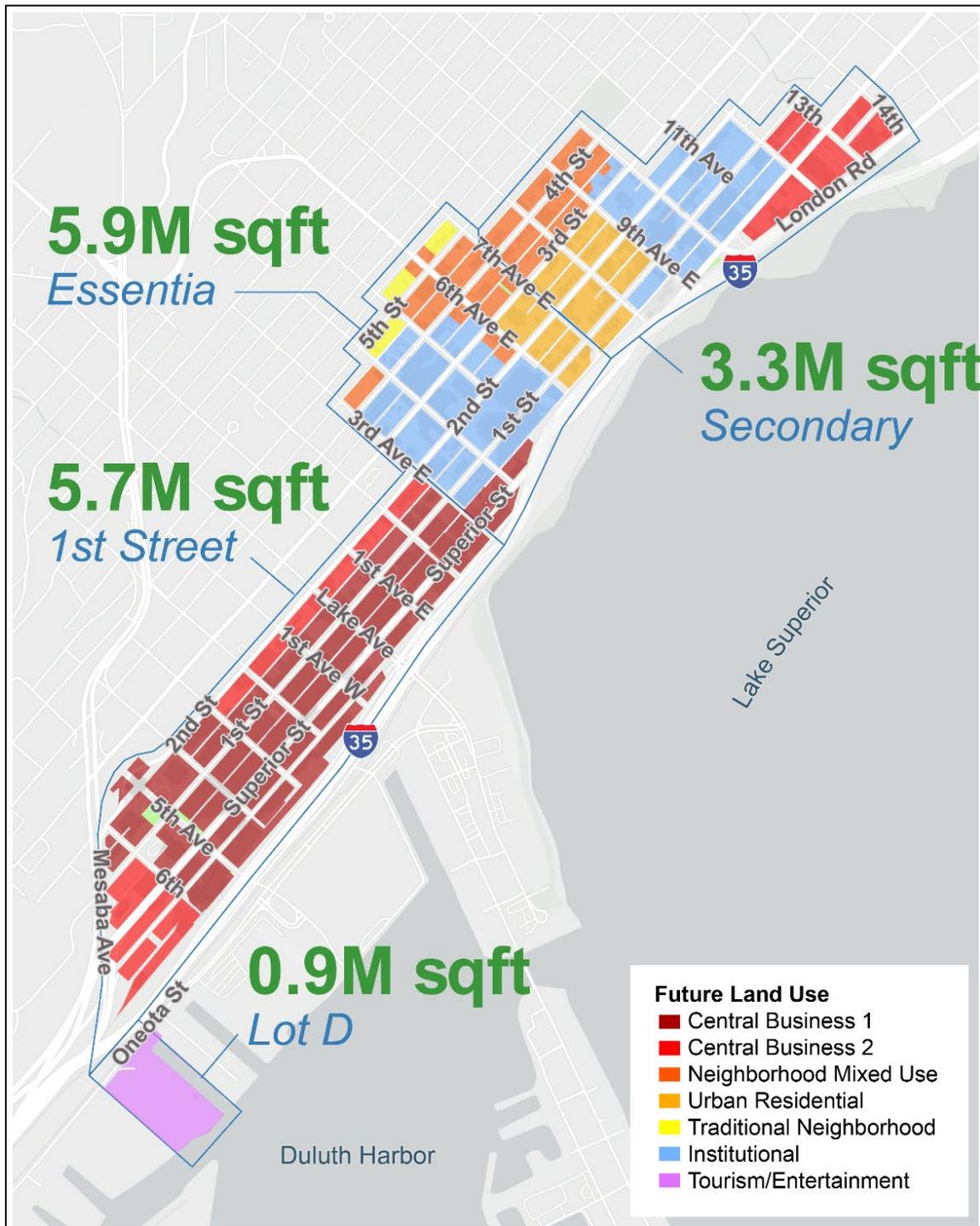


Exhibit 2. Development Scenario B – Maximum Development



Construction Activities

- 1) *Construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes*

Development Scenario B would include construction of new buildings and associated access roadways, parking areas, and utility infrastructure improvements. Construction activities will primarily be redevelopment of previously developed land. Site preparation may include demolition, grading,

excavation and limited vegetation removal. Stormwater infrastructure would be modified or constructed depending on the change in impervious surface area.

2) *Modifications to existing equipment or industrial processes*

Not applicable – no planned modifications to existing equipment or industrial processes.

3) *Significant demolition, removal or remodeling of existing structures*

The AUAR area encompasses a developed, urban core. It is anticipated that redevelopment of the AUAR area may require demolition, removal, or remodeling of existing buildings or structures, which would be confirmed at the time future projects are proposed within the AUAR area. The potential for redevelopment within the AUAR area to result in the demolition of properties listed or eligible for inclusion on the National Register of Historic Places (NRHP) will be evaluated as part of Item 15 (Historic Properties) of the Draft AUAR.

4) *Timing and duration of construction activities*

It is anticipated that initial site preparation for redevelopment of Lot D may occur as early as 2026, which would include repair of the existing seawall, removal of the cement slab, and remediation and encapsulation of soil contamination. Construction of the Lot D Redevelopment Project is anticipated to be completed in 2028.

The timing and duration of development phases within the three other subareas is unknown and would be dependent on market conditions. However, it is DEDA’s intention to procure developers for redevelopment of properties currently owned by DEDA in the 1st Street Subarea in 2026. For the purpose of the AUAR, the maximum build condition considered for Development Scenario B assumes a full buildout in ten years. The development assumptions and timeline would be re-assessed with the AUAR update in five years, based on anticipated conditions at that time.

c. Project magnitude

Table 1 summarizes the Project magnitude.

Table 1. Project Magnitude

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Total Project Acreage	Total approx. 335	Total: approx. 335
Linear Project length	Not applicable (N/A)	N/A
Residential building area (in square feet)	1,948,000	4,069,000
Commercial building area (in square feet)	5,983,000	6,053,000
Industrial building area (in square feet)	67,000	67,000
Institutional building area (in square feet)	4,141,000	4,416,000
Other uses – Tourism (in square feet)	540,000	869,000
Total Project Square Footage	12,679,000	15,474,000
Lot D Subarea		
Subarea Acreage	Approx. 19	Approx. 19
Residential building area (in square feet)	0	802,000
Commercial building area (in square feet)	0	0
Industrial building area (in square feet)	0	0
Institutional building area (in square feet)	0	0
Other uses – Tourism (in square feet)	0	93,000
Total Project Square Footage	0	895,000

Description	Scenario A - Existing Conditions	Scenario B – Maximum Development
Structure height (feet)	0	Up to 120 ft. (approx. 10 stories)
Essentia Subarea		
Subarea Acreage	Approx. 83	Approx. 83
Residential building area (in square feet)	510,000	1,460,000
Commercial building area (in square feet)	1,191,000	1,241,000
Industrial building area (in square feet)	14,000	14,000
Institutional building area (in square feet)	2,456,000	2,731,000
Other uses – Tourism (in square feet)	174,000	410,000
Total Project Square Footage	4,345,000	5,856,000
Structure height (feet)	Up to 18 stories (St. Mary’s Medical Center)	Up to 200 ft. (approx. 20 stories)
1st Street Subarea		
Subarea Acreage	Approx. 141	Approx. 141
Residential building area (in square feet)	808,000	1,051,000
Commercial building area (in square feet)	3,985,000	4,005,000
Industrial building area (in square feet)	30,000	30,000
Institutional building area (in square feet)	48,000	48,000
Other uses – Tourism (in square feet)	312,000	312,000
Total Project Square Footage	5,183,000	5,446,000
Structure height (feet)	Up to 15 stories (Alworth Building)	Up to 200 ft. (approx. 20 stories)
Secondary Subarea		
Subarea Acreage	Approx. 92	Approx. 92
Residential building area (in square feet)	630,000	756,000
Commercial building area (in square feet)	807,000	807,000
Industrial building area (in square feet)	23,000	23,000
Institutional building area (in square feet)	1,637,000	1,637,000
Other uses – Tourism (in square feet)	54,000	54,000
Total Project Square Footage	3,151,000	3,277,000
Structure height (feet)	Up to 114 ft. (St. Luke’s Hospital)	Up to 200 ft. (approx. 20 stories)

- d. **Explain the Project purpose; if the Project will be carried out by a governmental unit, explain the need for the Project and identify its beneficiaries.**

The purpose of completing this AUAR is to holistically plan for and study potential redevelopment within the downtown area. The City anticipates that downtown could see significant infill and redevelopment within the coming years, and has elected to complete an AUAR to holistically study the environmental impacts of development and prepare appropriate mitigation strategies. The City recognizes the environmental benefits of encouraging additional development within its urban core, especially housing development. The AUAR will help the City to appropriately manage this growth and development.

- e. **Are future stages of this development including development on any other property planned or likely to happen?** Yes No

If yes, briefly describe future stages, relationship to present Project, timeline and plans for environmental review.

It is anticipated that redevelopment of the AUAR area would occur in phases based on market conditions.

For the purpose of the analyses completed as part of the AUAR, it is assumed the full buildout contemplated in Development Scenario B would occur in the next ten years.

f. **Is this Project a subsequent stage of an earlier Project?** Yes No

If yes, briefly describe the past development, timeline and any past environmental review.

7. Climate Adaptation and Resilience

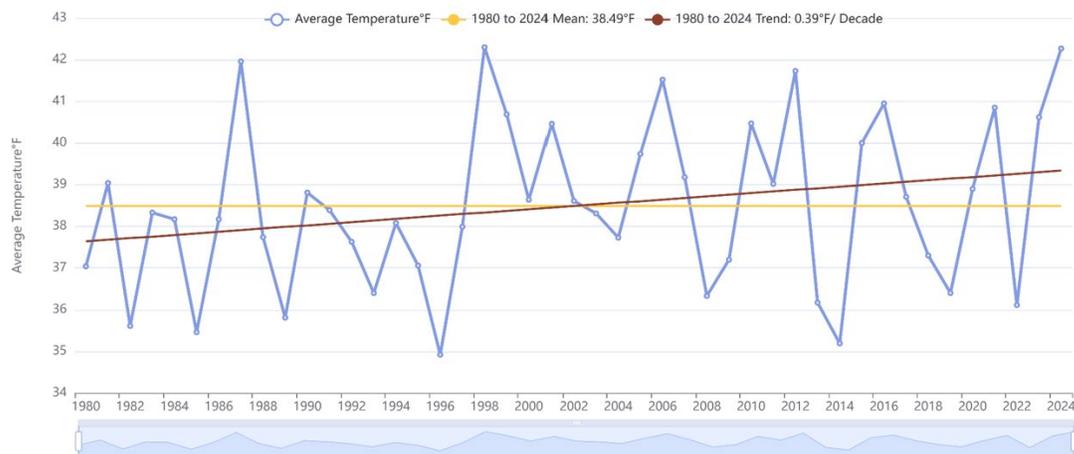
a. **Describe the climate trends in the general location of the Project (see guidance: Climate Adaptation and Resilience) and how climate change is anticipated to affect that location during the life of the Project.**

In general, Minnesota is anticipated to experience an increase in temperature, precipitation, and more frequent extreme precipitation events resulting from climate change. In Minnesota, annual average temperatures have risen two degrees over the past century and up to three degrees in the northern part of the state. The highest average temperature increases have occurred during the winter. Since 1895, temperatures during the winter have increased at a rate two to three times higher than during the summer. In particular, winter warming rates have risen more sharply in recent decades.³ Current climate warming trends, most notably during the winter, are anticipated to continue.⁴

Heavy rain events have become more frequent in Minnesota and more intense. From 1973 to 2020, Minnesota experienced 17 mega-rain events⁵ with a notable increase since 2000. Of these 17 events, three occurred in the 1970s, two in the 1980s, one in the 1990s, six mega-rain events occurred in the 2000s, four in the 2010s, and one in 2020. Thus, in the past 21 years (2000 to 2020), almost two times as many mega rain events occurred compared to the prior 27 years (1973 to 1999).⁶

Climate trends in St. Louis County parallel the overall statewide trends, indicating Minnesota's climate is becoming warmer and wetter. Exhibit 3 and Exhibit 4 illustrate historical average annual temperature and annual precipitation trends from 1980 to 2024, respectively. During this time period, the county experienced an average annual temperature increase of 0.39 degrees Fahrenheit (°F) per decade and an annual precipitation increase of 0.10 inches per decade.

Exhibit 3. Historical Annual Average Temperature in St. Louis County (1950 – 2024)



Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

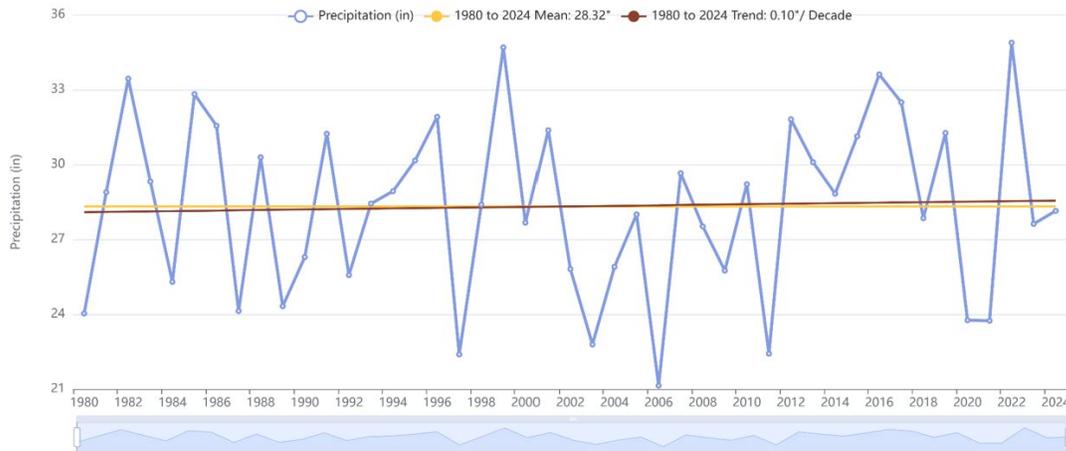
³ DNR, undated(a). Climate Trends. Available at: https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html. Accessed September 2025.

⁴ MnDOT, 2021. Minnesota Go Climate Change Report. Available at: <https://www.minnesotago.org/trends/climate-change>. Accessed September 2025.

⁵ Mega-rain events are defined as events in which six inches of rain covers more than 1,000 square miles and the core of the event tops eight inches. Definition is from the DNR's website cited in footnote 4.

⁶ DNR, 2024(a). Historic Mega-Rain Events in Minnesota. Available at: https://www.dnr.state.mn.us/climate/summaries_and_publications/mega_rain_events.html. Accessed September 2025.

Exhibit 4. Historical Annual Average Precipitation in St. Louis County (1950 – 2024)

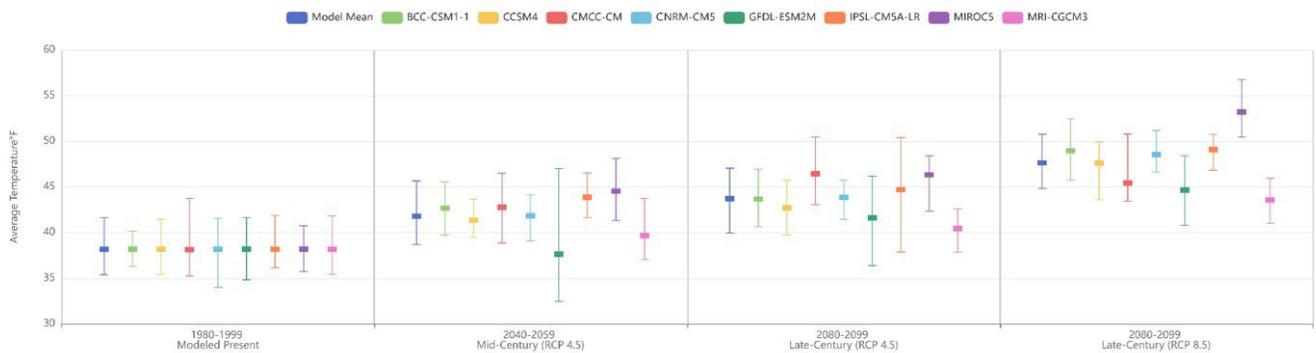


Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

Projected climate trends indicate that temperatures within the county would continue to increase. Exhibit 4 illustrates projected temperatures for the county. Several climate models are shown in the projected temperature analysis. The model mean, shown in blue on the first boxplot to the left in each model category, illustrates the average of all models included in the analysis. Exhibit 5 shows the modeled present condition, mid-century (2040-2059) at Representative Concentration Pathway (RCP) 4.5, late-century (2080-2099) at RCP 4.5, and late-century (2080-2099) at RCP 8.5. RCP is a greenhouse gas concentration scenario used by the Intergovernmental Panel on Climate Change in the fifth assessment report.⁷ RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040 and RCP 8.5 represents a worst-case scenario in which emissions continue rising through the 21st century.

Under the RCP 4.5 scenario, the annual temperature is anticipated to increase within the county from a modeled present mean of 38.2°F (1980-1999) to a mid-century (2040-2059) model mean of 41.8°F and a late-century (2080-2099) model mean of 43.7°F. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean temperature of 47.6°F. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual temperature would increase by approximately 13.4 percent under the RCP 4.5 scenario and increase by approximately 21.9 percent under the RCP 8.5 scenario.

Exhibit 5. Projected Temperatures in St. Louis County



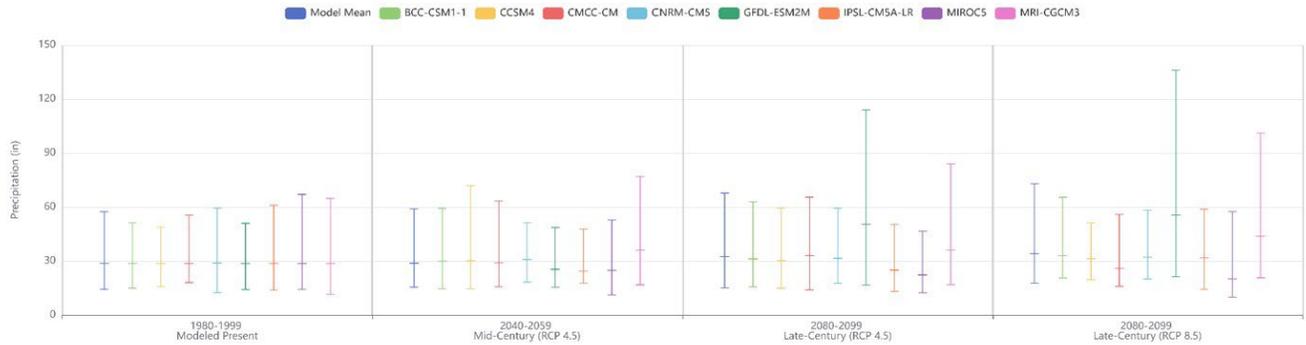
Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

Exhibit 6 presents projected average annual precipitation for St. Louis County. Under the RCP 4.5 scenario, the annual precipitation is anticipated to increase within the county from a modeled present mean of 28.6 inches (1980-1999) to a mid-century (2040-2059) model mean of 28.8 inches and a late-

⁷ IPCC, undated. Fifth Assessment Report. Available at: <https://www.ipcc.ch/assessment-report/ar5/>. Accessed September 2025.

century (2080-2099) model mean of 32.4 inches. Under the RCP 8.5 worst-case scenario, the county would experience a late-century (2080-2099) model mean precipitation of 34.2 inches. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual precipitation would increase by approximately 11.8 percent under the RCP 4.5 scenario and increase by approximately 17.1 percent under the RCP 8.5 scenario.

Exhibit 6. Projected Precipitation in St. Louis County



Source: DNR Climate Explorer available at <https://climate-explorer.dnr.state.mn.us/main/historical>

- b. For each Resource Category in the table below: Describe how the Project’s proposed activities and how the Project’s design will interact with those climate trends. Describe proposed adaptations to address the Project effects identified.**

Table 2 summarizes climate considerations related to the Project and adaptation considerations.

Table 2. Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	<p>Projected climate trends include increasing temperatures, precipitation, and frequency of heavy rainfall events.</p> <p>Minnesota is trending towards warmer temperatures. Urban heat islands occur when impervious surfaces, such as roofs and paved surfaces, absorb heat during the day and release it at night, amplifying the warming trend.</p>	<p>Construction of buildings, parking lots, and other impervious surfaces within the AUAR area may result in minor increases in impervious surface area. Given that the AUAR area consists of a developed, urban environment that is approximately 81 percent impervious, redevelopment would not result in significant increases in impervious surface area compared to existing conditions.</p> <p>Increased impervious surfaces would increase volume of stormwater runoff and potential flooding risk during heavy rain events.</p> <p>Impervious surfaces may create local heat island</p>	<p>Potential adaptations will be identified in the Draft AUAR.</p>

Resource Category	Climate Considerations	Project Information	Adaptations
		effects by absorbing heat during daytimes hours and radiating it at night leading to an increase in surface temperatures.	
Land Use	<p>Heavier rainfall expected to bring a higher risk of localized flooding.</p> <p>Increased temperatures may create public health crises primarily for vulnerable communities such as children and the elderly.</p>	<p>The majority of the AUAR area currently consists of urban development and limited grasslands and wooded areas.</p> <p>Any conversion from grasslands and wooded areas to more urban development would increase impervious surfaces and may contribute to local heat island effects.</p>	Potential adaptations will be identified in the Draft AUAR.
Water Resources	Addressed in Item 12.		
Contamination/ Hazardous Materials/Wastes	The AUAR area is projected to experience an increase in precipitation and heavy rainfall events.	The redevelopment anticipated in the AUAR is not anticipated to involve the installation of chemical/ hazardous materials storage during operation. The Project may include building demolition.	Potential adaptations will be identified in the Draft AUAR.
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Addressed in Item 14.		

8. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

The majority of the AUAR area (approximately 81 percent) consists of developed, impervious surface areas including buildings, roadways, and parking areas. Limited wooded areas are present within the AUAR area (approximately 0.1 percent) and are primarily characterized as landscape trees and small wooded/vegetated areas adjacent to primarily residential uses. Table 3 and Figure 3, Appendix B summarize cover types within the AUAR area. Table 4 summarizes green infrastructure for each scenario and subarea. Table 5 summarizes tree canopy change information.

AUAR Scope

The cover type analysis will be augmented with aerial photographs and other desktop resources as part of the Draft AUAR. Future land cover for both development scenarios would be evaluated in the Draft AUAR for each subarea. Existing conditions information (Scenario A) is included in the following Tables 3 through 5. These tables would be completed for the maximum development scenario (Scenario B) as part of the Draft AUAR.

Table 3. Cover Types

Cover Types	Scenario A Before (acreage)¹	Scenario B After (acreage)
Lot D Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	4.6 (24.8%)	
Wooded/forest	0.5 (2.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.0 (26.9%)	
Green infrastructure total (from table below*)	0.4 (1.9%)	
Impervious surface	8.1 (43.7%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	18.6	
Essentia Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	7.6 (9.1%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	5.2 (6.3%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	70.1 (84.6%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	82.9	
1st Street Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.5%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	8.8 (6.2%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	8.8 (6.2%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	
Impervious surface	123.1 (87.1%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	141.4	
Secondary Subarea		
Wetlands and shallow lakes (<2 meters deep)	0.0 (0.0%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	0.0 (0.0%)	
Wooded/forest	12.6 (13.7%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	11.1 (12.1%)	
Green infrastructure total (from table below*)	0.0 (0.0%)	

Cover Types	Scenario A Before (acreage) ¹	Scenario B After (acreage)
Impervious surface	68.0 (74.2%)	
Stormwater basins	0.0 (0.0%)	
Subarea Total	91.7	
Total AUAR area		
Wetlands and shallow lakes (<2 meters deep)	0.7 (0.2%)	Future land cover for Scenario B to be evaluated in the Draft AUAR.
Deep lakes (>2 meters deep)	4.6(1.4%)	
Wooded/forest	29.4 (8.8%)	
Brush/grassland	0.0 (0.0%)	
Cropland	0.0 (0.0%)	
Lawn/landscaping	30.1 (9.0%)	
Green infrastructure total (from table below*)	0.4 (0.1%)	
Impervious surface	269.3 (80.5%)	
Stormwater basins	0.0 (0.0%)	
AUAR Area Total	334.5	

¹ Before acreages are approximate and based on Duluth 1-Meter Land Cover 2016.

Table 4. Green Infrastructure

Green Infrastructure	Before (acres)	After
Lot D Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
Essentia Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0.5*	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
1st Street Subarea		

Green Infrastructure	Before (acres)	After
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0.5*	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
Secondary Subarea		
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	Future green infrastructure will be evaluated in the Draft AUAR.
Constructed tree trenches and tree boxes	0	
Constructed wetlands	0	
Constructed green roofs	0	
Constructed permeable pavements	0	
Other (describe):	0	
Subarea Total	0	
AUAR Area Total	1.0	

*A few existing green roofs are present in the AUAR area which include the Essentia Health – St. Mary’s Medical Center and the St. Louis County Motor Pool building.

Table 5. Tree Canopy

Trees	Percent	Number
Lot D Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		
Essentia Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		
1st Street Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will

Trees	Percent	Number
Number of new trees planted		be evaluated in the AUAR.
Secondary Subarea		
Percent tree canopy removed, or number of mature trees removed during development	To be determined (TBD)	Potential tree removal impacts will be evaluated in the AUAR.
Number of new trees planted		

9. 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.

Table 6 identifies anticipated permits and approvals that may be required for the proposed development within the AUAR area.

Table 6. Permits and Approvals

Unit of Government	Type of Application	Status
Federal		
U.S. Army Corps of Engineers (USACE)	Section 404 Permit	To be submitted, if required
USACE	Section 10 Permit	
U.S. Fish and Wildlife Service (USFWS)	Section 7 ESA Consultation (if federal nexus)	To be completed, if required
State		
Minnesota Department of Transportation (MnDOT)	(e.g., Drainage Permit, Right-of-way permit for work within or affecting MnDOT right-of-way)	To be submitted, if required
Minnesota Department of Health (MDH)	Water Main Plan Review	To be submitted, if required
Minnesota Department of Natural Resources (DNR)	Temporary Water Appropriation Permit for construction dewatering	To be submitted, if required
DNR	Public Waters Work Permit	To be submitted, if required.
DNR	Natural Heritage Information System (NHIS) concurrence	To be submitted, if required
MPCA	401 Water Quality Certification	To be submitted, if required
MPCA, City of Duluth	National Pollutant Discharge Elimination System (NPDES) MS4 Stormwater Discharge Permit, MS4 Statement of Compliance	To be submitted, if required
MPCA	Construction Site Stormwater Permit	To be submitted, if required
MPCA	Land Use Permit (under Brownfield Program)	To be submitted, if required.
Minnesota State Historic Preservation Office (SHPO)	Section 106 Consultation (if federal nexus)	To be submitted, if required.

Unit of Government	Type of Application	Status
Local		
City of Duluth	Preliminary and Final Plat, Minor Subdivision, and/or a CIC (Common Interest Communities) Plat	To be submitted, if required
City of Duluth	Planning Commission Review	To be completed, if required
City of Duluth	Sign Permits	To be submitted, if required
City of Duluth	Certificate of Occupancy	To be submitted, if required
City of Duluth	Fill Permit	To be submitted, if required
City of Duluth	Erosion and Sediment Control Permits	To be submitted, if required
City of Duluth	Shoreland Permit	To be submitted, if required.
City of Duluth	Floodplain Permit	To be submitted, if required.
City of Duluth	Water and Sewer Main Extension Permits	To be submitted, if required
City of Duluth	Water and Sewer Connection Permits	To be submitted, if required
City of Duluth	Utility Easement Dedications	To be submitted, if required
City of Duluth	Building Permits	To be submitted, if required
City of Duluth	Blasting Permit/ Blasting Plan	To be submitted, if required
City of Duluth	Wetland Conservation Act (Boundary Approval/Replacement Plan)	To be submitted, if required

10. Land Use

a. Describe:

- i. **Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.**

Lot D Subarea

Lot D is a former industrial site and the existing land use consists of mostly vacant land, with a remnant cement building pad and foundations. These are anticipated to be removed in anticipation of redevelopment. Additionally, the property has a deteriorating seawall, which will be replaced prior to redevelopment of the site. It is anticipated that repair and replacement of the existing seawall would include reclamation of a portion of the land that has eroded and replacement of the dock wall around the entire property. Lot D is located on Railroad Street between the Pier B hotel and Compass Minerals, an industrial site. The I-35 corridor creates a barrier between the Lot D site and downtown, while Lake Superior generally forms the eastern boundary of the site. Lot D is separated from Bayfront Park to the north by Pier B and the small mooring areas in between each of these areas. The Baywalk Trail connects Canal Park to Pier B, while the Cross City Trail connects the Lakewalk to the Lincoln Park neighborhood. No cemeteries or prime or unique farmlands are within the subarea.

Essentia Subarea

Existing land uses in the Essentia area include the medical campus and a variety of housing and commercial uses. This area is adjacent to the downtown core to the southwest, also within the AUAR

area (1st Street subarea). The area to the northeast is also within the AUAR area (Secondary subarea). Areas uphill of the Essentia subarea generally consist of lower density housing. Lake Superior is downhill (to the east) from the Essentia Subarea. The Superior Street Boulevard connects over I-35 in this subarea with the Lakewalk along Lake Superior. The North Shore Scenic Drive also intersects this subarea. No cemeteries or prime or unique farmlands are within the subarea.

1st Street Subarea

The 1st Street subarea includes Duluth's historic downtown core, including a mix of office, commercial, hospitality uses, and high density housing. Several surface and structure parking lots are also present within this subarea, along with a limited amount of light industrial uses. Many historic buildings are located within the 1st Street subarea, which are described further in Item 15 of this AUAR. Parks and open spaces within this subarea include Civic Center, Ordean Court, Gateway Park, Rail Park, Minnesota Power Plaza and Lake Superior Plaza. The North Shore Scenic Drive also extends through this subarea. A spur of the Cross City Trail connects through the 1st Street subarea. No cemeteries or prime or unique farmlands are within the subarea.

Secondary Subarea

Existing land uses in the Secondary subarea include high, medium, and low density housing, the Aspirus St. Lukes Hospital campus, and a mix of commercial uses mostly located along Superior Street. Land use in the southwest portion of the subarea generally coincides with the Essentia subarea described above and uses to the north are mostly residential. Lake Superior is generally to the east. The Lakewalk, Leif Erikson Park and the Rose Gardens are adjacent to the subarea. No cemeteries or prime or unique farmlands are within the subarea.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.**

AUAR Scope

Several plans will be reviewed and summarized in the Draft AUAR. These plans include:

- Imagine Duluth 2035 (City's Comprehensive Plan)
- Essential Spaces – Duluth Parks, Recreation, Open Space & Trails Plan
- Duluth Parks and Recreation Master Plan
- Duluth Trail and Bikeway Plan
- 2023 Downtown Housing Study
- 2025 Duluth Housing Needs Analysis (city-wide)
- Vision Northland Master Plan
- Duluth Market Study (Cushman Wakefield)
- Lot D – Minnesota Finance Plan

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.**

AUAR Scope

Lot D Subarea

Lot D is zoned MU-W Mixed Use Waterfront. A large portion of the Lot D subarea is also within the City's shoreland overlay zone associated with the Duluth/Superior Harbor Shoreline. Zoning surrounding this subarea includes industrial to the southwest and west, and MU-W to the northeast. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources

within the AUAR area and the City's shoreland management overlay zones.

Essentia Subarea

Zoning within the Essentia subarea includes predominately MU-I Mixed Use Institutional, with other districts including F-8 Downtown Mix, F-7 Downtown Shopping, F-6 Mid-Rise Neighborhood Shopping, MU-N Mixed Use Neighborhood, and R-2 Residential Urban. A portion of the Essentia subarea is also within the shoreland overlay zone associated with the Duluth/Superior Harbor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

1st Street Subarea

Zoning within the 1st Street subarea includes predominately F-8 Downtown Mix, with other districts including F-7 Downtown Shopping, F-5 Mid-Rise Community Shopping and Office, and MU-C Mixed Use Commercial. A portion of the 1st Street subarea is also within the shoreland overlay zone associated with the Duluth/Superior Harbor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

Secondary Subarea

Zoning within the Secondary subarea includes a mix of MU-I Mixed Use Institutional, F-8 Downtown Mix, F-6 Mid-Rise Neighborhood Shopping, F-4 Mid-Rise Community Mix, MU-N Mixed Use Neighborhood, and R-2 Residential Urban. A portion of the Secondary subarea is also within the shoreland overlay zone associated with Chester Creek and the Duluth/Superior Harbor Shoreline. These zoning districts will be described further in the AUAR and the maximum development scenario will be reviewed for potential incompatibilities with the districts and overlay. Figure 6, Appendix B identifies the zoning districts within the AUAR area. Figure 11, Appendix B shows the water resources within the AUAR area and the City's shoreland management overlay zones.

- iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.***

AUAR Scope

The maximum development scenario anticipates housing within the AUAR area. Portions of each subarea are within the shoreland overlay district and flood hazard zones. Appendix D provides the FEMA FIRMettes which are discussed in further detail in Item 12 (Water Resources). The AUAR will address the potential for localized flooding within each subarea.

- b. Discuss the Project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.***

AUAR Scope

This section of the Draft AUAR will analyze the compatibility of development of the AUAR area with neighboring land uses and zoning. The development scenarios will be compared to surrounding areas to determine if the anticipated uses are compatible. Related changes and impacts to the AUAR area including land cover, transportation and view sheds will be referenced, but discussed in detail in their respective sections.

- c. **Identify measures incorporated into the proposed Project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.**

AUAR Scope

This section will address potential mitigation strategies needed to ensure compatibility between the proposed maximum development scenario, the existing surrounding areas, and planned land use. The need for necessary changes to the Comprehensive Plan, which may be completed as a future Comprehensive Plan Amendment or in a subsequent update of the Comprehensive Plan, will be discussed in the Draft AUAR.

11. Geology, Soils and Topography/Land Forms

- a. **Geology - Describe the geology underlying the Project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the Project and any effects the Project could have on these features. Identify any Project designs or mitigation measures to address effects to geologic features.**

Lot D Subarea

The surficial geology across the Lot D subarea has been mapped by the Minnesota Geological Survey's (MGS) Geologic Atlas of St. Louis County⁸ as consisting mostly of constructed land deposited anthropogenically. The northwestern portion of Lot D near the railroad and I-35 has been mapped as post-glacial floodplain and channelized fluvial deposits consisting of sand, gravel, cobbles, boulders, and sandy loam to silt loam. The southeastern portion of Lot D includes the Duluth/Superior Harbor shoreline and has been mapped as post-glacial lacustrine sediments consisting of silt, sand and clay (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Duluth Complex of the Midcontinent Rift Intrusive Supersuite. Specifically, the bedrock is part of the Anorthositic series, a suite of plagioclase-rich cumulates emplaced relatively synchronously across the entire Duluth Complex just prior to the emplacement of the layered series. The Anorthositic series can contain anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, leucogabbro and leucotroctolite (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between 101 and 250 feet. According to the Minnesota Department of Health (MDH) Minnesota Well Index (MWI),⁹ no wells were identified within the Lot D Subarea (Figure 9, Appendix B).

The igneous bedrock formations in the Lot D subarea are not susceptible to the formation of karst features.

Essentia Subarea

The surficial geology across the Essentia subarea has been mapped by MGS as glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay. These sediments are deposits of the Superior lobe and occur inland at the surface within approximately four miles of the present-day Lake Superior shoreline (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being mostly Mesoproterozoic age igneous rocks

⁸ MGS. Geologic Atlas of St. Louis County, Minnesota, C-51, Bauer, E.J.; Jirsa, M.A.; Block, A.R.; Boerboom, T.J.; Chandler, V.M.; Peterson, D.M.; Wagner, K.G.; McDonald, J.M.; Dengler, E.L.; Meyer, G.N.; Hamilton, J.D. 2022. Retrieved from the University of Minnesota Digital Conservancy. Available at: <https://conservancy.umn.edu/items/1cea310b-ca8d-4345-acfa-450ab8ca17e6>. Accessed September 2025.

⁹ MDH. Minnesota Well Index. Undated. Available at: <https://www.health.state.mn.us/communities/environment/water/mwi/index.html>. Accessed September 2025.

from the Keweenawan Supergroup of the Midcontinent Rift Intrusive Supersuite. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include undifferentiated basalt to basaltic andesite flows and porphyritic basalt. There is also a mapped intrusion called the Tunnel intrusion consisting of diabase (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, ten verified wells were identified within the Essentia Subarea (Figure 9, Appendix B). Five of these wells have well logs and stratigraphic records which indicate the wells intersected bedrock between zero and five feet beneath the surface. The well logs and stratigraphic records are available in Appendix E.

The igneous bedrock formations in the Essentia Subarea are not susceptible to the formation of karst features.

1st Street Subarea

The surficial geology across the 1st Street subarea has been mapped by MGS as mostly being glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay. A small portion in the southeast has been mapped as post-glacial floodplain and channelized fluvial deposits consisting of sand, gravel, cobbles, boulders, and sandy loam to silt loam. (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Midcontinent Rift Intrusive Supersuite. Specifically, the bedrock includes units from the Anorthositic series, miscellaneous intrusions, and components of the Keweenawan Supergroup. The Anorthositic series can contain anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, leucogabbro and leucotroctolite. The miscellaneous intrusions include two unnamed intrusions containing porphyritic ophitic olivine leucogabbro and ferromonzodiorite to granophyre, and a third intrusion called the Tunnel intrusion which contains diabase. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include icelandite, undifferentiated basalt to basaltic andesite, and porphyritic basalt (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, 13 verified wells were identified within the 1st Street Subarea (Figure 9, Appendix B). Ten of these wells have well logs and stratigraphic records which indicate the wells intersected bedrock between zero and 18 feet beneath the surface. The well logs and stratigraphic records are available in Appendix E.

The igneous bedrock formations in the 1st Street subarea are not susceptible to the formation of karst features.

Secondary Subarea

The surficial geology across the Secondary subarea has been mapped by MGS as glacial lacustrine sediments of the Barnum Formation, consisting of clay and silty clay (Figure 7, Appendix B).

The bedrock geology has been mapped by MGS as being Mesoproterozoic age igneous rocks from the Keweenawan Supergroup of the Midcontinent Rift Intrusive Supersuite. The components of the North Shore Volcanic Group identified within the Keweenawan Supergroup include undifferentiated basalt to basaltic andesite flow, porphyritic basalt, and interflow sandstone, siltstone, and conglomerate (Figure 8, Appendix B).

The depth to bedrock is mapped by MGS as being between zero and 50 feet. According to the MDH MWI, no wells were identified within the Secondary Subarea (Figure 9, Appendix B).

The igneous bedrock formations in the Secondary subarea are not susceptible to the formation of karst features.

AUAR Scope

The Draft AUAR will discuss construction in shallow bedrock in the AUAR area and the potential need for

blasting and identify appropriate mitigation measures as needed.

- b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from Project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after Project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.**

Table 7 below describes the 2024 United States Department of Agriculture (USDA) Soil Survey Geographic Database (SSURGO)¹⁰ soil map units within each Subarea of the AUAR area. Based on the SSURGO soils data, the majority of the AUAR area soils are expected to have shallow bedrock and large areas of disturbance related to previous development.

Lot D Subarea

Most of the Lot D subarea (approximately 74 percent) is mapped as some mix of Urban Land, Udorthents soils, and Aquents soil. The remaining area is mapped as water. The “Urban Land” designation is used to indicate areas of urban development and disturbance. These areas are highly altered from their natural condition and typically feature soils impacted by cutting, grading, filling, compaction, and impervious cover. Udorthents are also disturbed soils and are often found in areas affected by human activity. Aquents are soils formed in areas with frequent water saturation and are often found in coastal areas.

The Lot D subarea features a generally flat terrain, with an average elevation of approximately 610 feet. While most of the area maintains this elevation, the land transitions into a steep slope as it approaches the water’s edge, indicating a sharp drop in elevation near the shoreline.

Essentia Subarea

The entirety of the Essentia subarea is mapped as some mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. As described above, Urban Land indicates highly disturbed and urbanized areas. Rock Outcrop areas feature surficial (at or near surface) bedrock with little or no soil cover. Mesaba and Barto are glacial till soils formed in bedrock-controlled surfaces and feature approximately 12 to 30 inches of gravelly sandy loam or gravelly loam over bedrock.

The Essentia subarea features a steep slope, descending from approximately 840 feet in the northwest to around 620 feet in the southeast. The northern portion near St. Mary’s Hospital Heliport sits on higher ground while the terrain gets steeper near the southeastern edge as the land drops towards lower elevations near I-35 and the lakefront.

1st Street Subarea

Most of the 1st Street subarea (approximately 75 percent) is also mapped as a mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. Approximately 24 percent is mapped as a mix of Urban Land, Udorthents, and Aquents.

Similar to the Essentia subarea, the 1st Street subarea features a steep slope, descending from approximately 710 feet in the northwest to approximately 610 feet in the southeast.

Secondary Subarea

Most of the Secondary subarea (approximately 76 percent) is also mapped as a mix of Urban Land, Rock Outcrop, Mesaba soil and Barto soil. Approximately 22 percent of the subarea is mapped as a mix of

¹⁰ NRCS USDA. Soil Survey Geographic Database. 2024. Accessed September 2025 via ESRI ArcGIS Online Services

Urban Land, Amnicon soils, and Rock Outcrop. Amnicon is clayey glacial till formed through a combination of glacial processes, clay accumulation and climate-driven soil development.

The Secondary subarea also features a steep slope, descending from northwest to southeast. The highest elevation is approximately 800 feet on the western corner and the lowest elevation is approximately 650 feet near the eastern edge.

Table 7. Soil within the AUAR area

Map Unit Symbol	Map Unit Name	Hydrologic Group	Wind Erodibility Group	Water Erodibility Factor (K _f)	Acres	% of AUAR area
Lot D Subarea						
1028A	Urban land-Udorthents-Aquents complex, 0 to 8 percent slopes	No Rating	5	No Rating	13.7	73.9
W	Water	Not Applicable	Not Applicable	Not Applicable	4.8	26.1
Total					18.5	100.0
Essentia Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	82.8	100.0
Total					82.8	100.0
1st Street Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	105.7	74.8
1028A	Urban land-Udorthents-Aquents complex, 0 to 8 percent slopes	No Rating	5	No Rating	33.5	23.7
F160F	Rock outcrop-Mesaba-Barto complex, 18 to 60 percent slopes	No Rating	5	No Rating	2.1	1.5
Total					141.3	100.0
Secondary Subarea						
F163D	Urban land-Mesaba-Rock outcrop complex, 1 to 18 percent slopes	No Rating	5	No Rating	69.9	76.2
E25D	Urban land-Amnicon-Rock outcrop complex, 0 to 18 percent slopes	No Rating	6	No Rating	20.1	22.0
E23F	Miskoaki-Udifluvents, flooded, complex, 1 to 45 percent slopes	D	6	0.43	1.7	1.8
Total					91.7	100.0

The hydrologic soil groups are:

- **Group A:** Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

- **Group B:** Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained, or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
- **Group C:** Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- **Group D:** Soils having a very slow infiltration rate (high runoff potential). These consist chiefly of soils with high clay content, soils that have a high-water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.
- **Dual Groups:** Dual Group designations (A/D, B/D, or C/D) are used to indicate wet soils that belong to Group D due to a high water table but would meet the drainage or textural criteria for Group A, B, or C if drained. Dual Group soils should be treated as Group D soils in the absence of effective artificial drainage.

The soil erodibility factors are:

- **Wind Erodibility Group:** Soils are assigned a Wind Erodibility Group (WEG) rating based on their inherent vulnerability to soil particle detachment from wind forces. Values range from 1 (most erodible) to 8 (least erodible).
- **Water Erodibility Factor (K_f):** The Soil Erodibility Factor (K_f) is a unitless quantitative description of the inherent vulnerability of a soil to water erosion. It provides a measurement of soil particles' susceptibility to detachment from rain drops or surface runoff. Values range from 0.02 (least erodible) to 0.69 (most erodible).

Shallow bedrock, disturbed soils, gravelly soils, wet soils, and steep slopes create risks for water erosion, sloughing, and overall soil stability. Most of the soils throughout the AUAR area have undergone past development, with most areas having received past cut-fill, grading, and impervious surfaces which likely altered the characteristics beyond what can be interpreted from the SSURGO data. Non-disturbed areas of the AUAR area may have other limitations based on soil wetness, shallow bedrock, or other factors. Runoff rates may be high on steep slopes, previously disturbed areas, and areas of very shallow or exposed bedrock.

AUAR Scope

The Draft AUAR will address risk factors identified above and measures to mitigate soil stability and soil loss concerns.

12. 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, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the Project. Include MnDNR Public Waters Inventory number(s), if any.**

Surface Waters

Table 8 summarizes surface waters, wetlands, DNR Public Waters, and other waters with special designations within the AUAR area. The following paragraphs provide a summary of these features for each of the four subareas.

Lot D Subarea

A review of DNR geospatial data determined that there is one lake, the Duluth/Superior Harbor (also called the St. Louis River Estuary), within the Lot D subarea. The St. Louis River Estuary is designated as a lake of biological significance,¹¹ classified as outstanding. There are no state designated trout streams or lakes,¹² wildlife lakes,¹³ or migratory waterfowl feeding/resting lakes¹⁴ within the Lot D Subarea. The shoreland overlay zone associated with Lake Superior encompasses portions of Lot D.

The City of Duluth Streams dataset and the DNR Hydrography Dataset did not identify any streams or watercourses within the Lot D subarea.

Essentia Subarea

A review of DNR geospatial data determined that there are no lakes, state designated trout streams or lakes, wildlife lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the Essentia subarea.

The City of Duluth Streams dataset indicates Brewery Creek is located within the Essentia subarea.

1st Steet Subarea

A review of DNR geospatial data determined that there are no lakes, state designated trout streams or lakes, wildlife lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the 1st Street subarea.

The City of Duluth Streams dataset indicates Clarkhouse Creek is located within the 1st Street subarea.

Secondary Subarea

A review of DNR geospatial data determined that there are no lakes, migratory waterfowl feeding/resting lakes, or lakes of biological significance within the Secondary Subarea. The City of Duluth Streams dataset indicates Chester Creek, Greys Creek, and Brewery Creek are located within the Secondary subarea. Chester Creek is a trout stream, impaired water, and a DNR Public Water Watercourse.

Table 8. Surface Waters, Public Waters, and other Special Designations within the AUAR area

Water Resource	Type	PW ID / Kittle No. / Duluth Stream ID	Special Designation
Lot D Subarea			
Duluth/Superior Harbor (St. Louis River Estuary)	Lake	69129101 (69129100)	Public Water Basin, Impaired Lake, Lake of Biological Significance
Essentia Subarea			
Brewery Creek	Stream	E003470	None

¹¹ DNR. Lakes of Biological Significance. 2020. Available at: <https://gisdata.mn.gov/dataset/env-lakes-of-biological-significance>. Accessed September 2025.

¹² DNR. State Designated Trout Streams. 2020. Available at: <https://gisdata.mn.gov/dataset/env-trout-stream-designations>. Accessed September 2025.

¹³ DNR. Designated Wildlife Lakes. 2016. Available at: <https://gisdata.mn.gov/dataset/env-designated-wildlife-lakes>. Accessed September 2025.

¹⁴ DNR. Migratory Waterfowl Feeding and Resting Areas. 2016. Available at: <https://gisdata.mn.gov/dataset/env-migratory-waterfowl-areas>. Accessed January 2025.

Water Resource	Type	PW ID / Kittle No. / Duluth Stream ID	Special Designation
1st Street Subarea			
Clarkhouse Creek	Stream	W000110	None
Secondary Subarea			
Chester Creek	Stream	693861 / S-003 / E005930	Public Water Watercourse, Impaired Stream, Trout Stream
Greys Creek	Stream	E003980	None
Brewery Creek	Stream	E003470	None

DNR Public Waters

Figure 11, Appendix B identifies DNR Public Waters within and near the AUAR area.

Lot D Subarea

According to the DNR National wetland Inventory (NWI) Wetland Finder¹⁵ and geospatial data, one DNR Public Water Basin, Duluth/Superior Harbor (69129101), is located within the Lot D subarea. No Public Watercourses are located with the Lot D subarea.

Essentia Subarea

According to the DNR NWI Wetland Finder and geospatial data, there are no DNR Public Water Basins or Watercourses located within the Essentia subarea.

1st Steet Subarea

According to the DNR NWI Wetland Finder and geospatial data, there are no DNR Public Water Basins or Watercourses located within the 1st Street subarea.

Secondary Subarea

According to the DNR NWI Wetland Finder and geospatial data, one DNR Public Watercourse, Chester Creek (693861), is located within the Secondary Subarea. No Public Water Basins are located within the Secondary subarea.

Wetland Resources

The DNR NWI geospatial data identified two wetlands within the AUAR area. Figure 12, Appendix B shows NWI wetlands within and near the AUAR area. Table 9 identifies NWI wetlands within the AUAR area.

Lot D Subarea

The DNR NWI geospatial data identified one NWI feature, Lake Superior, within the Lot D subarea.

Essentia Subarea

No DNR NWI features were identified within the Essentia subarea.

¹⁵ DNR. NWI Wetland Finder. 2024. Available at: <https://wetland-finder.dnr.state.mn.us>. Accessed October 2025.

1st Steet Subarea

The DNR NWI geospatial data identified one wetland feature, a freshwater emergent wetland, within the 1st Street subarea.

Secondary Subarea

No DNR NWI features were identified within the Secondary subarea.

Table 9. Wetlands within the AUAR area

Wetland ID	Circular 39	Cowardin	Eggers and Reed	Acres within the Subarea
Lot D	Type 5	L1UBH	Lake	4.65
1 st Street Corridor	Type 1	PEM1A	Freshwater Emergent Wetland	0.82

MPCA 303d Impaired Waters List

A review of the MPCA's 2024 Impaired Waters List¹⁶ identified two impaired waters within the AUAR area (Figure 11, Appendix B). Lake Superior, Assessment Unit Identification (AUID 16-0001-00, is located adjacent to the AUAR area and is impaired for aquatic consumption due to the presence of mercury (Hg) and polychlorinated biphenyls (PCB). No Total Maximum Daily Load (TMDL) has been established for Lake Superior. Several aquatic invasive species (AIS) have been identified in Lake Superior and the St. Louis River including Eurasian watermilfoil, New Zealand mudsnail, round goby, ruffe, spiny waterflea, viral hemorrhagic septicemia (VHS), white perch and zebra mussels.¹⁷ Table 10 identifies impaired waters within the AUAR area.

Lot D Subarea

A review of the MPCA's Impaired Waters List identified one impaired lake, Duluth Superior Harbor, in the Lot D subarea. Duluth Superior Harbor, AUID 69-1291-01, is impaired for aquatic consumption due to the presence of toxaphene, PCB, dioxin, dichloro-diphenyl-trichloroethane (DDT), dieldrin, and mercury (Hg). No Total Maximum Daily Load (TMDL) has been established.

Essentia Health Medical Campus Subarea

A review of the MPCA's Impaired Waters List identified no impaired waters in the Essentia subarea.

1st Steet Subarea

A review of the MPCA's Impaired Waters List identified no impaired waters in the 1st Street subarea.

Secondary Subarea

A review of the MPCA's Impaired Waters List identified one impaired stream, Chester Creek, in the Secondary subarea. Chester Creek, Assessment Unit Identification (AUID) 04010102-545, is impaired for aquatic recreation due to the presence of Escherichia coli (E. coli) and for aquatic life due to chloride (Cl-). No Total Maximum Daily Load (TMDL) has been established.

¹⁶ MPCA. Impaired Wates Viewer. 2024. Available at: <https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=fcc5a12d2fd4b16bc95bb535d09ae82>. Accessed October 2025.

¹⁷ St. Louis County. County Land Explorer GIS map. 2023. Available at: <https://www.stlouiscountymn.gov/departments-a-z/economic-community-development/enterprise-gis/county-land-explorer>. Accessed October 2025.

Table 10. Impaired Waters within the AUAR area

Waterbody Name	AUID ¹	Affected Designated Use	Pollutant or Stressor	TMDL ² ID
Lot D Subarea				
Duluth/Superior Harbor	69-1291-01	Aquatic Consumption	Toxaphene, PCB-F, PCB-W, Dioxin, DDT, Dieldrin, Hg-F, Hg-W	None
Secondary Subarea				
Chester Creek	04010102-545	Aquatic Life and Aquatic Recreation	E. coli and Cl-	None

¹ Assessment Unit Identification (AUID)

² Total Maximum Daily Load (TMDL)

Floodway/Floodplain

Portions of the AUAR area along the Lake Superior shoreline and Chester Creek are within the regulated 100-year floodplain and 500-year floodplain. Figure 11, Appendix B shows 100-year floodplain and 500-year floodplain areas within the AUAR area.

Lot D Subarea

The Federal Emergency Management (FEMA) Flood Insurance Rate Map (FIRM) panel 27137C3788E generated through the National Flood Hazard Layer (NFHL) mapping tool¹⁸ indicates that the southern and eastern portions of the Lot D subarea is within Zone AE (coastal floodplain), an area regulated 100-year floodplain (one percent annual chance of flooding). The remainder of the Lot D subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the Lot D subarea.

Essentia Subarea

The FEMA FIRM panels 27137C3786E and 27137C3790E generated through the NFHL mapping tool indicates that the Essentia subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the Essentia subarea.

1st Steet Subarea

The FEMA FIRM panels 27137C3788E and 27137C3786E generated through the NFHL mapping tool indicate that the 1st Street subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the 1st Street subarea.

Secondary Subarea

The FEMA FIRM panel 27137C3790E generated through the NFHL mapping tool indicates that the Secondary subarea is within Zone X (area of minimal flood hazard). Appendix D provides the FEMA FIRMette for the Secondary subarea.

AUAR Scope

As part of the Draft AUAR, further analysis of the identified water resources will be conducted as needed. Avoidance, minimization, and mitigation strategies will also be identified to address potential impacts to the identified water resources.

¹⁸ FEMA. NFHL Viewer. 2025. Available at: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed October 2025.

- 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.**

A review of the MDH MWI identified 23 verified wells within the AUAR area.¹⁹ These wells are presented in Table 11 and Figure 9, Appendix B.

Lot D Subarea

A review of the MDH MWI identified no wells within the Lot D subarea. Based on a review of some wells located near the Lot D subarea, the depth to static water level ranges from approximately two to six feet.

Essentia Subarea

A review of the MDH MWI identified 10 verified wells within the Essentia subarea. Based on a review of the wells located in the Essentia subarea, where reported, the depth to static water level ranges from approximately six to nine feet.

1st Street Subarea

A review of the MDH MWI identified 13 verified wells within the 1st Street subarea. Based on a review of the wells located in the 1st Street Subarea, where reported, the depth to static water level ranges from approximately six to 10 feet.

Secondary Subarea

A review of the MDH MWI identified no verified wells within the Secondary subarea. Based on a review of the wells located in the Secondary subarea, which is adjacent to the Secondary subarea, where reported, the depth to static water ranges from approximately six to nine feet.

Table 11. MDH Well Records within the AUAR area

Well ID	Use Type	Status	Depth (ft.)	Static Water Level (ft.)
Essentia Subarea				
704162	Elevator	Active	50	-
758411	Monitoring	Sealed	9	6
669263	Monitoring	Sealed	12	-
669264	Monitoring	Sealed	12	-
698994	Monitoring	Sealed	10.5	9
669262	Monitoring	Sealed	12	-
704151	Elevator	Active	24	-
704152	Elevator	Active	42	-
739033	Elevator	Active	60	-
739032	Elevator	Active	54	-
1st Street Subarea				
701046	Monitoring	Sealed	10	-
701047	Monitoring	Sealed	13	-
703163	Monitoring	Sealed	16	10
454658	Air Conditioning	Sealed	312	-
533479	Elevator	Active	35	-
739031	Elevator	Active	56	-

¹⁹ MDH. Minnesota Well Index (MWI) Version 2.2.0. undated. Available at: <https://www.health.state.mn.us/communities/environment/water/mwi/index.html>. Accessed September 2025.

Well ID	Use Type	Status	Depth (ft.)	Static Water Level (ft.)
644513	Domestic	Active	11	-
704170	Elevator	Active	42	6
533478	Elevator	Active	34	-
739042	Elevator	Active	49	-
739041	Elevator	Active	49	10
533480	Elevator	Active	36	-
764826	Elevator	Active	34	-

According to the MDH Source Water Protection Map, the AUAR area is not within a MDH Wellhead Protection Area (WPA) or Drinking Water Supply Management Area (DWSMA). The AUAR area is within a Historical Source Water Assessment Area for surface water.²⁰

AUAR Scope

The Draft AUAR will address the potential of the development scenarios to impact groundwater resources.

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.*

The Western Lake Superior Sanitary District (WLSSD) serves a 530-square mile area that includes 17 municipal customers, including the City of Duluth. WLSSD conveys and treats approximately 36 million gallons per day (MGD) of wastewater. The flow and peak flow design capacity of the wastewater treatment facility (WWTF) is 48.4 MGD and 100 MGD, respectively.²¹ The Total suspended solids (TSS) and biochemical oxygen demand (BOD) design capacity of the WWTF is 112,000 lbs. per day and 121,000 lbs. per day, respectively.

The City of Duluth owns, operates, and maintains 53 wastewater pumping stations including five storage facilities with a storage capacity of 14 million gallons. The City's sanitary sewer infrastructure system is comprised of approximately 440 miles of collection sewer interceptors. Under existing conditions, the AUAR area is comprised of developed land that is connected to the City's sanitary sewer infrastructure.

AUAR Scope

The Draft AUAR will evaluate projected wastewater flows and loads generated by Development Scenario B and will qualitatively describe potential constraints of the existing wastewater system. Potential mitigation strategies required for the sanitary sewer system will be described in the Draft AUAR.

- 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. If septic systems are part of the Project, describe the availability of septage disposal options within the*

²⁰ DNR. Source Water Protection Web Map Viewer. undated. Available at: <https://experience.arcgis.com/experience/14825b159b2e4dc686736d98e39ebce7>. Accessed October 2025.

²¹ WLSSD. Comprehensive Wastewater Plan. Adopted in 2023, amended in 2025. Available at: <https://wlssd.com/wp-content/uploads/2025/04/WLSSD-Wastewater-Comprehensive-Plan-Amended-2025.pdf>. Accessed October 2025.

region to handle the ongoing amounts generated as a result of the Project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.

A subsurface sewage treatment system would not be proposed for Development Scenario B. The AUAR area would not be allowed to utilize SSTS, per City of Duluth ordinance, disallowing SSTS in areas served by municipal sewer.

- 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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects.*

Wastewater conveyed and treated by WLSSD is ultimately discharged into the St. Louis River. WLSSD treatment system staff closely monitor effluent discharged to the St. Louis River to prevent pollution. The WLSSD laboratory conducts regular sampling of effluent to ensure compliance with all State and Federal water quality standards.

AUAR Scope

The Draft AUAR will include a discussion of potential effects of wastewater discharge to surface water and considerations of climate trends on wastewater infrastructure and operations.

- ii. ***Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the Project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the Project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For Projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the Project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after Project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.***

Existing Conditions

Lot D Subarea

Lot D subarea is located along Duluth's waterfront in the Bayfront District adjacent to Lake Superior. The subarea is approximately 44 percent impervious, primarily consisting of a cement slab and associated roadways. The area contains contaminated soils, which is planned for remediation in 2026. The proposed remediation plan includes encapsulating the contaminated soil and constructing new development atop the resulting soil cap.

Essentia Subarea

The Essentia subarea encompasses approximately 83 acres with approximately 85 percent impervious surface coverage. The area includes three primary land use zones: institutional mixed-use, neighborhood mixed use and urban residential.

1st Street Subarea

The 1st Street subarea covers approximately 141 acres with approximately 85 percent impervious surface. Land use within this area is predominantly commercial business.

Secondary Subarea

The Secondary subarea spans approximately 92 acres with approximately 74 percent impervious surface coverage. The area includes a mix of institutional mixed-use and residential land uses.

Proposed Conditions

Development in all four subareas will be required to comply with applicable stormwater management requirements and Duluth zoning regulations. Available information for the areas indicates limited stormwater best management practice (BMP) measures are currently present in the subareas. A few large-scale sediment channels are present under I-35 that were constructed to manage runoff generated from the public roads, however, these channels also receive runoff that drains down the hillside from 6th Avenue West to 1st Avenue East. All potential and future development within the AUAR area is located below the bluff line in downtown Duluth, within one mile of Lake Superior, a designated impaired water and identified as a wetland in the NWI. Due to the area's history of industrial activity, numerous MPCA-listed contamination sites may require further investigation and mitigation. All future development within the AUAR area must comply with regulations from the City of Duluth, MPCA, DNR, and USACE as applicable. While general stormwater management standards apply across all subareas, mitigation will be anticipated in the AUAR and site-specific requirements may be addressed with AUAR updates as development plans are refined. AUAR updates as development plans are refined.

Stormwater management must meet both temporary and permanent requirements for volume control, rate control, and water quality treatment, as outlined in:

- City of Duluth Natural Resources Overlay (Section 50-18), which includes additional standards for areas below the bluff line.
- MPCA's NPDES/SDS Construction Stormwater Permit, including Section 23 provisions for discharges to Lake Superior, a designated Outstanding Resource Water.

Lot D Subarea

Inland's preliminary concept plan proposes two multifamily buildings and a hotel with parking. Lot D, an undeveloped parcel, may be subject to stricter water quality standards than redevelopment sites under city rules. Due to its proximity to Lake Superior the development will need to consider shoreland setback requirements and floodplain fill/mitigation.

Essentia Subarea

The Essentia subarea includes 18 potential redevelopment sites. Due to the variability of development plans and site-specific conditions related to stormwater infrastructure implementation, most sites will require an individual treatment system. Adjacent lots developed in similar time frames may benefit from regional stormwater treatment systems, which allow for shared infrastructure and reduce the need for 95 percent of impervious runoff capture at each site if it is managed within a regional treatment watershed. However, these systems require increased coordination with the City and property owners to identify limitations to development and responsibilities of shared systems.

1st Street Subarea

The 1st Street subarea anticipates redevelopment of properties with high impervious cover (85 percent or greater) such as existing parking lots, vacant land, or unoccupied buildings. These areas

are expected to be converted to mixed-use residential and commercial land uses, which typically have a maximum impervious percentage of 85 percent. As a result, changes to impervious areas – whether decreasing or increasing - will impact the stormwater requirements (e.g. rate and water quality) and selection of appropriate stormwater BMP(s) (e.g. pond or pond with filter bench). Similar to the Essentia subarea, identifying opportunities for regional treatment would be beneficial if impervious areas increase from existing conditions. This depends on the availability of land and future development plans for adjacent parcels.

Secondary Subarea

While most of the Secondary Redevelopment Area watershed drains directly to Lake Superior, the northern portion of the site is adjacent to Chester Creek, a designated trout stream. It is anticipated that additional site-specific stormwater BMPs requirements in proximity to Chester Creek would be required related to temperature and construction timing.

AUAR Scope

Generally, filtration practices are utilized within the City of Duluth for stormwater management due to the soil types, existing shallow and exposed bedrock, and shallow groundwater conditions. Therefore, infiltration-based BMPs may be infeasible across much of the AUAR area. Additionally, special design considerations may be required near contaminated sites. Therefore, hydraulic and water quality modeling would be needed to determine appropriate BMP sizing and design criteria. These efforts will also incorporate climate resilience strategies to address future precipitation patterns and extreme weather events.

- 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 MnDNR 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. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the Project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.***

The AUAR area is connected to municipal water services. The City of Duluth owns, operates, and maintains the Lakewood Water Treatment Plant which provides city water sourced from Lake Superior. The City also owns, operates, and maintains 15 water reservoirs. The water system is capable of providing a maximum of approximately 68 MGD of treated water. On average, the Lakewood Water Treatment Plant provides approximately 13 MGD of treated water. Projected water demands for the area would be utilized in planning additional distribution infrastructure. Any new distribution infrastructure would be constructed in accordance with the City of Duluth's current Water Master Plan or Comprehensive Plan and according to the City's Engineering Guidelines

AUAR Scope

Projected water demands for Development Scenario B and the capacity of the City's water system will be evaluated in the Draft AUAR. The AUAR will include a discussion of the influence of climate change and resiliency associated with the development scenario water use.

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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. 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.

Impacts to wetlands are regulated by the Minnesota Wetland Conservation Act (WCA) and the USACE under Section 404 of the Clean Water Act. The City of Duluth is the WCA local governmental unit (LGU) for the AUAR area. If wetland impacts associated with future development of the AUAR area are unavoidable, a wetland replacement plan will be required. Future developers would be required to demonstrate avoidance and minimization of wetland impacts to the greatest practicable extent. The USACE, LGU, and other appropriate stakeholders would be consulted during this process. The AUAR area is located within Bank Service Area (BSA) 1. Purchase of wetland bank credits may be used to provide mitigation if future proposed development were to result in unavoidable wetland impacts.

AUAR Scope

The Draft AUAR will include a desktop-level evaluation of potential impacts to wetlands within the AUAR area resulting from the development scenarios. Mitigation strategies will identify measures for avoidance, minimization, and mitigation for potential wetland impacts in accordance with local, state, and federal regulations.

- 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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. 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.***

AUAR Scope

As part of the Draft AUAR, potential impacts to surface waters resulting from Development Scenario B will be evaluated and measures to avoid, minimize, or mitigate impacts will be identified as applicable. BMPs will be proposed that are consistent with the requirements of the local, state, and federal regulations. The Draft AUAR will include a discussion of the potential for climate change to influence the impacts of future development within the AUAR area.

13. 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.

A review of MPCA's *What's in My Neighborhood* (WIMN) database²² was conducted to identify documented potentially contaminated sites within or in the vicinity of the AUAR area. Appendix F tabulates data from the WIMN database and Figure 13; Appendix B illustrates the location of potentially contaminated sites in close proximity to the AUAR area.

An additional review of the Minnesota Department of Agriculture (MDA) WIMN database²³ was conducted to identify documented potentially contaminated sites within or in the vicinity of the AUAR area. Three MDA spill or release sites were identified within the AUAR area or within a quarter-mile radius.

Lot D has a complex history of industrial use including lime manufacturing, scrap metal handling, oil storage, electrical equipment manufacturing, and warehouse/cold storage operations between the late 1800s and 1980s. Multiple environmental site assessments and investigations have been conducted since the early 1990s. These studies have identified contamination in soil, groundwater, and soil vapor, including exceedances of state and federal screening values for metals (arsenic, lead, mercury, cadmium, manganese), petroleum, hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, and volatile organic compounds. Soil vapor investigations have also indicated potential vapor intrusion risks.²⁴

Remedial actions have been implemented in both upland and adjacent harbor areas. In 2016, soils with elevated arsenic and PAHs were excavated, and a clean fill cap was placed over portions of the property. In 2018, the MPCA directed dredging and capping of approximately 6,700 cubic yards of contaminated sediment, addressing impacts from PAHs, PCBs, metals, and dioxins. Despite these actions, residual contamination remains in the Lot D subarea. A Response Action Plan and Construction Contingency Plan (CCP) was approved by the MPCA (dated October 7, 2025). The RAP/CCP identifies soil response actions related to site preparation. An implementation report describing completed response actions, sampling results, soil management and disposal and imported soils will be submitted to the MPCA.

More broadly, development activities across the AUAR area may also involve demolition of existing structures, which presents additional considerations related to regulated hazardous building materials. If future development proposes demolition of existing buildings within the AUAR area, there is potential for regulated hazardous building materials to be encountered. Common regulated materials in older structures include asbestos-containing materials, lead-based paint, mercury thermostats, fluorescent light ballasts containing PCBs, and other items subject to federal and state management requirements.

AUAR Scope

As part of the Draft AUAR, further review of available desktop resources will be conducted. The potential to encounter contamination and hazardous materials during site demolition and construction activities will be evaluated. Mitigation strategies consistent with state and federal laws will be developed for the Draft AUAR.

- 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.**

AUAR Scope

The Draft AUAR will identify solid waste that could be generated or stored from future development within the AUAR area, along with requirements for proper storage and disposal in accordance with state and federal regulations.

²² MPCA, 2025. *What's in My Neighborhood*. Available at: [What's in My Neighborhood | Minnesota Pollution Control Agency \(state.mn.us\)](https://www.mn.gov/what-in-my-neighborhood). Accessed October 2025.

²³ MDA, 2025. *What's in my Neighborhood? – Agricultural*. Available at: [What's In My Neighborhood \(arcgis.com\)](https://arcgis.com). Accessed October 2025.

²⁴ Barr Engineering Co. 2024. *Lot D Historical and Contamination Summary*. Memorandum prepared for the City of Duluth, May 21, 2024.

- 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 new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the Project will use. 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.***

AUAR Scope

The Draft AUAR will identify potential use and storage of hazardous materials and petroleum products from future development within the AUAR area, as well as requirements for their proper management in accordance with state and federal regulations.

- 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***

AUAR Scope

The Draft AUAR will identify potential generation and storage of hazardous wastes from future development within the AUAR area, along with requirements for managing these materials in accordance with state and federal regulations.

14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

- a. ***Describe fish and wildlife resources as well as habitats and vegetation on or near the site.***

The AUAR area consists of a developed, urban environment predominately comprised of impervious surfaces, with some limited wooded and wetland areas. Approximately 81 percent of the AUAR area consists of paved roadways and buildings based on land cover data. Vegetated areas within the AUAR area primarily consist of landscaped lawn. Figure 3, Appendix B illustrates land cover types within the AUAR area based on geospatial data. Item 8 (Cover Types) details land cover types identified within the AUAR area.

Wetland and vegetated areas within the AUAR may provide limited foraging or roaming habitat for a variety of urban wildlife species, including squirrels, rabbits, deer, coyotes, foxes, passerine birds, raptors, and other small mammals. Minor water features (e.g., intermittent water collection features, recognized as rain puddles or similar) could provide limited habitat for aquatic species such as turtles, fish, frogs, and toads within the AUAR area. Chester Creek, a designated trout stream, intersects the northern portion of the Secondary subarea. Lake Superior and the St. Louis River Estuary provide habitat for aquatic species, including Lake Sturgeon, a State Species Concern Species. Given the urban environment of the AUAR area, limited habitat resources are present within the AUAR area due to the isolation of habitat and extent of past disturbance from development.

- b. ***Describe rare features state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number and/or correspondence number from which the data were obtained and attach the Natural Heritage Review letter from the MnDNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.***

Native Plant Communities and Sites of Biodiversity Significance

Based on a review of the DNR Minnesota Conservation Explorer (MCE) portal and NHIS database, no native plant communities are present within one mile of the AUAR area. One Minnesota Biological Survey (MBS) site is located in proximity to the AUAR area.

One MBS site (Duluth Lakewalk to Lester River) borders the AUAR area starting in the 1st Street subarea and extends to the northern boundary of the Secondary subarea, along the Lake Superior shoreline. This MBS site has been determined to be below the minimum biodiversity threshold for statewide significance.

A formal NHIS review request was submitted to the DNR through the Minnesota Conservation Explorer (MCE) system for the AUAR area. An initial response for the AUAR area (MCE No. 2025-00850) was received from the DNR on October 15, 2025, and indicated that the review will be further evaluated by DNR NHIS staff. Appendix G provides the initial DNR MCE response letter. The final DNR NHIS review letter will be included with the Draft AUAR.

State – Listed Species

The NHIS search did indicate records within the AUAR area and its one-mile buffer zone. Records of no rare species, one threatened species, and six special concern species were identified within the AUAR area and one mile of the AUAR area:

Within AUAR Area

- Lake sturgeon (*Acipenser fulvescens*) – Special Concern

Within One-Mile Buffer of AUAR Area

- Least Moonwort (*Botrychium simplex*)– Special Concern
- Shortjaw Cisco (*Coregonus zenithicus*) – Special Concern
- Peregrine Falcon (*Falco peregrinus*) – Special Concern
- American Eel (*Anguilla rostrata*) – Special Concern
- Lake Chub (*Couesius plumbeus*) – Special Concern
- Common Tern (*Sterna Hirundo*) – Threatened

Federally – Listed Species

A review of the USFWS Information for Planning and Consultation (IPaC) tool identified four federally listed species and two proposed for federal listing with the potential to occur within the AUAR area, which are listed below. Appendix G includes the species lists generated through the USFWS IPaC review tool.

- Canada lynx (*Lynx canadensis*) – Threatened, Critical Habitat
- Gray wolf (*Canus lupus*) - Threatened
- Monarch butterfly (*Danaus plexippus*) – Proposed Threatened
- Suckley's Cuckoo Bumble Bee (*Bombus suckleyi*) – Proposed Endangered
- Rufa red knot (*Calidris canutus rufa*) – Threatened
- Piping Plover (*Charadrius melodus*) – Endangered

Migratory Birds

Twenty one migratory species have the potential to occur within the AUAR area. Suitable nesting habitat and construction timing will be considered when preparing the Draft AUAR to determine whether the development scenarios may affect nesting migratory Birds of Conservation Concern (BCC) in accordance with the Migratory Bird Treaty Act.

Nineteen migratory bird species listed as USFWS Birds of Conservation Concern (BCC) and two eagle species have the potential to occur within the AUAR area according to the USFWS IPaC review (Appendix G). These species and their habitat requirements are detailed in Table 12 using data from the

Cornell Lab of Ornithology.²⁵ The Draft AUAR will assess the habitat requirements for nesting, foraging, and/or migration, as applicable, for each bird species in Table 12.

Duluth is located within the Mississippi Flyway, one of four major migration paths used by birds during spring and fall migration. When migrating birds reach neighboring Lake Superior, many species are more likely to follow the lakeshore than cross open water; flying over land provides opportunities to stop and refuel while the open water frequently does not. Therefore, raptors are funneled over Hawk Ridge, a migration observatory in Duluth, each fall. Given that the AUAR area includes the Lake Superior shoreline, it is anticipated that large numbers of migrating birds pass over or near the AUAR area each spring and fall.

Table 12. Migratory Birds Listed as BCC with the Potential to Occur within the AUAR area

Common Name	Scientific Name
Bald Eagle*	<i>Haliaeetus leucocephalus</i>
Black Tern	<i>Chlidonias niger surinamensis</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Canada Warbler	<i>Cardellina canadensis</i>
Chimney Swift	<i>Chaetura pelagica</i>
Common Tern	<i>Sterna hirundo</i>
Connecticut Warbler	<i>Oporornis agilis</i>
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>
Evening Grosbeak	<i>Coccothraustes vespertinus</i>
Golden Eagle*	<i>Aquila chrysaetos</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>
Le Conte's Sparrow	<i>Ammodramus leconteii</i>
Lesser Yellowlegs	<i>Tringa flavipes</i>
Long-eared Owl	<i>Asio otus</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Pectoral Sandpiper	<i>Calidris melanotos</i>
Ruddy Turnstone	<i>Arenaria interpres morinella</i>
Veery	<i>Catharus fuscescens fuscescens</i>
Whimbrel	<i>Numenius phaeopus hudsonicus</i>
Wood Thrush	<i>Hylocichla mustelina</i>
*These species are not listed as BBC but warrant special attention under the Bald and Golden Eagle Protection Act (BGEPA).	

- c. **Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the Project including how current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the effects. 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.**

AUAR Scope

A desktop assessment (i.e., using aerial photographs and publicly available information) will be completed to evaluate the potential for impacts to fish, wildlife, plant communities, threatened and

²⁵ Cornell Lab of Ornithology, 2024. All About Birds. Ithaca, New York. Available at: <https://www.allaboutbirds.org/news/#>. Accessed October 2025.

endangered species, migratory birds, rare features, and ecosystems as a result of Development Scenario B.

The Draft AUAR will identify habitat requirements for state and federally listed species: the lake sturgeon, least moonwort, shortjaw cisco, peregrine falcon, American eel, lake chub, common tern, Canada lynx, gray wolf, monarch butterfly, Suckley's cuckoo bumble bee, rufa red knot, and piping plover. The Draft AUAR will assess potential impacts to these species and determine if suitable habitat for these species will be impacted by future development within the AUAR area. The Draft AUAR will also discuss how climate trends may influence the effects of future development on these species.

Construction activities that involve soil disturbance can result in the introduction and spread of invasive species. The Draft AUAR will identify potential permit requirements related to noxious weeds and invasive species management and will provide a discussion of recommended BMPs during construction and operation.

- d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.**

AUAR Scope

The Draft AUAR will evaluate the potential for future development within the AUAR area to affect suitable habitat for protected species and mitigation strategies to avoid, minimize, or mitigate potential impacts as applicable. Mitigation strategies will include considerations for bird-safe building design recommendations to minimize potential impacts to migratory birds.

15. 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 on historic properties during Project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects on historic properties.

The AUAR area is primarily comprised of a developed, urban area which has been previously disturbed. As described in Item 10 (Land Use), the majority of the AUAR area consists of a mix of residential, commercial, and institutional uses. The Lot D subarea is a vacant, former industrial property.

The Minnesota Office of the State Archaeologist (OSA) portal provides an inventory of publicly-available archaeological and cultural resource sites mapped at the Public Land Survey System (PLSS) township-level. Based on review of this database, there are two OSA sites extend into the 1st Street and Essentia subareas.

Publicly available data from the Minnesota Statewide Historic Inventory portal (MnSHIP) was also reviewed to identify historic sites and districts within the AUAR area. A total of 475 records were reported in the AUAR area. Appendix H presents the publicly available data obtained for the MnSHIP portal database for each subarea.

AUAR Scope

The Draft AUAR will include a detailed desktop review of the Minnesota SHPO and OSA databases, local historic landmark and historic district data, and other applicable resources to identify to evaluate the potential for cultural resources to be affected by development within the AUAR area. The need for additional cultural resources investigations will be discussed as a part of the mitigation plan for the Draft AUAR. Comments on the Scoping EAW received from SHPO will be considered as a part of the development of the Draft AUAR.

16. 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.

AUAR Scope

The AUAR area consists of a developed, urban environment. The natural environment is largely limited to landscaped vegetation within limited lawn space and wooded areas. The AUAR area includes approximately two miles of Lake Superior shoreline. Residential neighborhoods surround the AUAR area.

The analysis in the Draft AUAR will identify any scenic views of community importance that should be protected and/or mitigated as part of the AUAR. Potential visual effects of future development within the AUAR area will be qualitatively assessed in the Draft AUAR. Mitigation measures may include recommendations for zoning overlays or other interventions to protect views of community importance, landscape screening, vegetative buffers, adjustment of lighting recommendations, and other measures in accordance with the City's zoning code.

17. 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. 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.

In accordance with the EQB's AUAR guidance document²⁶, this item is not applicable to an AUAR as any stationary air emission sources large enough to merit environmental review would require individual review.

AUAR Scope

The Draft AUAR will include a qualitative discussion of potential sources of low-level air emissions typically associated with the development scenarios. Development Scenario B does not propose industrial uses that would have the potential to result in new stationary source emissions.

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.

Motorized vehicles affect air quality by emitting airborne pollutants. The changes in traffic volumes, travel patterns, and roadway locations for development Scenario B may affect air quality by changing the number of vehicles and the congestion levels in the AUAR area. It is not anticipated that Scenario B would include transportation improvement projects that would be considered regionally significant per 40 CFR Part 93.

Criteria pollutants identified by the U.S. Environmental Protection Agency (EPA) are ozone, particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO₂), lead, and sulfur dioxide (SO₂). In Minnesota, air quality analysis for transportation projects primarily addresses localized CO emissions and Mobile Source Air Toxics (MSATs). The AUAR area (St. Louis County) is not located within a nonattainment area for criteria pollutants. The AUAR area is located within a maintenance area for Carbon Monoxide (1971

²⁶ EQB. Alternative Urban Areawide Review Documents: Recommended Content and Format. Updated September 2008. <https://www.eqb.state.mn.us/sites/eqb/files/documents/AUAR%20guidance%20%28form%29%20-9-09.pdf>. Accessed September 2025.

standard), designated in June 1994.²⁷

AUAR Scope

The Draft AUAR will include a qualitative vehicle emissions assessment conducted in accordance with MnDOT air quality analysis guidance.²⁸ It is not anticipated that a quantitative air quality analysis for CO or MSATs would be required.

- 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 17a). 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.***

AUAR Scope

Dust and odors may be of concern during construction of future development projects. The Draft AUAR will document city ordinances and codes pertaining to dust and odors and identify sensitive receptors in the vicinity of the AUAR area. Minimization and mitigation strategies for the AUAR area will be developed.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

- a. *GHG Quantification: For all proposed Projects, provide quantification and discussion of Project GHG emissions. Include additional rows in the tables as necessary to provide Project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.***

AUAR Scope

The Minnesota Environmental Quality Board's (EQB's) EAW climate adaptation and resilience guidance (June 2024)²⁹ will be used to develop the carbon footprint for the Draft AUAR. Greenhouse gas emissions will be calculated for existing conditions (baseline, development Scenario A) and the construction and operation of Development Scenario B. Land use changes will also be included in the greenhouse gas quantification.

Readily available emission calculation tools such as U.S. EPA's Simplified Greenhouse Gas Emissions Calculator (SGEC) Tool or other acceptable methods would be used for the calculations. The SGEC Tool uses building square footage to estimate natural gas and electricity usage for various building types. Construction emissions would be calculated for each development scenario based on the number and type of mobile equipment needed. Greenhouse gas emissions from the equipment exhaust would be calculated using U.S. EPA emission factors.

Summary tables will be provided for the development scenarios, summarizing construction and operation emissions.

- b. *GHG Assessment***

- i. *Describe any mitigation considered to reduce the Project's GHG emissions.***

²⁷Environmental Protection Agency. EPA Green Book. Updated August 2025. Available at: https://www3.epa.gov/airquality/greenbook/anayo_mn.html. Accessed September 2025.

²⁸ MnDOT. Air Quality Process. <http://www.dot.state.mn.us/project-development/subject-guidance/air-quality/process.html>. Accessed September 2025.

²⁹ EQB. Environmental Assessment Worksheet (EAW) Guidance. June 2024 https://www.eqb.state.mn.us/sites/eqb/files/2024_eaw_climate_guidance_2.pdf. Accessed September 2025.

AUAR Scope

Reductions in greenhouse gas emissions associated with Development Scenario B compared to the baseline Development Scenario A will be described in the Draft AUAR. Potential mitigation measures will be identified, such as energy efficient lighting or other building efficiency specifications. Specific mitigation measures would be identified at the time that specific projects are proposed within the AUAR.

- ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the Project's GHG emissions. Explain why the selected mitigation was preferred.**

AUAR Scope

Potential opportunities for GHG emissions reductions will be qualitatively evaluated as part of the Draft AUAR. At the time that specific projects are proposed within the AUAR and design details are available, potential GHG emissions reductions may be quantified.

- iii. Quantify the proposed Projects predicted net lifetime GHG emissions (total tons/# of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.**

AUAR Scope

The net lifetime greenhouse gas emissions will be presented for development scenarios, along with a discussion of how the scenarios affect the state's greenhouse gas reduction goals.

19. 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.

In accordance with the EQB's AUAR guidance document³⁰, it is not required to address construction noise unless there is some unusual reason to do so. No unusual circumstances are anticipated for the development scenarios that would warrant conducting a quantitative noise analysis.

The State of Minnesota's noise rules (Minn. Rules Ch. 7030) establish noise limits by noise area classifications (NACs) based on land use at the location of the person that hears noise. The MPCA enforces noise standards at industrial facilities for which it has issued an air permit. MnDOT is responsible for state highway noise mitigation and coordinates with the Federal Highway Administration (FHWA) and the MPCA to evaluate road projects for noise impacts and possible mitigation measures.

Noise impacts in Minnesota are evaluated by measuring and/or modeling the noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the loudest scenario. These numbers are identified as the L10 and L50 levels, respectively. The L10 value is the noise level that is exceeded for a total of 10 percent, or six minutes, of an hour. The L50 value is the noise level that is exceeded for a total of 50 percent, or 30 minutes, of an hour.

For traffic noise analyses, traffic volume, types of vehicles, operating speed, topography, and distance from the road to the receptor influences the traffic noise level at the receptor. The sound level decreases as distance from a source increases. A general rule regarding sound level decrease due to increasing distance from a line source (roadway) that is commonly used is: beyond approximately 50 feet from the sound source, each doubling of distance from the line source over hard ground (such as pavement or water) will reduce the

³⁰ EQB. Alternative Urban Area-wide Review Documents: Recommended Content and Format. Updated September 2008. <https://www.eqb.state.mn.us/sites/default/files/documents/AUAR%20guidance%20%28form%29%20-9-09.pdf>

sound level by 3 dBA, whereas each doubling of distance over soft ground (such as vegetated or grassy ground) results in a sound level decrease of 4.5 dBA.

1) *Existing noise levels/sources in the area*

Existing noise is dominated by I-35 through downtown Duluth, Mesaba Avenue, London Road, and downtown arterial streets. Secondary sources include port and industrial activity along the waterfront, commercial loading/unloading activities in downtown, and event activity at the Bayfront Festival Park and Canal Park.

Lot D Subarea

Current noise levels are influenced by adjacent port facilities, I-35 vehicle traffic, Bayfront Festival Park traffic and event noise, and rail corridors.

Essentia Subarea

The existing medical campus produces noise from patient and visitor vehicle traffic, ambulance and emergency vehicles, and service deliveries.

1st Street Subarea

Noise is currently generated by vehicle traffic, transit operations, and downtown commercial activity.

Secondary Subarea

East of downtown, traffic on London Road and adjacent commercial uses are the dominant noise contributors.

2) *Nearby sensitive receptors*

Sensitive receptors within and adjacent to the AUAR area include residential neighborhoods west of downtown, hillside neighborhoods overlooking the central business district, residences and hotels in Canal Park, the Essentia Health Medical Campus, nearby schools and waterfront recreational areas.

Lot D Subarea

Sensitive receptors in proximity include Canal Park hotels and residences, and recreational/event users at Bayfront Festival Park. Pier B Hotel is adjacent to the Lot D subarea.

Essentia Subarea

Sensitive receptors would include patients and facilities at the hospital and medical campus, and hotels and residences, including the Sheraton Duluth Hotel, and nearby residential neighborhoods.

1st Street Subarea

Receptors include mixed-use, residential buildings, and hotels within the corridor and adjacent hillside neighborhoods. Hotels in the 1st Street subarea include the Radisson Hotel Duluth – Harborview and Holiday Inn & Suites Downtown.

Secondary Subarea

Receptors include residential blocks east of downtown, St. Luke's Hospital, schools along London Road, and parks and trails along the Lakewalk.

3) *Conformance to State noise standards*

Minnesota’s noise pollution rules³¹ are based on statistical measurements that describe noise levels over a one-hour monitoring period. Two key values are used: L₁₀, the sound level exceeded 10 percent of the time (equivalent to six minutes per hour), and L₅₀ the sound level exceeded 50 percent of the time (30 minutes per hour). The rules do not establish an absolute maximum noise level.

For residential locations (Noise Area Classification 1), the daytime limits (7:00 a.m. – 10:00 p.m.) are 65 dBA for L₁₀ and 60 dBA for L₅₀ while the nighttime limits (10:00 p.m. – 7:00 a.m.) are 55 dBA for L₁₀ and 50 dBA for L₅₀. In practice, this means that during a one-hour period, daytime noise levels cannot exceed 65 dBA for more than 10 percent of the time or 60 dBA for more than 50 percent of the time. Table 12 provides a summary of the Noise Area Classifications and associated standards.

Table 13. Noise Area Classifications

NAC	Common land use associated with the Noise Area Classification	Daytime (dBA)		Nighttime (dBA)	
		L ₁₀	L ₅₀	L ₁₀	L ₅₀
1	Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services	65	60	55	50
2	Retail, business and government services, recreational activities, transit passenger terminals	70	65	70	65
3	Manufacturing, fairgrounds and amusement parks, agricultural and forestry activities	80	75	80	75

NACs are determined by the land use at the location where the noise is received, which does not always correspond to the zoning designation of the area. As a result, noise generated by an industrial facility adjacent to residential properties is subject to NAC 1 standards if it can be heard on those residential parcels.

By state law, all future development within the AUAR area must comply with Minnesota’s noise standards. In addition, future land uses must comply with local noise requirements under Duluth’s Legislative Code, which incorporates the City’s ordinances.

AUAR Scope

Area-specific evaluations in the Draft AUAR will assess whether operational noise from maximum development could approach NAC limits. Where necessary, design strategies (setbacks, orientation, landscaping) or operational measures will be identified to maintain compliance.

4) *Quality of life*

Maximum development would likely increase background noise levels. However, these changes are anticipated to remain consistent with those of a typical urban environment. Quality of life considerations would focus on residential livability in adjacent hillside neighborhoods, lodging and residential uses in Canal Park, the sensitivity of medical campus operations within the Essentia Health Medical Campus, and recreational use of the waterfront and Lakewalk.

AUAR Scope

The Draft AUAR will evaluate the potential quality of life impacts resulting from operational noise generated by the development scenarios. Mitigation strategies will be identified as applicable.

³¹ More information on Minnesota Noise rules, [Minn. Rules Ch. 7030](https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf), may be found at: <https://www.pca.state.mn.us/sites/default/files/p-gen6-01.pdf>

20. 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.**

AUAR Scope

Per EQB's *AUAR Recommended Content and Format* guidance³², a traffic analysis is required in accordance with the Minnesota Department of Transportation (MnDOT) Traffic Impact Study (TIS) Guidance³³ and local guidance. MnDOT guidance establishes that a TIS is triggered if development generates more than 250 peak-hour vehicle trips or 2,500 average daily trips.

Given the scale of the AUAR area and that, with the exception of Lot D, specific development plans are not currently available, a comprehensive TIS will not be prepared for the entire AUAR area. Instead, the Draft AUAR will provide a qualitative discussion of the existing transportation network and the capacity of major roadway corridors.

For the Lot D subarea, a concept plan is currently proposed by Inland and a TIS will be prepared for the development for Lot D. The TIS will assess the following study intersections:

- Garfield Avenue/Railroad Street
- Railroad Street/5th Avenue W
- Harbor Drive/5th Avenue W
- I-35 northbound ramps/Harbor Drive
- I-35 southbound ramps/Harbor Drive
- Railroad Street/Harbor Drive

- 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.**

AUAR Scope

The Draft AUAR will evaluate the potential effects of Development Scenario B on traffic congestion and roadway performance, focusing on major corridors such as I-35, Mesaba Avenue, London Road, and key downtown arterials. For the overall AUAR area, this analysis will remain qualitative, emphasizing network capacity and existing travel patterns.

For Lot D, the dedicated TIS will provide a quantitative assessment of traffic operations at the identified intersections. The analysis will develop in peak-hour trip generation estimates for the proposed development and evaluate intersection operations for the existing and proposed conditions.

- c. **Identify measures that will be taken to minimize or mitigate Project related transportation effects.**

³² Minnesota Environmental Quality Board (EQB). *Recommended Content and Format for AUAR Documents*. September 2008.

³³ Minnesota Department of Transportation (MnDOT). *Traffic Impact Study (TIS) Guidance*. Available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>. Accessed October 2025

AUAR Scope

As part of the TIS to be prepared for the Lot D subarea, mitigation measures will be identified if warranted by study results.

21. Cumulative Potential Effects

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

- a. ***Describe the geographic scales and timeframes of the Project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.***

AUAR Scope

The cumulative potential effects analysis will consider land adjacent to and within approximately a one-mile radius of the AUAR area. This scale captures the neighborhoods, commercial districts, waterfront, and transportation corridors most likely to experience the combined effects of the development within the AUAR area. Maximum development under Development Scenario B is anticipated to occur in phases over several years, depending on market conditions. The cumulative potential effects analysis will consider reasonably foreseeable projects that are funded or planned for construction within the next ten years.

- b. ***Describe any reasonably foreseeable future Projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed Project within the geographic scales and timeframes identified above.***

AUAR Scope

The Draft AUAR will include a review of reasonably foreseeable projects that may interact with environmental effects of the development scenarios within the identified geographic scale and timeframe. Desktop sources to be consulted will include the EQB's Environmental Review Projects Database,³⁴ the City of Duluth's capital improvement and redevelopment planning documents, MnDOT construction schedules, and St. Louis County public works projects. Additional input will be obtained from City of Duluth staff regarding current and planned development, transportation improvements, and downtown infrastructure projects.

- c. ***Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.***

AUAR Scope

If reasonably foreseeable projects are identified under Item 21.a, the Draft AUAR will evaluate how their environmental effects could interact with those of the development scenarios.

22. 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 how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No other potential environmental effects are anticipated that are not addressed by Items 1 through 21.

³⁴ EQB. Environmental Review Projects Database. <https://webapp.pca.state.mn.us/eqb-search/search>

Appendix A

List of Parcels within the AUAR area

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0173-00040
1st St	010-0410-00010
1st St	010-0410-00020
1st St	010-0410-00050
1st St	010-0410-00055
1st St	010-0410-00080
1st St	010-0410-00150
1st St	010-0410-00180
1st St	010-0410-00210
1st St	010-0410-00220
1st St	010-0410-00240
1st St	010-0410-00250
1st St	010-0410-00270
1st St	010-0410-00320
1st St	010-0410-00390
1st St	010-0410-00420
1st St	010-0410-00530
1st St	010-0410-00540
1st St	010-0410-00550
1st St	010-0410-00570
1st St	010-0410-00580
1st St	010-0410-00590
1st St	010-0410-00630
1st St	010-0410-00640
1st St	010-0410-00650
1st St	010-0410-00660
1st St	010-0410-00680
1st St	010-0410-00690
1st St	010-0410-00700
1st St	010-0410-00710
1st St	010-0410-00720
1st St	010-0410-00730
1st St	010-0410-00750
1st St	010-0410-00760
1st St	010-0410-00780
1st St	010-0410-00790
1st St	010-0410-00800
1st St	010-0410-00840
1st St	010-0410-00860
1st St	010-0410-00880
1st St	010-0410-00930
1st St	010-0410-00990
1st St	010-0410-01035
1st St	010-0410-01090
1st St	010-0410-01110
1st St	010-0410-01130
1st St	010-0410-01150
1st St	010-0410-01170
1st St	010-0410-01200
1st St	010-0410-01210
1st St	010-0410-01250

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0410-01290
1st St	010-0410-01330
1st St	010-0410-01340
1st St	010-0410-01350
1st St	010-0410-01370
1st St	010-0410-01390
1st St	010-0410-01411
1st St	010-0910-00020
1st St	010-0910-00090
1st St	010-0910-00180
1st St	010-0910-00200
1st St	010-0910-00220
1st St	010-0910-00230
1st St	010-0910-00240
1st St	010-0910-00260
1st St	010-0910-00270
1st St	010-0910-00280
1st St	010-0910-00290
1st St	010-0910-00420
1st St	010-0910-00435
1st St	010-0920-00020
1st St	010-0920-00030
1st St	010-0920-00050
1st St	010-0920-00060
1st St	010-0920-00070
1st St	010-0920-00080
1st St	010-0920-00120
1st St	010-0920-00125
1st St	010-0920-00130
1st St	010-0920-00140
1st St	010-0920-00160
1st St	010-0920-00180
1st St	010-0920-00210
1st St	010-0920-00230
1st St	010-0920-00260
1st St	010-0920-00270
1st St	010-0920-00280
1st St	010-0920-00300
1st St	010-0920-00320
1st St	010-0920-00410
1st St	010-0920-00421
1st St	010-0920-00422
1st St	010-0920-00440
1st St	010-0920-00450
1st St	010-0920-00460
1st St	010-0920-00470
1st St	010-0920-00480
1st St	010-0920-00490
1st St	010-0920-00500
1st St	010-0920-00510
1st St	010-0920-00540

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0920-00550
1st St	010-0920-00625
1st St	010-0930-00010
1st St	010-0930-00030
1st St	010-0930-00040
1st St	010-0930-00050
1st St	010-0930-00060
1st St	010-0930-00070
1st St	010-0930-00090
1st St	010-0930-00095
1st St	010-0930-00170
1st St	010-0930-00175
1st St	010-0930-00240
1st St	010-0930-00270
1st St	010-0930-00290
1st St	010-0930-00320
1st St	010-0930-00330
1st St	010-0930-00340
1st St	010-0930-00440
1st St	010-0930-00452
1st St	010-0930-00500
1st St	010-0930-00510
1st St	010-0930-00520
1st St	010-0930-00530
1st St	010-0930-00535
1st St	010-0930-00540
1st St	010-0930-00550
1st St	010-0930-00560
1st St	010-0930-00580
1st St	010-0930-00600
1st St	010-0930-00620
1st St	010-0930-00622
1st St	010-0930-00630
1st St	010-0930-00640
1st St	010-0930-00650
1st St	010-0930-00670
1st St	010-0930-00680
1st St	010-0930-00700
1st St	010-0930-00720
1st St	010-0930-00740
1st St	010-0930-00760
1st St	010-0930-00780
1st St	010-0930-00800
1st St	010-0930-00810
1st St	010-0930-00840
1st St	010-0940-00010
1st St	010-0940-00030
1st St	010-0940-00040
1st St	010-0940-00060
1st St	010-0940-00062
1st St	010-0940-00065

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0940-00066
1st St	010-0940-00085
1st St	010-0940-00086
1st St	010-0940-00090
1st St	010-0940-00130
1st St	010-0940-00150
1st St	010-0940-00160
1st St	010-0940-00180
1st St	010-0940-00200
1st St	010-0940-00220
1st St	010-0940-00240
1st St	010-0940-00290
1st St	010-0940-00300
1st St	010-0940-00302
1st St	010-0940-00303
1st St	010-0940-00320
1st St	010-0940-00330
1st St	010-0940-00340
1st St	010-0940-00350
1st St	010-0940-00360
1st St	010-0940-00380
1st St	010-0940-00420
1st St	010-0940-00430
1st St	010-0940-00450
1st St	010-0940-00460
1st St	010-0940-00480
1st St	010-0940-00570
1st St	010-0940-00580
1st St	010-0940-00590
1st St	010-0940-00610
1st St	010-0940-00630
1st St	010-0940-00650
1st St	010-0940-00670
1st St	010-0940-00680
1st St	010-0940-00690
1st St	010-0940-00700
1st St	010-0940-00710
1st St	010-0940-00712
1st St	010-0940-00720
1st St	010-0940-00725
1st St	010-0940-00730
1st St	010-0940-00770
1st St	010-0940-00790
1st St	010-0940-00820
1st St	010-0940-00840
1st St	010-0940-00850
1st St	010-0940-00860
1st St	010-0940-00870
1st St	010-0940-00880
1st St	010-0940-00920
1st St	010-0940-00960

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0940-00980
1st St	010-0940-00985
1st St	010-0940-01020
1st St	010-0940-01070
1st St	010-0940-01100
1st St	010-0940-01120
1st St	010-0940-01130
1st St	010-0940-01150
1st St	010-0940-01170
1st St	010-0940-01200
1st St	010-0940-01245
1st St	010-0940-01250
1st St	010-0940-01255
1st St	010-0950-00520
1st St	010-0950-00550
1st St	010-0950-00560
1st St	010-0950-00570
1st St	010-0950-00580
1st St	010-0950-00590
1st St	010-0950-00600
1st St	010-0950-00620
1st St	010-0950-00622
1st St	010-0950-00660
1st St	010-0950-00700
1st St	010-0950-00720
1st St	010-0950-00740
1st St	010-0950-00790
1st St	010-0950-00820
1st St	010-0950-00830
1st St	010-0950-00850
1st St	010-0950-00870
1st St	010-0950-00880
1st St	010-0960-00490
1st St	010-0960-00510
1st St	010-0960-00530
1st St	010-0960-00560
1st St	010-0960-00580
1st St	010-0960-00600
1st St	010-0960-00640
1st St	010-0960-00760
1st St	010-0960-00790
1st St	010-0960-00800
1st St	010-0960-00820
1st St	010-0960-00830
1st St	010-0960-00850
1st St	010-0960-00870
1st St	010-0960-00890
1st St	010-0960-01010
1st St	010-0960-01050
1st St	010-0960-01055
1st St	010-0960-01060

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-0960-01070
1st St	010-0960-01080
1st St	010-1250-00300
1st St	010-1270-00050
1st St	010-1230-00052
1st St	010-1230-00055
1st St	010-1230-00083
1st St	010-1230-00085
1st St	010-1230-00087
1st St	010-1230-00088
1st St	010-1230-00089
1st St	010-1230-00140
1st St	010-1230-00145
1st St	010-1230-00200
1st St	010-1230-00201
1st St	010-1230-00220
1st St	010-1230-00230
1st St	010-1230-00250
1st St	010-1230-00260
1st St	010-1230-00280
1st St	010-1230-00380
1st St	010-1230-00440
1st St	010-1230-00480
1st St	010-1230-00490
1st St	010-1230-00500
1st St	010-1230-00550
1st St	010-1230-00580
1st St	010-1230-00660
1st St	010-1230-00670
1st St	010-1230-01700
1st St	010-1230-01710
1st St	010-1230-01720
1st St	010-1230-01900
1st St	010-1230-01902
1st St	010-1230-01910
1st St	010-1230-01960
1st St	010-1230-02000
1st St	010-1230-02002
1st St	010-1230-02100
1st St	010-1230-02105
1st St	010-1230-02330
1st St	010-1230-02340
1st St	010-1230-02360
1st St	010-1230-02380
1st St	010-1230-02400
1st St	010-1230-02460
1st St	010-2710-06505
1st St	010-2710-06506
1st St	010-2710-06507
1st St	010-3595-00010
1st St	010-3595-00020

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
1st St	010-3595-00020
1st St	010-3595-00020
1st St	010-3595-00030
1st St	010-3595-00040
1st St	010-3595-00050
1st St	010-3943-00010
1st St	010-3957-00010
1st St	010-3957-00020
1st St	010-3964-00050
1st St	010-4448-00001
1st St	Unidentified
1st St	Unidentified
1st St	010-0410-00120
1st St	010-0410-00130
Essentia	010-0172-00930
Essentia	010-0172-00940
Essentia	010-0172-00950
Essentia	010-0990-00320
Essentia	010-0990-00420
Essentia	010-0990-00440
Essentia	010-0990-00460
Essentia	010-0990-00490
Essentia	010-0990-00510
Essentia	010-0990-00520
Essentia	010-0990-00540
Essentia	010-0990-00570
Essentia	010-0990-00580
Essentia	010-0990-00585
Essentia	010-0990-00610
Essentia	010-0990-00620
Essentia	010-0990-01120
Essentia	010-0990-01180
Essentia	010-0990-01210
Essentia	010-0990-01310
Essentia	010-0990-01320
Essentia	010-0990-01350
Essentia	010-0990-01360
Essentia	010-0930-00370
Essentia	010-1010-00810
Essentia	010-1010-00860
Essentia	010-1010-00870
Essentia	010-1010-00880
Essentia	010-1010-00900
Essentia	010-1010-00930
Essentia	010-1010-00950
Essentia	010-1010-00960
Essentia	010-1010-00970
Essentia	010-1010-00980
Essentia	010-1010-01700
Essentia	010-1010-01710
Essentia	010-1010-01760

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-1010-01800
Essentia	010-1010-01815
Essentia	010-1010-01830
Essentia	010-1010-01920
Essentia	010-1010-01930
Essentia	010-1010-01940
Essentia	010-1010-01950
Essentia	010-0950-00330
Essentia	010-0950-00980
Essentia	010-0950-01010
Essentia	010-0950-01020
Essentia	010-0950-01030
Essentia	010-0950-01040
Essentia	010-0970-00320
Essentia	010-0970-00340
Essentia	010-0970-00360
Essentia	010-0970-00370
Essentia	010-0970-00390
Essentia	010-0970-00400
Essentia	010-0970-00520
Essentia	010-0970-00780
Essentia	010-0970-00860
Essentia	010-0970-00930
Essentia	010-3820-01321
Essentia	010-3820-01330
Essentia	010-3820-01340
Essentia	010-3820-01342
Essentia	010-3820-01500
Essentia	010-3820-01520
Essentia	010-3820-01530
Essentia	010-3830-00200
Essentia	010-3830-00290
Essentia	010-3830-00310
Essentia	010-3830-02500
Essentia	010-3830-02520
Essentia	010-3830-02560
Essentia	010-3830-02580
Essentia	010-3830-02650
Essentia	010-3830-02750
Essentia	010-3830-02860
Essentia	010-3830-02870
Essentia	010-3830-02900
Essentia	010-3830-02940
Essentia	010-3830-03050
Essentia	010-3830-03090
Essentia	010-3830-03100
Essentia	010-3830-03110
Essentia	010-3830-03120
Essentia	010-3830-03140
Essentia	010-3830-03150
Essentia	010-3830-03170

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-3830-03240
Essentia	010-3830-03260
Essentia	010-3830-03360
Essentia	010-3830-03770
Essentia	010-3830-03780
Essentia	010-3830-03800
Essentia	010-3830-03810
Essentia	010-3830-03820
Essentia	010-3830-03830
Essentia	010-3830-03850
Essentia	010-3830-03870
Essentia	010-3830-03880
Essentia	010-3830-06160
Essentia	010-3830-06180
Essentia	010-3830-06190
Essentia	010-3830-06200
Essentia	010-3830-06205
Essentia	010-3830-06240
Essentia	010-3830-06360
Essentia	010-3830-06400
Essentia	010-3830-06760
Essentia	010-3830-06900
Essentia	010-3830-06930
Essentia	010-3830-07000
Essentia	010-3830-07020
Essentia	010-3830-17840
Essentia	010-3830-17860
Essentia	010-3830-17870
Essentia	010-3830-17880
Essentia	010-3830-17890
Essentia	010-3830-17910
Essentia	010-3830-17940
Essentia	010-3830-17970
Essentia	010-3830-18000
Essentia	010-3830-18010
Essentia	010-3830-18020
Essentia	010-3830-18030
Essentia	010-3830-18050
Essentia	010-3830-07030
Essentia	010-3830-07180
Essentia	010-3830-07200
Essentia	010-3915-00070
Essentia	010-3915-00080
Essentia	010-3830-09870
Essentia	010-3830-09980
Essentia	010-3830-10060
Essentia	010-3830-10110
Essentia	010-3830-10155
Essentia	010-3830-10160
Essentia	010-3830-10380
Essentia	010-3830-10420

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Essentia	010-3830-10540
Essentia	010-3830-10590
Essentia	010-3830-10595
Essentia	010-3830-10600
Essentia	010-3830-10620
Essentia	010-3830-10640
Essentia	010-3830-10650
Essentia	010-3830-10670
Essentia	010-3830-10690
Essentia	010-3830-10691
Essentia	010-3830-13880
Essentia	010-3830-13889
Essentia	010-3830-13890
Essentia	010-3830-13940
Essentia	010-3830-13970
Essentia	010-3830-13980
Essentia	010-3830-14070
Essentia	010-3830-14100
Essentia	010-3830-14110
Essentia	010-3830-14140
Essentia	010-3830-14190
Essentia	010-3830-14230
Essentia	010-3830-14410
Essentia	010-0160-00590
Essentia	010-3830-00320
Lot D	010-0200-01490
Lot D	010-0210-00010
Lot D	010-0210-00220
Lot D	010-0210-00340
Lot D	Unsurveyed Land
Lot D	Unsurveyed Land
Lot D	010-0210-00300
Secondary	010-0190-00030
Secondary	010-0190-00050
Secondary	010-0190-00060
Secondary	010-0190-00140
Secondary	010-0190-00150
Secondary	010-0190-00170
Secondary	010-0190-00180
Secondary	010-0190-00200
Secondary	010-0190-00250
Secondary	010-0190-00290
Secondary	010-0190-00330
Secondary	010-0190-00560
Secondary	010-0190-00590
Secondary	010-0190-00600
Secondary	010-0190-00610
Secondary	010-0190-00640
Secondary	010-0190-00650
Secondary	010-0190-00750
Secondary	010-0190-00770

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-0190-00790
Secondary	010-0190-00840
Secondary	010-0190-00860
Secondary	010-0190-00890
Secondary	010-0190-01120
Secondary	010-0190-01140
Secondary	010-0190-01160
Secondary	010-0190-01220
Secondary	010-0190-01250
Secondary	010-3830-00970
Secondary	010-3830-01090
Secondary	010-3830-01110
Secondary	010-3830-01120
Secondary	010-3830-01140
Secondary	010-3830-01150
Secondary	010-3830-01160
Secondary	010-3830-01170
Secondary	010-3830-01180
Secondary	010-3830-01190
Secondary	010-3830-01220
Secondary	010-3830-01230
Secondary	010-3830-01240
Secondary	010-3830-01250
Secondary	010-3830-01302
Secondary	010-3830-01530
Secondary	010-3830-01540
Secondary	010-3830-01560
Secondary	010-3830-01600
Secondary	010-3830-01620
Secondary	010-3830-01645
Secondary	010-3830-01660
Secondary	010-3830-01670
Secondary	010-3830-01675
Secondary	010-3830-01680
Secondary	010-3830-01740
Secondary	010-3830-01800
Secondary	010-3830-01820
Secondary	010-3830-01880
Secondary	010-3830-02000
Secondary	010-3830-02070
Secondary	010-3830-02080
Secondary	010-3830-02100
Secondary	010-3830-02110
Secondary	010-3830-02120
Secondary	010-3830-02130
Secondary	010-3830-02162
Secondary	010-3830-02195
Secondary	010-3830-02280
Secondary	010-3830-02340
Secondary	010-3830-02370
Secondary	010-3830-02390

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-3830-02410
Secondary	010-3830-02430
Secondary	010-3830-02450
Secondary	010-3830-02470
Secondary	010-3830-03920
Secondary	010-3830-03955
Secondary	010-3830-03965
Secondary	010-3830-03980
Secondary	010-3830-04000
Secondary	010-3830-04010
Secondary	010-3830-04020
Secondary	010-3830-04070
Secondary	010-3830-04080
Secondary	010-3830-04240
Secondary	010-3830-04460
Secondary	010-3830-04690
Secondary	010-3830-04695
Secondary	010-3830-04940
Secondary	010-3830-05080
Secondary	010-3830-05140
Secondary	010-3830-05280
Secondary	010-3830-05420
Secondary	010-3830-05450
Secondary	010-3830-05480
Secondary	010-3830-05490
Secondary	010-3830-05510
Secondary	010-3830-05520
Secondary	010-3830-05530
Secondary	010-3830-05550
Secondary	010-3830-05580
Secondary	010-3830-05600
Secondary	010-3830-05620
Secondary	010-3830-05640
Secondary	010-3830-05650
Secondary	010-3830-05675
Secondary	010-3830-05695
Secondary	010-3830-05730
Secondary	010-3830-05770
Secondary	010-3830-05780
Secondary	010-3830-05800
Secondary	010-3830-05860
Secondary	010-3830-05930
Secondary	010-3830-05930
Secondary	010-3830-05980
Secondary	010-3830-06010
Secondary	010-3830-07250
Secondary	010-3830-07280
Secondary	010-3830-07290
Secondary	010-3830-07300
Secondary	010-3830-07330
Secondary	010-3830-07340

Downtown Duluth AUAR area Parcels

Subarea	Parcel ID No.
Secondary	010-3830-07350
Secondary	010-3830-07360
Secondary	010-3830-07380
Secondary	010-3830-07390
Secondary	010-3830-07400
Secondary	010-3830-07420
Secondary	010-3830-07470
Secondary	010-3830-07480
Secondary	010-3830-07490
Secondary	010-3830-07500
Secondary	010-3830-07510
Secondary	010-3830-07520
Secondary	010-3830-07560
Secondary	010-3830-07580
Secondary	010-3830-07590
Secondary	010-3830-07630
Secondary	010-3830-07640
Secondary	010-3830-07730
Secondary	010-3830-07840
Secondary	010-3830-07900
Secondary	010-3830-09450
Secondary	010-3830-09471
Secondary	010-3830-09480
Secondary	010-3830-09510
Secondary	010-3830-09520
Secondary	010-3830-09530
Secondary	010-3830-09560
Secondary	010-3830-09560
Secondary	010-3830-09580
Secondary	010-3830-09600
Secondary	010-3830-09630
Secondary	010-3830-09632
Secondary	010-3830-09642
Secondary	010-3830-09660
Secondary	010-3830-09670
Secondary	010-3830-09680
Secondary	010-3830-09720
Secondary	010-3830-09760
Secondary	010-3830-09770
Secondary	010-3830-09780
Secondary	010-3830-09790
Secondary	010-3830-09800
Secondary	010-3830-09810
Secondary	010-3830-09820
Secondary	010-3830-09830
Secondary	010-3830-09840
Secondary	010-3830-09860
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Secondary	010-3830-10710
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Secondary	010-3830-10730

Downtown Duluth AUAR area Parcels

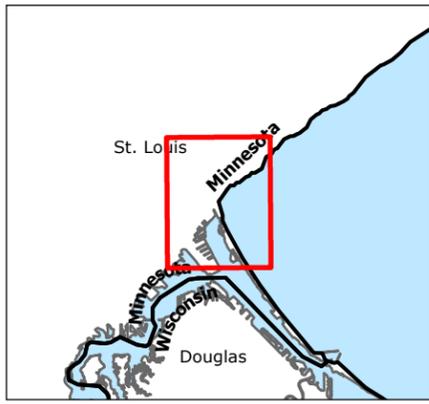
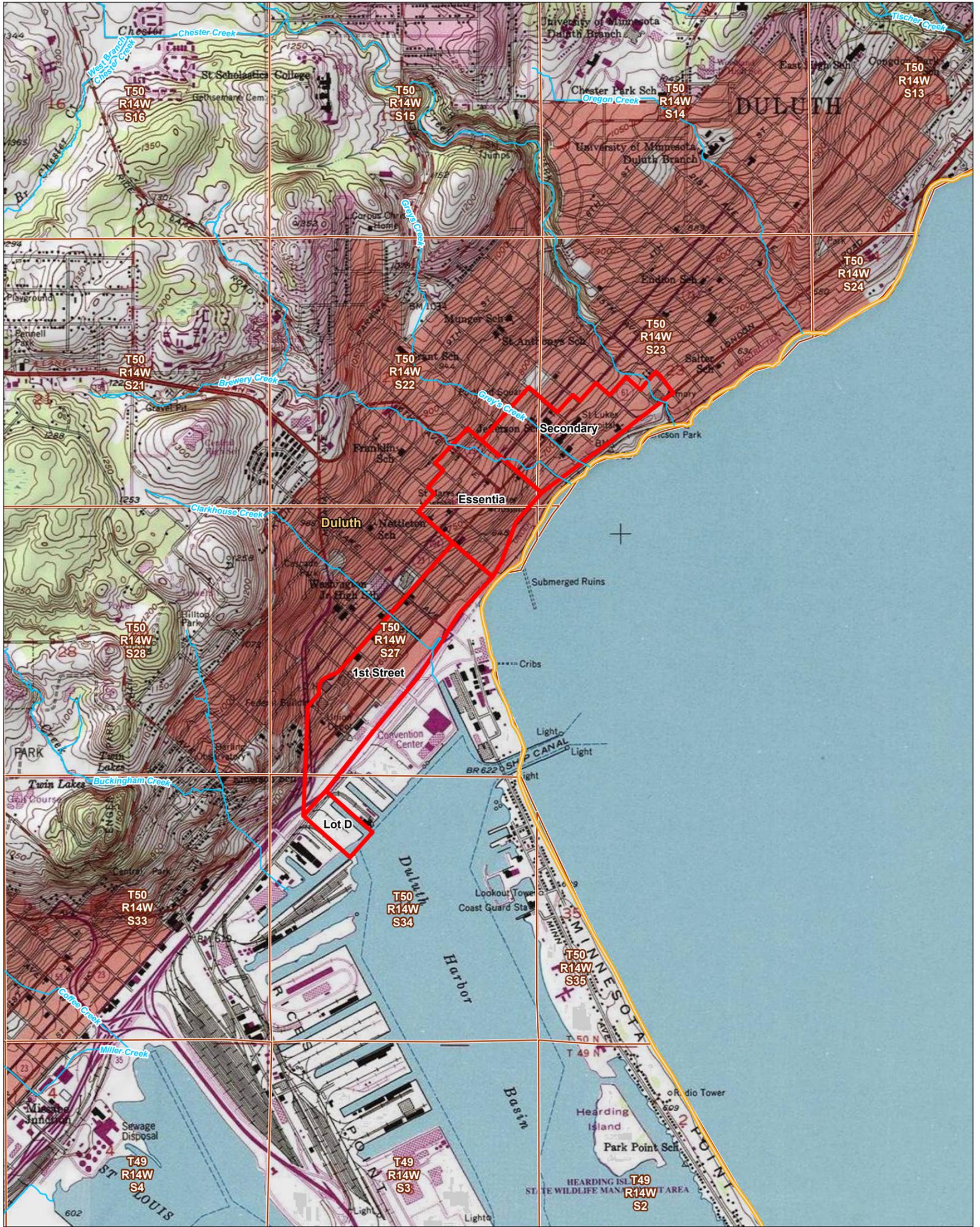
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Secondary	010-3830-10770
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Secondary	010-3830-10860
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Secondary	010-3830-10900
Secondary	010-3830-10930
Secondary	010-3830-10940
Secondary	010-3830-10950
Secondary	010-3830-10980
Secondary	010-3830-11000
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Secondary	010-3830-11020
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Secondary	010-3830-11040
Secondary	010-3830-11052
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Secondary	010-3830-11120
Secondary	010-3830-11160
Secondary	010-3830-11190
Secondary	010-3830-11210
Secondary	010-3830-11220
Secondary	010-3830-11230
Secondary	010-3830-11240
Secondary	010-3830-11250
Secondary	010-3830-11330
Secondary	010-3830-11335
Secondary	010-3830-11360
Secondary	010-3830-11380
Secondary	010-3860-00020
Secondary	010-3860-00040
Secondary	010-3860-00090
Secondary	010-3860-00130
Secondary	010-3860-00160
Secondary	010-3860-00180
Secondary	010-3860-00210
Secondary	010-3860-00220
Secondary	010-3830-13180
Secondary	010-3830-13230
Secondary	010-3830-13250
Secondary	010-3830-13260
Secondary	010-3830-13300
Secondary	010-3830-13350
Secondary	010-3830-13380
Secondary	010-3830-13410
Secondary	010-3830-13440
Secondary	010-3830-13480
Secondary	010-3830-13540
Secondary	010-3830-13550
Secondary	010-3830-13560
Secondary	010-3830-13610

Downtown Duluth AUAR area Parcels

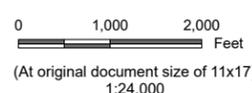
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Secondary	010-3830-13640
Secondary	010-3830-13660
Secondary	010-3830-13680
Secondary	010-3830-13740
Secondary	010-3830-13750
Secondary	010-3830-13760
Secondary	010-3830-13770
Secondary	010-3830-13780
Secondary	010-3830-13790
Secondary	010-3830-13810
Secondary	010-3830-13820
Secondary	010-3830-13821
Secondary	010-3830-13830
Secondary	010-3830-14560
Secondary	010-3830-14570
Secondary	010-3830-14630
Secondary	010-3830-14640
Secondary	010-3830-14710
Secondary	010-3830-14770
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Secondary	010-3830-14790
Secondary	010-3830-14800
Secondary	010-3830-14910
Secondary	010-3830-14930
Secondary	010-3830-14950
Secondary	010-3830-14970
Secondary	010-3830-15010
Secondary	010-3830-15030
Secondary	010-3830-15050
Secondary	010-3830-15070
Secondary	010-3830-15090
Secondary	010-3830-15150

Appendix B

Figures



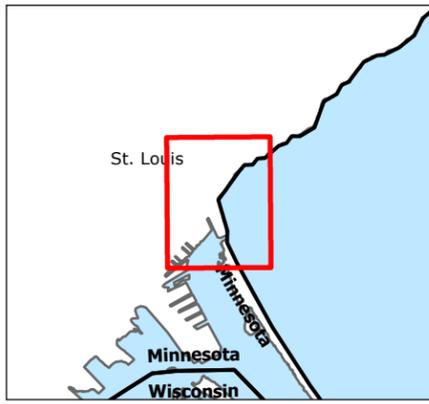
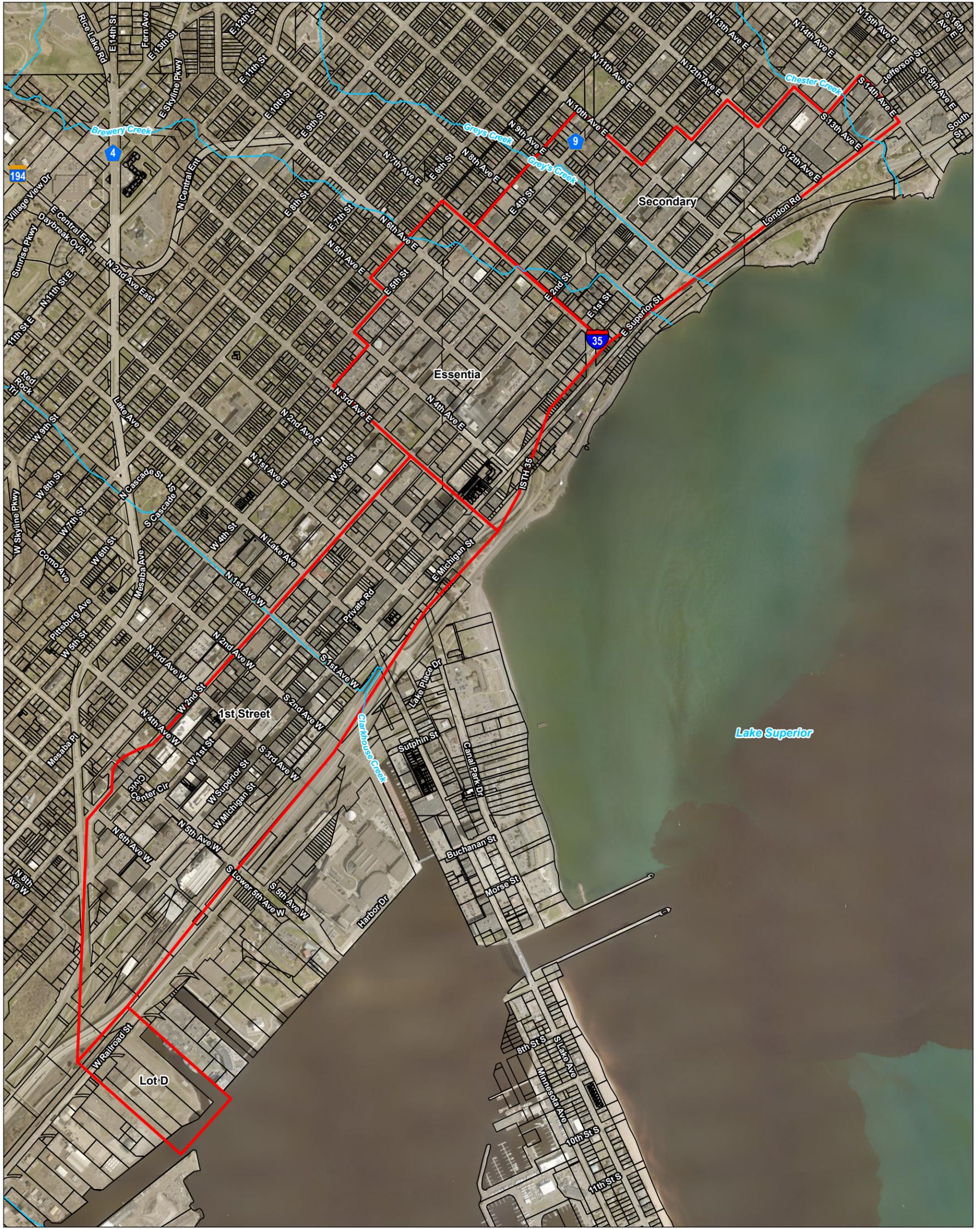
- Legend**
-  City of Duluth Streams
 -  AUAR Area
 -  Municipal Boundary
 -  Township, Range & Section Boundary



Project Location T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

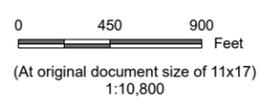
Figure No. 1
Title Project Location USGS Topo Map

Notes
 1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnGeo
 3. Background: USGS 7.5' Quadrangle



- Legend
-  City of Duluth Streams
 -  AUAR Area
 -  Parcel Boundary

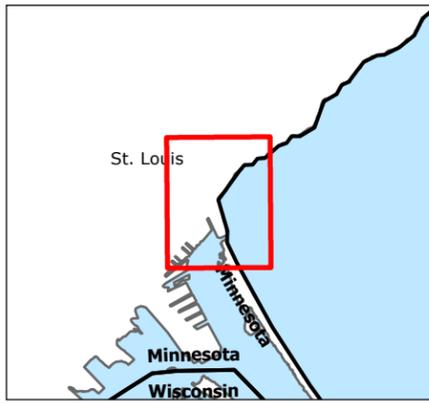
Notes
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 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
 3. Background: 2023 St. Louis Co.



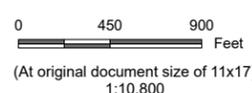
Project Location T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW
 Prepared by KJM on 2025-10-30
 TR by LW on 2025-10-30
 IR by ES on 2025-10-30
 227708309

Figure No.
2
Title
Project Location Aerial Map

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kmueller



- Legend**
- Existing Trail
 - - - Minnesota Scenic Byways
 - - - Minnesota Water Trails
 - Park Boundary
 - AUAR Area



Project Location T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

Client/Project City of Duluth, MN
Downtown Duluth AUAR
Scoping EAW

Figure No. 4

Title Parks, Trails and Other Recreational Areas

Prepared by KJM on 2025-10-30
TR by LW on 2025-10-30
IR by ES on 2025-10-30
227708309

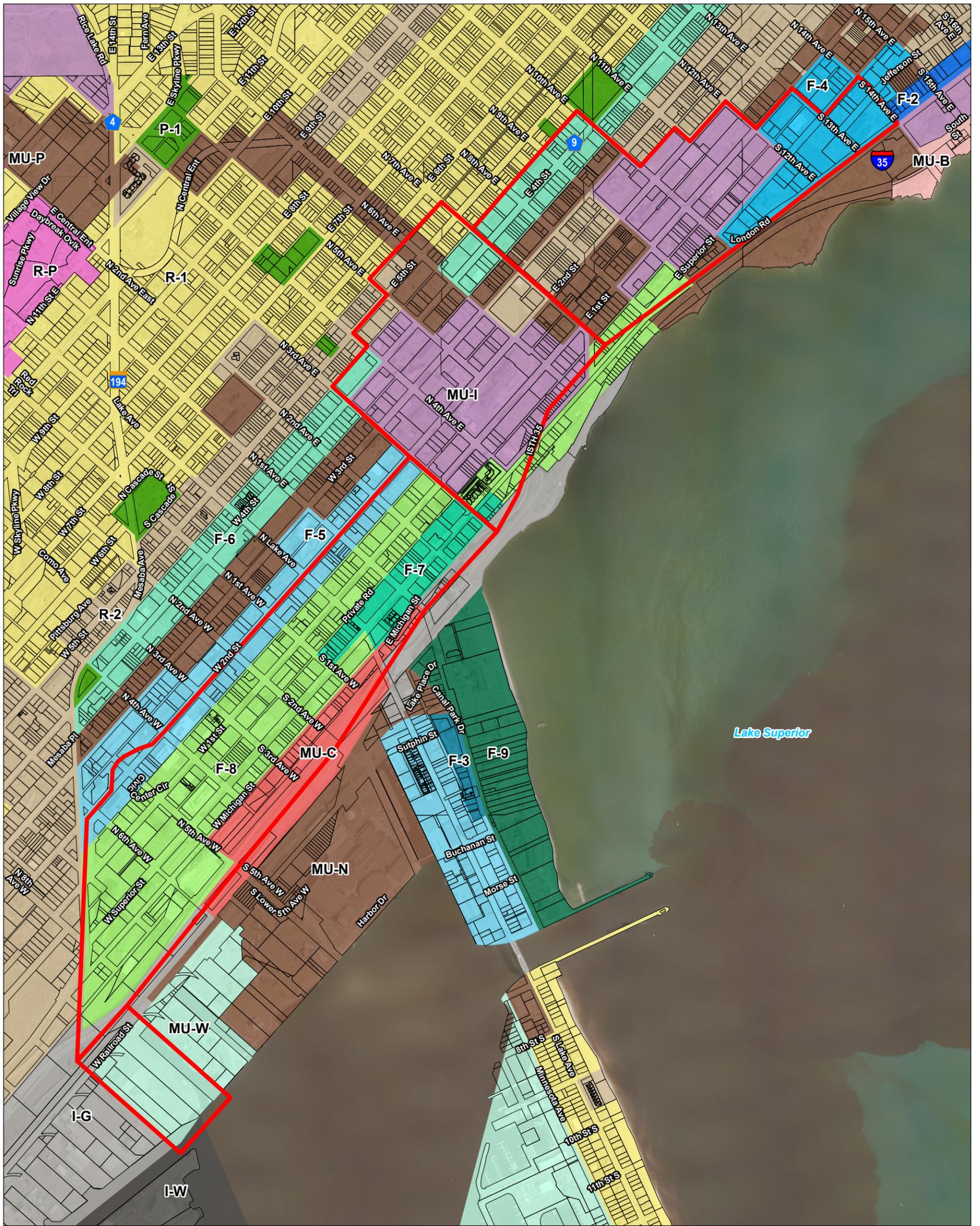
Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

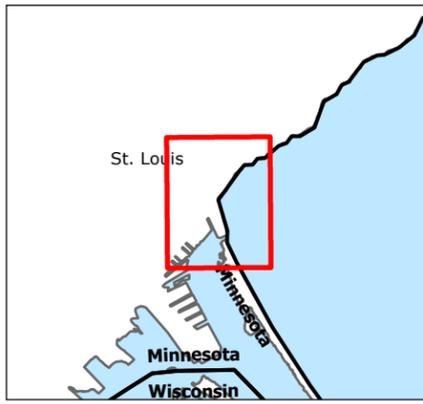
Page 1 of 1

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kymueller

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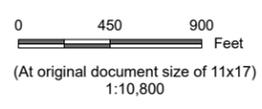
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 Revised: 2025-10-30 By: kymueller



Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
3. Background: 2023 St. Louis Co.

- Legend**
- ▬ AUAR Area
 - Parcels
 - City of Duluth Zoning**
 - F-2 (Low-Rise Neighborhood Mix)
 - F-3 (Mid-Rise Community Shopping)
 - F-4 (Mid-Rise Community Mix)
 - F-5 (Mid-Rise Community Shopping and Office)
 - F-6 (Mid-Rise Neighborhood Shopping)
 - F-7 (Downtown Shopping)
 - F-8 (Downtown Mix)
 - F-9 (Canal Park Lakefront)
 - I-G (Industrial General)
 - I-W (Industrial Waterfront)
 - MU-B (Mixed Use Business Park)
 - MU-C (Mixed Use Commercial)
 - MU-I (Mixed Use Institutional)
 - MU-N (Mixed Use Neighborhood)
 - MU-P (Mixed Use Planned)
 - MU-W (Mixed Use Waterfront)
 - P-1 (Park)
 - R-1 (Residential Traditional)
 - R-2 (Residential Urban)
 - R-P (Residential Planned)



Project Location
 T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN

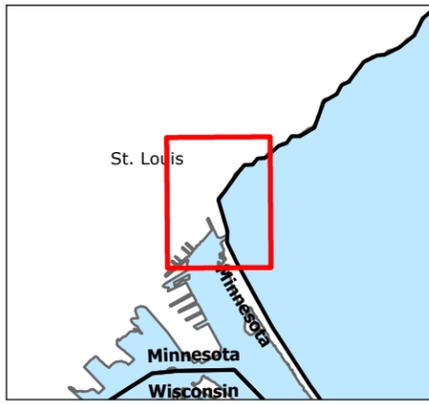
Prepared by KJM on 2025-10-30
 TR by LW on 2025-10-30
 IR by ES on 2025-10-30

Client/Project
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
6

Title
Zoning

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Legend

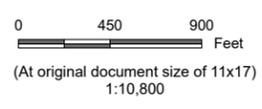
AUAR Area

Surficial Geology

map_label	Descriptn
bt	Glacial Till
cs	Glacial Stream Sediment, Outwash
ct	Glacial Till
ctx	Diamicton, Sand/Gravel, Lacustrine Complex
bl	Glacial Lacustrine Sediment
sa	Floodplain and Channelized Fluvial Deposits
mf	Constructed Land
Water	Water

Notes

- Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
- Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MGS C-51
- Background: 2023 St. Louis Co.



Project Location
 T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN

Client/Project
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

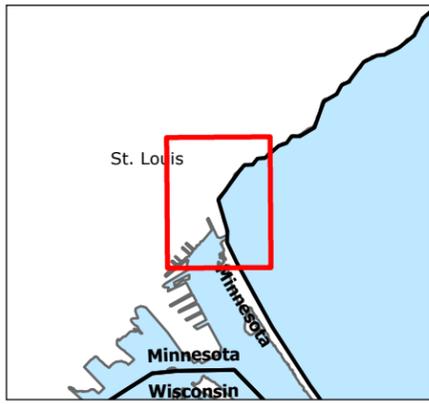
Prepared by KJM on 2025-10-30
 TR by LW on 2025-10-30
 IR by ES on 2025-10-30
 227708309

Figure No.
7

Surface Geology Map

U:\227708309\03_data\gis\pro\227708309_duluth_downtown_auar.aprx Revised: 2025-10-30 By: kymueller

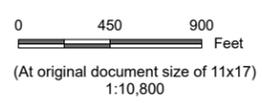
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- Legend**
- ▬ AUAR Area
 - Bedrock Geology**
 - Mns, interflow sandstone, siltstone, and conglomerate
 - Mtd, Tunnel intrusion - Diabase
 - Mdo, Porphyritic ophitic olivine leucogabbro
 - Mes, Diabase
 - Mdu, Upper contact zone - ferrodiorite, ferromonzodiorite, ferrogabbro
 - Mda, Anorthosite, troctolitic anorthosite, olivine gabbroic anorthosite, anorthositic gabbro
 - Mdg, Ferromonzodiorite to granophyre
 - Mnb, Undifferentiated basalt to basaltic andesite flows
 - Mnp, Porphyritic basalt
 - Mni, Icelandite

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MGS C-51
3. Background: 2023 St. Louis Co.



Project Location Prepared by KJM on 2025-10-30
 T50N, R14W, S22, 23, 27 & 34 TR by LW on 2025-10-30
 C. of Duluth, St. Louis Co., MN IR by ES on 2025-10-30

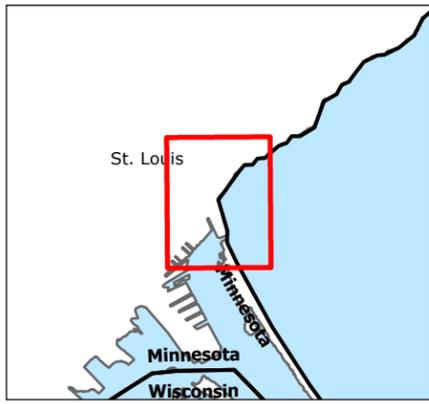
Client/Project 227708309
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
 8

Title
 Bedrock Geology Map

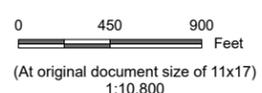
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- Legend**
- AUAR Area
 - Field Verified Wells
 - Domestic
 - Monitoring Well
 - Environmental Bore Hole
 - Air Conditioning
 - Elevator

Notes
 1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MDA, MGS
 3. Background: 2023 St. Louis Co.



Project Location
 T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN

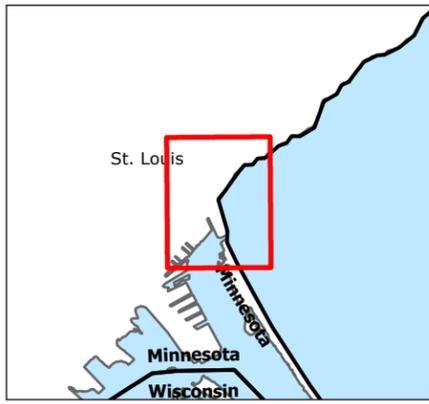
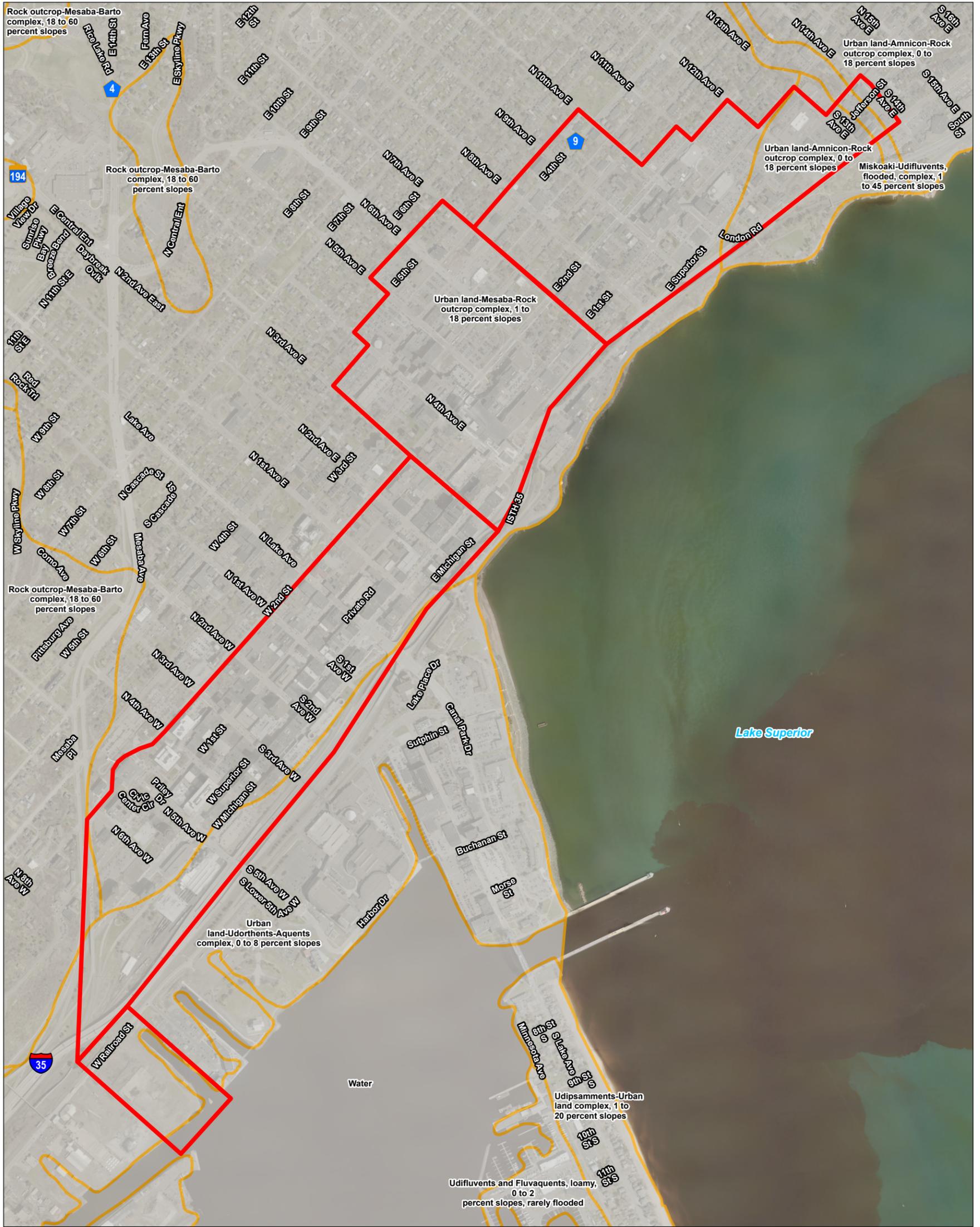
Client/Project
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TR by LW on 2025-10-30
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 227708309

Figure No.
9

Title
Minnesota Well Index

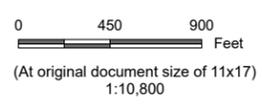
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- Legend**
- AUAR Area
 - Soil Map Unit
 - Farmland Classification
 - Not prime farmland

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, NRCS
3. Background: 2023 St. Louis Co.



Project Location
 T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN

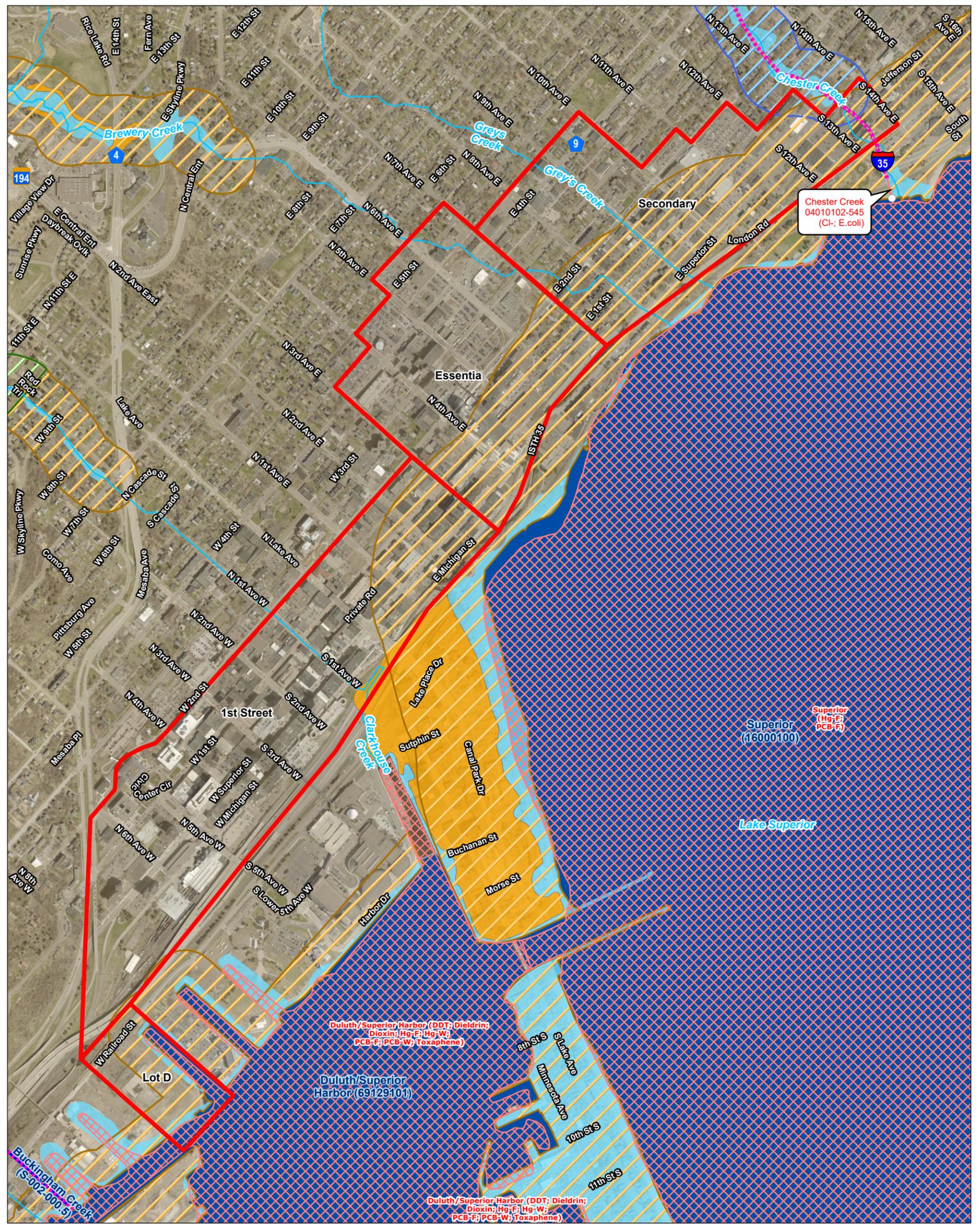
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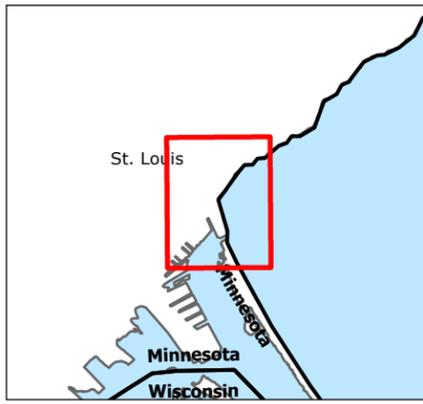
Figure No.
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Title
Soil and Farmland Classification

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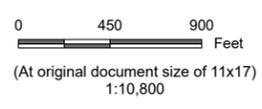


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 1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MNDNR, MPCA
 3. Background: 2023 St. Louis Co.

- Legend**
- AUAR Area
 - 2024 MPCA Impaired Lakes
 - 2024 MPCA Impaired Streams
 - Trout Stream
 - City of Duluth Streams
 - Shoreland Management Zones**
 - Cold Water
 - General Development
 - NE
 - Minnesota Public Waters Delineations**
 - Public Water Watercourse
 - Public Waters Basins
 - City of Duluth Flood Hazard**
 - 100 Year Flood Hazard
 - 500 Year Flood Hazard



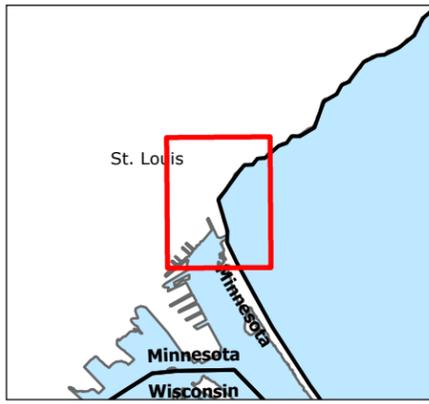
Project Location
 T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN

Client/Project
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
11

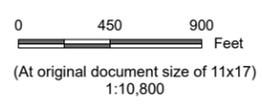
Title
Water Resources Map

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- Legend**
-  City of Duluth Streams
 -  National Wetlands Inventory Feature
 -  AUAR Area

Notes
 1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MNDNR
 3. Background: 2023 St. Louis Co.



Project Location T50N, R14W, S22, 23, 27 & 34 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

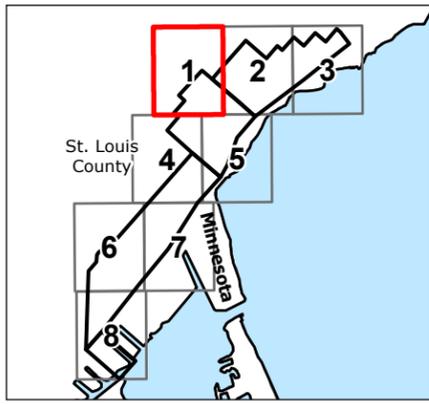
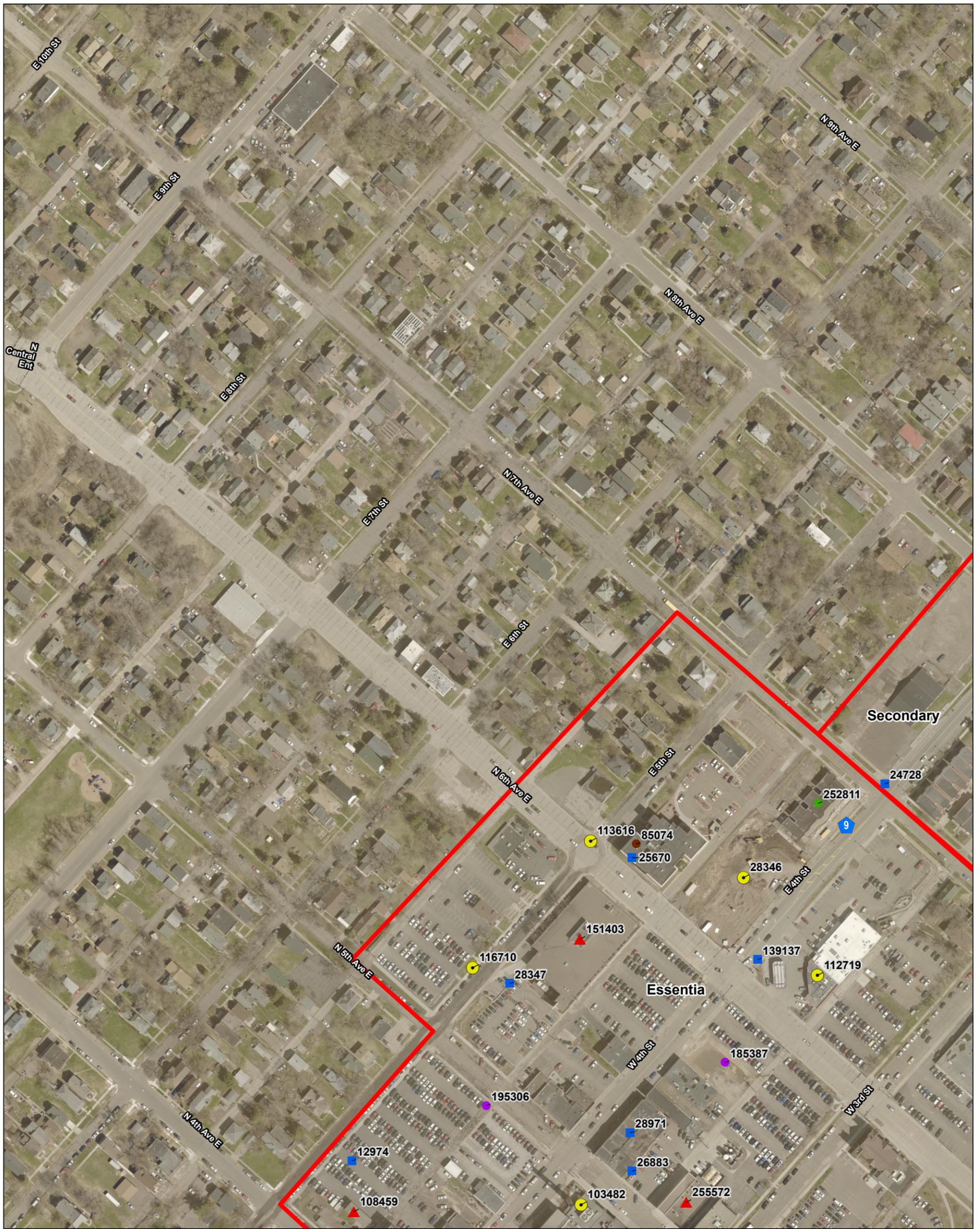
Prepared by KJM on 2025-10-30
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 227708309

Figure No.
12

Title
Wetlands Map

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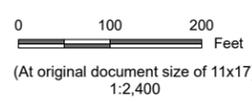
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- Legend**
- AUAR Area
 - MPCA Sites**
 - Program Name**
 - Multiple Programs
 - Hazardous Waste
 - Investigation and Cleanup
 - Solid Waste
 - Stormwater
 - ▲ Tanks

Notes

1. Coordinate System: NAD 1983 HARN Adj MN St Louis CS96 Feet
2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
3. Background: 2023 St. Louis Co.



Project Location T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

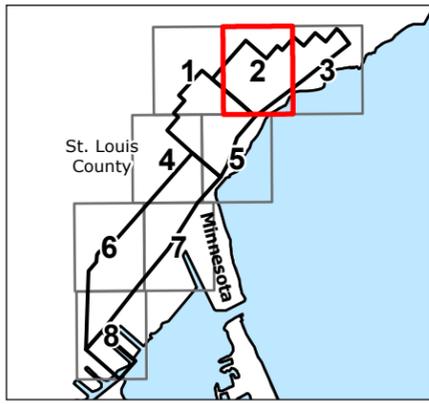
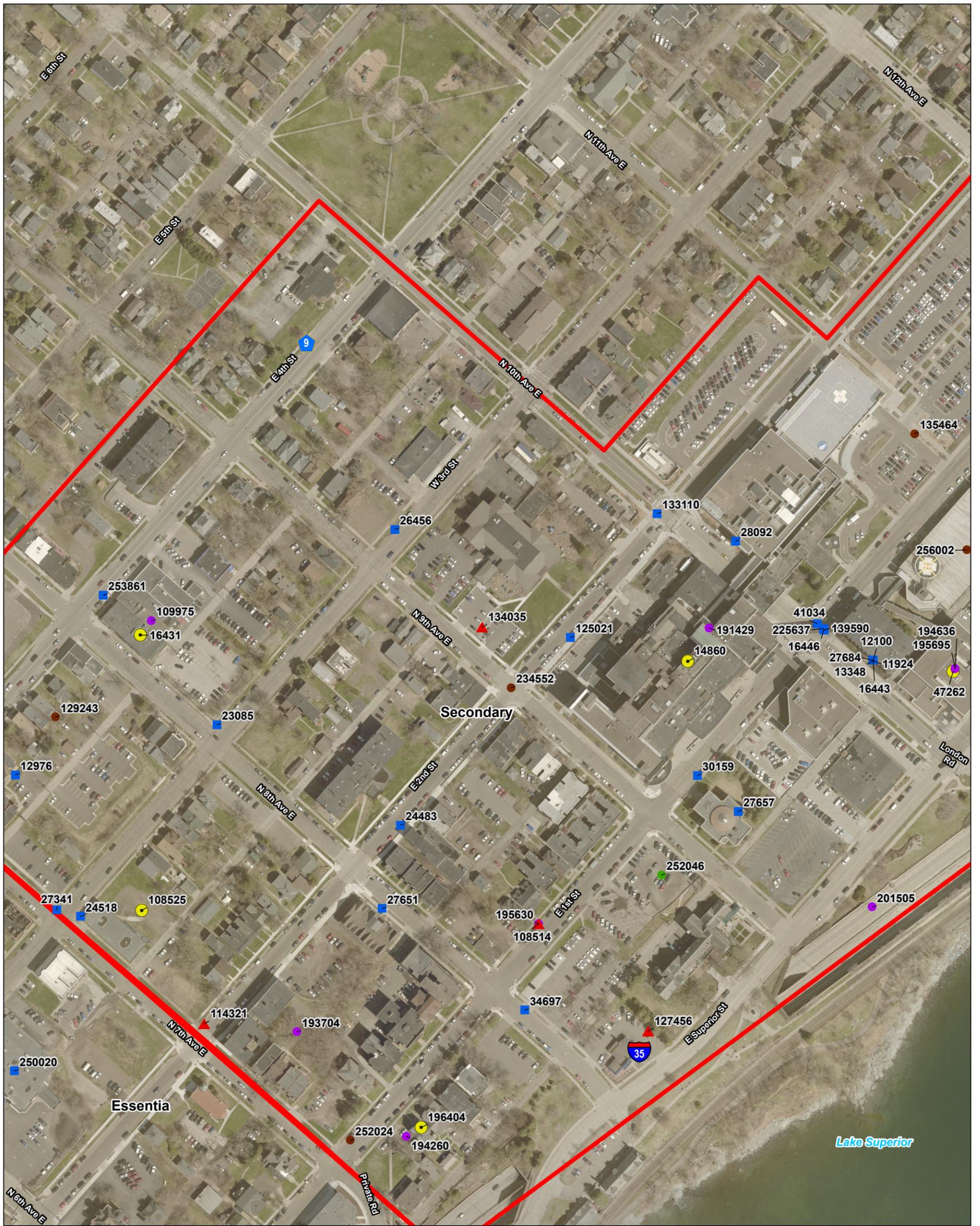
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Downtown Duluth AUAR
Scoping EAW

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Figure No.
13

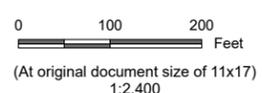
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- Legend**
- AUAR Area
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 - Program Name**
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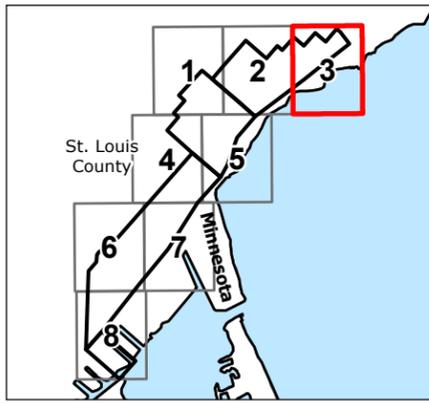
Client/Project 227708309
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
13

Title
MPCA Potentially Contaminated Sites

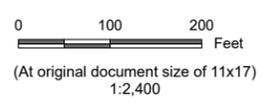
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- Legend**
- AUAR Area
 - MPCA Sites
 - Program Name
 - Multiple Programs
 - Hazardous Waste
 - Investigation and Cleanup
 - Stormwater
 - ▲ Tanks

Notes
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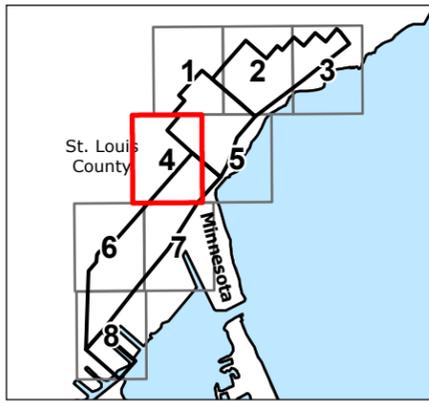
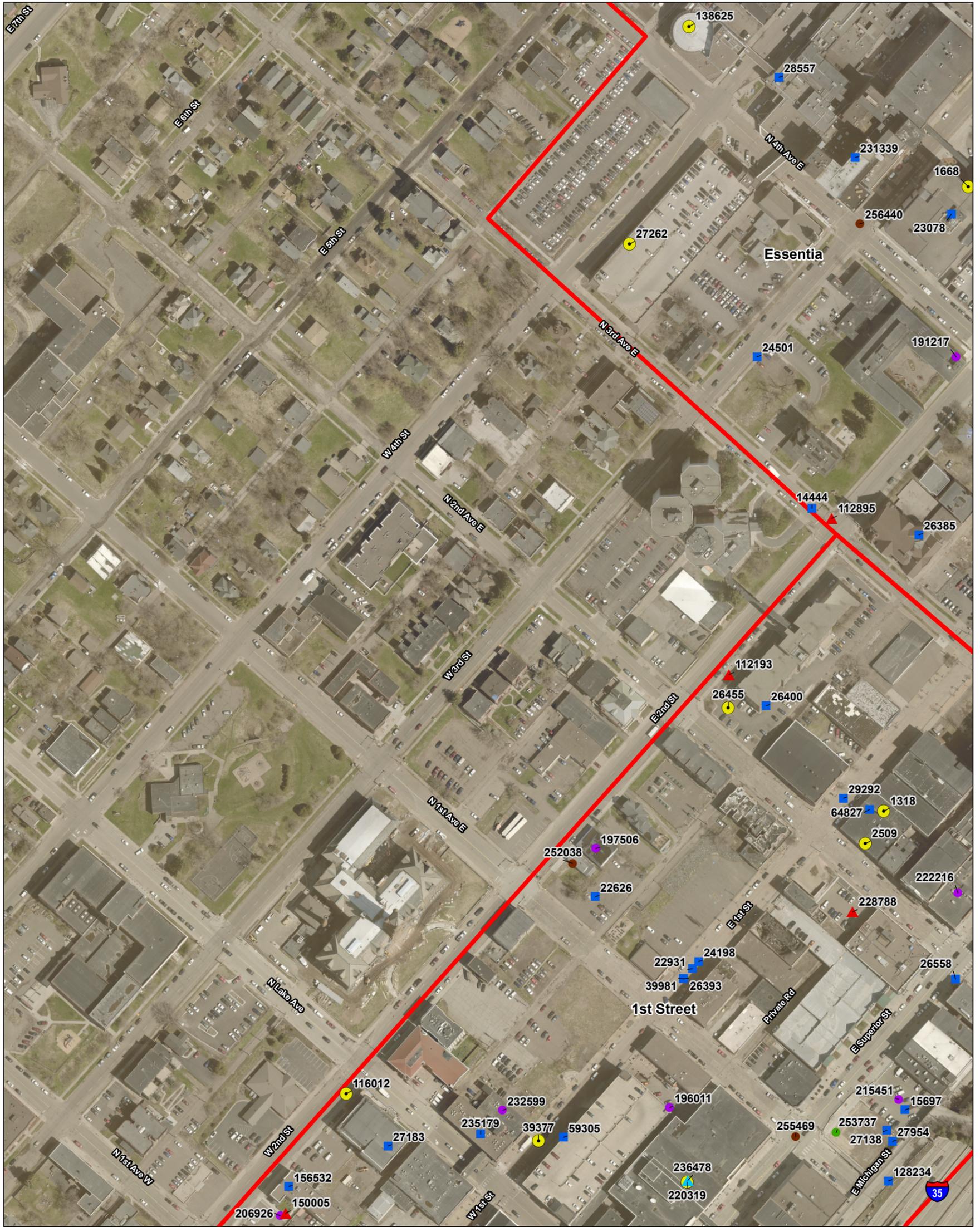
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 C. of Duluth, St. Louis Co., MN IR by ES on 2025-10-30

Client/Project 227708309
 City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No.
13

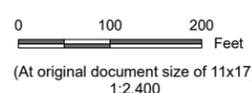
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MPCA Potentially Contaminated Sites

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- Legend**
- AUAR Area
 - MPCA Sites
 - Program Name
 - Multiple Programs
 - Hazardous Waste
 - Investigation and Cleanup
 - Solid Waste
 - Stormwater
 - ▲ Tanks
 - ▲ Water Quality

Notes
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Project Location T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN
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Figure No.
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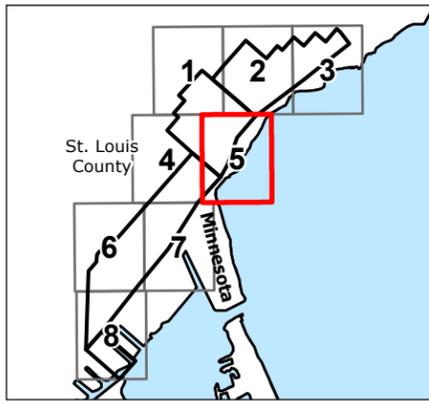
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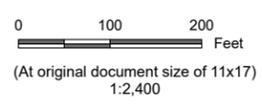
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- Legend**
- AUAR Area
 - MPCA Sites
 - Program Name
 - Multiple Programs
 - Hazardous Waste
 - Investigation and Cleanup
 - Stormwater
 - ▲ Tanks

Notes

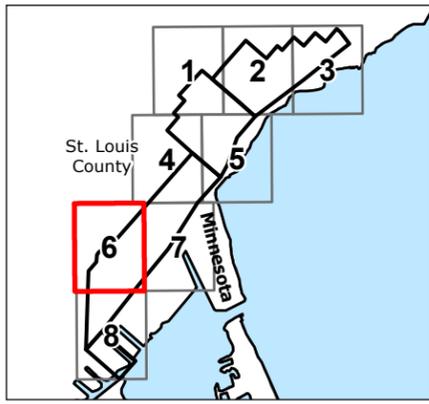
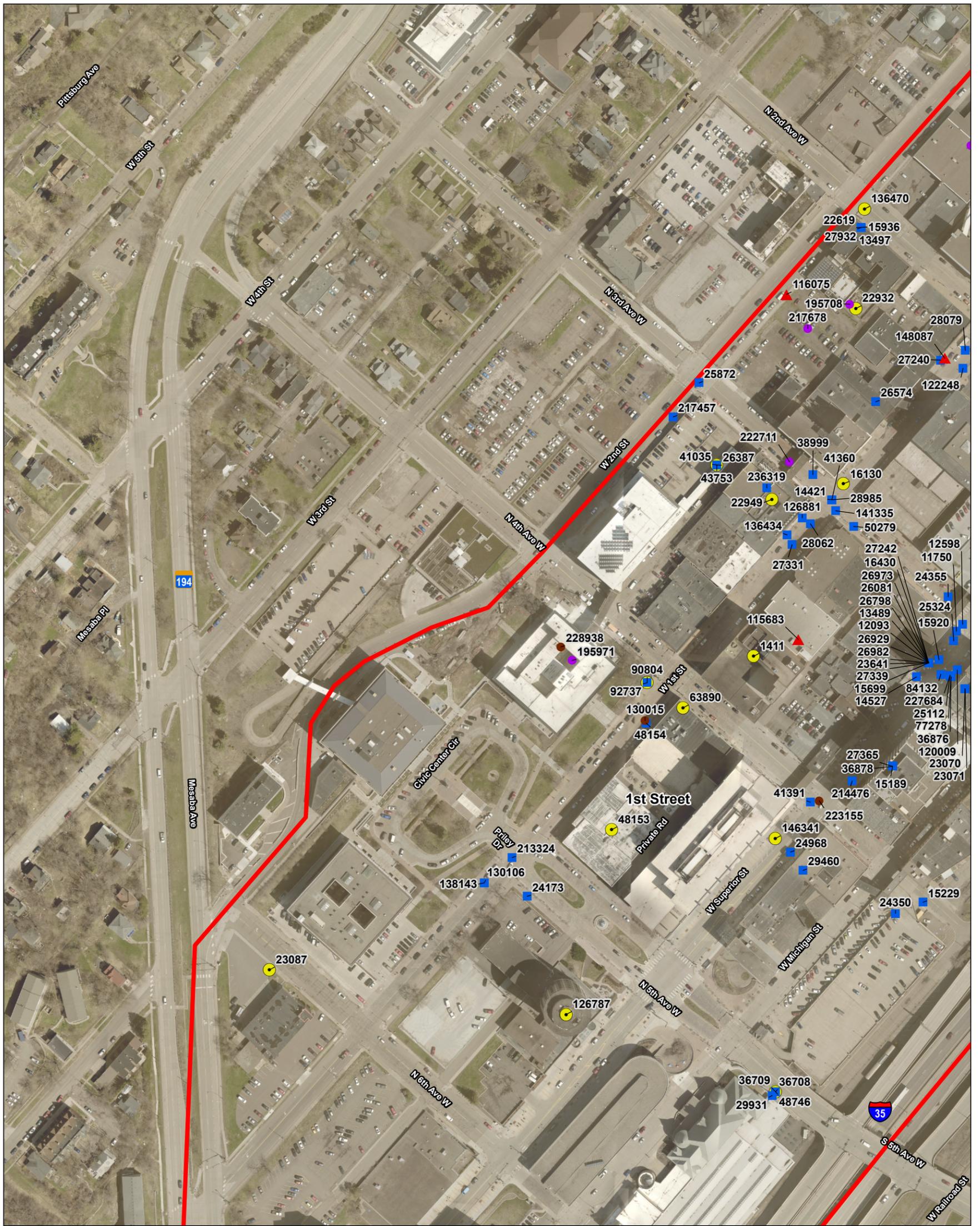
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2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT, MPCA
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Project Location T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

Figure No. 13
Title MPCA Potentially Contaminated Sites

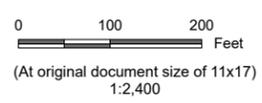
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- Legend**
- AUAR Area
 - MPCA Sites
 - Program Name
 - Multiple Programs
 - Hazardous Waste
 - Investigation and Cleanup
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 - ▲ Tanks

Notes

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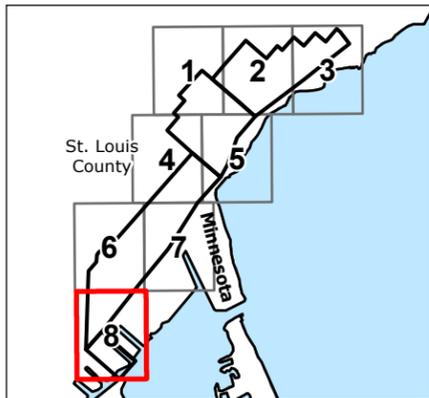
Project Location
T50N, R14W, S22, 23, 27 & 34
C. of Duluth, St. Louis Co., MN

Client/Project
City of Duluth, MN
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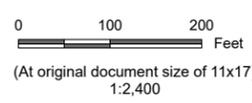
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Title **MPCA Potentially Contaminated Sites**

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- Legend**
- AUAR Area
 - MPCA Sites
 - Program Name
 - Multiple Programs
 - Investigation and Cleanup
 - Stormwater

Notes
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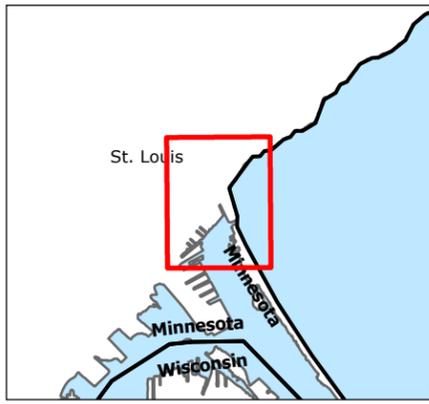
Project Location T50N, R14W, S22, 23, 27 & 34
 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
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Figure No.
 13

Title
 MPCA Potentially Contaminated Sites

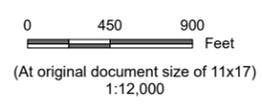
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Notes
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 2. Data Sources: Stantec, City of Duluth, St. Louis Co., MnDOT
 3. Background: 2023 St. Louis Co.

Legend
 + Transportation Study Intersections
 [Red Outline] AUAR Area

Map ID	Intersection
01	Garfield Avenue/Railroad Street
02	Railroad Street/5th Avenue W
03	Harbor Drive/5th Avenue W
04	I-35 northbound ramps/Harbor Drive
05	I-35 southbound ramps/Harbor Drive
06	Railroad Street/Harbor Drive



Project Location T50N, R14W, S22, 23, 27 & 34 C. of Duluth, St. Louis Co., MN
Client/Project City of Duluth, MN
 Downtown Duluth AUAR
 Scoping EAW

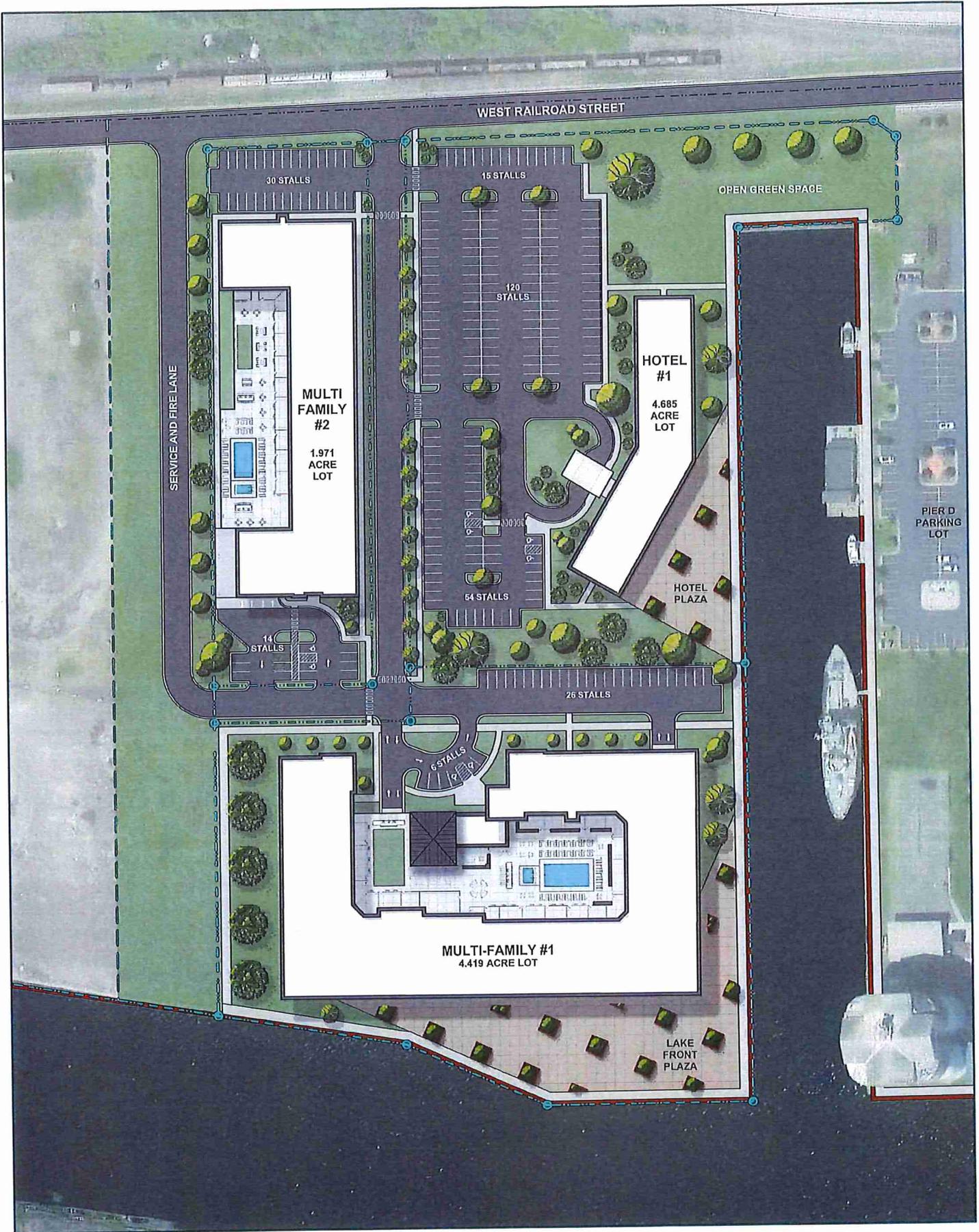
Figure No. 14
Title Transportation Study Intersections

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Appendix C

Lot D Concept Plan



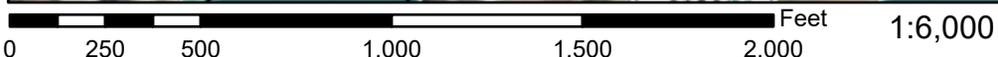
Appendix D

FEMA FIRMette

National Flood Hazard Layer FIRMette



92°6'40"W 46°46'45"N



92°6'2"W 46°46'20"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		17.5 Water Surface Elevation
		Coastal Transect
OTHER FEATURES		Base Flood Elevation Line (BFE)
		Limit of Study
OTHER FEATURES		Jurisdiction Boundary
		Coastal Transect Baseline
OTHER FEATURES		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

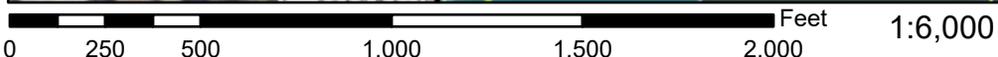
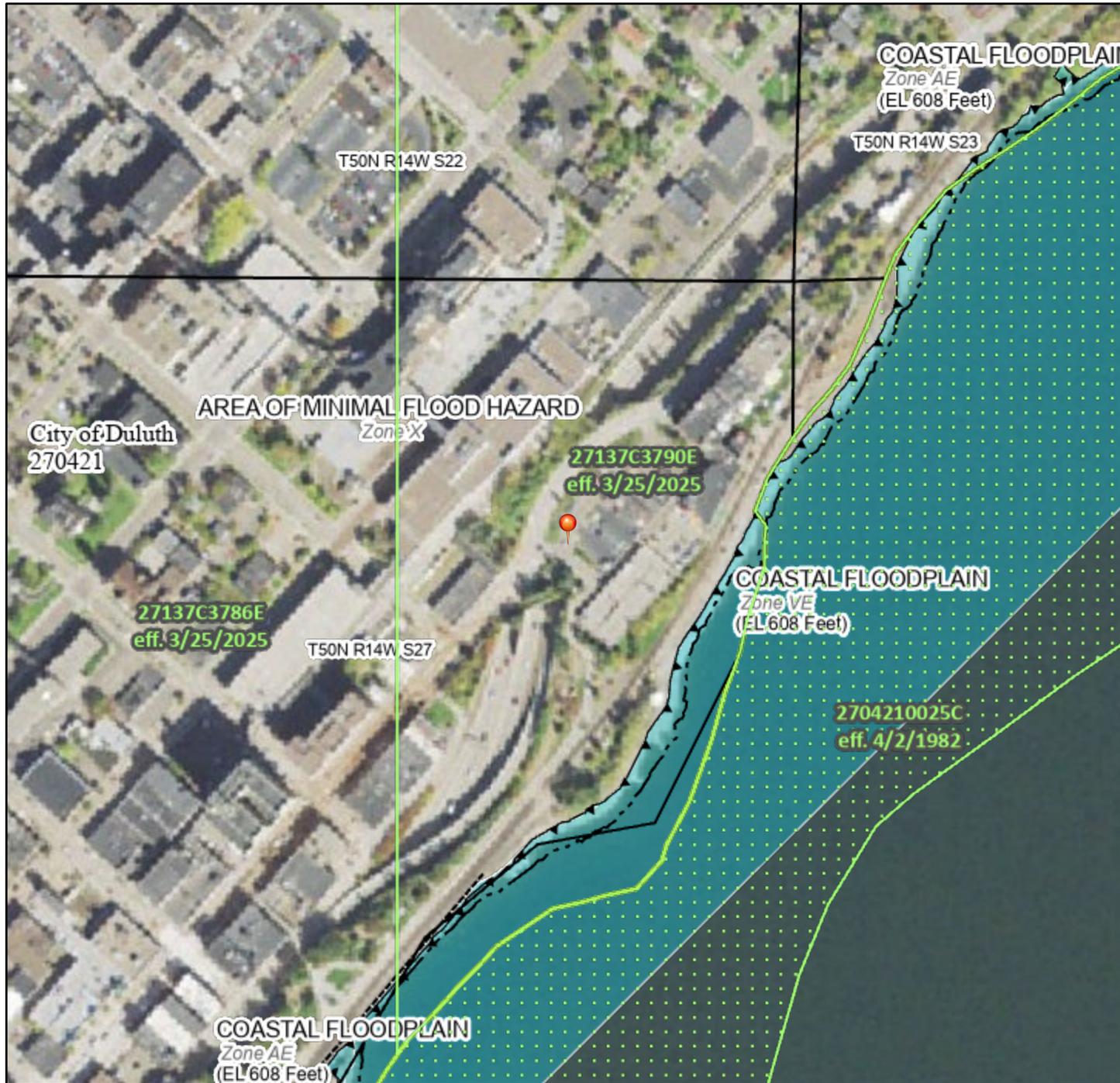
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/3/2025 at 2:47 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMMette



92°5'51"W 46°47'41"N



92°5'13"W 46°47'17"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| | | Channel, Culvert, or Storm Sewer |
| OTHER FEATURES | | Levee, Dike, or Floodwall |
| | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| MAP PANELS | | 17.5 Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/3/2025 at 3:10 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix E

MDH Well Log Reports

454658

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 10/31/1990
 Update
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
BOWMAN	50	14	W	27	CABCDC	air conditioning	S	312 ft.	312 ft.	05/11/1989	69183		
Elevation	697 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	Duluth Complex	Depth to Bedrock	10 ft	Open Hole	25 - 312 ft	Static Water Level	ft
Field Located By	Minnesota Geological Survey			Locate Method	Digitization (Screen) - Map (1:24,000) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568310				
Geological Interpretation	Amy Block			Input Date	04/24/2018			UTM Northing (Y)	518160				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SAND FILL	BROWN	SOFT	0	10	10	697	687	man-made fill	fill	sand	
GABBRO	BLACK	MEDIUM	10	312	302	687	385	Duluth Complex	icelandite	volcanics,	

Minnesota Well Index - Stratigraphy Report	454658	Printed on 09/30/2025
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533478

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
 Update
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
3	50	14	W	27	ACACBC	elevator	A	34 ft.	33.5 ft.	12/28/1993	L0006		
Elevation	648 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568855				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518202				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
FRACTURED BEDROCK	RED		0	5	5	648	643	upper southwest volc	basalt	basaltic andesite	
BLUE GRANITE	BLUE		5	34	29	643	614	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report

533478

Printed on 09/30/2025

County St. Louis
 Quad Duluth
 Quad ID 244D

533479

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
 Update
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
JAUSS, JAMES	50	14	W	27	CACADC	elevator	A	35 ft.	34.5 ft.	02/04/1994	L0006		
Elevation	650 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	18 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568412				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518145				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SAND & COBBLES			0	18	18	650	632	sand +larger	sand	cobble	
ROCK	BLUE		18	35	17	632	615	upper southwest volc	icelandite		

Minnesota Well Index - Stratigraphy Report	533479	Printed on 09/30/2025
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533480

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 07/03/1995
 Update
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
NEW APOLLO APT.	50	14	W	27	ACABCD	elevator	A	36 ft.	36 ft.	07/27/1994	L0006		
Elevation	654 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	2 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568874				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518207				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
CLAYEY SAND & COBBLES	BROWN		0	2	2	654	652	pebbly sand/silt/clay-	sand	cobble	clay
GRANITE	BLUE	HARD	2	36	34	652	618	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	533480	Printed on 09/30/2025
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644513

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 05/29/2001
 Update
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
OFFICE DEPOT,	50	14	W	27	CAADBA	domestic	A	11 ft.	11 ft.	04/08/2000	L0004		
Elevation	642 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	4 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568577				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518164				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
CLAY/GRAVEL	RED	MEDIUM	0	4	4	642	638	pebbly sand/silt/clay-	clay	gravel	
KEWEENAWAN FORMATION	BLACK	HARD	4	11	7	638	631	upper southwest volc	icelandite		

Minnesota Well Index - Stratigraphy Report	644513	Printed on 09/30/2025
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701046

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 02/21/2008
 Update 07/05/2007
 Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.			
MW-2	50	14	W	27	CDBBCA	monitor well	S	10 ft.	9.31 ft.	06/28/2007	1381			
Elevation	644 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	ft	Open Hole	-	ft	Static Water Level	ft
Field Located By	Minnesota Geological Survey			Locate Method	Digitization (Screen) - Map (1:12,000) (>15			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -						
Unique No. Verified	Site Plan			Input Source	Minnesota Geological Survey			UTM Easting (X)	568268					
Geological Interpretation	Bruce Bloomgren			Input Date	03/17/2016			UTM Northing (Y)	518129					
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k						

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SANDY FILL MATEIAL	BROWN	SOFT	0	10	10	644	634	man-made fill	fill	sand	clay

Minnesota Well Index - Stratigraphy Report	701046	Printed on 09/30/2025
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701047

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 07/05/2007
 Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.			
MW-3	50	14	W	27	CDBBCA	monitor well	S	13 ft.	12.17 ft.	06/28/2007	1381			
Elevation	644 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	Quat. Water Table	Depth to Bedrock	ft	Open Hole	-	ft	Static Water Level	ft
Field Located By	Minnesota Geological Survey			Locate Method	Digitization (Screen) - Map (1:12,000) (>15			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -						
Unique No. Verified	Site Plan			Input Source	Minnesota Geological Survey			UTM Easting (X)	568284					
Geological Interpretation	Bruce Bloomgren			Input Date	03/17/2016			UTM Northing (Y)	518128					
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k						

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SANDY FILL MATERIAL	BROWN	SOFT	0	3	3	644	641	man-made fill	fill	sand	
CLAY W/SAND & SILT FIRM	RED/BRN		3	13	10	641	631	clay/sand/silt-no peb.	clay	sand	silt

Minnesota Well Index - Stratigraphy Report	701047	Printed on 09/30/2025
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703163

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 02/28/2008
 Update 06/27/2007
 Received Date 02/26/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.				
MW-1	50	14	W	27	CDBBCA	monitor well	S	16 ft.	16 ft.	05/04/2007	1688				
Elevation	643 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	Quat. Water Table	Depth to Bedrock	ft	Open Hole	-	ft	Static Water Level	10	ft
Field Located By	Minnesota Geological Survey			Locate Method	Digitization (Screen) - Map (1:12,000) (>15			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -							
Unique No. Verified	Site Plan			Input Source	Minnesota Geological Survey			UTM Easting (X)	568281						
Geological Interpretation	Bruce Bloomgren			Input Date	03/17/2016			UTM Northing (Y)	518129						
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k							

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SAND/GRAVEL	BROWN	SOFT	0	16	16	643	627	sand +larger-brown	sand	gravel	

Minnesota Well Index - Stratigraphy Report	703163	Printed on 09/30/2025
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704170

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 01/17/2006
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
A & L DOWNTOWN	50	14	W	27	ACBDCD	elevator	A	42 ft.	42 ft.	01/05/2006	L0008		
Elevation	655 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	2 ft	Open Hole	- ft	Static Water Level	6 ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568790				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518196				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
CONCRETE	GRAY	M.HARD	0	2	2	655	653	pavement	pavement (man-made)		
ROCK	GRAY	HARD	2	42	40	653	613	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report	704170	Printed on 09/30/2025
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739031

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 05/08/2006
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
SHERMAN	50	14	W	27	CAACDC	elevator	A	56 ft.	56 ft.	04/28/2006	L0008		
Elevation	639 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568517				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518156				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRANITE	GRAY	HARD	0	28	28	639	611	upper southwest volc	icelandite		
GRANITE	RED	HARD	28	56	28	611	583	upper southwest volc	volcanics,		

Minnesota Well Index - Stratigraphy Report	739031	Printed on 09/30/2025
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739041

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 06/29/2009
 Update 10/29/2007
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
A & L PROPERTIES	50	14	W	27	ACDABB	elevator	A	49 ft.	49 ft.	10/10/2007	1832		
Elevation	614 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	upper southwest	Depth to Bedrock	2 ft	Open Hole	- ft	Static Water Level	10 ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568951				
Geological Interpretation	Amy Block			Input Date	10/11/2017			UTM Northing (Y)	518195				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRAVEL	GRAY	MEDIUM	0	2	2	614	612	gravel (+larger)-gray	gravel		
BROKEN ROCK	DK. GRY	MEDIUM	2	9	7	612	605	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	DK. GRY	HARD	9	49	40	605	565	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	739041	Printed on 09/30/2025
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739042

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 06/30/2009
 Update 10/29/2007
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
A & L PROPERTIES	50	14	W	27	ACDABB	elevator	A	49 ft.	49 ft.	10/18/2007	1832		
Elevation	615 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer	upper southwest	Depth to Bedrock	2 ft	Open Hole	- ft	Static Water Level	10 ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	568946				
Geological Interpretation	Amy Block			Input Date	10/11/2017			UTM Northing (Y)	518195				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRAVEL	GRAY	MEDIUM	0	2	2	615	613	gravel (+larger)-gray	gravel		
BROKEN ROCK	DK. GRY	MEDIUM	2	8	6	613	607	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	DK. GRY	HARD	8	49	41	607	566	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	739042	Printed on 09/30/2025
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764826

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 07/28/2009
 Update 10/23/2009
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
HURLBUT-ZEPPE	50	14	W	27	ADBBBA	elevator	A	34 ft.	34 ft.	03/03/2009	1832		
Elevation	628 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	Minnesota Geological Survey			Locate Method	Digitization (Screen) - Map (1:12,000) (>15			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	569103				
Geological Interpretation	Amy Block			Input Date	04/28/2016			UTM Northing (Y)	518213				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
BROKEN GRANITE	BLACK	HARD	0	5	5	628	623	upper southwest volc	basalt	basaltic andesite	crevice
GRANITE	BLACK	HARD	5	34	29	623	594	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	764826	Printed on 09/30/2025
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454658

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 10/31/1990
 Update Date 12/05/2019
 Received Date

Well Name BOWMAN	Township 50	Range 14	Dir Section W 27	Subsection CABCDC	Well Depth 312 ft.	Depth Completed 312 ft.	Date Well Completed 05/11/1989
Elevation 697 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Air Rotary		Drill Fluid Foam	Use air conditioning Status Sealed		
Address					Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To		
Well 330 2ND ST W DULUTH MN 55802					Casing Type Single casing Joint Welded		
Contact 700 FIRST BANK PL DULUTH MN 55802					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below 1 ft.		
Stratigraphy Information					Casing Diameter Weight Hole Diameter		
Geological Material		From	To (ft.)	Color	Hardness		
SAND FILL		0	10	BROWN	SOFT	6 in. To 312 ft.	
GABBRO		10	312	BLACK	MEDIUM		
					Open Hole From 25 ft. To 312 ft.		
					Screen? <input type="checkbox"/> Type Make		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer Model		
					<input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade		
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Nearest Known Source of Contamination		
					100 feet East Direction Septic tank/drain field Type		
					Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input checked="" type="checkbox"/> Not Installed Date Installed		
					Manufacturer's name		
					Model Number HP Volt		
					Length of drop pipe ft Capacity g.p. Typ		
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Miscellaneous		
					First Bedrock upper southwest volc Aquifer Duluth Complex		
					Last Strat Duluth Complex Depth to Bedrock 10 ft		
					Located by Minnesota Geological Survey		
					Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or		
					System UTM - NAD83, Zone 15, Meters X 568310 Y 5181602		
					Unique Number Verification Address verification Input Date 04/24/2018		
					Angled Drill Hole		
					Well Contractor		
					Petersen Well Co. 69183 PETERSEN, D.		
					Licensee Business Lic. or Reg. No. Name of Driller		

Remarks
 HOLE PRODUCED VERY LITTLE WATER, WAS ABANDONED.
 WELL SEALED 5-12-1989 BY 69183.

533478

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
 Update Date 12/05/2019
 Received Date

Well Name 3	Township 50	Range 14	Dir Section W 27	Subsection ACACBC	
Elevation 648 ft.	Elev. Method LiDAR 1m DEM (MNDNR)				
Address C/W 32 1ST ST E DULUTH MN 55802					
Stratigraphy Information					
Geological Material	From	To (ft.)	Color	Hardness	
FRACTURED BEDROCK	0	5	RED		
BLUE GRANITE	5	34	BLUE		
Well Depth 34 ft. Depth Completed 33.5 ft. Date Well Completed 12/28/1993					
Drill Method Non-specified Rotary Drill Fluid Foam					
Use elevator Status Active					
Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To					
Casing Type Single casing Joint					
Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below					
Casing Diameter 16 in. Weight 32 ft. 62.5 lbs./ft. Hole Diameter 20 in. To 33.5 ft.					
Open Hole From _____ ft. To _____ ft.					
Screen? <input type="checkbox"/> Type Make					
Static Water Level					
Pumping Level (below land surface)					
Wellhead Completion					
Pitless adapter manufacturer _____ Model _____					
<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade					
<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)					
Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified					
Material Amount From To					
neat cement 20 Sacks 0 ft. 32.5 ft.					
Nearest Known Source of Contamination					
feet Direction Type					
Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Pump <input type="checkbox"/> Not Installed Date Installed _____					
Manufacturer's name _____					
Model Number _____ HP _____ Volt _____					
Length of drop pipe _____ ft Capacity _____ g.p. Typ _____					
Abandoned					
Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Variance					
Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Miscellaneous					
First Bedrock upper southwest volc Aquifer					
Last Strat upper southwest volc Depth to Bedrock 0 ft					
Located by Minnesota Geological Survey					
Locate Method GPS SA Off (averaged) (15 meters)					
System UTM - NAD83, Zone 15, Meters X 568855 Y 5182026					
Unique Number Verification Address verification Input Date 04/06/2018					
Angled Drill Hole					
Well Contractor					
Rudy's Contracting, Inc L0006 ZIMBAUER, R.					
Licensee Business Lic. or Reg. No. Name of Driller					

533479

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 06/16/1994
 Update Date 12/05/2019
 Received Date

Well Name JAUSS, JAMES	Township 50	Range 14	Dir Section W 27	Subsection CACADC	Well Depth 35 ft.	Depth Completed 34.5 ft.	Date Well Completed 02/04/1994
Elevation 650 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Cable Tool		Drill Fluid Foam			
Address					Use elevator Status Active		
Contact 1931 2ND ST E DULUTH MN 55812					Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To		
Well 403 SUPERIOR ST W DULUTH MN 55802					Casing Type Step down Joint		
Stratigraphy Information					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
Geological Material		From	To (ft.)	Color	Hardness	Casing Diameter Weight Hole Diameter	
SAND & COBBLES		0	18			12 in. To 34 ft. lbs./ft.	20 in. To 34.5 ft.
ROCK		18	35	BLUE		20 in. To 18 ft. lbs./ft.	
Open Hole					Screen? <input type="checkbox"/> Type Make		
					Static Water Level		
					Pumping Level (below land surface)		
Wellhead Completion					Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
Pitless adapter manufacturer					Model		
<input type="checkbox"/> Casing Protection					<input type="checkbox"/> 12 in. above grade		
<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)							
Material		Amount		From	To		
neat cement		40 Sacks		0	ft. 34.5 ft.		
Nearest Known Source of Contamination					Well Contractor		
feet		Direction				Type	
Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No					Rudy's Contracting, Inc L0006 ZIMBAUER, R.		
Pump <input type="checkbox"/> Not Installed Date Installed					Licensee Business Lic. or Reg. No. Name of Driller		
Manufacturer's name							
Model Number		HP		Volt			
Length of drop pipe		ft Capacity		g.p. Typ			
Abandoned							
Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Variance							
Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Miscellaneous							
First Bedrock		upper southwest volc		Aquifer			
Last Strat		upper southwest volc		Depth to Bedrock		18 ft	
Located by Minnesota Geological Survey							
Locate Method GPS SA Off (averaged) (15 meters)							
System		UTM - NAD83, Zone 15, Meters		X 568412		Y 5181452	
Unique Number Verification		Address verification		Input Date		04/06/2018	
Angled Drill Hole							
Well Contractor							
Rudy's Contracting, Inc					L0006		ZIMBAUER, R.
Licensee Business					Lic. or Reg. No.		Name of Driller

Remarks

533480

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 07/03/1995
 Update Date 12/05/2019
 Received Date

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Name</td> <td>Township</td> <td>Range</td> <td>Dir Section</td> <td>Subsection</td> </tr> <tr> <td>NEW APOLLO</td> <td>50</td> <td>14</td> <td>W 27</td> <td>ACABCD</td> </tr> <tr> <td>Elevation</td> <td>654 ft.</td> <td>Elev. Method</td> <td colspan="2">LiDAR 1m DEM (MNDNR)</td> </tr> <tr> <td colspan="5">Address</td> </tr> <tr> <td>Well</td> <td colspan="4">102 1ST ST E DULUTH MN 55802</td> </tr> <tr> <td>Contact</td> <td colspan="4">P.O. BOX 39 DULUTH MN 55802</td> </tr> <tr> <td colspan="5">Stratigraphy Information</td> </tr> <tr> <td>Geological Material</td> <td>From</td> <td>To (ft.)</td> <td>Color</td> <td>Hardness</td> </tr> <tr> <td>CLAYEY SAND & GRANITE</td> <td>0</td> <td>2</td> <td>BROWN</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>36</td> <td>BLUE</td> <td>HARD</td> </tr> </table>	Well Name	Township	Range	Dir Section	Subsection	NEW APOLLO	50	14	W 27	ACABCD	Elevation	654 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)		Address					Well	102 1ST ST E DULUTH MN 55802				Contact	P.O. BOX 39 DULUTH MN 55802				Stratigraphy Information					Geological Material	From	To (ft.)	Color	Hardness	CLAYEY SAND & GRANITE	0	2	BROWN			2	36	BLUE	HARD	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Depth</td> <td>Depth Completed</td> <td>Date Well Completed</td> </tr> <tr> <td>36 ft.</td> <td>36 ft.</td> <td>07/27/1994</td> </tr> <tr> <td>Drill Method</td> <td>Non-specified Rotary</td> <td>Drill Fluid Foam</td> </tr> <tr> <td>Use</td> <td>elevator</td> <td>Status Active</td> </tr> <tr> <td>Well Hydrofractured?</td> <td>Yes <input type="checkbox"/> No <input type="checkbox"/></td> <td>From To</td> </tr> <tr> <td>Casing Type</td> <td>Single casing</td> <td>Joint Welded</td> </tr> <tr> <td>Drive Shoe?</td> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>Above/Below</td> </tr> <tr> <td>Casing Diameter</td> <td>Weight</td> <td>Hole Diameter</td> </tr> <tr> <td>16 in. To 35 ft.</td> <td>lbs./ft.</td> <td>19 in. To 36 ft.</td> </tr> <tr> <td>Open Hole</td> <td>From ft.</td> <td>To ft.</td> </tr> <tr> <td>Screen? <input type="checkbox"/></td> <td>Type</td> <td>Make</td> </tr> <tr> <td colspan="3">Static Water Level</td> </tr> <tr> <td colspan="3">Pumping Level (below land surface)</td> </tr> <tr> <td colspan="3">Wellhead Completion</td> </tr> <tr> <td colspan="2">Pitless adapter manufacturer</td> <td>Model</td> </tr> <tr> <td><input type="checkbox"/> Casing Protection</td> <td colspan="2"><input type="checkbox"/> 12 in. above grade</td> </tr> <tr> <td colspan="3"><input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)</td> </tr> <tr> <td>Grouting Information</td> <td>Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified</td> <td></td> </tr> <tr> <td>Material</td> <td>Amount</td> <td>From To</td> </tr> <tr> <td>neat cement</td> <td>30 Sacks</td> <td>0 ft. 36 ft.</td> </tr> <tr> <td colspan="3">Nearest Known Source of Contamination</td> </tr> <tr> <td>feet</td> <td>Direction</td> <td>Type</td> </tr> <tr> <td colspan="3">Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Pump <input type="checkbox"/> Not Installed</td> <td colspan="2">Date Installed</td> </tr> <tr> <td colspan="3">Manufacturer's name</td> </tr> <tr> <td>Model Number</td> <td>HP</td> <td>Volt</td> </tr> <tr> <td>Length of drop pipe</td> <td>ft Capacity</td> <td>g.p. Typ</td> </tr> <tr> <td colspan="3">Abandoned</td> </tr> <tr> <td colspan="3">Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Variance</td> </tr> <tr> <td colspan="3">Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Miscellaneous</td> </tr> <tr> <td>First Bedrock</td> <td>upper southwest volc</td> <td>Aquifer</td> </tr> <tr> <td>Last Strat</td> <td>upper southwest volc</td> <td>Depth to Bedrock 2 ft</td> </tr> <tr> <td colspan="3">Located by Minnesota Geological Survey</td> </tr> <tr> <td>Locate Method</td> <td colspan="2">GPS SA Off (averaged) (15 meters)</td> </tr> <tr> <td>System</td> <td>UTM - NAD83, Zone 15, Meters</td> <td>X 568874 Y 5182072</td> </tr> <tr> <td>Unique Number Verification</td> <td>Address verification</td> <td>Input Date 04/06/2018</td> </tr> <tr> <td colspan="3">Angled Drill Hole</td> </tr> <tr> <td colspan="3">Well Contractor</td> </tr> <tr> <td>Rudy's Contracting, Inc</td> <td>L0006</td> <td>ZIMBAUER, R.</td> </tr> <tr> <td>Licensee Business</td> <td>Lic. or Reg. No.</td> <td>Name of Driller</td> </tr> </table>	Well Depth	Depth Completed	Date Well Completed	36 ft.	36 ft.	07/27/1994	Drill Method	Non-specified Rotary	Drill Fluid Foam	Use	elevator	Status Active	Well Hydrofractured?	Yes <input type="checkbox"/> No <input type="checkbox"/>	From To	Casing Type	Single casing	Joint Welded	Drive Shoe?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Above/Below	Casing Diameter	Weight	Hole Diameter	16 in. To 35 ft.	lbs./ft.	19 in. To 36 ft.	Open Hole	From ft.	To ft.	Screen? <input type="checkbox"/>	Type	Make	Static Water Level			Pumping Level (below land surface)			Wellhead Completion			Pitless adapter manufacturer		Model	<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade		<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)			Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		Material	Amount	From To	neat cement	30 Sacks	0 ft. 36 ft.	Nearest Known Source of Contamination			feet	Direction	Type	Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No			Pump <input type="checkbox"/> Not Installed	Date Installed		Manufacturer's name			Model Number	HP	Volt	Length of drop pipe	ft Capacity	g.p. 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<p>Remarks START OF HOLE IN APPROX. 12 FT BELOW NORTH SIDEWALK.</p>																																																																																																																																																																																	

567858

County St. Louis
 Quad
 Quad ID

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 09/16/2008
 Update Date 12/05/2019
 Received Date

Well Name MW-2 CITY OF	Township 50	Range 14	Dir Section W 27	Subsection null	Well Depth null	Depth Completed null	Date Well Completed
Elevation	Elev. Method				Drill Method	Drill Fluid	
Address C/W 411 W. 1ST. ST MN					Use		
Stratigraphy Information					Status		
					Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To		
					Casing Type Joint		
					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/> Type Make		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer _____ Model _____		
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade		
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Specified		
					Nearest Known Source of Contamination		
					_____ feet _____ Direction _____ Type		
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed _____ Date Installed _____		
					Manufacturer's name _____		
					Model Number _____ HP _____ Volt _____		
					Length of drop pipe _____ ft Capacity _____ g.p. Typ _____		
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Miscellaneous		
					First Bedrock _____ Aquifer _____		
					Last Strat _____ Depth to Bedrock _____ ft		
					Located by _____		
					Locate Method _____		
					System UTM - NAD83, Zone 15, Meters X Y		
					Unique Number Verification _____ Input Date _____		
					Angled Drill Hole		
					Well Contractor		
					Earth Burners, Inc. M0142		
					Licensee Business _____ Lic. or Reg. No. _____ Name of Driller _____		

Remarks
 MW-2 NOT INSTALLED

644513

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 05/29/2001
 Update Date 12/05/2019
 Received Date

Well Name OFFICE DEPOT, 50	Township 14	Range W 27	Dir Section CAADBA	Subsection	Well Depth 11 ft.	Depth Completed 11 ft.	Date Well Completed 04/08/2000	
Elevation 642 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Cable Tool		Drill Fluid	Use domestic Status Active			
Address					Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To			
Contact 2200 OLD GERMANTOWN RD DEL RAY BEACH FL 33445					Casing Type Step down Joint Welded			
Well 207W SUPERIOR ST DULUTH MN 55802					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below			
Stratigraphy Information					Casing Diameter Weight Hole Diameter			
Geological Material		From	To (ft.)	Color	Hardness			
CLAY/GRAVEL		0	4	RED	MEDIUM	16 in. To 11 ft. 62.5 lbs./ft. 24 in. To 11 ft.		
KEWEENAWAN		4	11	BLACK	HARD	24 in. To 5 ft. 63.4 lbs./ft.		
Open Hole					Screen? <input type="checkbox"/> Type Make			
					Static Water Level			
					Pumping Level (below land surface)			
Wellhead Completion					Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified			
Pitless adapter manufacturer					Model			
<input type="checkbox"/> Casing Protection					<input type="checkbox"/> 12 in. above grade			
<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)								
Material					Amount		From To	
neat cement					16 Sacks		0 ft. 11 ft.	
Nearest Known Source of Contamination					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No			
feet					Direction		Type	
Pump <input checked="" type="checkbox"/> Not Installed					Date Installed			
Manufacturer's name					HP		Volt	
Model Number					ft Capacity		g.p. Typ	
Abandoned					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Variance					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Miscellaneous					First Bedrock upper southwest volc Aquifer			
Last Strat upper southwest volc					Depth to Bedrock 4		ft	
Located by Minnesota Geological Survey					Locate Method GPS SA Off (averaged) (15 meters)			
System UTM - NAD83, Zone 15, Meters					X 568577		Y 5181647	
Unique Number Verification					Address verification		Input Date 04/06/2018	
Angled Drill Hole								
Well Contractor					Midwest Drilling L0004		STANGRET, J.	
Licensee Business					Lic. or Reg. No.		Name of Driller	

Remarks
 PIT 5 FT. BELOW GRADE.

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 02/21/2008

Update Date 02/26/2019

Received Date 07/05/2007

County St. Louis
Quad Duluth
Quad ID 244D

701046

Well Name MW-2	Township 50	Range 14	Dir Section W 27	Subsection CDBBCA	Well Depth 10 ft.	Depth Completed 9.31 ft.	Date Well Completed 06/28/2007
Elevation 644 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid	Use monitor well Status Sealed		
Address Well 505 SUPERIOR ST W DULUTH MN 55802					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Stratigraphy Information					Casing Type Single casing Joint		
Geological Material From To (ft.) Color Hardness					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
SANDY FILL MATEIAL 0 10 BROWN SOFT					Casing Diameter Weight Hole Diameter		
					2 in. To 4.3 ft. 0 lbs./ft. 4.2 in. To 9.3 ft.		
					Open Hole From ft. To ft.		
					Screen? <input checked="" type="checkbox"/> Type plastic Make JOHNSON		
					Diameter Slot/Gauze Length Set		
					2 in. 10 5 ft. 4.3 ft. 9.3 ft.		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer Model		
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade		
					<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material Amount From To		
					bentonite 0.5 Sacks 0.5 ft. 3.3 ft.		
					Nearest Known Source of Contamination		
					20 feet South Direction Type		
					Well disinfected upon completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Pump <input checked="" type="checkbox"/> Not Installed Date Installed		
					Manufacturer's name		
					Model Number HP Volt		
					Length of drop pipe ft Capacity g.p. Typ		
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock Aquifer		
					Last Strat man-made fill Depth to Bedrock ft		
					Located by Minnesota Geological Survey		
					Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)		
					System UTM - NAD83, Zone 15, Meters X 568268 Y 5181292		
					Unique Number Verification Site Plan Input Date 03/17/2016		
					Angled Drill Hole		
					Well Contractor		
					Twin Ports Testing, Inc. 1381 DINNAN, L.		
					Licensee Business Lic. or Reg. No. Name of Driller		

Remarks
 SEALED 02-04-2010 BY 1381.
 NO WATER ENCOUNTERED.

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date
Update Date 02/26/2019
Received Date 07/05/2007

County St. Louis
Quad Duluth
Quad ID 244D

701047

Well Name MW-3	Township 50	Range 14	Dir Section W 27	Subsection CDBBCA	Well Depth 13 ft.	Depth Completed 12.17 ft.	Date Well Completed 06/28/2007
Elevation 644 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid	Use monitor well Status Sealed		
Address Well 505 SUPERIOR ST W DULUTH MN 55802					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Stratigraphy Information					Casing Type Single casing Joint		
Geological Material From To (ft.) Color Hardness					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
SANDY FILL MATERIAL 0 3 BROWN SOFT					Casing Diameter Weight Hole Diameter		
CLAY W/SAND & SILT 3 13 RED/BRN					2 in. To 12.2 ft. 0 lbs./ft. 4.2 in. To 12.1 ft.		
					Open Hole From ft. To ft.		
					Screen? <input checked="" type="checkbox"/> Type plastic Make JOHNSON		
					Diameter Slot/Gauze Length Set		
					2 in. 10 5 ft. 7.2 ft. 12.2 ft.		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer Model		
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade		
					<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material Amount From To		
					bentonite 0.5 Sacks 0.8 ft. 5.1 ft.		
					Nearest Known Source of Contamination		
					20 feet North Direction Type		
					Well disinfected upon completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Pump <input checked="" type="checkbox"/> Not Installed Date Installed		
					Manufacturer's name		
					Model Number HP Volt		
					Length of drop pipe ft Capacity g.p. Typ		
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock Aquifer Quat. Water		
					Last Strat clay/sand/silt-no peb. Depth to Bedrock ft		
					Located by Minnesota Geological Survey		
					Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)		
					System UTM - NAD83, Zone 15, Meters X 568284 Y 5181281		
					Unique Number Verification Site Plan Input Date 03/17/2016		
					Angled Drill Hole		
					Well Contractor		
					Twin Ports Testing, Inc. 1381 DINNAN, L.		
					Licensee Business Lic. or Reg. No. Name of Driller		

Remarks
 SEALED 02-04-2010 BY 1381.
 NO WATER ENCOUNTERED.

704170

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 12/05/2019
 Received Date 01/17/2006

Well Name A & L	Township 50	Range 14	Dir Section W 27	Subsection ACBDCD	Well Depth 42 ft.	Depth Completed 42 ft.	Date Well Completed 01/05/2006
Elevation 655 ft.	Elev. Method LiDAR 1m DEM (MNDNR)				Drill Method Non-specified Rotary	Drill Fluid	
Address					Use elevator	Status Active	
Contact 16W 1ST ST DULUTH MN 55802					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Well 10W 1ST ST DULUTH MN 55805					Casing Type Step down Joint Welded		
Stratigraphy Information					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below		
Geological Material		From	To (ft.)	Color	Hardness	Casing Diameter Weight Hole Diameter	
CONCRETE		0	2	GRAY	M.HARD	16 in. To 42 ft. 62.6 lbs./ft. 19. in. To 42 ft.	
ROCK		2	42	GRAY	HARD	2 in. To 20 ft. 52.7 lbs./ft.	
Open Hole					From	ft.	To ft.
Screen? <input type="checkbox"/>					Type	Make	
Static Water Level					6	ft.	land surface Measure 01/05/2006
Pumping Level (below land surface)							
Wellhead Completion							
Pitless adapter manufacturer Model							
<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade							
<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)							
Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified							
Material		Amount		From		To	
neat cement		2.25 Cubic yards		ft. 42		ft.	
Nearest Known Source of Contamination							
feet		Direction		Type			
Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Pump <input type="checkbox"/> Not Installed Date Installed							
Manufacturer's name							
Model Number		HP		Volt			
Length of drop pipe		ft Capacity		g.p. Typ			
Abandoned							
Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Variance							
Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Miscellaneous							
First Bedrock		upper southwest volc		Aquifer			
Last Strat		upper southwest volc		Depth to Bedrock		2 ft	
Located by Minnesota Geological Survey							
Locate Method GPS SA Off (averaged) (15 meters)							
System		UTM - NAD83, Zone 15, Meters		X 568790		Y 5181966	
Unique Number Verification		Address verification		Input Date		04/06/2018	
Angled Drill Hole							
Well Contractor							
United Drilling, Inc.		L0008		GRABER, K.			
Licensee Business		Lic. or Reg. No.		Name of Driller			

Remarks

739031

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 12/05/2019
 Received Date 05/08/2006

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Name</td> <td>Township</td> <td>Range</td> <td>Dir Section</td> <td>Subsection</td> </tr> <tr> <td>SHERMAN</td> <td>50</td> <td>14</td> <td>W 27</td> <td>CAACDC</td> </tr> <tr> <td>Elevation</td> <td>639 ft.</td> <td>Elev. Method</td> <td colspan="2">LiDAR 1m DEM (MNDNR)</td> </tr> <tr> <td colspan="5">Address</td> </tr> <tr> <td>Contact</td> <td colspan="4">233 PARK AV S DULUTH MN</td> </tr> <tr> <td>Well</td> <td colspan="4">301 SUPERIOR ST E DULUTH MN 55802</td> </tr> <tr> <td colspan="5">Stratigraphy Information</td> </tr> <tr> <td>Geological Material</td> <td>From</td> <td>To (ft.)</td> <td>Color</td> <td>Hardness</td> </tr> <tr> <td>GRANITE</td> <td>0</td> <td>28</td> <td>GRAY</td> <td>HARD</td> </tr> <tr> <td>GRANITE</td> <td>28</td> <td>56</td> <td>RED</td> <td>HARD</td> </tr> </table>	Well Name	Township	Range	Dir Section	Subsection	SHERMAN	50	14	W 27	CAACDC	Elevation	639 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)		Address					Contact	233 PARK AV S DULUTH MN				Well	301 SUPERIOR ST E DULUTH MN 55802				Stratigraphy Information					Geological Material	From	To (ft.)	Color	Hardness	GRANITE	0	28	GRAY	HARD	GRANITE	28	56	RED	HARD	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Depth</td> <td>Depth Completed</td> <td>Date Well Completed</td> </tr> <tr> <td>56 ft.</td> <td>56 ft.</td> <td>04/28/2006</td> </tr> <tr> <td>Drill Method</td> <td>Non-specified Rotary</td> <td>Drill Fluid</td> </tr> <tr> <td>Use</td> <td>elevator</td> <td>Status</td> </tr> <tr> <td></td> <td></td> <td>Active</td> </tr> <tr> <td>Well Hydrofractured?</td> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>From To</td> </tr> <tr> <td>Casing Type</td> <td>Step down</td> <td>Joint Welded</td> </tr> <tr> <td>Drive Shoe?</td> <td>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Above/Below</td> </tr> <tr> <td>Casing Diameter</td> <td>Weight</td> <td>Hole Diameter</td> </tr> <tr> <td>18 in. To 56 ft. 82.2 lbs./ft.</td> <td></td> <td>24 in. To 56 ft.</td> </tr> <tr> <td>24 in. 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Typ</td> </tr> <tr> <td colspan="3">Abandoned</td> </tr> <tr> <td colspan="3">Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Variance</td> </tr> <tr> <td colspan="3">Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Miscellaneous</td> </tr> <tr> <td>First Bedrock</td> <td>upper southwest volc</td> <td>Aquifer</td> </tr> <tr> <td>Last Strat</td> <td>upper southwest volc</td> <td>Depth to Bedrock 0 ft</td> </tr> <tr> <td colspan="3">Located by Minnesota Geological Survey</td> </tr> <tr> <td colspan="3">Locate Method GPS SA Off (averaged) (15 meters)</td> </tr> <tr> <td>System</td> <td>UTM - NAD83, Zone 15, Meters</td> <td>X 568517 Y 5181566</td> </tr> <tr> <td>Unique Number Verification</td> <td>Address verification</td> <td>Input Date 04/06/2018</td> </tr> <tr> <td colspan="3">Angled Drill Hole</td> </tr> <tr> <td colspan="3">Well Contractor</td> </tr> <tr> <td>United Drilling, Inc.</td> <td>L0008</td> <td>LUTZ, D.</td> </tr> <tr> <td>Licensee Business</td> <td>Lic. or Reg. No.</td> <td>Name of Driller</td> </tr> </table>	Well Depth	Depth Completed	Date Well Completed	56 ft.	56 ft.	04/28/2006	Drill Method	Non-specified Rotary	Drill Fluid	Use	elevator	Status			Active	Well Hydrofractured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From To	Casing Type	Step down	Joint Welded	Drive Shoe?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Above/Below	Casing Diameter	Weight	Hole Diameter	18 in. To 56 ft. 82.2 lbs./ft.		24 in. To 56 ft.	24 in. To 3 ft. 63.4 lbs./ft.			Open Hole	From ft.	To ft.	Screen? <input type="checkbox"/>	Type	Make	Static Water Level			Pumping Level (below land surface)			Wellhead Completion			Pitless adapter manufacturer		Model	<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade		<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)			Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		Material	Amount	From To	neat cement	2.5 Cubic yards	ft. 56 ft.	Nearest Known Source of Contamination			feet	Direction	Type	Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No			Pump <input type="checkbox"/> Not Installed	Date Installed		Manufacturer's name			Model Number	HP	Volt	Length of drop pipe	ft Capacity	g.p. Typ	Abandoned			Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No			Variance			Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Miscellaneous			First Bedrock	upper southwest volc	Aquifer	Last Strat	upper southwest volc	Depth to Bedrock 0 ft	Located by Minnesota Geological Survey			Locate Method GPS SA Off (averaged) (15 meters)			System	UTM - NAD83, Zone 15, Meters	X 568517 Y 5181566	Unique Number Verification	Address verification	Input Date 04/06/2018	Angled Drill Hole			Well Contractor			United Drilling, Inc.	L0008	LUTZ, D.	Licensee Business	Lic. or Reg. No.	Name of Driller
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MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 06/29/2009

Update Date 12/05/2019

Received Date 10/29/2007

County St. Louis
 Quad Duluth
 Quad ID 244D

739041

Well Name A & L	Township 50	Range 14	Dir Section W 27	Subsection ACDABB	Well Depth 49 ft.	Depth Completed 49 ft.	Date Well Completed 10/10/2007
Elevation 614 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Non-specified Rotary		Drill Fluid			
Address C/W 38 SUPERIOR ST E DULUTH MN 55807					Use elevator	Status Active	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From	To
Geological Material	From	To (ft.)	Color	Hardness	Casing Type Step down	Joint Welded	
GRAVEL	0	2	GRAY	MEDIUM	Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Above/Below	
BROKEN ROCK	2	9	DK. GRY	MEDIUM	Casing Diameter	Weight	Hole Diameter
GRANITE	9	49	DK. GRY	HARD	16 in. To 49 ft. 62.6 lbs./ft.		19 in. To 49 ft.
					20 in. To 9 ft. 52.7 lbs./ft.		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/>	Type	Make
					Static Water Level		
					10 ft. land surface	Measure	10/10/2007
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer _____	Model	
					<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade	
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material	Amount	From To
					neat cement	1.75 Cubic yards	ft. 49 ft.
					Nearest Known Source of Contamination		
					_____ feet	Direction	Type
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed	Date Installed	
					Manufacturer's name _____		
					Model Number	HP	Volt
					Length of drop pipe _____ ft	Capacity	g.p. Typ
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock upper southwest volc	Aquifer upper southwest	
					Last Strat upper southwest volc	Depth to Bedrock 2 ft	
					Located by Minnesota Geological Survey		
					Locate Method GPS SA Off (averaged) (15 meters)		
					System UTM - NAD83, Zone 15, Meters	X 568951	Y 5181951
					Unique Number Verification	Address verification	Input Date 10/11/2017
					Angled Drill Hole		
					Well Contractor		
					United Drilling, Inc.	1832	SIMON, G.
					Licensee Business	Lic. or Reg. No.	Name of Driller

Remarks
HARD ROCK.

739042

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 06/30/2009
 Update Date 12/05/2019
 Received Date 10/29/2007

Well Name A & L	Township 50	Range 14	Dir Section W 27	Subsection ACDABB	Well Depth 49 ft.	Depth Completed 49 ft.	Date Well Completed 10/18/2007																				
Elevation 615 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Non-specified Rotary		Drill Fluid																							
Address C/W 38 SUPERIOR ST E DULUTH MN 55807					Use elevator	Status Active																					
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To																						
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:20%;">Geological Material</th> <th style="width:10%;">From</th> <th style="width:10%;">To (ft.)</th> <th style="width:10%;">Color</th> <th style="width:10%;">Hardness</th> </tr> </thead> <tbody> <tr> <td>GRAVEL</td> <td>0</td> <td>2</td> <td>GRAY</td> <td>MEDIUM</td> </tr> <tr> <td>BROKEN ROCK</td> <td>2</td> <td>8</td> <td>DK. GRY</td> <td>MEDIUM</td> </tr> <tr> <td>GRANITE</td> <td>8</td> <td>49</td> <td>DK. GRY</td> <td>HARD</td> </tr> </tbody> </table>					Geological Material	From	To (ft.)	Color	Hardness	GRAVEL	0	2	GRAY	MEDIUM	BROKEN ROCK	2	8	DK. GRY	MEDIUM	GRANITE	8	49	DK. GRY	HARD	Casing Type Step down Joint Welded		
Geological Material	From	To (ft.)	Color	Hardness																							
GRAVEL	0	2	GRAY	MEDIUM																							
BROKEN ROCK	2	8	DK. GRY	MEDIUM																							
GRANITE	8	49	DK. GRY	HARD																							
					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below																						
					Casing Diameter Weight Hole Diameter																						
					16 in. To 49 ft. 62.6 lbs./ft. 19. in. To 49 ft.																						
					20 in. To 8 ft. 52.7 lbs./ft.																						
					Open Hole From _____ ft. To _____ ft.																						
					Screen? <input type="checkbox"/> Type Make																						
					Static Water Level																						
					10 ft. land surface Measure 10/18/2007																						
					Pumping Level (below land surface)																						
					Wellhead Completion																						
					Pitless adapter manufacturer _____ Model																						
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade																						
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																						
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified																						
					Material Amount From To																						
					neat cement 1.75 Cubic yards ft. 49 ft.																						
					Nearest Known Source of Contamination																						
					feet Direction Type																						
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																						
					Pump <input type="checkbox"/> Not Installed Date Installed																						
					Manufacturer's name																						
					Model Number HP Volt																						
					Length of drop pipe ft Capacity g.p. Typ																						
					Abandoned																						
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No																						
					Variance																						
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																						
					Miscellaneous																						
					First Bedrock upper southwest volc Aquifer upper southwest																						
					Last Strat upper southwest volc Depth to Bedrock 2 ft																						
					Located by Minnesota Geological Survey																						
					Locate Method GPS SA Off (averaged) (15 meters)																						
					System UTM - NAD83, Zone 15, Meters X 568946 Y 5181954																						
					Unique Number Verification Address verification Input Date 10/11/2017																						
					Angled Drill Hole																						
					Well Contractor																						
					United Drilling, Inc. 1832 SIMON, G.																						
					Licensee Business Lic. or Reg. No. Name of Driller																						

Remarks
 HARD ROCK.

764826

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 07/28/2009
 Update Date 12/05/2019
 Received Date 10/23/2009

Well Name HURLBUT-	Township 50	Range 14	Dir Section W 27	Subsection ADBBBA	Well Depth 34 ft.	Depth Completed 34 ft.	Date Well Completed 03/03/2009
Elevation 628 ft.	Elev. Method LiDAR 1m DEM (MNDNR)				Drill Method Non-specified Rotary	Drill Fluid	
Address C/W 222 SUPERIOR ST E DULUTH MN 55802					Use elevator	Status Active	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From	To
Geological Material	From	To (ft.)	Color	Hardness	Casing Type Step down	Joint Welded	
BROKEN GRANITE	0	5	BLACK	HARD	Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Above/Below	
GRANITE	5	34	BLACK	HARD	Casing Diameter	Weight	Hole Diameter
					16 in. To 34 ft. 62.6 lbs./ft.	20 in. To 34 ft.	
					20 in. To 5 ft. 52.7 lbs./ft.		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/>	Type	Make
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer	Model	
					<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade	
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified	
					Material	Amount	From To
					neat cement	1.5 Cubic yards	ft. 34 ft.
					Nearest Known Source of Contamination		
					feet	Direction	Type
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input checked="" type="checkbox"/> Not Installed	Date Installed	
					Manufacturer's name		
					Model Number	HP	Volt
					Length of drop pipe	ft	Capacity g.p. Typ
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock	upper southwest volc	Aquifer
					Last Strat	upper southwest volc	Depth to Bedrock 0 ft
					Located by Minnesota Geological Survey		
					Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)		
					System	UTM - NAD83, Zone 15, Meters	X 569103 Y 5182134
					Unique Number Verification	Address verification	Input Date 04/28/2016
					Angled Drill Hole		
					Well Contractor		
					United Drilling, Inc.	1832	LANGSDORF, A.
					Licensee Business	Lic. or Reg. No.	Name of Driller

703163

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 02/28/2008
 Update Date 02/26/2019
 Received Date 06/27/2007

Well Name MW-1	Township 50	Range 14	Dir Section W 27	Subsection CDBBCA	Well Depth 16 ft.	Depth Completed 16 ft.	Date Well Completed 05/04/2007
Elevation 643 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid			
Address Well 505 SUPERIOR ST W DULUTH MN 55812					Use monitor well	Status Sealed	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From	To
Geological Material	From	To (ft.)	Color	Hardness	Casing Type Single casing Joint		
SAND/GRAVEL	0	16	BROWN	SOFT	Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Above/Below		
					Casing Diameter	Weight	Hole Diameter
					3 in. To 6 ft. 0 lbs./ft.		8.2 in. To 16 ft.
					Open Hole	From ft.	To ft.
					Screen? <input checked="" type="checkbox"/>	Type plastic	Make JOHNSON
					Diameter 3 in.	Slot/Gauze 10	Length 10 ft. Set 6 ft. 16 ft.
					Static Water Level		
					10 ft. land surface	Measure	05/04/2007
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer	Model	
					<input type="checkbox"/> Casing Protection	<input checked="" type="checkbox"/> 12 in. above grade	
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material	Amount	From To
					high solids bentonite	0.5 Sacks	ft. 4 ft.
					Nearest Known Source of Contamination		
					5 feet	East Direction	Tanks Type
					Well disinfected upon completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Pump <input checked="" type="checkbox"/> Not Installed Date Installed		
					Manufacturer's name		
					Model Number	HP	Volt
					Length of drop pipe	ft Capacity	g.p. Typ
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock	Aquifer	Quat. Water
					Last Strat sand +larger-brown	Depth to Bedrock	ft
					Located by Minnesota Geological Survey		
					Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)		
					System UTM - NAD83, Zone 15, Meters	X 568281	Y 5181291
					Unique Number Verification	Site Plan	Input Date 03/17/2016
					Angled Drill Hole		
					Well Contractor		
					Environmental	1688	DANSEREAU, J.
					Licensee Business	Lic. or Reg. No.	Name of Driller

Remarks
 SEALED 02-14-2010 BY 1381.

704151

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 12/07/2004
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
ST. MARY'S	50	14	W	27	AABADD	elevator	A	24 ft.	24 ft.	11/09/2004	L0008		
Elevation	687 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	Digitization (Screen) - Map (1:12,000) (>15			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Plat Book			Input Source	Minnesota Geological Survey			UTM Easting (X)	569253				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518248				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRANITE	GRAY	V.HARD	0	24	24	687	663	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report	704151	Printed on 09/30/2025
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704152

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 12/07/2004
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
ST. MARY'S	50	14	W	27	AABDCB	elevator	A	42 ft.	42 ft.	11/10/2004	L0008		
Elevation	684 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Plat Book			Input Source	Minnesota Geological Survey			UTM Easting (X)	569180				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518240				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRANITE	GRAY	V.HARD	0	42	42	684	642	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report	704152	Printed on 09/30/2025
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704162

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 04/28/2005
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
VP DEVELOPMENT	50	14	W	22	DCAADA	elevator	A	50 ft.	50 ft.	04/22/2005	L0008		
Elevation	821 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	5 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	569012				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518289				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
SANDY CLAY	BROWN	SOFT	0	5	5	821	816	clay+sand-brown	clay	sand	
GRANITE	GRAY	HARD	5	50	45	816	771	upper southwest volc	basalt		

Minnesota Well Index - Stratigraphy Report	704162	Printed on 09/30/2025
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739032

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date
 Update 04/11/2006
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
CITY OF DULUTH	50	14	W	27	AACBCD	elevator	A	54 ft.	54 ft.	03/23/2006	L0008		
Elevation	663 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	569073				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518226				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRANITE	RED/BLK	HARD	0	54	54	663	609	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	739032	Printed on 09/30/2025
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739033

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
 Minnesota Statutes Chapter 1031

Entry Date 08/03/2006
 Update 04/11/2006
 Received Date 12/05/2019

Well Name	Township	Range	Dir	Section	Subsection	Use	Status	Well Depth	Depth Completed	Date Well Completed	Lic/Reg. No.		
CITY OF DULUTH	50	14	W	27	AACBDC	elevator	A	60 ft.	60 ft.	03/23/2006	L0008		
Elevation	662 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)			Aquifer		Depth to Bedrock	0 ft	Open Hole	- ft	Static Water Level	ft
Field Located By	County Planning & Zoning			Locate Method	GPS SA Off (averaged) (15 meters)			Universal Transverse Mercator (UTM) - NAD83 - Zone 15 -					
Unique No. Verified	Address verification			Input Source	Minnesota Geological Survey			UTM Easting (X)	569091				
Geological Interpretation	Amy Block			Input Date	04/06/2018			UTM Northing (Y)	518227				
Agency (Interpretation)							Interpretation Method	Geologic study 1:24k to 1:100k					

Geological Material	Color	Hardness	Depth (ft.)		Thickness	Elevation (ft.)		Stratigraphy	Primary Lithology	Secondary	Minor Lithology
			From	To		From	To				
GRANITE	RED/BLK	HARD	0	60	60	662	602	upper southwest volc	basalt	basaltic andesite	

Minnesota Well Index - Stratigraphy Report	739033	Printed on 09/30/2025
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533481

County St. Louis
 Quad
 Quad ID

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 04/01/2013
 Update Date 02/09/2018
 Received Date 10/23/2008

Well Name ANDA	Township 50	Range 14	Dir Section W 22	Subsection DDD	Well Depth 7.5 ft.	Depth Completed 7.5 ft.	Date Well Completed 07/00/1994
Elevation	Elev. Method				Drill Method	Drill Fluid	
Address					Use elevator	Status	Sealed
Well 730 2ND ST E DULUTH MN					Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> From To		
Stratigraphy Information					Casing Type Single casing Joint		
					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
					Casing Diameter 20 in. Weight 7.5 ft. lbs./ft.		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/> Type Make		
					Static Water Level 3 ft. land surface Measure 10/12/2006		
					Pumping Level (below land surface)		
					Wellhead Completion Pitless adapter manufacturer Model <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Material Amount From To neat cement 12 Sacks ft. 7.5 ft.		
					Nearest Known Source of Contamination feet Direction Type Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pump <input type="checkbox"/> Not Installed Date Installed Manufacturer's name Model Number HP Volt Length of drop pipe ft Capacity g.p. Typ							
Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Miscellaneous First Bedrock Aquifer Last Strat Depth to Bedrock ft Located by Locate Method System UTM - NAD83, Zone 15, Meters X Y Unique Number Verification Input Date							
Angled Drill Hole							
Well Contractor Dennys Drilling, Inc. 1779 KOEPP, D. Licensee Business Lic. or Reg. No. Name of Driller							
Remarks ORIGINAL USE: ELEVATOR SHAFT. ORIGINAL UNIQUE NO. FROM JULY 1994 WAS 533481. MDH SHOWS CANCELLED.							

669262

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
 Update Date 02/26/2019
 Received Date 10/16/2001

Well Name MW-3	Township 50	Range 14	Dir Section W 22	Subsection DDBCDB	Well Depth 12 ft.	Depth Completed 12 ft.	Date Well Completed 09/24/2001
Elevation 789 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid	Use monitor well Status Sealed		
Address					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Well 602 4TH ST E DULUTH MN 55805					Casing Type Single casing Joint		
Contact 4997 MILLER TRUNK HY HERMANTOWN MN 55811					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below		
Stratigraphy Information					Casing Diameter Weight Hole Diameter		
Geological Material		From	To (ft.)	Color	Hardness		
SANDY CLAY		0	8	BROWN	MEDIUM	2 in. To 3 ft. lbs./ft. 8 in. To 12 ft.	
CLAY		8	12	BROWN	HARD		
Open Hole					Screen? <input checked="" type="checkbox"/> Type plastic Make JOHNSON (SCH 40)		
		From	ft.	To	ft.		
Diameter		Slot/Gauze	Length	Set			
2 in.		10	9 ft.	3 ft.	12 ft.		
Static Water Level					Pumping Level (below land surface)		
Wellhead Completion					Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
Pitless adapter manufacturer					Model		
<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade							
<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)							
Material					Amount	From	To
high solids bentonite					1 Sacks	0	ft. 3 ft.
Nearest Known Source of Contamination					Abandoned		
feet		Direction		Type			
Well disinfected upon completion?					<input type="checkbox"/> Yes <input type="checkbox"/> No		
Pump <input checked="" type="checkbox"/> Not Installed Date Installed							
Manufacturer's name							
Model Number		HP		Volt			
Length of drop pipe		ft	Capacity	g.p.	Typ		
Does property have any not in use and not sealed well(s)?					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Variance					Miscellaneous		
Was a variance granted from the MDH for this well?					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
First Bedrock					Aquifer Quat. Water		
Last Strat		clay-brown		Depth to Bedrock		ft	
Located by Minnesota Geological Survey							
Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)							
System		UTM - NAD83, Zone 15, Meters		X 569094		Y 5182808	
Unique Number Verification		Site Plan		Input Date		03/17/2016	
Angled Drill Hole					Well Contractor		
					Bergerson-Caswell 27058 LENZMEIER, D.		
					Licensee Business Lic. or Reg. No. Name of Driller		

Remarks
 SEALED 05-19-2008 BY 1767.

669263

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
 Update Date 02/26/2019
 Received Date 10/16/2001

Well Name MW-1	Township 50	Range 14	Dir Section W 22	Subsection DDBCBD	Well Depth 12 ft.	Depth Completed 12 ft.	Date Well Completed 09/24/2001	
Elevation 793 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid	Use monitor well Status Sealed			
Address					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To			
Well 602 4TH ST E DULUTH MN 55805					Casing Type Single casing Joint			
Contact 4997 MILLER TRUNK HY HERMANTOWN MN 55811					Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> Above/Below			
Stratigraphy Information					Casing Diameter Weight			
Geological Material		From	To (ft.)	Color	Hardness	2 in. To 3 ft. lbs./ft.		
CLAY		0	12	BROWN	MEDIUM			
Open Hole					From	ft.	To	ft.
Screen? <input checked="" type="checkbox"/>		Type plastic		Make JOHNSON				
Diameter		Slot/Gauze	Length	Set				
2 in.		10	9 ft.	3 ft. 12 ft.				
Static Water Level								
Pumping Level (below land surface)								
Wellhead Completion								
Pitless adapter manufacturer				Model				
<input type="checkbox"/> Casing Protection		<input type="checkbox"/> 12 in. above grade						
<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)								
Grouting Information				Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified				
Material		Amount		From		To		
high solids bentonite		1 Sacks		0 ft.		3 ft.		
Nearest Known Source of Contamination								
feet		Direction		Type				
Well disinfected upon completion?				<input type="checkbox"/> Yes <input type="checkbox"/> No				
Pump <input checked="" type="checkbox"/> Not Installed		Date Installed						
Manufacturer's name								
Model Number		HP		Volt				
Length of drop pipe		ft Capacity		g.p. Typ				
Abandoned								
Does property have any not in use and not sealed well(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Variance								
Was a variance granted from the MDH for this well?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Miscellaneous								
First Bedrock		clay-brown		Aquifer		Quat. Water		
Last Strat				Depth to Bedrock		ft		
Located by Minnesota Geological Survey								
Locate Method		Digitization (Screen) - Map (1:12,000) (>15 meters)						
System		UTM - NAD83, Zone 15, Meters		X 569076		Y 5182825		
Unique Number Verification		Site Plan		Input Date		03/17/2016		
Angled Drill Hole								
Well Contractor								
Bergerson-Caswell		27058		LENZMEIER, D.				
Licensee Business		Lic. or Reg. No.		Name of Driller				

Remarks
 SEALED 05-19-2008 BY 1767.

669264

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 12/13/2001
 Update Date 02/26/2019
 Received Date 10/16/2001

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Name</td> <td>Township</td> <td>Range</td> <td>Dir Section</td> <td>Subsection</td> </tr> <tr> <td>MW-2</td> <td>50</td> <td>14</td> <td>W 22</td> <td>DDBCAC</td> </tr> <tr> <td>Elevation</td> <td>772 ft.</td> <td>Elev. Method</td> <td colspan="2">LiDAR 1m DEM (MNDNR)</td> </tr> <tr> <td colspan="5">Address</td> </tr> <tr> <td>Well</td> <td colspan="4">602 4TH ST E DULUTH MN 55805</td> </tr> <tr> <td>Contact</td> <td colspan="4">4997 MILLER TRUNK HY HERMANTOWN MN 55811</td> </tr> <tr> <td colspan="5">Stratigraphy Information</td> </tr> <tr> <td>Geological Material</td> <td>From</td> <td>To (ft.)</td> <td>Color</td> <td>Hardness</td> </tr> <tr> <td>SAND</td> <td>0</td> <td>5</td> <td>BROWN</td> <td>MEDIUM</td> </tr> <tr> <td>BROWN CLAY</td> <td>5</td> <td>12</td> <td>BROWN</td> <td>HARD</td> </tr> </table>	Well Name	Township	Range	Dir Section	Subsection	MW-2	50	14	W 22	DDBCAC	Elevation	772 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)		Address					Well	602 4TH ST E DULUTH MN 55805				Contact	4997 MILLER TRUNK HY HERMANTOWN MN 55811				Stratigraphy Information					Geological Material	From	To (ft.)	Color	Hardness	SAND	0	5	BROWN	MEDIUM	BROWN CLAY	5	12	BROWN	HARD	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Depth</td> <td>Depth Completed</td> <td>Date Well Completed</td> </tr> <tr> <td>12 ft.</td> <td>12 ft.</td> <td>09/24/2001</td> </tr> <tr> <td>Drill Method</td> <td>Auger (non-specified)</td> <td>Drill Fluid</td> </tr> <tr> <td>Use</td> <td>monitor well</td> <td>Status</td> </tr> <tr> <td></td> <td></td> <td>Sealed</td> </tr> <tr> <td>Well Hydrofractured?</td> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>From To</td> </tr> <tr> <td>Casing Type</td> <td>Single casing</td> <td>Joint</td> </tr> <tr> <td>Drive Shoe?</td> <td>Yes <input type="checkbox"/> No <input type="checkbox"/></td> <td>Above/Below</td> </tr> <tr> <td>Casing Diameter</td> <td>Weight</td> <td></td> </tr> <tr> <td>2 in. 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Typ</td> </tr> <tr> <td colspan="3">Abandoned</td> </tr> <tr> <td colspan="3">Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Variance</td> </tr> <tr> <td colspan="3">Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</td> </tr> <tr> <td colspan="3">Miscellaneous</td> </tr> <tr> <td>First Bedrock</td> <td>Aquifer</td> <td>Quat. Water</td> </tr> <tr> <td>Last Strat clay-brown</td> <td>Depth to Bedrock</td> <td>ft</td> </tr> <tr> <td colspan="3">Located by Minnesota Geological Survey</td> </tr> <tr> <td colspan="3">Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)</td> </tr> <tr> <td>System</td> <td>UTM - NAD83, Zone 15, Meters</td> <td>X 569088 Y 5182825</td> </tr> <tr> <td>Unique Number Verification</td> <td>Site Plan</td> <td>Input Date 03/17/2016</td> </tr> <tr> <td colspan="3">Angled Drill Hole</td> </tr> <tr> <td colspan="3">Well Contractor</td> </tr> <tr> <td>Bergerson-Caswell</td> <td>27058</td> <td>LENZMEIER, D.</td> </tr> <tr> <td>Licensee Business</td> <td>Lic. or Reg. No.</td> <td>Name of Driller</td> </tr> </table>	Well Depth	Depth Completed	Date Well Completed	12 ft.	12 ft.	09/24/2001	Drill Method	Auger (non-specified)	Drill Fluid	Use	monitor well	Status			Sealed	Well Hydrofractured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From To	Casing Type	Single casing	Joint	Drive Shoe?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Above/Below	Casing Diameter	Weight		2 in. To 3 ft.	lbs./ft.		Open Hole	From ft.	To ft.	Screen? <input checked="" type="checkbox"/>	Type plastic	Make JOHNSON	Diameter	Slot/Gauze Length	Set	2 in. 10	9 ft.	3 ft. 12 ft.	Static Water Level			Pumping Level (below land surface)			Wellhead Completion			Pitless adapter manufacturer		Model	<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade		<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)			Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		Material	Amount	From To	high solids bentonite	1 Sacks	0 ft. 3 ft.	Nearest Known Source of Contamination			feet	Direction	Type	Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No			Pump <input checked="" type="checkbox"/>	Not Installed	Date Installed	Manufacturer's name			Model Number	HP	Volt	Length of drop pipe	ft Capacity	g.p. Typ	Abandoned			Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Variance			Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Miscellaneous			First Bedrock	Aquifer	Quat. Water	Last Strat clay-brown	Depth to Bedrock	ft	Located by Minnesota Geological Survey			Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)			System	UTM - NAD83, Zone 15, Meters	X 569088 Y 5182825	Unique Number Verification	Site Plan	Input Date 03/17/2016	Angled Drill Hole			Well Contractor			Bergerson-Caswell	27058	LENZMEIER, D.	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Licensee Business	Lic. or Reg. No.	Name of Driller																																																																																																																																																																																								

Remarks
 SEALED 05-19-2008 BY 1767.

698994

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 03/09/2017
 Received Date 03/18/2004

Well Name MW-5	Township 50	Range 14	Dir Section W 22	Subsection DDBDBA	Well Depth 10.5 ft.	Depth Completed 10.5 ft.	Date Well Completed 02/10/2004																				
Elevation 764 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid																							
Address Well 407 3RD ST E DULUTH MN 55805					Use monitor well		Status Sealed																				
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To																						
<table border="1"> <thead> <tr> <th>Geological Material</th> <th>From</th> <th>To (ft.)</th> <th>Color</th> <th>Hardness</th> </tr> </thead> <tbody> <tr> <td>SANDY CLAY</td> <td>0</td> <td>4</td> <td>RED/BRN</td> <td>HARD</td> </tr> <tr> <td>SANDY CLAY WOOD</td> <td>4</td> <td>8</td> <td>RED/BRN</td> <td>HARD</td> </tr> <tr> <td>WET SANDY CLAY</td> <td>8</td> <td>11</td> <td>RED/BRN</td> <td>HARD</td> </tr> </tbody> </table>					Geological Material	From	To (ft.)	Color	Hardness	SANDY CLAY	0	4	RED/BRN	HARD	SANDY CLAY WOOD	4	8	RED/BRN	HARD	WET SANDY CLAY	8	11	RED/BRN	HARD	Casing Type Single casing Joint		
Geological Material	From	To (ft.)	Color	Hardness																							
SANDY CLAY	0	4	RED/BRN	HARD																							
SANDY CLAY WOOD	4	8	RED/BRN	HARD																							
WET SANDY CLAY	8	11	RED/BRN	HARD																							
Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Above/Below					Casing Diameter 2 in. To 5.5 ft. 0 lbs./ft.																						
					Hole Diameter 8 in. To 0 ft.																						
Open Hole From ft. To ft.					Screen? <input checked="" type="checkbox"/> Type plastic Make JOHNSON																						
					Diameter Slot/Gauze Length Set 2 in. 10 5 ft. 5.5 ft. 10.5 ft.																						
Static Water Level 9 ft. land surface Measure 02/10/2004					Pumping Level (below land surface)																						
Wellhead Completion Pitless adapter manufacturer Model <input checked="" type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified																						
					Material Amount From To bentonite 0.5 Sacks 3.5 ft. 4.5 ft. neat cement 2 Sacks ft. 3.5 ft.																						
Nearest Known Source of Contamination feet Direction Type Well disinfected upon completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Pump <input type="checkbox"/> Not Installed Date Installed Manufacturer's name Model Number HP Volt Length of drop pipe ft Capacity g.p. Typ																						
Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																						
Remarks GEOLOGICAL MATERIALS: WET SANDY CLAY WOOD FROM 8 TO 10.5. SEALED 05-19-2008 BY 1767.					Miscellaneous First Bedrock Aquifer Quat. Water Last Strat clay+sand Depth to Bedrock ft Located by Minnesota Geological Survey Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters) System UTM - NAD83, Zone 15, Meters X 569161 Y 518284 Unique Number Verification Site Plan Input Date 03/17/2016																						
Angled Drill Hole					Well Contractor Thein Well Co. 34625 HILBRANDS, B. Licensee Business Lic. or Reg. No. Name of Driller																						

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date
Update Date 12/05/2019
Received Date 12/07/2004

County St. Louis
Quad Duluth
Quad ID 244D

704151

Well Name ST. MARY'S	Township 50	Range 14	Dir Section W 27	Subsection AABADD	Well Depth 24 ft.	Depth Completed 24 ft.	Date Well Completed 11/09/2004
Elevation 687 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Non-specified Rotary		Drill Fluid			
Address Well 402 1ST ST E DULUTH MN 55802					Use elevator		Status Active
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Geological Material From To (ft.) Color Hardness GRANITE 0 24 GRAY V.HARD					Casing Type Step down Joint Welded		
					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below		
					Casing Diameter Weight 16 in. To 24 ft. 62.6 lbs./ft. 20 in. To 1 ft. 52.7 lbs./ft.		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/> Type Make		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion Pitless adapter manufacturer _____ Model <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material Amount From To neat cement 18 Sacks ft. 24 ft.		
					Nearest Known Source of Contamination 0 feet Direction Type Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed Date Installed Manufacturer's name Model Number HP Volt Length of drop pipe ft Capacity g.p. Typ		
					Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Miscellaneous First Bedrock upper southwest volc Aquifer Last Strat upper southwest volc Depth to Bedrock 0 ft Located by Minnesota Geological Survey Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters) System UTM - NAD83, Zone 15, Meters X 569253 Y 5182485 Unique Number Verification Plat Book Input Date 04/06/2018		
Remarks BROKEN ROCK FROM 19 TO 21 FT, BACK INTO SOLID.					Angled Drill Hole		
					Well Contractor United Drilling, Inc. L0008 SCHERER, B. Licensee Business Lic. or Reg. No. Name of Driller		

704152

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 12/05/2019
 Received Date 12/07/2004

Well Name ST. MARY'S	Township 50	Range 14	Dir Section W 27	Subsection AABDCB	Well Depth 42 ft.	Depth Completed 42 ft.	Date Well Completed 11/10/2004
Elevation 684 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Air Rotary		Drill Fluid	Use elevator Status Active		
Address Well 402 1ST ST E DULUTH MN 55802					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To		
Stratigraphy Information					Casing Type Step down Joint Welded		
Geological Material From To (ft.) Color Hardness					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Above/Below		
GRANITE 0 42 GRAY V.HARD					Casing Diameter Weight		
					16 in. To 42 ft. 62.6 lbs./ft.		
					20 in. To 1 ft. 52.7 lbs./ft.		
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/> Type Make		
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer _____ Model		
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade		
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material Amount From To		
					neat cement 2 Sacks ft. 42 ft.		
					Nearest Known Source of Contamination		
					feet Direction Type		
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed Date Installed		
					Manufacturer's name		
					Model Number HP Volt		
					Length of drop pipe ft Capacity g.p. Typ		
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Miscellaneous		
					First Bedrock upper southwest volc Aquifer		
					Last Strat upper southwest volc Depth to Bedrock 0 ft		
					Located by Minnesota Geological Survey		
					Locate Method GPS SA Off (averaged) (15 meters)		
					System UTM - NAD83, Zone 15, Meters X 569180 Y 5182404		
					Unique Number Verification Plat Book Input Date 04/06/2018		
					Angled Drill Hole		
					Well Contractor		
					United Drilling, Inc. L0008 SCHERER, B.		
					Licensee Business Lic. or Reg. No. Name of Driller		

Remarks
 BROKEN ROCK FROM 19 TO 21 FT, BACK INTO SOLID.

704162

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 12/05/2019
 Received Date 04/28/2005

Well Name	Township	Range	Dir Section	Subsection	Well Depth	Depth Completed	Date Well Completed															
VP	50	14	W 22	DCAADA	50 ft.	50 ft.	04/22/2005															
Elevation	821 ft.	Elev. Method	LiDAR 1m DEM (MNDNR)																			
Address					Use	Status	Active															
Well 602 5TH ST E DULUTH MN 55805					elevator																	
Stratigraphy Information					Well Hydrofractured?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>															
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Geological Material</th> <th style="width:10%;">From</th> <th style="width:10%;">To (ft.)</th> <th style="width:10%;">Color</th> <th style="width:10%;">Hardness</th> </tr> </thead> <tbody> <tr> <td>SANDY CLAY</td> <td>0</td> <td>5</td> <td>BROWN</td> <td>SOFT</td> </tr> <tr> <td>GRANITE</td> <td>5</td> <td>50</td> <td>GRAY</td> <td>HARD</td> </tr> </tbody> </table>					Geological Material	From	To (ft.)	Color	Hardness	SANDY CLAY	0	5	BROWN	SOFT	GRANITE	5	50	GRAY	HARD	From		To
					Geological Material	From	To (ft.)	Color	Hardness													
SANDY CLAY	0	5	BROWN	SOFT																		
GRANITE	5	50	GRAY	HARD																		
					Casing Type Step down		Joint Welded															
					Drive Shoe?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>															
					Above/Below																	
					Casing Diameter	Weight																
					16 in. To 50 ft.	62.6 lbs./ft.																
					20 in. To 5 ft.	52.7 lbs./ft.																
					Open Hole	From _____ ft.	To _____ ft.															
					Screen? <input type="checkbox"/>	Type	Make															
					Static Water Level																	
					Pumping Level (below land surface)																	
					Wellhead Completion																	
					Pitless adapter manufacturer _____		Model _____															
					<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade																
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																	
					Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified																
					Material	Amount	From To															
					neat cement	4 Cubic yards	ft. 50 ft.															
					Nearest Known Source of Contamination																	
					feet	Direction	Type															
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
					Pump <input type="checkbox"/> Not Installed	Date Installed _____																
					Manufacturer's name _____																	
					Model Number _____	HP _____	Volt _____															
					Length of drop pipe _____ ft	Capacity _____ g.p.	Typ _____															
					Abandoned																	
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
					Variance																	
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
					Miscellaneous																	
					First Bedrock	upper southwest volc	Aquifer															
					Last Strat	upper southwest volc	Depth to Bedrock 5 ft															
					Located by Minnesota Geological Survey																	
					Locate Method GPS SA Off (averaged) (15 meters)																	
					System	UTM - NAD83, Zone 15, Meters	X 569012 Y 5182896															
					Unique Number Verification	Address verification	Input Date 04/06/2018															
					Angled Drill Hole																	
					Well Contractor																	
					United Drilling, Inc.	L0008	GRABER, K.															
					Licensee Business	Lic. or Reg. No.	Name of Driller															

Remarks
 DRY HOLE.

739032

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date
 Update Date 12/05/2019
 Received Date 04/11/2006

Well Name CITY OF	Township 50	Range 14	Dir Section W 27	Subsection AACBCD	Well Depth 54 ft.	Depth Completed 54 ft.	Date Well Completed 03/23/2006
Elevation 663 ft.	Elev. Method LiDAR 1m DEM (MNDNR)				Drill Method Non-specified Rotary	Drill Fluid	
Address Well 302 1ST ST E DULUTH MN 55805					Use elevator	Status Active	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From	To
Geological Material From To (ft.) Color Hardness GRANITE 0 54 RED/BLK HARD					Casing Type Single casing	Joint Welded	
					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Above/Below	
					Casing Diameter 18 in. To 54 ft.	Weight 70.6 lbs./ft.	Hole Diameter 24 in. To 54 ft.
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/>	Type	Make
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer _____ Model _____		
					<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade	
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified		
					Material	Amount	From To
					neat cement	3 Cubic yards	ft. 54 ft.
					Nearest Known Source of Contamination		
					feet	Direction	Type
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed Date Installed _____		
					Manufacturer's name _____		
					Model Number	HP	Volt
					Length of drop pipe	ft Capacity	g.p. Typ
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock	upper southwest volc	Aquifer
					Last Strat	upper southwest volc	Depth to Bedrock 0 ft
					Located by Minnesota Geological Survey		
					Locate Method GPS SA Off (averaged) (15 meters)		
					System	UTM - NAD83, Zone 15, Meters	X 569073 Y 5182268
					Unique Number Verification	Address verification	Input Date 04/06/2018
					Angled Drill Hole		
					Well Contractor		
					United Drilling, Inc.	L0008	LANGSDORF, A.
					Licensee Business	Lic. or Reg. No.	Name of Driller

Remarks
 NO DRILL CASING.

739033

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 08/03/2006
 Update Date 12/05/2019
 Received Date 04/11/2006

Well Name CITY OF	Township 50	Range 14	Dir Section W 27	Subsection AACBDC	Well Depth 60 ft.	Depth Completed 60 ft.	Date Well Completed 03/23/2006
Elevation 662 ft.	Elev. Method LiDAR 1m DEM (MNDNR)				Drill Method Non-specified Rotary	Drill Fluid	
Address Well 302 1ST ST E DULUTH MN 55805					Use elevator	Status Active	
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	From	To
Geological Material GRANITE	From 0	To (ft.) 60	Color RED/BLK	Hardness HARD	Casing Type Single casing	Joint Welded	
					Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Above/Below	
					Casing Diameter 18 in. To 60 ft.	Weight 70.6 lbs./ft.	Hole Diameter 24 in. To 60 ft.
					Open Hole From _____ ft. To _____ ft.		
					Screen? <input type="checkbox"/>	Type	Make
					Static Water Level		
					Pumping Level (below land surface)		
					Wellhead Completion		
					Pitless adapter manufacturer	Model	
					<input type="checkbox"/> Casing Protection	<input type="checkbox"/> 12 in. above grade	
					<input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)		
					Grouting Information	Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified	
					Material neat cement	Amount 3.25 Cubic yards	From To ft. 60 ft.
					Nearest Known Source of Contamination		
					feet	Direction	Type
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Pump <input type="checkbox"/> Not Installed	Date Installed	
					Manufacturer's name		
					Model Number	HP	Volt
					Length of drop pipe	ft	Capacity g.p. Typ
					Abandoned		
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
					Variance		
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
					Miscellaneous		
					First Bedrock upper southwest volc	Aquifer	
					Last Strat upper southwest volc	Depth to Bedrock	0 ft
					Located by Minnesota Geological Survey		
					Locate Method GPS SA Off (averaged) (15 meters)		
					System UTM - NAD83, Zone 15, Meters	X 569091	Y 5182277
					Unique Number Verification	Address verification	Input Date 04/06/2018
					Angled Drill Hole		
					Well Contractor		
					United Drilling, Inc.	L0008	LANGSDORF, A.
					Licensee Business	Lic. or Reg. No.	Name of Driller

Remarks
 NO DRILL CASING.

758411

County St. Louis
 Quad Duluth
 Quad ID 244D

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 02/26/2013
 Update Date 02/26/2019
 Received Date 10/17/2008

Well Name MW	Township 50	Range 14	Dir Section W 22	Subsection DDBCBA	Well Depth 9 ft.	Depth Completed 9 ft.	Date Well Completed 11/21/2007																									
Elevation 794 ft.	Elev. Method LiDAR 1m DEM (MNDNR)	Drill Method Auger (non-specified)		Drill Fluid																												
Address Well 601 4TH ST E DULUTH MN 55805					Use monitor well		Status Sealed																									
Stratigraphy Information					Well Hydrofractured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> From To																											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Geological Material</th> <th>From</th> <th>To (ft.)</th> <th>Color</th> <th>Hardness</th> </tr> </thead> <tbody> <tr> <td>FILL</td> <td>0</td> <td>1</td> <td>BLACK</td> <td>SOFT</td> </tr> <tr> <td>CLAY</td> <td>1</td> <td>2</td> <td>BROWN</td> <td>SOFT</td> </tr> <tr> <td>NO DATA</td> <td>2</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>SAND</td> <td>3</td> <td>9</td> <td>BROWN</td> <td>SOFT</td> </tr> </tbody> </table>					Geological Material	From	To (ft.)	Color	Hardness	FILL	0	1	BLACK	SOFT	CLAY	1	2	BROWN	SOFT	NO DATA	2	3			SAND	3	9	BROWN	SOFT	Casing Type Single casing Joint		
Geological Material	From	To (ft.)	Color	Hardness																												
FILL	0	1	BLACK	SOFT																												
CLAY	1	2	BROWN	SOFT																												
NO DATA	2	3																														
SAND	3	9	BROWN	SOFT																												
					Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Above/Below																											
					Casing Diameter 2 in. To 4 ft.		Weight lbs./ft.																									
							Hole Diameter 8.5 in. To 9 ft.																									
					Open Hole From ft. To ft.																											
					Screen? <input checked="" type="checkbox"/> Type plastic Make ECT																											
					Diameter 2 in.		Slot/Gauze 10																									
					Length 5 ft.		Set 4 ft.																									
							ECT 9 ft.																									
					Static Water Level																											
					6 ft. land surface		Measure 11/21/2007																									
					Pumping Level (below land surface)																											
					Wellhead Completion																											
					Pitless adapter manufacturer Model																											
					<input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade																											
					<input checked="" type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																											
					Grouting Information Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Specified																											
					Material bentonite		Amount 1 ft. 3 ft.																									
					Nearest Known Source of Contamination																											
					feet Direction		Type																									
					Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																											
					Pump <input checked="" type="checkbox"/> Not Installed Date Installed																											
					Manufacturer's name																											
					Model Number		HP																									
					Length of drop pipe ft		Capacity g.p.																									
							Typ Volt																									
					Abandoned																											
					Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No																											
					Variance																											
					Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																											
					Miscellaneous																											
					First Bedrock		Aquifer Quat. Water																									
					Last Strat sand-brown		Depth to Bedrock ft																									
					Located by Minnesota Geological Survey																											
					Locate Method Digitization (Screen) - Map (1:12,000) (>15 meters)																											
					System UTM - NAD83, Zone 15, Meters		X 569074 Y 5182857																									
					Unique Number Verification Site Plan		Input Date 03/17/2016																									
					Angled Drill Hole																											
					Well Contractor																											
					Northeast Technical 1635		SECABA, S.																									
					Licensee Business		Lic. or Reg. No. Name of Driller																									

Remarks
 SEALED 9-26-2008 BY 1635.

Appendix F

List of MPCA WIMN Sites within the AUAR area

MPCA Potentially Contaminated Sites within One-Quarter Mile of the AUAR area

Site ID	Site Name	MPCA Program	Status
Lot D Subarea			
205357	Bayfront Lot D	• Brownfields (5)	Active
192538	SLIP 3	• Environmental Review	Active
Essentia Subarea			
215131	Hacienda Del Sol	• Brownfields	Inactive
146463	E 1st St Medical Parking Facility	• Petroleum Remediation • Underground Tanks	Inactive
16441	Northland Chiropractic Center	• Hazardous Waste	Inactive
23329	Lake Superior Cust Photolab Inc	• Hazardous Waste	Inactive
109460	Voyageur Motel/lakewalk Inn	• Brownfields • Petroleum Remediation • Underground Tanks	Inactive
26385	State Farm Mutual Insurance	• Hazardous Waste	Inactive
56856	Northern Access Transportation	• Hazardous Waste	Inactive
112895	Grandview Manor	• Underground Tanks	Inactive
14444	Harbor Centers Inc	• Hazardous Waste	Inactive
23708	A Quality Lube Center	• Aboveground Tanks • Hazardous Waste	Inactive
27688	Dunbar's Auto Body	• Hazardous Waste	Inactive
1998	Rainbow Auto Body Inc	• Air Quality • Hazardous Waste	Inactive
191217	SMDC Campus Addition	• Brownfields • Site Assessment	Inactive
24501	Saint Anns Home & Residence	• Hazardous Waste	Inactive
256441	Essentia Health-Duluth	• Hazardous Waste	Inactive
109580	Miller Dwan Medical Center	• Aboveground Tanks • Underground Tanks	Inactive
213953	Essentia Health Duluth 1st Street Pharmacy	• Hazardous Waste	Inactive
27262	Kaarbo's Auto Repair Inc	• Aboveground Tanks • Hazardous Waste	Inactive
23379	Joes Peerless Auto Body	• Hazardous Waste • Underground Tanks	Inactive
23078	Essentia Health Duluth 3rd Street Pharmacy	• Hazardous Waste	Inactive
24220	Miller Dwan Medical Center	• Hazardous Waste	Inactive
1668	Saint Mary's Medical Center	• Air Quality • Hazardous Waste • Site Assessment • Solid Waste	Inactive
231339	Life Link III-Duluth Base	• Hazardous Waste	Inactive
256068	Essentia Health Duluth 2nd Street Pharmacy	• Hazardous Waste	Inactive
11766	Twice But Nice	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
130013	Former American Linen Building	• Underground Tanks	Inactive
25057	Downtown Service Skafta Ent	• Hazardous Waste	Inactive
28557	Chart & Mohs Dentistry PA	• Hazardous Waste	Inactive
23552	Expert Tire - Duluth	• Hazardous Waste	Inactive
16411	Polinsky Medical Rehabilitation Center	• Hazardous Waste	Inactive
138625	Support Services Building	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Inactive
27239	Johnson-Crawford Funeral Home	• Hazardous Waste	Inactive
108459	Saint Mary's Medical Center	• Aboveground Tanks	Inactive
103482	Saint Mary's Medical Center	• Petroleum Remediation • Underground Tanks	Inactive
255572	Essentia Health	• Aboveground Tanks	Inactive
26883	Fifield Portrait Design	• Hazardous Waste	Inactive
12974	Midtown Auto Service	• Hazardous Waste	Inactive
28971	Daugherty Hardware & Appliances	• Hazardous Waste	Inactive
195306	Na Auto Electric	• Petroleum Remediation	Inactive
250020	Aspirus St. Luke's Behavioral Health Clinic - Duluth	• Hazardous Waste	Inactive
185387	Bell Building	• Petroleum Remediation	Inactive
28347	Auto Medics	• Hazardous Waste	Inactive
112719	Speedway #4896	• Petroleum Remediation • Underground Tanks	Inactive
116710	Spur Station #4885	• Petroleum Remediation • Underground Tanks	Inactive
139137	Whole Foods Coop	• Hazardous Waste	Inactive
151403	Involta Duluth 6th Ave	• Aboveground Tanks	Inactive
28346	Brewery Creek Apartments LLLP	• Aboveground Tanks • Brownfields • Hazardous Waste • Petroleum Remediation • Solid Waste • Underground Tanks	Inactive
25670	Holiday Stationstore 089	• Hazardous Waste	Inactive
113616	Holiday Stationstore #89	• Petroleum Remediation • Underground Tanks	Inactive
252811	Portland Land Co LLC	• Solid Waste	Inactive
1st Street Subarea			
262165	Mesaba Ave Bridge/Filling Station	• Petroleum Remediation	Active
27709	Lenox Place	Brownfields (2) • Hazardous Waste	Inactive
27338	Gateway Tower	• Brownfields (2) • Hazardous Waste	Inactive
29931	The Depot	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
36708	Northshore Scenic Railroad	• Hazardous Waste	Inactive
48746	Duluth Art Institute	• Hazardous Waste	Active
36709	Saint Louis County Heritage & Arts Center	• Hazardous Waste • Wastewater	Inactive
126787	Radisson Hotel	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Active
23087	Duluth Fire Department	• Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks	Active
24350	Wahl & Wahl Inc	• Hazardous Waste	Inactive
15229	Otis Elevator	• Hazardous Waste	Inactive
24173	USDA NRCS	• Hazardous Waste	Active
130106	Atlas Abatement & Contracting LLC - Duluth	• Hazardous Waste	Active
138143	Gerald W Heaney Federal Building	• Hazardous Waste	Active
29460	425 Development	• Hazardous Waste	Active
213324	Lake Superior Consulting - Landsmenn Building	• Hazardous Waste	Active
24968	Lutheran Social Service	• Hazardous Waste	Inactive
146341	Maurices Headquarters	• Brownfields	Active
48153	ISD 709 DNT Building	• Hazardous Waste • Industrial Stormwater • Site Assessment	Active
41391	Saint Louis County Safety & Risk	• Hazardous Waste	Inactive
192083	Medical Arts Annex	• Petroleum Remediation	Active
214476	Genoa Healthcare	• Hazardous Waste	Active
27119	Stewart Taylor Company	• Hazardous Waste	Inactive
27365	Midwest Podiatry Centers - Duluth	• Hazardous Waste	Active
36878	Aspirus St. Luke's Eye Care - Duluth	• Hazardous Waste	Inactive
15189	Bluestone OMS	• Hazardous Waste	Active
112404	Medical Arts Garage	• Aboveground Tanks • Petroleum Remediation • Underground Tanks	Active
48154	Ray Bob & Associates Inc	• Hazardous Waste	Inactive
130015	Duluth Budgeteer	• Industrial Stormwater	Active
30253	Michael Bussa DDS	• Hazardous Waste	Active
127531	Downtown Dental Care of Duluth	• Hazardous Waste	Active
14420	PS Rudie Medical Clinic - Suite 302	• Hazardous Waste	Inactive
26984	Robert D Le Vasseur DDS	• Hazardous Waste	Inactive
34050	Steven D Johnson DDS	• Hazardous Waste	Active
23092	The Dental Specialists Duluth	• Hazardous Waste	Active
15790	William J Schuldt DDS PA	• Hazardous Waste	Active
36877	Wolf Frank MD	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
63890	Duluth News Tribune	<ul style="list-style-type: none"> • Industrial Stormwater • Petroleum Remediation • Underground Tanks 	Active
15797	Secretarial Services	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
23071	Duluth Camera Exchange 1	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
23070	Duluth Camera Exchange	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
92737	Duluth City of	<ul style="list-style-type: none"> • Hazardous Waste 	Active
90804	Duluth city of	<ul style="list-style-type: none"> • MS4 • Wastewater 	Active
11923	Oneida Realty Co	<ul style="list-style-type: none"> • Hazardous Waste 	Active
77278	Sandelin Rodney E DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
36876	Sarvela Leonard A DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
14527	First Properties	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
227684	Oneida Realty	<ul style="list-style-type: none"> • Hazardous Waste 	Active
25112	Madison Nelson Family Dental	<ul style="list-style-type: none"> • Hazardous Waste 	Active
84132	Douglas M Erickson DDS MS Inc	<ul style="list-style-type: none"> • Hazardous Waste 	Active
120009	Saint Luke's Medical Arts Clinic	<ul style="list-style-type: none"> • Hazardous Waste 	Active
15799	Security Jewelers	<ul style="list-style-type: none"> • Hazardous Waste 	Active
26929	Patterson Family Dental	<ul style="list-style-type: none"> • Hazardous Waste 	Active
26798	Young Allen A DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
16430	Northern Oral & Maxillofacial Surgeons	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
23641	Eugene T Altieri DDS MS	<ul style="list-style-type: none"> • Hazardous Waste 	Active
26982	Layon Roger E DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
27242	Johnson William O DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
26081	J Marco Hearing Service	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
12093	Medical Arts Orthodontic Lab	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
13489	Northern Prosthodontics	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
15699	Northern Endodontics Associates Ltd	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
26973	Park Dental Downtown Duluth	<ul style="list-style-type: none"> • Hazardous Waste 	Active
27339	Wayne C Gatlin DDS	<ul style="list-style-type: none"> • Hazardous Waste 	Active
195971	City Hall And Police Garage	<ul style="list-style-type: none"> • Petroleum Remediation 	Active
15920	Jewelers Bench	<ul style="list-style-type: none"> • Hazardous Waste 	Active
1411	Qwest Corp dba CenturyLink QC - Duluth	<ul style="list-style-type: none"> • Aboveground Tanks • Air Quality • Hazardous Waste 	Active
193953	DTA Multimodal Transportation Center	<ul style="list-style-type: none"> • Brownfields (2) 	Active
25324	Toys For Keeps	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
115683	At&t Building	<ul style="list-style-type: none"> • Underground Tanks 	Active
11750	Shoreline Dental Associates Downtown	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
12598	Reporters Diversified Service	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
24355	Third Avenue Dental Clinic	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive

Site ID	Site Name	MPCA Program	Status
263989	The Herald Building	• Brownfields (2)	Active
27331	Garrett Hr	• Hazardous Waste	Inactive
136434	Saint Louis County Public Health	• Hazardous Waste	Active
50279	Lake Superior Painting	• Hazardous Waste	Inactive
28062	Telespectrum Communications	• Hazardous Waste	Inactive
126881	Nalco Co - Duluth	• Hazardous Waste	Inactive
137356	Innovative Living Inc	• Hazardous Waste	Active
141335	Duluth Area Family YMCA	• Hazardous Waste	Active
23372	Jiran D H Design Inc	• Hazardous Waste	Inactive
28985	Decora Painting & Wallcovering	• Hazardous Waste	Inactive
14421	Psycholgist	• Hazardous Waste	Inactive
41360	MSA Professional Services	• Hazardous Waste	Inactive
22949	Hawley Music Inc	• Brownfields • Hazardous Waste	Inactive
121266	Duluth Budgeteer News	• Hazardous Waste	Inactive
236319	Duluth Board of Trade Lofts	• Hazardous Waste	Active
31092	D T A Transit Center	• Hazardous Waste	Inactive
16130	Former Peter Pan Cleaners	• Brownfields • Emergency Response • Hazardous Waste • Site Assessment	Active
104687	Ace Hardware Downtown	• Hazardous Waste	Active
38999	Arrowhead Printing	• Hazardous Waste	Inactive
26387	State Labor & Industry Dept	• Hazardous Waste	Inactive
43753	Oneida Realty Co - Duluth	• Aboveground Tanks • Hazardous Waste • Underground Tanks	Active
41035	St. Louis County GSC	• Hazardous Waste	Inactive
196201	NorShor Theatre	• Brownfields • Hazardous Waste	Active
222711	Board of Trade Building	• Brownfields	Active
217457	Saint Louis County GSC	• Hazardous Waste	Active
26574	Advantage Hearing Center	• Hazardous Waste	Inactive
25872	Whitefish Mfg Co	• Hazardous Waste	Inactive
122248	Twi Port Mailing	• Hazardous Waste	Inactive
2298	Great Lakes Gas Transmission LP	• Wastewater	Active
27240	Johnson Supply Co	• Hazardous Waste	Active
148087	Saint Louis County Public Works Garage	• Aboveground Tanks	Active
27712	Leones Tailors Cleaners Shop	• Brownfields • Hazardous Waste	Inactive
28079	Skywalk Chiropractic	• Hazardous Waste	Inactive
15028	Sawmill Unpainted Furniture	• Hazardous Waste	Inactive

Site ID	Site Name	MPCA Program	Status
112830	Us Bank	• Underground Tanks	Inactive
27118	Stewart Taylor Co	• Hazardous Waste	Active
23377	JNT Printery Co Inc	• Hazardous Waste	Inactive
217678	Duluth Board of Trade Building Parking Lot	• Brownfields	Active
131776	Sheldon Group Inc Pressroom	• Hazardous Waste	Active
22932	Duluth Auto Repair & Quick Lube	• Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
28086	US Bank - Duluth	• Hazardous Waste	Active
195708	Parking Lot	• Petroleum Remediation	Active
116075	Como Quick Lube - City Center	• Underground Tanks	Inactive
126181	Cooper Enterprises	• Hazardous Waste	Inactive
194992	Superior Street Reconstruction Corridor	• Brownfields (2)	Inactive
13497	Planned Parenthood - Duluth	• Hazardous Waste	Inactive
30167	Etcetera Studio & Gallery	• Hazardous Waste	Inactive
22985	Gopher Shoe Repair Co Inc	• Hazardous Waste	Inactive
15936	Wilson Environmental Laboratories Inc	• Hazardous Waste	Inactive
22619	Arrowhead Security Systems Inc	• Hazardous Waste	Inactive
27932	Courage Center	• Hazardous Waste	Inactive
14275	Printing Express The	• Hazardous Waste	Inactive
136470	American Indian Community Housing Organization	• Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
16106	Paper Hog Inc	• Hazardous Waste	Active
86818	New Garrick Building	• Hazardous Waste	Active
138141	Advanstar	• Hazardous Waste	Active
262206	Children's Dental Services	• Hazardous Waste	Active
15935	Insty Prints Litho Printing	• Hazardous Waste	Inactive
26967	Us Dea	• Hazardous Waste	Inactive
42462	Earth Burners Inc	• Hazardous Waste	Inactive
15918	Jersey City	• Hazardous Waste	Inactive
2419	Minnesota Power Inc- General Office	• Hazardous Waste • Site Assessment • Wastewater	Active
256891	Human Development Center	• Petroleum Remediation • Site Assessment	Active
220769	PETSMART 2735	• Hazardous Waste	Active
136443	Aspirus St. Luke's Clinic - Duluth - 26 E Superior St	• Hazardous Waste	Active
30166	Eslabon Designer Jewelry	• Hazardous Waste	Inactive
106090	Women In Construction Co LLC	• Hazardous Waste • Petroleum Remediation • Site Assessment	Inactive

Site ID	Site Name	MPCA Program	Status
29950	Commercial Electric Company	• Hazardous Waste	Inactive
190601	Lakehead Pipe Line Company	• Petroleum Remediation	Active
26068	Southwest Windpower	• Hazardous Waste	Inactive
26029	Masters Piano Shop The	• Hazardous Waste	Inactive
25652	Carters Spring	• Hazardous Waste	Inactive
14524	Music Center	• Hazardous Waste	Inactive
27097	Johns Used Furniture	• Hazardous Waste	Inactive
133844	EMR Inc	• Hazardous Waste	Active
215167	Lewis Lake Avenue Building	• Brownfields	Active
27961	Carlton & Co	• Hazardous Waste	Inactive
206926	The Scottish Rite Foundation	• Petroleum Remediation	Active
150005	Former Service Station	• Underground Tanks	Active
156532	Scottish Rite Clinic	• Hazardous Waste	Active
220319	Enbridge Energy Line 3 Replacement Project	• Integrated Remediation • Wastewater	Inactive
128234	Jes Durfee Glass Art	• Hazardous Waste	Active
236478	Enbridge Energy LP - Former Brunos Truck Stop	• Wastewater	Active
27183	Fuhr Printing Co Inc	• Hazardous Waste	Inactive
27954	Carlson & Kirwan Inc	• Hazardous Waste	Inactive
39377	Duluth Soft Center	• Hazardous Waste • Underground Tanks	Inactive
59305	WE Health Clinic	• Hazardous Waste	Active
235179	Cove Apartments	• Hazardous Waste	Active
253737	North Creek Investors II LLC	• Solid Waste	Active
27138	Superior Computer Prod Inc	• Hazardous Waste	Inactive
232599	Proposed 1st Aveue Lofts	• Brownfields	Active
15697	Northern Electric Supply C	• Hazardous Waste	Inactive
196011	Duluth Technology Village - City Block	• Petroleum Remediation	Active
215451	Former Muffler Clinic	• Brownfields • Petroleum Remediation	Active
116012	Teachers Credit Union	• Petroleum Remediation • Underground Tanks	Inactive
26558	Johnson's Auto Repair of Duluth	• Hazardous Waste	Inactive
26393	Den's AutoBody	• Hazardous Waste	Active
39981	Automotive Maintenance & Repair	• Hazardous Waste	Inactive
28366	Balcum Appliance Inc	• Hazardous Waste	Inactive
22931	Duluth Auto Body	• Hazardous Waste	Inactive
24198	Viking Micrographics	• Hazardous Waste	Inactive
23341	Tv Spotlight Inc	• Hazardous Waste	Inactive
25868	Whirlwind Power Co	• Hazardous Waste	Inactive
228788	Former Carter Hotel	• Underground Tanks	Active

Site ID	Site Name	MPCA Program	Status
22626	Winslow's Inc	• Hazardous Waste	Inactive
222216	Temple Opera Block	• Brownfields	Active
232507	Zeitgiest Building - Superior St Utlty Reconstruction Proj	• Underground Tanks	Active
197506	Former Ncr	• Brownfields • Site Assessment	Active
2509	Gene's Auto Body	• Air Quality • Hazardous Waste	Active
23711	A1 Auto Body	• Hazardous Waste	Inactive
1318	202 E 1st LLC	• Air Quality • Hazardous Waste	Active
64827	SMDC	• Hazardous Waste	Inactive
29292	Clean As New Auto Cleaning	• Hazardous Waste	Inactive
24721	Greysolon Plaza Property	• Brownfields (2) • Hazardous Waste • Petroleum Remediation • Underground Tanks	Active
16117	Paul Bunyan Press	• Hazardous Waste	Inactive
24529	Arrowhead Hearing Aid Cente	• Hazardous Waste	Inactive
186951	Sheraton Hotel/Condominiums	• Brownfields	Active
193848	Greysolon Plaza Parking Lot	• Brownfields • Site Assessment	Active
26455	HealthEast Transportation	• Aboveground Tanks • Hazardous Waste	Active
26400	Housing & Redevelopment Authority Duluth	• Hazardous Waste	Active
112193	King Manor	• Underground Tanks	Inactive
Secondary Subarea			
194260	Duluth Gas Mfg Site	• CERCLIS Site	Active
196404	JAS Duluth LLC Property	• Petroleum Remediation • Underground Tanks	Active
193704	Apartment Complex	• Petroleum Remediation	Active
127456	Sir Benedicts Tavern On The Lake	• Underground Tanks	Inactive
114321	Formerly Service Station	• Underground Tanks	Inactive
34697	Wick Marvin G Dental Office	• Hazardous Waste	Inactive
108514	Pat Schelhom Property-apt Comp	• Underground Tanks	Inactive
195630	Shehon Property	• Petroleum Remediation	Active
24518	C & H Automotive Service	• Hazardous Waste	Inactive
108525	Louis Pichetti Est (henlock Gar)	• Petroleum Remediation • Site Assessment • Underground Tanks	Inactive
27341	General Cleaning Specialists	• Hazardous Waste	Inactive
27651	Fochs & Associates Inc Adve	• Hazardous Waste	Inactive
201505	Northland Medical Center South Lmted	• Petroleum Remediation	Active
252046	Saint Lukes Hospital of Duluth	• Solid Waste	Active

Site ID	Site Name	MPCA Program	Status
24483	Sorcerer Lures	• Hazardous Waste	Inactive
27657	Foreign Affairs Of Duluth Inc	• Hazardous Waste	Inactive
24728	Guardian Pest Solutions Inc	• Hazardous Waste	Active
30159	Pavilion Surgery Center LLC	• Hazardous Waste	Active
12976	Midwest Engine Rebuilders	• Hazardous Waste	Active
26797	Yorkleigh Apartments	• Brownfields • Hazardous Waste	Inactive
112188	Gaidas Amoco Gas Station	• Underground Tanks	Inactive
38439	Haighs Electric Service	• Hazardous Waste	Inactive
47261	Waynes Radiator	• Hazardous Waste	Inactive
23085	Duluth Family Practice Center	• Hazardous Waste	Active
24503	Saint Germain Co	• Hazardous Waste	Inactive
47262	Litmans Garage	• Brownfields • Hazardous Waste • Petroleum Remediation • Underground Tanks	Inactive
194636	Pavillion 2	• Petroleum Remediation	Active
195695	Saint Lukes Hospital Parking Lot	• Petroleum Remediation	Active
14860	Aspirus St. Lukes Hospital	• Aboveground Tanks • Brownfields • Hazardous Waste • Underground Tanks	Active
12100	Somers James M DDS MS PA	• Hazardous Waste	Inactive
16443	Northland Ear Nose & Throat	• Hazardous Waste	Active
11924	Oral & Maxillofacial Surgical	• Hazardous Waste	Inactive
27684	Duluth Urology Group Ltd	• Hazardous Waste	Inactive
13348	Saint Luke's Obstetrics & Gynecology Associates	• Hazardous Waste	Inactive
125021	Saint Lukes Center for Diagnostic Imaging	• Hazardous Waste	Inactive
16431	Northern Photo	• Hazardous Waste • Underground Tanks	Inactive
139590	Orthopedic Associates	• Hazardous Waste	Active
16446	Oral & Maxillofacial Surgical Associates	• Hazardous Waste	Active
225637	Northland Pharmacy	• Hazardous Waste	Active
191429	Saint Lukes Hospital	• Petroleum Remediation	Active
134035	Jefferson Square	• Underground Tanks	Inactive
41034	Duluth Detoxification Center	• Hazardous Waste	Inactive
109975	Duluth Family Practice Center	• Petroleum Remediation	Inactive
214703	First Lutheran Church	• Petroleum Remediation	Active
253861	Genoa Healthcare	• Hazardous Waste	Active

Site ID	Site Name	MPCA Program	Status
28988	Dee Independent Cleaners	<ul style="list-style-type: none"> • Brownfields • Hazardous Waste • Petroleum Remediation • Site Assessment • Underground Tanks 	Active
13511	Plaza Dental Center	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
28092	Basgen Photography Inc	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
26456	Hearing Associates	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
130083	Walgreen's Store 13877	<ul style="list-style-type: none"> • Hazardous Waste 	Active
133110	Saint Lukes Hospital Apartments	<ul style="list-style-type: none"> • Hazardous Waste 	Active
193024	Heikkila Property	<ul style="list-style-type: none"> • Petroleum Remediation 	Active
23561	Family Chiropractic	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
113851	Plaza Shopping Center	<ul style="list-style-type: none"> • Underground Tanks 	Inactive
29937	Cm Business Equipment	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
27134	Sunset Antiques	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
143913	O'Reilly Auto Parts - 1543	<ul style="list-style-type: none"> • Hazardous Waste 	Active
42459	Duluth Public Works Dept Central Tool	<ul style="list-style-type: none"> • Hazardous Waste 	Inactive
105532	City Of Duluth-street Maintenance-dist 3	<ul style="list-style-type: none"> • Aboveground Tanks • Petroleum Remediation • Underground Tanks 	Active
190579	Proposed CVS Pharmacy Store 6691	<ul style="list-style-type: none"> • Brownfields (2) • Petroleum Remediation 	Active
111124	Former SuperAmerica 4895	<ul style="list-style-type: none"> • Hazardous Waste • Petroleum Remediation • Underground Tanks 	Active
250996	Alaskef Coffee Building	<ul style="list-style-type: none"> • Hazardous Waste 	Active
148125	Former Car Dealership	<ul style="list-style-type: none"> • Underground Tanks 	Inactive
49089	Center for Alcohol & Drug Treatment	<ul style="list-style-type: none"> • Aboveground Tanks • Hazardous Waste • Petroleum Remediation • Underground Tanks 	Inactive

Appendix G
**USFWS IPaC Unofficial Species List and DNR NHIS Review
Letter**



Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Downtown Duluth AUAR

Project Proposer: City of Duluth

Project Type: Development, Mixed Use

Project Type Activities: Lakeshore;Wetland impacts (e.g., dewatering, tiling, drainage, discharge, excavation, fill, runoff, sedimentation, changes in hydrology);Waterbody or watercourse impacts (e.g., dewatering, discharge, excavation, fill, runoff, sedimentation, changes in hydrology));Tree Removal;Structure Removal or Bridge Removal;Grading

TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

County(s): St. Louis

DNR Admin Region(s): Northeast

Reason Requested: Other

Project Description: The City of Duluth is preparing an AUAR for an approximately 335-acre area encompassing the traditional downtown, Essentia Health Medical Campus and surrounding ...

Existing Land Uses: Land use within the AUAR area includes a mix of residential, commercial, institutional, and limited industrial activities. Some sections of the AUAR area ...

Landcover / Habitat Impacted: The AUAR area is consists of a developed, urban environment predominately comprised of impervious surfaces, with limited wooded and wetland areas. Approximately ...

Waterbodies Affected: Lot D includes the Lake Superior shoreline. As part of the planned redevelopment of the project, it is anticipated that improvements would be made to the ...

Groundwater Resources Affected: Future development within the AUAR area may require temporary dewatering during construction, which would need to be confirmed at the time a project is proposed.

Previous Natural Heritage Review: No

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	Comments	Lakeshore - Recommendations Tree Removal - Recommendations
Ecologically Significant Area	Comments	MBS Sites - Recommendations Potential Local Conservation Value Lakes - Recommendations
State-Listed Endangered or Threatened Species	Needs Further Review	State-protected Species - Needs Further Review

Category	Results	Response By Category
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review



October 15, 2025

Project Name: Downtown Duluth AUAR
Project Proposer: City of Duluth
Project Type: Development, Mixed Use
Project ID: MCE #2025-00850

AUTOMATED RESULTS: FURTHER REVIEW IS NEEDED

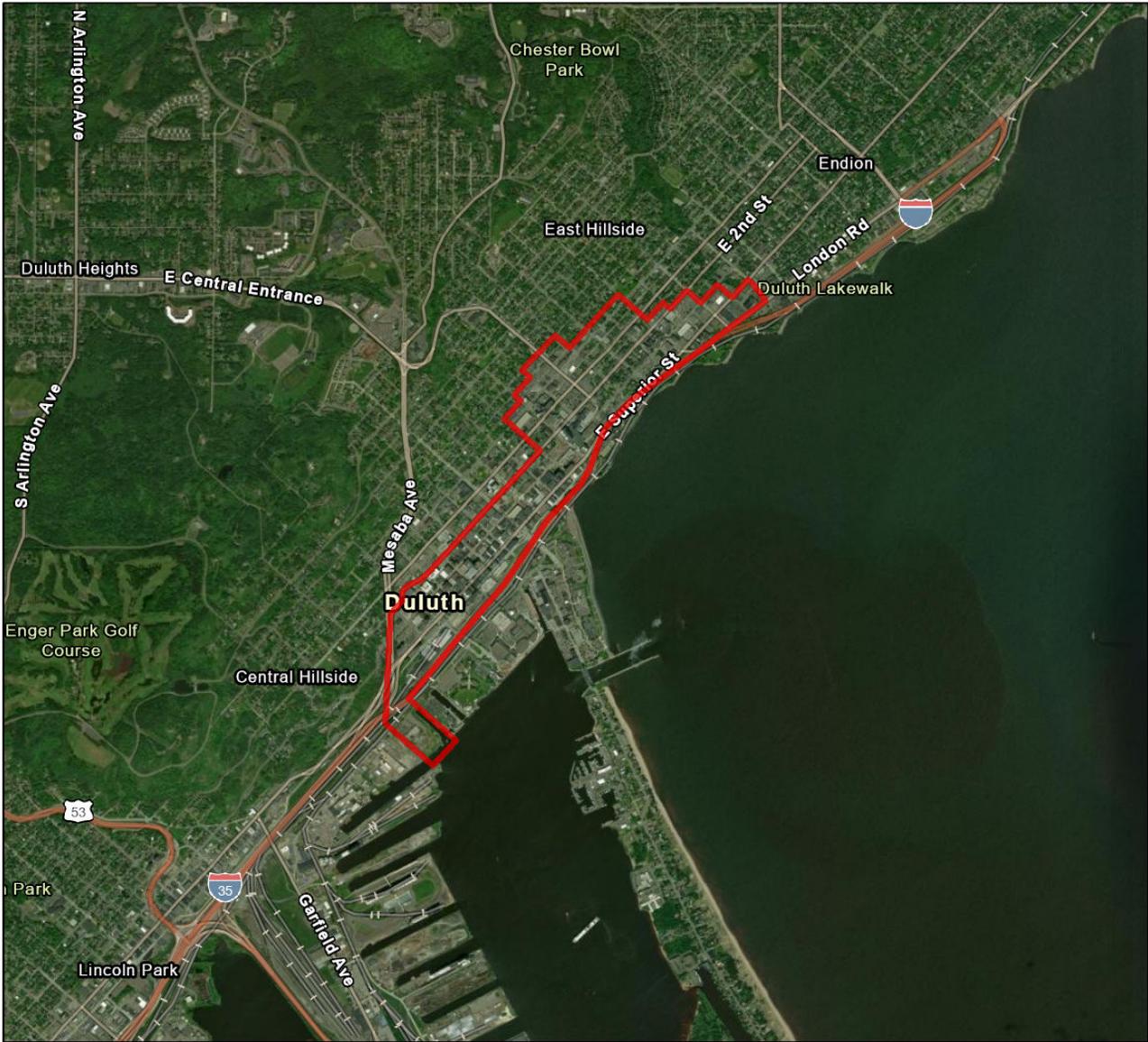
As requested, the above project has undergone an automated review for potential impacts to rare features. Based on this review, one or more rare features may be impacted by the proposed project and further review by the Natural Heritage Review Team is needed. You will receive a separate notification email when the review process is complete and the Natural Heritage Review letter has been posted.

Please refer to the table on the cover page of this report for a summary of potential impacts to rare features. For additional information or planning purposes, use the Explore Page in Minnesota Conservation Explorer to view the potentially impacted rare features or to create a Conservation Planning Report for the proposed project.

If you have additional information to help resolve the potential impacts listed in the summary results, please attach related project documentation in the Edit Details tab of the Project page. Relevant information includes, but is not limited to, additional project details, completed habitat assessments, or survey results. This additional information will be considered during the project review.

Downtown Duluth AUAR

Aerial Imagery With Locator Map



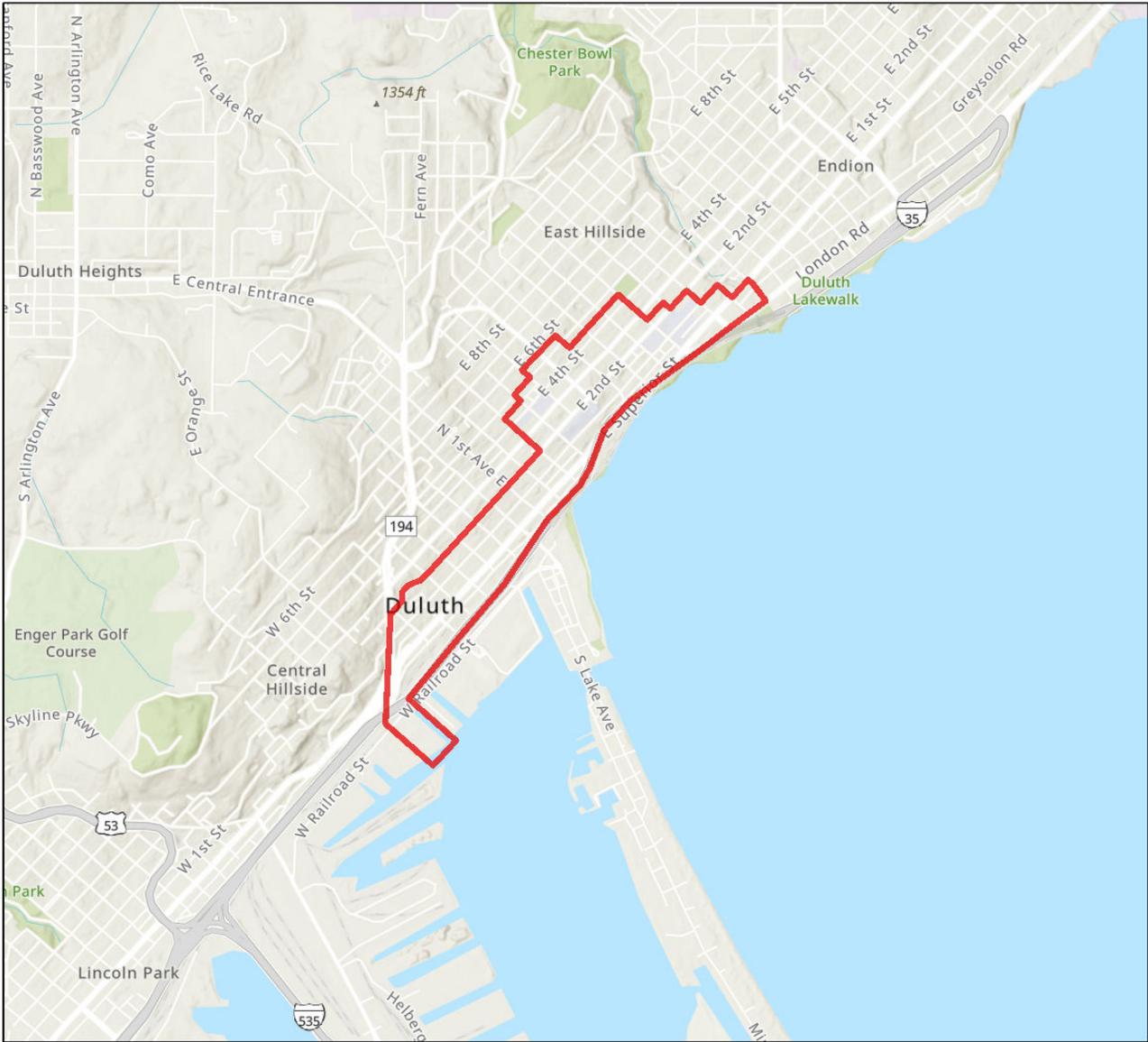
Project Type: Development, Mixed Use
Project Size (acres): 334.05
County(s): St. Louis
TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
St. Louis County (MN), MN Dept Natural Resources, Esri, TomTom, Garmin,
SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,



Downtown Duluth AUAR

USA Topo Basemap With Locator Map



Project Type: Development, Mixed Use
Project Size (acres): 334.05
County(s): St. Louis
TRS: T50 R14 S22, T50 R14 S23, T50 R14 S27, T50 R14 S34

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
St. Louis County (MN), MN Dept Natural Resources, Esri, TomTom, Garmin,
SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,



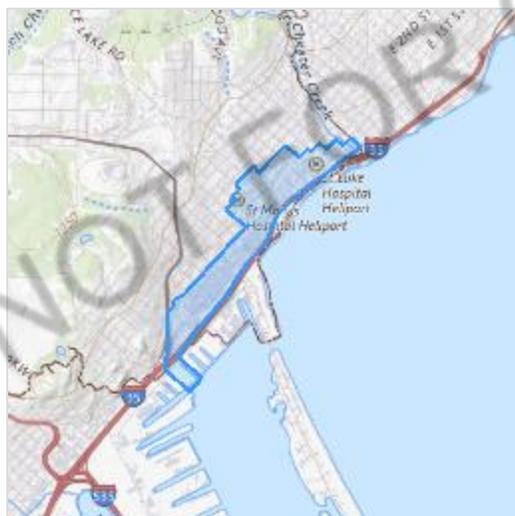
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

St. Louis County, Minnesota



Local office

Minnesota-Wisconsin Ecological Services Field Office

☎ (952) 858-0793

3815 American Blvd East
Bloomington, MN 55425-1659

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Gray Wolf <i>Canis lupus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4488	Threatened

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered
Rufa Red Knot <i>Calidris canutus rufa</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1864	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee <i>Bombus suckleyi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Canada Lynx <i>Lynx canadensis</i> https://ecos.fws.gov/ecp/species/3652#crithab	Final

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1626</p>	Breeds Dec 1 to Aug 31
<p>Golden Eagle <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental](#)

[Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

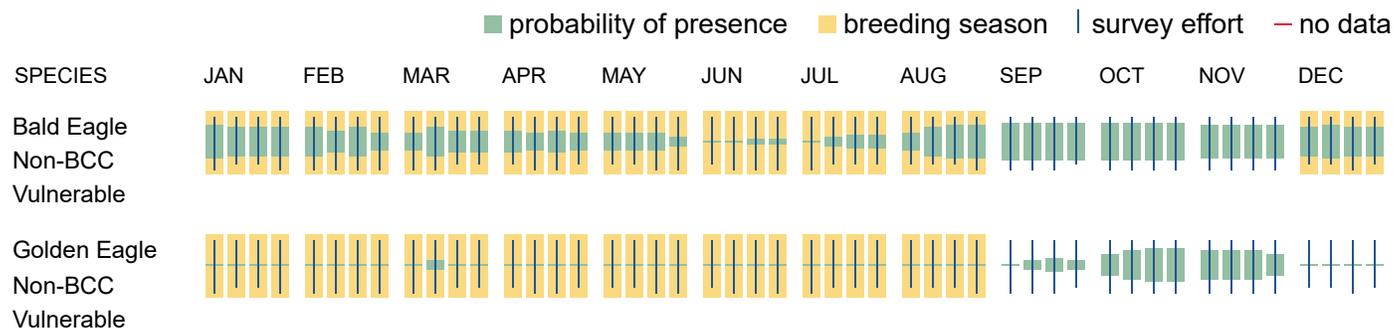
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
<p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1626</p>	Breeds Dec 1 to Aug 31
<p>Black Tern <i>Chlidonias niger surinamensis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/3093</p>	Breeds May 15 to Aug 20
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9399</p>	Breeds May 15 to Oct 10

Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Common Tern <i>Sterna hirundo</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4963	Breeds May 1 to Aug 31
Connecticut Warbler <i>Oporornis agilis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 15 to Aug 10
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20

<p>Le Conte's Sparrow <i>Ammospiza leconteii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 15
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631</p>	Breeds Mar 1 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds elsewhere
<p>Veery <i>Catharus fuscescens fuscescens</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds May 15 to Jul 15
<p>Whimbrel <i>Numenius phaeopus hudsonicus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds elsewhere
<p>Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

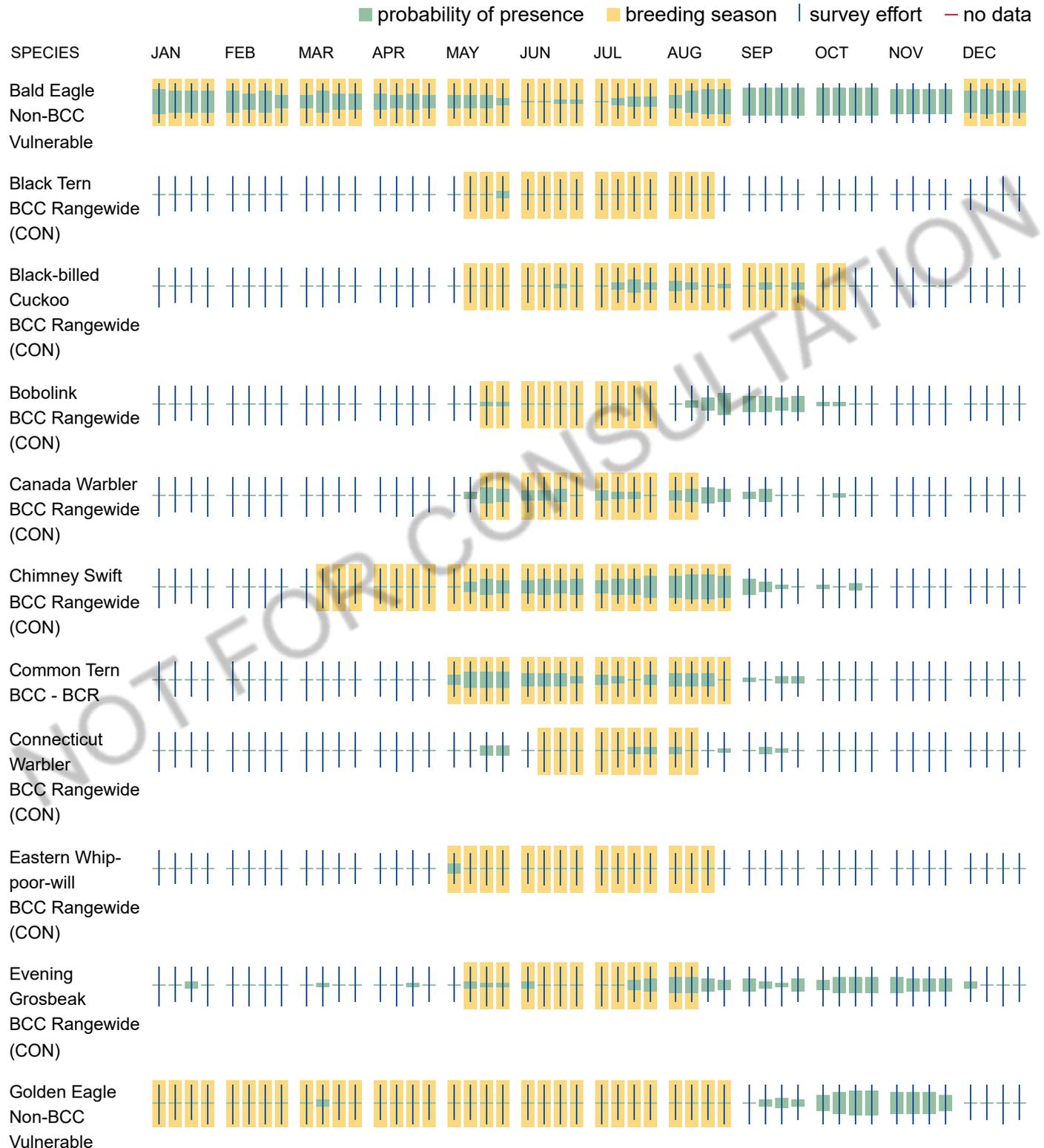
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

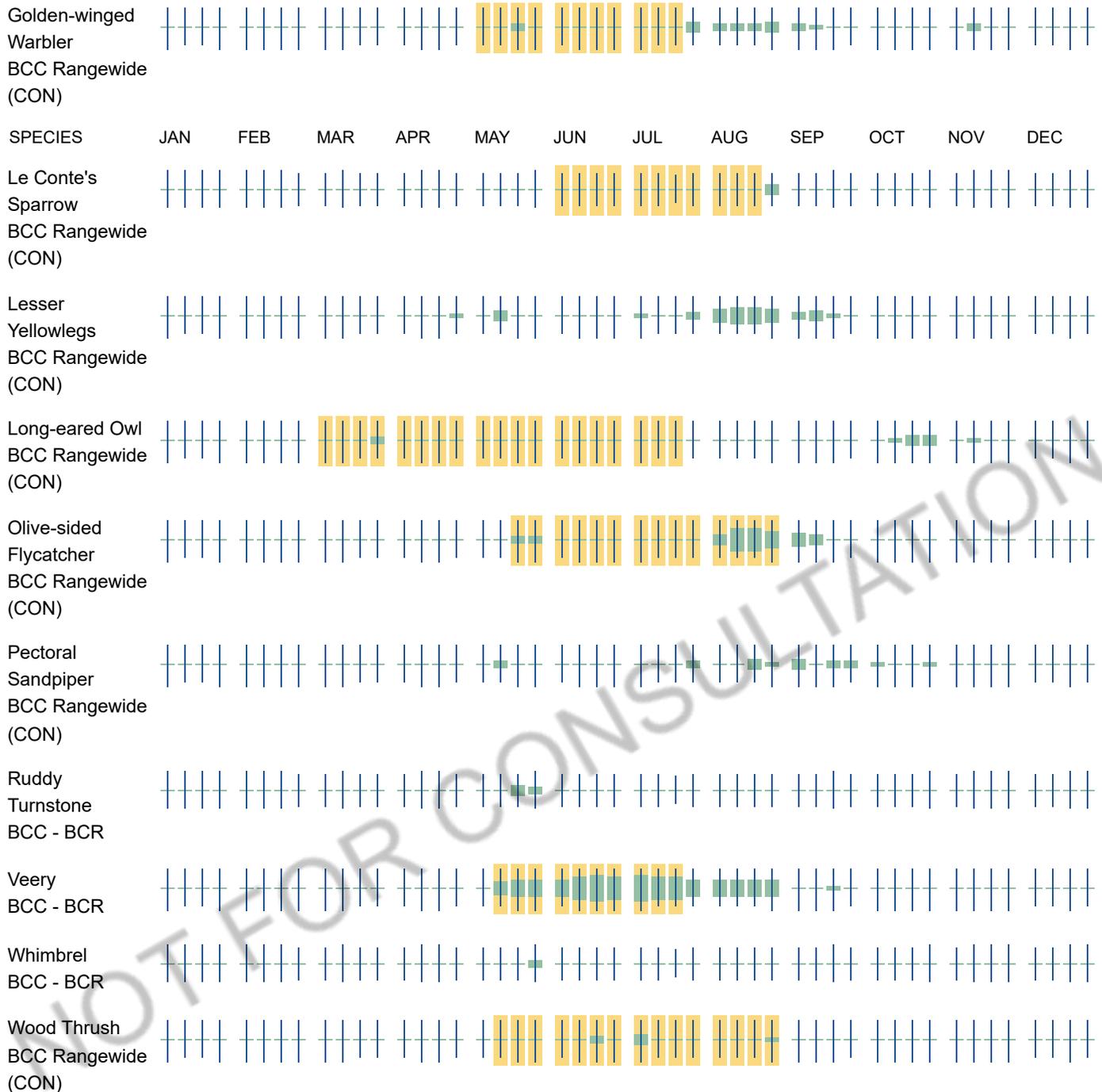
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in

activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix H

MnSHIP Sites within the AUAR area

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
Lot D Subarea (2 Resources)			
SL-DUL-00056	Huron-Portland Cement	Building	8th Ave. W. and waterfront
SL-DUL-02441	U.S. Coast Guard Cutter Sundew	Structure (Boat)	Waterfront (No address)
Essentia Subarea (134 Resources)			
SL-DUL-04120	Bridge 69817	Transportation, Road-Related (Vehicular)	Michigan Street and I-35 Interchange
SL-DUL-00212	Mutual Auto Company-Bresnan Communications	Commerce/Trade, Specialty Store	302 Superior St. E.
SL-DUL-00213	Burrell and Harmon Metal Work	Commerce/Trade, Specialty Store	308 Superior St. E.
SL-DUL-00214	Hotel Florham	Commerce/Trade, Specialty Store	310-312 Superior St. E.
SL-DUL-00215	Northwest Cadillac Company	Commerce/Trade, Specialty Store	314 Superior St. E.
SL-DUL-00180	Commercial building	Commerce/Trade, Specialty Store	309-317 Superior St. E.
SL-DUL-00216	McNamara Automobiles	Commerce/Trade, Specialty Store	318 Superior St. E.
SL-DUL-00217	Buffalo Saloon	Commerce/Trade, Specialty Store	320 Superior St. E.
SL-DUL-00815	Monte Carlo Apartments	Domestic, Multiple Dwelling	324-326 E. Superior St.
SL-DUL-00814	Commercial building	Commerce/Trade, Specialty Store	322 Superior St. E.
SL-DUL-00181	Carlson Bakery	Commerce/Trade, Specialty Store	319 Superior St. E.
SL-DUL-00182	Vacant lot - Paul Bunyan Printing	Commerce/Trade, Specialty Store	321 Superior St. E.
SL-DUL-00183	Parker Millinery	Commerce/Trade, Specialty Store	323 Superior St. E.
SL-DUL-00184	The Voyageur Motel	Domestic, Hotel	331 Superior St. E.
SL-DUL-00817	Mathiason Tire Company	Commerce/Trade, Specialty Store	400 Superior St. E.
SL-DUL-00819	Kenzen Used Cars	Commerce/Trade, Specialty Store	410 Superior St. E.
SL-DUL-00821	Branch's Hall	Commerce/Trade, Specialty Store	416 Superior St. E.
SL-DUL-00822	Kenzen Auto Sales	Commerce/Trade, Specialty Store	430 Superior St. E.
SL-DUL-00116	House	Domestic, Single Dwelling	311 1st St. E.
SL-DUL-00818	Dodge Block	Commerce/Trade, Specialty Store	401-407 Superior St. E.
SL-DUL-00115	brownstone apartments	Domestic, Multiple Dwelling	309 1/2 1st St. E.
SL-DUL-00117	Duplex	Domestic, Multiple Dwelling	315 1st St. E.
SL-DUL-00118	Duplex	Domestic, Multiple Dwelling	317 1st St. E.
SL-DUL-00244	Harbor View Apartments	Domestic, Multiple Dwelling	17-19 North 4th Ave. E.
SL-DUL-00119	New York apartments	Domestic, Multiple Dwelling	319-321 1st St. E.
SL-DUL-00121	Duplex	Domestic, Multiple Dwelling	323 1st St. E.
SL-DUL-01075	Kellerhais Auto Body	Domestic, Secondary Structure	402 1st St. E.
SL-DUL-00122	House	Domestic, Single Dwelling	325 1st St. E.
SL-DUL-00245	Harbor View Apartments	Domestic, Multiple Dwelling	21-23 North 4th Ave. E.
SL-DUL-00820	Arrowhead Glass Company	Commerce/Trade, Specialty Store	415 Superior St. E.
SL-DUL-00246	Harbor View Apartments	Domestic, Multiple Dwelling	25-27 North 4th Ave. E.
SL-DUL-00088	First Presbyterian Church	Religion, Religious Facility	302 2nd St. E.
SL-DUL-00089	Portland Apartments	Domestic, Multiple Dwelling	316 2nd St. E.
SL-DUL-00123	House	Domestic, Single Dwelling	331 1st St. E.
SL-DUL-01077	Duplex	Domestic, Multiple Dwelling	408-410 1st St. E.
SL-DUL-01076	House	Domestic, Single Dwelling	406 1st St. E.
SL-DUL-00247	Harbor View Apartments	Domestic, Multiple Dwelling	29-31 North 4th Ave. E.
SL-DUL-00248	Harbor View Apartments	Domestic, Multiple Dwelling	33-35 North 4th Ave. E.
SL-DUL-01079	Berkely Apartments	Domestic, Multiple Dwelling	416-420 1st St. E.
SL-DUL-00090	house-Almquist insurance	Domestic, Single Dwelling	320 2nd St. E.
SL-DUL-01078	Warehouse	Commerce/Trade, Warehouse	412 1st St. E.
SL-DUL-00249	House	Domestic, Single Dwelling	109 North 4th Ave. E.
SL-DUL-01266	Grandview Manor	Domestic, Multiple Dwelling	301 2nd St. E.
SL-DUL-01080	House	Domestic, Single Dwelling	422 1st St. E.
SL-DUL-01081	House	Domestic, Single Dwelling	424 1st St. E.
SL-DUL-00091	House	Domestic, Single Dwelling	322 2nd St. E.
SL-DUL-01082	Duluth Auto Body	Domestic, Secondary Structure	426-428 1st St. E.
SL-DUL-00092	Miller-Dawn Medical	Health Care, Medical Business/Office	330 2nd St. E.
SL-DUL-02813	Temple Adas Israel Synagogue	Religion, Religious Facility	302 E 3RD ST
SL-DUL-03942	Bridge 69821 (Brewery Historic District Tunnel/ Superior West Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 4th and 6th Avenues East
SL-DUL-01419	Apartments	Domestic, Multiple Dwelling	301-307 3rd St. E.
SL-DUL-01422	St. Anne's Home	Domestic, Multiple Dwelling	330 3rd St. E.
SL-DUL-01268	House	Domestic, Single Dwelling	420 2nd St. E.
SL-DUL-01420	Apartments	Domestic, Multiple Dwelling	317 3rd St. E.
SL-DUL-01592	Messiah Lutheran Church	Religion, Religious Facility	4th St. and 3rd Ave. E.
SL-DUL-01074	Commercial building	Commerce/Trade, Specialty Store	401 1st St. E.
SL-DUL-01267	Shoreview Apartments	Domestic, Multiple Dwelling	401 2nd St. E.
SL-DUL-01083	Hampshire Apartments	Domestic, Multiple Dwelling	514-518 1st St. E.
SL-DUL-02815	Essentia Health-Duluth Clinic 3rd Street Building & Parking Ramp	Health Care, Clinic	400 E 3RD ST

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-02814	St. Mary Star of the Sea Catholic Church (St. Mary's Polish Catholic Church)	Religion, Religious Facility	325 E 3RD ST
SL-DUL-03751	Essentia Health	Health Care	400 3rd St E
SL-DUL-02008	House	Domestic, Single Dwelling	329 North 4th Ave. E.
SL-DUL-01593	Jeffrey Black Building	Commerce/Trade, Specialty Store	332 4th St. E.
SL-DUL-03746	Commercial building	Commerce/Trade, Specialty Store	532 1st St E
SL-DUL-01084	Peerless Auto Body	Domestic, Secondary Structure	532 1st St. E.
SL-DUL-01270	Miller-Dawn Hospital	Health Care, Hospital	504 2nd St. E.
SL-DUL-02816	St. Mary's Hospital	Health Care, Hospital	407 E 3RD ST
SL-DUL-01269	House	Domestic, Single Dwelling	501 2nd St. E.
SL-DUL-02817	Kaarbos Auto Repair	Commerce	331 4th Street East
SL-DUL-01594	Commercial building	Commerce/Trade, Specialty Store	401 4th St. E.
SL-DUL-03750	Unknown	-	620 1st St E
SL-DUL-01085	Apartment	Domestic, Multiple Dwelling	601-603 E 1st St
SL-DUL-01087	House	Domestic, Single Dwelling	610 1st St. E.
SL-DUL-01088	Commercial Building	Commerce/Trade, Specialty Store	614 E 1st St
SL-DUL-03679	Apartment	Domestic, Multiple Dwelling	605 E 1st St
SL-DUL-01425	Ashtabula Apartments	Domestic, Multiple Dwelling	502 3rd St. E.
SL-DUL-03747	Duplex	Domestic, Multiple Dwelling	601-603 1st St E
SL-DUL-03748	Duplex	Domestic, Multiple Dwelling	605 1st St E
SL-DUL-03749	Duplex	Domestic, Multiple Dwelling	607-609 1st St E
SL-DUL-01086	Apartments	Domestic, Multiple Dwelling	607-609 E 1st St
SL-DUL-01595	Commercial building	Commerce/Trade, Specialty Store	407 4th St. E.
SL-DUL-01271	House	Domestic, Single Dwelling	517 2nd St. E.
SL-DUL-01868	Apartments	Domestic, Multiple Dwelling	110-114 N 6th Ave E
SL-DUL-02818	Goering Bldg.	-	413 4th Street East
SL-DUL-01092	Expert Tire (Commercial Building)	Commerce/Trade, Specialty Store	624 E 1st St
SL-DUL-02819	Beschenbossel Building	-	415 4th Street East
SL-DUL-01272	Daugherty Funeral Home	Funerary, Mortuary	600 2nd St. E.
SL-DUL-01089	House	Domestic, Multiple Dwelling	619 E 1st St
SL-DUL-01427	Johnson Mortuary	Funerary, Mortuary	514 3rd St. E.
SL-DUL-01704	Evergreen Apartments	Domestic, Multiple Dwelling	402-404 5th St. E.
SL-DUL-01091	Double House	Domestic, Multiple Dwelling	621-623 E 1st St
SL-DUL-01090	House	Domestic, Single Dwelling	621 1st St. E.
SL-DUL-01596	The Barber	Commerce/Trade, Specialty Store	419 4th St. E.
SL-DUL-04087	Commercial Building	Commerce/Trade, Business	421 East 4th Street
SL-DUL-01007	Vermillion Trail Marker	-	Washington Ave. & 1st St.
SL-DUL-01093	Double House	Domestic, Multiple Dwelling	629 E 1st St
SL-DUL-01873	House	Domestic, Single Dwelling	119 North 7th Ave. E.
SL-DUL-01870	Gloria Dei Church	Religion, Religious Facility	219 North 6th Ave. E.
SL-DUL-03617	Swedish Evangelical Lutheran Church	Religion, Religious Facility	219 N. 6th Ave. E.
SL-DUL-01426	Fifth Avenue Apartments	Domestic, Multiple Dwelling	503 3rd St. E.
SL-DUL-02820	Bell Apartment	Domestic, Multiple Dwelling	502 E 4th St.
SL-DUL-01274	House (parish center)	Religion, Religious Facility	620 E 2nd St
SL-DUL-02838	Commercial building	Commerce/Trade, Specialty Store	512-514 4th St E
SL-DUL-01273	House	Domestic, Single Dwelling	617 2nd St. E.
SL-DUL-02822	Daugherty Bldg.	Commerce/Trade, Specialty Store	516 E 4th St.
SL-DUL-01279	Twelve Holy Apostles Greek Orthodox Church	Religion, Religious Facility	632 E 2nd St
SL-DUL-02836	Bartholdi Block	Commerce/Trade, Specialty Store	501 4th Street East
SL-DUL-03614	SMDC Health System building	-	412 N. 5th Ave. E.
SL-DUL-03615	Commercial Building	Commerce	520 E. 4th St.
SL-DUL-01275	House	Domestic, Single Dwelling	621 E 2nd St
SL-DUL-01277	House	Domestic, Single Dwelling	629 2nd St. E.
SL-DUL-01278	House	Domestic, Single Dwelling	631 2nd St. E.
SL-DUL-03616	Commercial Building	Commerce	526 E. 4th St.
SL-DUL-02823	Potswald Block	Commerce/Trade, Specialty Store	522 E 4th St.
SL-DUL-02821	Tufia Bldg.	Commerce/Trade, Specialty Store	513 E 4th St.
SL-DUL-01276	House	Domestic, Single Dwelling	627 2nd St. E.
SL-DUL-01429	Kohagen Flats	Domestic, Multiple Dwelling	632 E 3rd St
SL-DUL-03602	Grocery Store	Commerce	610 E. 4th St.
SL-DUL-01428	Schaf Flats	Domestic, Multiple Dwelling	631 3rd St. E.
SL-DUL-03601	Commercial Building and Gas Station	Commerce	619 E. 4th St.
SL-DUL-03613	Auto Repair - Retail Store	Commerce	531 E. 5th St.
SL-DUL-03618	Brewery Creek Culvert	Transportation, Road-Related (Vehicular)	unknown
SL-DUL-01709	House	Domestic, Single Dwelling	618 5th St. E.
SL-DUL-03693	Brooks Terrace	Domestic, Multiple Dwelling	621 E 4th St

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-03612	Automotive Parts Headquarters Inc.	Commerce	502 N. 6th Ave. E.
SL-DUL-03611	House	Domestic	609 E. 5th St.
SL-DUL-01711	House	Domestic, Single Dwelling	620 5th St. E.
SL-DUL-01712	Krause Building	Domestic, Multiple Dwelling	624-626 E 5th St
SL-DUL-03610	2 Houses	Domestic, Multiple Dwelling	613 E. 5th St.
SL-DUL-01708	Duplex	Domestic, Multiple Dwelling	617 E 5th St
SL-DUL-01710	Duplex	Domestic, Multiple Dwelling	619 E 5th St
SL-DUL-03609	House	Domestic	623 E. 5th St.
SL-DUL-03608	House	Domestic	627 E. 5th St.
SL-DUL-03607	House	Domestic	629 E. 5th St.
1st Street Subarea (249 Resources)			
SL-DUL-04109	Bridge 69818S	Transportation, Road-Related (Vehicular)	I-35 between Mesaba Avenue and 5th Avenue West
SL-DUL-03038	Bridge 69840	Transportation, Road-Related (Vehicular)	0.2 MI N OF JCT TH 35 (carries MN 194 NB over SUPERIOR ST(MSAS171))
SL-DUL-00959	Bible House Building	Commerce/Trade, Business	715 Superior St. W.
SL-DUL-00958	Lenox Place	Domestic, Multiple Dwelling	701 Superior St. W.
SL-DUL-04107	Bridge 69818B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-03115	Gateway Tower	Domestic, Multiple Dwelling	600 Superior St W
SL-DUL-00957	Gateway Towers Apartments	Domestic, Multiple Dwelling	600-612 Superior St. W.
SL-DUL-04110	Bridge 69870A	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-00658	Duluth Union Depot	Transportation, Rail-Related	506 Michigan St.
SL-DUL-03040	69870	Transportation, Road-Related (Vehicular)	unknown
SL-DUL-04111	Bridge 69870B	Transportation, Road-Related (Vehicular)	5th Avenue West and I-35 Interchange
SL-DUL-02465	William Crooks Locomotive	Transportation, Rail-Related	Duluth Union Depot - 506 Michigan St.
SL-DUL-03113	Parking Structure	Landscape, Parking Lot	N/A Michigan St W
SL-DUL-00955	Radison Duluth Hotel	Domestic, Hotel	505 Superior St. W.
SL-DUL-00953	Ordean Building	Commerce/Trade, Business	424 Superior St. W.
SL-DUL-01240	Gerald W. Heaney Federal Building & US Courthouse/US Custom House/ US Post Office/Civic Center Station	Government, Post Office	515 1st St. W.
SL-DUL-02375	Duplicate Number - See SL-DUL-01240	Government, Government Office	unknown
SL-DUL-00952	Duluth Business University Building	Commerce/Trade, Specialty Store	418 Superior St. W.
SL-DUL-02504	Bridge L6125	Transportation, Road-Related (Vehicular)	Skyway Michigan St. .1 miles east of 5th Ave. W
SL-DUL-00951	Commercial building	Commerce/Trade, Specialty Store	404 Superior St. W.
SL-DUL-01239	Duluth Herald & News Tribune	Commerce/Trade, Business	424 1st St. W.
SL-DUL-00954	KDLH TV	Commerce/Trade, Business	425 Superior St. W.
SL-DUL-00950	Palladis Building	Commerce/Trade, Business	403 Superior St. W.
SL-DUL-00948	Providence Building	Commerce/Trade, Financial Institution	332 Superior St. W.
SL-DUL-01238	Duluth Water & Gas Department Offices	Commerce/Trade, Business	414 1st St. W.
SL-DUL-02373	Soldiers and Sailors Monument	Recreation and Culture, Monument/Marker	unknown
SL-DUL-00947	Medical Arts Building	Health Care, Medical Business/Office	324 Superior St. W.
SL-DUL-00949	Phoenix Building	Commerce/Trade, Specialty Store	333 Superior St. W.
SL-DUL-01236	Duluth Water & Gas Warehouse	Social, Meeting Hall	408-410 1st St. W.
SL-DUL-00943	Torrey Building	Commerce/Trade, Business	314-316 Superior St. W.
SL-DUL-01235	Duluth Athletic Club	Social, Meeting Hall	402 1st St. W.
SL-DUL-02372	St. Louis County Courthouse	Government, Courthouse	unknown
SL-DUL-03953	Bridge 93729 (Skyway)	Transportation, Road-Related (Vehicular)	Skyway Bridge
SL-DUL-00941	Moore Memorial Building	Commerce/Trade, Specialty Store	312 Superior St. W.
SL-DUL-00946	Commercial building	Commerce/Trade, Specialty Store	323 Superior St. W.
SL-DUL-00939	Alworth Building	Commerce/Trade, Specialty Store	306-310 Superior St. W.
SL-DUL-00945	Duluth Common Exchange	Commerce/Trade, Specialty Store	321 Superior St. W.
SL-DUL-00940	Boyce Drug	Commerce/Trade, Specialty Store	306 Superior St. W.
SL-DUL-00944	Black Steer	Commerce/Trade, Restaurant	319 Superior St. W.
SL-DUL-00937	Lonsdale Building	Commerce/Trade, Professional	302 Superior St. W.
SL-DUL-00204	Duluth City Hall	Government, City Hall	132 Superior St. E.
SL-DUL-00942	Bagley & Company	Commerce/Trade, Specialty Store	313-315 Superior St. W.
SL-DUL-01237	Duluth City Hall	Government, City Hall	411 1st St. W.
SL-DUL-01234	J.J. Summers Agency	Commerce/Trade, Specialty Store	322 1st St. W.
SL-DUL-00218	Norwest Bank Building	Commerce/Trade, Financial Institution	230 Superior St. W.
SL-DUL-01233	Northwest Bell Telephone Company	Commerce/Trade, Specialty Store	322 1st St. W.
SL-DUL-02651	Winthrop Building	Commerce/Trade, Specialty Store	325-333 1st St. W
SL-DUL-01230	Commercial building	Commerce/Trade, Specialty Store	314 1st St. W.
SL-DUL-00938	Commercial building	Commerce/Trade, Specialty Store	303-305 Superior St. W.

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Resource No.	Name	Resource Type	Address/Location
SL-DUL-00219	Duluth Hardware Company/Smith, Farwell & Steele Building	Commerce/Trade, Financial Institution	222 Superior St. W.
SL-DUL-00220	The Herald Building	Commerce/Trade, Specialty Store	220 Superior St. W.
SL-DUL-01232	Commercial building	Commerce/Trade, Specialty Store	321-323 1st St. W.
SL-DUL-01228	Duluth YMCA	Recreation and Culture, Sports Facility	302 1st St. W.
SL-DUL-00221	Wattenworth & Fee Block	Commerce/Trade, Specialty Store	218 Superior St. W.
SL-DUL-00222	Clague & Prindle Block	Commerce/Trade, Specialty Store	216 Superior St. W.
SL-DUL-01231	Central Garage	Recreation and Culture, Sports Facility	315 1st St. W.
SL-DUL-02770	Duluth Transit Authority (DTA) Transit Center - Skyway Entrance	Government, Government Office	214 Superior St. W.
SL-DUL-00223	Commercial Building (razed)	Commerce/Trade, Specialty Store	214 Superior St. W.
SL-DUL-02771	Ace Hardware	Commerce/Trade, Specialty Store	212 Superior St. W.
SL-DUL-00936	Lyric Block	Commerce/Trade, Specialty Store	209 Superior St. W.
SL-DUL-02772	West Hotel	Domestic, Hotel	210 Superior St. W.
SL-DUL-00225	Commercial building	Commerce/Trade, Specialty Store	208 Superior St. W.
SL-DUL-00224	Commercial building	Commerce/Trade, Specialty Store	210-212 Superior St. W.
SL-DUL-01229	Elk's Club-Court house bldg	Commerce/Trade, Specialty Store	309-311 1st St. W.
SL-DUL-00226	Argone Hotel	Domestic, Hotel	206 Superior St. W.
SL-DUL-01227	Duluth Board of Trade	Commerce/Trade, Business	301-307 1st St. W.
SL-DUL-00227	Sellwood Building	Commerce/Trade, Specialty Store	202 Superior St. W.
SL-DUL-00074	Commercial building	Commerce/Trade, Specialty Store	226-232 1st St. W.
SL-DUL-00073	Commercial building	Commerce/Trade, Specialty Store	222-224 1st St. W.
SL-DUL-02503	Bridge 92849	Transportation, Road-Related (Vehicular)	Skyway Michigan St. E of 3rd Ave W
SL-DUL-00185	First Bank Place	Commerce/Trade, Financial Institution	130 Superior St. W.
SL-DUL-01226	Wolvyn Building	Commerce/Trade, Specialty Store	225-231 1st St. W.
SL-DUL-00068	Salvation Army	Commerce	118 North 3rd Ave. W.
SL-DUL-01224	LeTourneau Printing Company	Commerce/Trade, Specialty Store	219-221 1st St. W.
SL-DUL-00186	commercial building-Saw Mill unpainted furniture	Commerce/Trade, Specialty Store	120 Superior St. W.
SL-DUL-01223	Armstead Building	Commerce/Trade, Specialty Store	217 1st St. W.
SL-DUL-00934	Commercial building	Commerce/Trade, Specialty Store	118 Superior St. W.
SL-DUL-00935	First Bank Place	Commerce/Trade, Financial Institution	131 Superior St. W.
SL-DUL-02006	Northwestern Bank of Commerce Drive-In	Commerce/Trade, Financial Institution	23 North 2nd Ave. W.
SL-DUL-00188	Commercial building - Swor Shoes	Commerce/Trade, Specialty Store	114 Superior St. W.
SL-DUL-01221	Central Club Café	Commerce/Trade, Specialty Store	213-215 1st St. W.
SL-DUL-00228	Commercial building	Commerce/Trade, Specialty Store	125-127 Superior St. W.
SL-DUL-00189	F.W. Woolworth	Commerce/Trade, Specialty Store	104-106 Superior St. W.
SL-DUL-00154	Gately Store	Commerce/Trade, Specialty Store	123 Superior St. W.
SL-DUL-00155	Walgreen's Drug Store	Commerce/Trade, Specialty Store	121 Superior St. W.
SL-DUL-00069	Peter Pan Cleaners	Commerce/Trade, Specialty Store	122 North 3rd Ave. W.
SL-DUL-01220	Gilbert Building	Commerce/Trade, Specialty Store	209-211 1st St. W.
SL-DUL-01219	Altman Clothing	Commerce/Trade, Specialty Store	201-207 1st St. W.
SL-DUL-00156	George Gray Department Store	Commerce/Trade, Department Store	113-119 Superior St. W.
SL-DUL-00190	Harbor Building	Commerce/Trade, Specialty Store	102 Superior St. W.
SL-DUL-00153	Commercial building - North shore bank of commerce	Commerce/Trade, Specialty Store	129-131 Superior St. W.
SL-DUL-00231	Parking ramp (Nonextant)	Landscape, Parking Lot	16-20 North 2nd Ave. W.
SL-DUL-00071	Natchios Greek Restaurant	Commerce/Trade, Restaurant	109 North 2nd Ave. W.
SL-DUL-00157	Aster Theatre	Recreation and Culture, Theater	109 Superior St. W.
SL-DUL-00070	Leone's Cleaners and Tailors	Commerce/Trade, Specialty Store	115 North 2nd Ave. W.
SL-DUL-00230	Commercial building	Commerce/Trade, Financial Institution	202 1st St. W.
SL-DUL-00093	Bayha and Company Furniture	Commerce/Trade, Business	131 1st St. W.
SL-DUL-00229	Commercial building	Commerce/Trade, Specialty Store	105 Superior St. W.
SL-DUL-02390	Young Women's Christian Association of Duluth (YWCA)	Social, Civic	202 2nd St. W.
SL-DUL-04116	Bridge 69816E	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange
SL-DUL-00124	Commercial building	Commerce/Trade, Specialty Store	118-138 1st St. W.
SL-DUL-00126	Pasek Pharmacy, Jerry Lee's Restaurant, commercial building	Commerce/Trade, Specialty Store	114-116 1st St. W.
SL-DUL-00125	Deluxe Coney Island-Rowley Building	Commerce/Trade, Specialty Store	112 1st St. W.
SL-DUL-00191	Great Northern Power Company/Minnesota Power & Light	Industry/Processing/Extraction, Extractive Facility	30 W Superior St
SL-DUL-00158	Hunter Building	Commerce/Trade, Specialty Store	31 Superior St. W.
SL-DUL-00159	Commercial building	Commerce/Trade, Specialty Store	29 Superior St. W.
SL-DUL-02004	Gulleson Shoe Store	Commerce/Trade, Specialty Store	21 North 1st Ave. W.
SL-DUL-00127	Ideal Market & Bakery	Commerce/Trade, Specialty Store	102 1st St. W.
SL-DUL-01212	Rowley Building	Commerce/Trade, Specialty Store	108 1st St. W.
SL-DUL-00072	Auto Garage	Transportation, Road-Related (Vehicular)	120-122 North 2nd Ave. W.

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Resource No.	Name	Resource Type	Address/Location
SL-DUL-00160	Commercial building	Commerce/Trade, Specialty Store	25 Superior St. W.
SL-DUL-02391	Duplicate Number - See SL-DUL-000127 (Ideal Market & Bakery)	Commerce/Trade, Specialty Store	102 1st St W
SL-DUL-00094	Gershgol Grocery	Commerce/Trade, Specialty Store	123 1st St. W.
SL-DUL-00233	Action Pawn and Gopher Shoe Repair	Commerce/Trade, Specialty Store	16-18 North 1st Ave. W.
SL-DUL-00075	Duplicate Number - See SL-DUL-00072 (Auto Garage)	Transportation, Road-Related (Vehicular)	120 2nd St. W.
SL-DUL-00236	Crown Christian Center	Religion, Religious Facility	13-15 Lake Ave. N.
SL-DUL-00234	Printing Express	Commerce/Trade, Specialty Store	22-26 North 1st Ave. W.
SL-DUL-00096	Frederick Hotel	Commerce/Trade, Specialty Store	105 W 1st St.
SL-DUL-00095	Columbia Block-Norman's Bar Bldg	Commerce/Trade, Specialty Store	113-115 1st St. W.
SL-DUL-00161	Commercial Building	Commerce/Trade, Specialty Store	21-23 Superior St. W.
SL-DUL-00164	Wirth Building	Commerce/Trade, Specialty Store	13 Superior St. W.
SL-DUL-00128	Pearson Block-Duluth Liquor	Commerce/Trade, Specialty Store	26-32 1st St. W.
SL-DUL-00162	Commercial building-sportsman's headquarters	Commerce/Trade, Specialty Store	17-23 Superior St. W.
SL-DUL-00101	European Bakery-New England Hotel	Commerce/Trade, Specialty Store	109-111 W 1st St.
SL-DUL-00097	East End Ice and Coal- Life House Youth Center	Commerce/Trade, Specialty Store	31 1st St. W.
SL-DUL-00129	Cantonese House-commercial building	Commerce/Trade, Specialty Store	24 1st St. W.
SL-DUL-00166	Norris-MacDougal Block	Commerce/Trade, Specialty Store	5-7 Superior St. W.
SL-DUL-00163	Commercial Building	Commerce/Trade, Specialty Store	15 Superior St. W.
SL-DUL-04117	Bridge 69816F	Transportation, Road-Related (Vehicular)	Lake Avenue and I-35 Interchange
SL-DUL-00098	commercial building-Life House Youth Center	Commerce/Trade, Specialty Store	29 1st St. W.
SL-DUL-00130	Young at Heart	Commerce/Trade, Specialty Store	22 1st St. W.
SL-DUL-00800	Commercial building	Commerce/Trade, Specialty Store	3-9 Superior St. E.
SL-DUL-00167	Bell and Eyster	Commerce/Trade, Specialty Store	3 Superior St. W.
SL-DUL-00803	Old Jolly Fisher Restaurant	Commerce/Trade, Specialty Store	27 Superior St. E.
SL-DUL-00066	Merrit and Hector Printers	Commerce/Trade, Specialty Store	108-114 North 1st Ave. W.
SL-DUL-00131	E.F. Berg Hotel Supplies	Commerce/Trade, Specialty Store	20 1st St. W.
SL-DUL-00251	Plaunt Company Plumbing	Commerce/Trade, Specialty Store	121-123 North 1st Ave. W.
SL-DUL-00168	Poirier's Boots and Shoes	Commerce/Trade, Specialty Store	1 Superior St. W.
SL-DUL-00099	Arthurs Formal Wear	Commerce/Trade, Specialty Store	25 1st St. W.
SL-DUL-00132	Sanitary Plumbing-Glenwood trophy	Commerce/Trade, Specialty Store	18 1st St. W.
SL-DUL-00165	Silberstein and Bondy Dry Goods Company	Commerce/Trade, Specialty Store	9-11 Superior St. W.
SL-DUL-00252	Chum Drop-In Center	Social, Civic	125 N. 1st Ave. W
SL-DUL-00237	Commercial building-Bayly building	Commerce/Trade, Specialty Store	17-19 Lake Ave. N.
SL-DUL-00193	Vacant lot	Recreation and Culture, Theater	16 Superior St. E.
SL-DUL-00238	Nortun Lodge #126 Sons of Norway	Social, Meeting Hall	21-23 Lake Ave. N.
SL-DUL-02644	Parking lot	Landscape, Parking Lot	9-23 1st St. W.
SL-DUL-00133	Bridgeman & Russell	Commerce/Trade, Specialty Store	14-16 1st St. W.
SL-DUL-00067	Commercial Electric Company	Commerce/Trade, Specialty Store	118 North 1st Ave. W.
SL-DUL-00135	Spina Building-Dreamland bar;Willis Supply Co./Shishka Bar	Commerce/Trade, Specialty Store	2-8 1st St. W.
SL-DUL-00134	Bridgeman-Russell Block	Commerce/Trade, Specialty Store	10-16 1st St. W.
SL-DUL-00235	Tremont Hotel	Domestic, Hotel	12 Lake Ave. N.
SL-DUL-00076	Commercial building - Duluth Teachers Credit Union	Commerce/Trade, Specialty Store	28 2nd St. W.
SL-DUL-00196	Wieland Block	Commerce/Trade, Specialty Store	26 Superior St. E.
SL-DUL-00194	J. J. Costello Hardware and Stoves	Commerce/Trade, Specialty Store	22-24 Superior St. E.
SL-DUL-00169	Commercial building	Commerce/Trade, Specialty Store	13 Superior St. E.
SL-DUL-00136	First Bank Drive-In	Commerce/Trade, Financial Institution	10 1st St. E.
SL-DUL-03922	Bridge 69857	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park
SL-DUL-00802	Jeronimus Floral	Commerce/Trade, Specialty Store	11 1/2 Superior St. E.
SL-DUL-00170	Commercial building	Commerce/Trade, Specialty Store	17 Superior St. E.
SL-DUL-00801	Bridgemen's	Commerce/Trade, Specialty Store	11 Superior St. E.
SL-DUL-00171	Commercial building	Commerce/Trade, Specialty Store	21 Superior St. E.
SL-DUL-00100	HBJ Publications Inc	Commerce/Trade, Specialty Store	1-7 1st St. W.
SL-DUL-00172	Commercial building - music center	Commerce/Trade, Specialty Store	23-25 Superior St. E.
SL-DUL-00078	Duluth Masonic Temple	Social, Meeting Hall	4 2nd St. W.
SL-DUL-00197	Hayes Block	Commerce/Trade, Specialty Store	30-38 Superior St. E.
SL-DUL-00198	Astoria Hotel-Northern lights/Chinese Dragon	Commerce/Trade, Specialty Store	102-108 Superior St. E.
SL-DUL-02645	Granite retaining wall	Landscape, Street Furniture/Object	9 1st St. E.
SL-DUL-00137	Commercial building	Commerce/Trade, Specialty Store	18 1st St. E.
SL-DUL-00173	Last place on earth	Commerce/Trade, Specialty Store	29-33 Superior St. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00103	Interstate Auto	Commerce/Trade, Specialty Store	5-7 1st St. E.
SL-DUL-00138	Duluth Candy Factory	Commerce/Trade, Specialty Store	20 1st St. E.
SL-DUL-01208	Hockin Furniture Co.	Commerce/Trade, Specialty Store	5 1st St. W. (formerly 1 - 7 W 1st St)
SL-DUL-00102	Builders Exchange Building	Commerce/Trade, Specialty Store	1-3 1st St. E.
SL-DUL-02353	Granada Theater	Recreation and Culture, Theater	109 Superior St. E.
SL-DUL-00139	Commercial building - Duluth Teachers Retirement Fund	Commerce/Trade, Specialty Store	22 1st St. E.
SL-DUL-00804	Granada News & Book	Commerce/Trade, Specialty Store	111 Superior St. E.
SL-DUL-00805	China Night Restaurant	Commerce/Trade, Restaurant	113 Superior St. E.
SL-DUL-00199	Vacant lot - Sears parking lot	Commerce/Trade, Specialty Store	110-116 Superior St. E.
SL-DUL-00174	Grand Hotel	Domestic, Hotel	101-105 Superior St. E.
SL-DUL-00200	Peterson Buffet-chamber of commerce	Commerce/Trade, Specialty Store	118 Superior St. E.
SL-DUL-00807	C.H. Oppel Block	Commerce/Trade, Restaurant	117 Superior St. E.
SL-DUL-00201	Delray Hotel	Commerce/Trade, Specialty Store	120 Superior St. E.
SL-DUL-01071	Singer and Associates	Commerce/Trade, Specialty Store	26 E. 1st St.
SL-DUL-00808	Commercial building	Commerce/Trade, Specialty Store	119 Superior St. E.
SL-DUL-02646	US Bank Parking Garage	Landscape, Parking Lot	2-28 1st St. E
SL-DUL-01072	Corner Cafe	Commerce/Trade, Specialty Store	35 1st St. E.
SL-DUL-00202	Service Motor Company, Drivers' Union Hall	Commerce/Trade, Specialty Store	124 Superior St. E.
SL-DUL-00152	Duplex	Domestic, Multiple Dwelling	316 1st St. E.
SL-DUL-00104	Salo Building-Dunlap Building	Commerce/Trade, Specialty Store	15-17 1st St. E.
SL-DUL-00203	Duluth City Jail	Government, Correctional Facility	126 Superior St. E.
SL-DUL-00810	Commercial building	Commerce/Trade, Specialty Store	123 Superior St. E.
SL-DUL-00106	Sher Brothers and Company	Commerce/Trade, Specialty Store	25 1st St. E.
SL-DUL-00080	Chatham Apartments	Domestic, Multiple Dwelling	10 2nd St. E.
SL-DUL-00175	Parking ramp, Fond-du-Luth Casino	Transportation, Road-Related (Vehicular)	107-123 Superior St. E.
SL-DUL-02648	Hobart Manufacturing Company	Commerce/Trade, Specialty Store	31 1st St. E
SL-DUL-00240	Duluth Steam Bath	Commerce/Trade, Specialty Store	18-20 North 1st Ave. E.
SL-DUL-01073	Mobil Service - Frenchy's	Commerce/Trade, Specialty Store	101 East 1st St.
SL-DUL-01853	House	Domestic, Single Dwelling	117 North 1st Ave. E.
SL-DUL-00105	Parking lot	Transportation	19-23 1st St. E.
SL-DUL-01854	Amity Furniture Restoration	Commerce/Trade, Specialty Store	123 North 1st Ave. E.
SL-DUL-00140	Yale Laundry-H & J (stge)	Commerce/Trade, Specialty Store	30-32 1st St. E.
SL-DUL-01211	Commercial building (razed)	Commerce/Trade, Specialty Store	106-110 1st St. W.
SL-DUL-00107	Lake Superior Liquors-commercial building	Commerce/Trade, Specialty Store	27-35 1st St. E.
SL-DUL-02505	Fire Hall #1	Government, Fire Station	22 East Second St
SL-DUL-01214	Coney Island	Commerce/Trade, Specialty Store	110 1st St. W.
SL-DUL-00205	Knudsen Automobile Company Building	Commerce/Trade, Specialty Store	202 Superior St. E.
SL-DUL-00176	Sears, Roebuck and Company	Commerce/Trade, Department Store	125-131 Superior St. E.
SL-DUL-00141	Toverilla Hotel-First Street Exchange	Commerce/Trade, Specialty Store	102-108 1st St. E.
SL-DUL-00142	Union Fur Company/Thorsell-Nesgoda Garage	Commerce/Trade, Specialty Store	110-112 1st St. E.
SL-DUL-00144	Gray Brothers Bakery-Duluth auto sales	Commerce/Trade, Specialty Store	118-120 1st St. E.
SL-DUL-00206	Interstate Auto Company	Commerce/Trade, Specialty Store	206-214 Superior St. E.
SL-DUL-03923	Bridge 69858	Transportation, Pedestrian-Related	Connecting Superior Street to Gichi-Ode' Akiing Park
SL-DUL-02647	Parking lot	Landscape, Parking Lot	101-121 1st St. E
SL-DUL-00177	Masonic Temple Opera House	Recreation and Culture, Music Facility	201-205 Superior St. E.
SL-DUL-00239	Apartment	Domestic, Multiple Dwelling	114 N. 1st Ave. E
SL-DUL-00143	Moose 505 Lodge-International Harvester Company	Social, Meeting Hall	114-116 1st St. E.
SL-DUL-00145	Model Laundry	Commerce/Trade, Specialty Store	126 1st St. E.
SL-DUL-01858	Carter Hotel	Domestic, Hotel	17-25 North 2nd Ave. E.
SL-DUL-00178	NorShor Theatre-Orpheum Service Garage	Commerce/Trade, Specialty Store	207-213 Superior St. E.
SL-DUL-02354	Jimmy's Used Cars	Commerce/Trade, Specialty Store	27 North 2nd Ave. E.
SL-DUL-00208	Gannon Auto Supplies	Commerce/Trade, Specialty Store	216-218 Superior St. E.
SL-DUL-00812	Sunnyside Cafe	Commerce/Trade, Specialty Store	214 Superior St. E.
SL-DUL-00108	Northwest Radio	Commerce/Trade, Specialty Store	123 1st St. E.
SL-DUL-02649	Clayton Jackson McGhie Memorial	Landscape, Park	130 1st St. E
SL-DUL-00241	Orpheum Theatre	Recreation and Culture, Theater	8-12 North 2nd Ave. E.
SL-DUL-00210	Rockhill Buick Company-St. Louis Cty health Dept.	Commerce/Trade, Specialty Store	222 Superior St. E.
SL-DUL-00083	House	Domestic, Single Dwelling	108 2nd St. E.
SL-DUL-00243	Duluth Cleaners and Dyers	Commerce/Trade, Specialty Store	16-18 North 2nd Ave. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-00084	Commercial building	Commerce/Trade, Specialty Store	112 2nd St. E.
SL-DUL-00109	Surplus electronics-commercial building	Commerce/Trade, Specialty Store	125 1st St. E.
SL-DUL-00211	Jacob Kohn Autos and Television Center Building	Commerce/Trade, Specialty Store	228-230 Superior St. E.
SL-DUL-00147	Jenswold Motor Company-Sturm brothers supply Co.	Commerce/Trade, Specialty Store	202-206 1st St. E.
SL-DUL-02550	KBIR TV	Commerce/Trade, Specialty Store	230 E. Superior St.
SL-DUL-00209	Albert Salter Saloon	Commerce/Trade, Specialty Store	220 Superior St. E.
SL-DUL-03874	Pastoret Terrace	Domestic, Multiple Dwelling	101-107-109-111-113 N 2nd Ave E
SL-DUL-00085	House	Domestic, Single Dwelling	118 2nd St. E.
SL-DUL-00148	Parisian Dry Cleaners	Commerce/Trade, Specialty Store	208 1st St. E.
SL-DUL-00149	Motor Mart	Commerce/Trade, Specialty Store	210 1st St. E.
SL-DUL-00110	Pastoret Terrace	Commerce/Trade, Specialty Store	127-129 1st St. E.
SL-DUL-00150	Duluth Ford Exchange	Commerce/Trade, Specialty Store	214-216 1st St. E.
SL-DUL-00151	Turner Automobiles	Commerce/Trade, Specialty Store	218-222 1st St. E.
SL-DUL-00111	Shrine Temple	Social, Meeting Hall	201-207 1st St. E.
SL-DUL-00086	St. Regis Apartments	Domestic, Multiple Dwelling	117-129 North 2nd Ave. E.
SL-DUL-00179	Hotel Duluth	Domestic, Hotel	219-231 Superior St. E.
SL-DUL-00112	Peterson Building-Scarlett Feed Store	Commerce/Trade, Specialty Store	213-215 1st St. E.
SL-DUL-02650	Parking lot	Landscape, Parking Lot	226-232 1st St. E
SL-DUL-00113	Union Gospel Mission-Martin Hotel	Commerce/Trade, Specialty Store	217-219 1st St. E.
SL-DUL-00114	Johnson Supply Co. -commercial building	Commerce/Trade, Specialty Store	231 1st St. E.
SL-DUL-00087	King Manor	Domestic, Multiple Dwelling	222 2nd St. E.
Secondary Subarea (80 Resources)			
SL-DUL-03941	Bridge 69820 (Jay Cooke Plaza Tunnel/Superior East Tunnel)	Transportation, Road-Related (Vehicular)	I-35 between 8th and 9th Avenues East
SL-DUL-01096	House	Domestic, Multiple Dwelling	712 E 1st St
SL-DUL-01098	Double House	Domestic, Multiple Dwelling	718-720 E 1st St
SL-DUL-01871	Apartment	Domestic, Multiple Dwelling	116 N 7th Ave E
SL-DUL-01095	Double House	Domestic, Multiple Dwelling	709-711 E 1st St
SL-DUL-01100	Apartments	Domestic, Multiple Dwelling	722-724 E 1st St
SL-DUL-01094	House	Domestic, Single Dwelling	707 1st St. E.
SL-DUL-01872	Duplex	Domestic, Multiple Dwelling	118-120 N 7th Ave E
SL-DUL-00831	Sir Benedict's Tavern on the Lake	Commerce/Trade, Specialty Store	805 E Superior St
SL-DUL-01874	Duplex	Domestic, Multiple Dwelling	122 N 7th Ave E
SL-DUL-01097	Adams	Domestic, Multiple Dwelling	715 E 1st St
SL-DUL-01280	Williams Apartments	Domestic, Multiple Dwelling	702-704 E 2nd St
SL-DUL-01099	St. Elmo Building	Domestic, Multiple Dwelling	721 E 1st St
SL-DUL-01101	Oxford Building	Domestic, Multiple Dwelling	725-727 E 1st St
SL-DUL-00581	Jay Cooke Monument	Recreation and Culture, Monument/Marker	London Rd. & Superior St.
SL-DUL-03682	Hollywood	Domestic, Multiple Dwelling	708-710 E 2nd St
SL-DUL-01102	Berkshire Apartments	Domestic, Multiple Dwelling	731 E 1st St
SL-DUL-00832	Kitchi Gammi Club	Social, Meeting Hall	831 E Superior St
SL-DUL-01281	Apartment	Domestic, Multiple Dwelling	711 E 2nd St
SL-DUL-01282	Apartments	Domestic, Multiple Dwelling	713-717 E 2nd St
SL-DUL-01283	Apartment	Domestic, Multiple Dwelling	719 E 2nd St
SL-DUL-01877	Duplex	Domestic, Multiple Dwelling	118-120 N 8th Ave
SL-DUL-01878	Apartment	Domestic, Multiple Dwelling	122-126 N 8th Ave E
SL-DUL-01103	Lafayette Apartments	Domestic, Multiple Dwelling	815 E 1st St
SL-DUL-01106	United Baptist Christian Church	Religion, Religious Facility	830 E 1st St
SL-DUL-01879	Duplex	Domestic, Multiple Dwelling	128-130 N 8th Ave E
SL-DUL-01104	Apartment	Domestic, Multiple Dwelling	821 E 1st St
SL-DUL-01430	House	Domestic, Single Dwelling	707 E 3rd St
SL-DUL-01286	House	Domestic, Single Dwelling	824 E 2nd St
SL-DUL-01105	Greysolon Apartments	Domestic, Multiple Dwelling	823-833 1st St E
SL-DUL-01431	House	Domestic, Single Dwelling	711 3rd St. E.
SL-DUL-01284	Duplex	Domestic, Multiple Dwelling	812-814 E 2nd St
SL-DUL-01107	Karpeles Manuscript Library	Recreation and Culture, Museum	902 E 1st St
SL-DUL-01875	Apartments	Domestic, Multiple Dwelling	318 North 7th Ave. E.
SL-DUL-01882	Kimball Flats	Domestic, Multiple Dwelling	109-111 N 9th Ave E
SL-DUL-03165	House	Domestic, Multiple Dwelling	814 E. 2nd St.
SL-DUL-01285	House	Domestic, Single Dwelling	822 E 2nd St
SL-DUL-01599	Willow Apartment	Domestic, Multiple Dwelling	702-712 E 4th St
SL-DUL-03816	Duplex	Domestic, Multiple Dwelling	801-803-805 2nd St E
SL-DUL-03030	Rowhouse	Domestic, Multiple Dwelling	121 North 9th Ave. E.

MnSHIP Sites within the AUAR area

Resource No.	Name	Resource Type	Address/Location
SL-DUL-01288	Row Flats	Domestic, Multiple Dwelling	826-834 E 2nd St
SL-DUL-03031	Rowhouse	Domestic, Multiple Dwelling	123 North 9th Ave. E.
SL-DUL-03032	Rowhouse	Domestic, Multiple Dwelling	125 North 9th Ave. E.
SL-DUL-01880	Apartments	Domestic, Multiple Dwelling	301 N 8th Ave E
SL-DUL-01600	Henry Halkman Store & Flats	Commerce/Trade, Specialty Store	701-705 E 4th St
SL-DUL-01883	Row Flats	Domestic, Multiple Dwelling	119-125 N 9th Ave E
SL-DUL-01881	Duplex	Domestic, Multiple Dwelling	305-307 N 8th Ave E
SL-DUL-01108	Albemarle Apartments	Domestic, Multiple Dwelling	914-916 1st St. E.
SL-DUL-03694	House	Domestic, Single Dwelling	716 E 4th St
SL-DUL-03676	Yorkleigh	Domestic, Multiple Dwelling	1017 London Rd
SL-DUL-01110	Apartments	Domestic, Multiple Dwelling	926-926 1/2 1st St. E.
SL-DUL-01287	Apartment	Domestic, Multiple Dwelling	825-827 E 2nd St
SL-DUL-03820	Apartment Building	Domestic, Multiple Dwelling	810-812 3rd St E
SL-DUL-03695	Duplex	Domestic, Multiple Dwelling	720 E 4th St
SL-DUL-03821	Apartment Building	Domestic, Multiple Dwelling	820-822 3rd St E
SL-DUL-04002	Bridge L6130	Transportation, Road-Related (Vehicular)	PLAZA over MSAS 148(10TH AVE E)
SL-DUL-03677	First Lutheran ELCA	Religion, Religious Facility	1100 E Superior St
SL-DUL-01432	House	Domestic, Single Dwelling	831 E 3rd St
SL-DUL-03734	Melrose	Domestic, Multiple Dwelling	402-414 N 8th Ave E
SL-DUL-04123	Mechanical Building	Other, (Blank)	1121 London Road
SL-DUL-01434	Jefferson School	Domestic, Multiple Dwelling	916 E 3rd St
SL-DUL-03832	Duplex	Domestic, Multiple Dwelling	822-824 4th St E
SL-DUL-03831	Duplex	Domestic, Multiple Dwelling	811 4th St E
SL-DUL-01291	House	Domestic, Single Dwelling	1020 2nd St. E.
SL-DUL-01884	Apartment	Domestic, Multiple Dwelling	312-314 N 9th Ave E
SL-DUL-00582	Apartments	Domestic, Multiple Dwelling	1121-1123 London Rd.
SL-DUL-01289	House	Domestic, Single Dwelling	1007-1009 2nd St. E.
SL-DUL-01293	House	Domestic, Single Dwelling	1030 2nd St. E.
SL-DUL-00833	Louis S. Loeb House	Domestic, Single Dwelling	1123 Superior St. E.
SL-DUL-01436	St. Paul's German Evangelical Lutheran Church	Religion, Religious Facility	932 E 3rd St
SL-DUL-01290	Duplex	Domestic, Multiple Dwelling	1017-1019 2nd St. E.
SL-DUL-01435	Apartments	Domestic, Multiple Dwelling	929-931 E 3rd St
SL-DUL-01292	Apartments	Domestic, Multiple Dwelling	1021-1025 2nd St. E.
SL-DUL-01113	House	Domestic, Single Dwelling	1131 1st St. E.
SL-DUL-01111	House	Domestic, Single Dwelling	1115 1st St. E.
SL-DUL-03696	Double House	Domestic, Multiple Dwelling	920-922 E 4th St
SL-DUL-00192	Bijou Theater	Commerce/Trade, Specialty Store	12-14 Superior St. E.
SL-DUL-01294	Apartment	Domestic, Multiple Dwelling	1106 E 2nd St
SL-DUL-01601	House	Domestic, Single Dwelling	915 4th St. E.
SL-DUL-03683	Apartment	Domestic, Multiple Dwelling	1031 E 2nd St
SL-DUL-01602	Apartments	Domestic, Multiple Dwelling	932 4th St. E.
SL-DUL-01603	Mandan Block	Commerce/Trade, Specialty Store	926-932 E 4th St
SL-DUL-03877	Rowhouse	Domestic, Multiple Dwelling	201-203-205-207 N 11th Ave E
SL-DUL-01112	William Heimbach House	Domestic, Single Dwelling	1123 1st St. E.
SL-DUL-01895	Hillman Realty & House	Commerce/Trade, Specialty Store	20 N 12th Ave E
SL-DUL-03684	Apartment	Domestic, Multiple Dwelling	1108-1110 E 2nd St
SL-DUL-03685	Apartment	Domestic, Multiple Dwelling	1112-1114 E 2nd St
SL-DUL-01297	Apartment	Domestic, Multiple Dwelling	1120-1124 E 2nd St
SL-DUL-01114	Chester Terrace Apartments	Domestic, Multiple Dwelling	1210-1232 E 1st St
SL-DUL-00583	Duluth Armory	Defense, Arms Storage	1301-1305 London Rd



Planning & Development Division
Planning & Economic Development Department

Room 160
411 West First Street
Duluth, Minnesota 55802

218-730-5580
planning@duluthmn.gov

MEMORANDUM

DATE: January 13, 2026
TO: Duluth Planning Commission
FROM: Chris Lee, Planner II
RE: Final Plat Amendments for Harbor Highlands First Addition.

Recommended Action: Adopt Resolution for PLSUB-2510-0013, waiving the subdivisions requirements of UDC Section 50-37.5 for The Housing and Redevelopment Authority of Duluth for property located in the plat of Harbor Highlands First Addition.

The preliminary plat for Harbor Highlands First Addition was approved by the Planning Commission on August 20, 2024 (PLSUB-2406-0003). A final plat was approved by Planning Commission on March 27, 2025 (PLSUB-2411-0007), but the Plat has not yet been recorded with St. Louis County.

The City received the following documents from The Housing and Redevelopment Authority of Duluth as a request to waive the subdivision regulations to convey property by a metes and bounds description:

1. Letter from Attorney James Aird on behalf of The Housing and Redevelopment Authority of Duluth;
2. Draft deed conveying property by metes and bounds;
3. Draft Resolution; and
4. Plat of Harbor Highlands First Addition.

Ideally, The Housing and Redevelopment Authority of Duluth would have filed the plat of Harbor Highlands First Addition, and then conveyed property to One Roof Community Housing by lot and block descriptions in accordance with the plat. However, it is unable to file the plat without consent from the Department of Housing and Urban Development. This request had been made due to issues obtaining approval from the Department of Housing and Urban Development, causing unnecessary hardship in complying with the City's subdivision regulations. Planning Commission approval of the attached resolution will permit the City to certify the transfer of property by a metes and bounds description, upon the condition that the plat of Harbor Highlands First Addition is immediately recorded with St. Louis County.

The attached letter also describes minor mathematical corrections to two parcels that can be approved as an after action review by the Land Use Supervisor as these constitute minor changes to the plat.

Decisions of the PC are able to be appealed to the City Council within 10 calendars days of the decision.

FRYBERGER

— LAW FIRM —

JAMES B. AIRD
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January 2, 2026

City of Duluth
Planning Commission
411 West First Street, Room 160
Duluth, MN 55802

Re: PLSUB-2411-0007
Harbor Highlands First Addition (the “Plat”)
Amendment to Final Plat Approval

Dear Planning Commission:

This firm represents the Housing and Redevelopment Authority of Duluth, MN (the “HRA”). This letter supplements and provides further information to support the HRA’s request to amend a prior final Plat approval, previously approved March 27, 2025, under File Number PLSUB-2411-0007.

Pursuant to the City’s Unified Development Chapter (“UDC”) § 50-37.5 and Minn. Stat. § 462.358, Subd. 4b(c), the HRA requests that the Planning Commission waive the requirements of UDC § 50-37.5 for the enclosed Quit Claim Deed (the “Deed”) from the HRA to One Roof Community Housing (“One Roof” or the “Developer”) which would otherwise be noncompliant under the UDC. The proposed Deed is submitted along with this letter.

Further amendment to the Plat is also necessary for two minor adjustments:

- First, simply to reflect that the HRA and One Roof would *jointly* dedicate the Plat as owners, immediately after the recording of the Deed.
- Second, the Plat has been amended to correct two minor mathematical errors, each one-hundredth of a foot, found on the southwesterly lines of Lot 1 and Lot 9, Block 1.

FRYBERGER, BUCHANAN, SMITH & FREDERICK, P.A.

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January 2, 2026

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In all other respects, the Plat is the same as it was when approved by the Commission on March 27, 2025.

UDC § 50-37.5 notes that “This Section applies to all applications to subdivided unplatted land.” Minn. Stat. § 462.358, Subd. 4b(a) provides that: “In a municipality in which subdivision regulations are in force and have been filed or recorded as provided in this section, no conveyance of land to which the regulations are applicable shall be filed or recorded, if the land is described in the conveyance by metes and bounds or by reference to an unapproved registered land survey made after April 21, 1961 or to an unapproved plat made after such regulations become effective.” The metes and bounds description found in the Deed does not qualify for one of the exemptions listed in UDC § 50-37.5(A)(2).

However, the UDC in Section 50-37.5(A)(2) further states that “in any case in which compliance with the foregoing restrictions will create an unnecessary hardship and failure to comply does not interfere with the purpose of the subdivision regulations, the planning commission may waive such compliance by adoption of a resolution to that effect and the conveyance may then be filed or recorded.” This is supported by Minnesota Statutes § 462.358, Subd. 4b(c).

A waiver of the requirements of UDC § 50-37.5 is necessary because the HRA cannot obtain further revisions to prior approvals from the U.S. Department of Housing and Urban Development (“**HUD**”) for disposition of this Property in a timely fashion (further exacerbated by HUD staff retirements, layoffs, and a government shutdown). HUD staff has requested the HRA make all efforts to close the transaction as previously approved by HUD. The HRA cannot follow HUD’s current requirements to close on the transaction with One Roof while remaining in compliance with § 50-37.5 of the UDC. This presents an unnecessary hardship.

Waiver of UDC § 50-37.5 for the Deed in this case will allow the development to proceed, and any nonconformity created by the Deed will be immediately cured by the recording of the Plat. Therefore, failure to comply does not interfere with the purpose of the subdivision regulations.

January 2, 2026

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Factual Background

The HRA owns 3.22 acres of vacant land in the City of Duluth, Minnesota (the “**City**”) in the Harbor Highlands / Central Hillside Revitalization Traditional Neighborhood Development, which said land is legally described as follows:

Tract B, Registered Land Survey No. 82, St. Louis County, Minnesota.

(hereinafter the “**Property**”).

The Property is subject to several recorded Declarations of Trust in favor of HUD. The HRA requires HUD’s approval to convey the land to the Developer. The HRA has obtained such approval. However, the approval by HUD uses a legal description which is a “metes and bounds” description based on the “pre-plat” legal description. Current HUD approvals therefore require the conveyance be made to the Developer *prior to* recording of the Plat.

In HUD’s most recent approval, the legal description used by HUD allows for a conveyance to the Developer of all the Property, except a parcel of land which was identified previously as a possible site for an extension of Lake Avenue (the “**Lake Avenue Extension Lot**,” identified on the proposed final plat as “Lot 8, Block 1”).

The HRA removed the Lake Avenue Extension Lot from HUD’s approval to accommodate the Commission’s desire to pursue the Lake Avenue extension. In its preliminary Plat approval, the Commission asked the HRA to provide space for a right of way to be dedicated for the future connection of Lake Avenue in the Plat (the “**Condition**”). Fulfilling the Condition will require further approval from HUD.

Seeking to accommodate the Condition, and seeking the most expedient possible way to close on the transaction, convey the Property to the Developer, and begin development of the Property, the HRA removed the Lake Avenue Extension Lot entirely from HUD’s approval of the disposition of the Property.

January 2, 2026

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HUD has therefore approved the disposition of all of the Property except the Lake Avenue Extension Lot. It is the HRA's intention to convey all the Property to One Roof, except for the Lake Avenue Extension Lot, which the HRA will retain. After recording of the Plat, the HRA will revisit the disposition of the Lake Avenue Extension Lot (which will then be legally described as "Lot 8, Block 1") with HUD. Pursuant to the Condition, the HRA will continue to use its best efforts to obtain all consents from HUD necessary, proper, and advisable to achieve the Condition for the Lake Avenue Extension, which may include, if appropriate, a later amendment to the Plat.

Notwithstanding the failure to meet the foregoing Condition, it is worth noting that the Planning Commission has already, on March 27, 2025, approved the final Plat.

The HRA now simply requests that the Planning Commission allow the recording of the Deed to the Developer using the HUD-approved "pre-plat" legal description. This would briefly create a non-conforming lot, but such nonconformity will be immediately cured by recording of the Plat.

Further delay unnecessarily jeopardizes the Developer's funding sources, and delays construction of 20+ new units of housing at a time when recent reports suggest the City will require nearly 9,000 new units of housing by 2035. Waiving the requirements of UDC § 50-37.5 for the Deed to One Roof will solve the problem imposed by the current HUD requirements and allow this development to proceed. The HRA will then continue to use its best efforts to revisit if and under what conditions HUD may release the Lake Avenue Extension Lot for road purposes.

The City needs new housing. One Roof is ready to build it. The HRA is ready to convey land for that purpose. HUD has approved the disposition of all but one lot in this Property for housing. The Planning Commission has previously approved this Plat. Accordingly, the HRA respectfully requests that the Planning Commission waive UDC § 50-37.5 for the Deed, so that development can proceed on all lots except the Lake Avenue Extension Lot.

Sincerely,

/s/ James B. Aird

James B. Aird

Fryberger Law Firm

Attorneys for the Housing and Redevelopment Authority of Duluth, MN

(top 3 inches reserved for recording data)

QUIT CLAIM DEED

DEED TAX DUE: \$1.65

Date: _____, 2026

FOR VALUABLE CONSIDERATION, the **HOUSING AND REDEVELOPMENT AUTHORITY OF DULUTH, MINNESOTA**, a public body corporate and politic under the laws of the State of Minnesota ("Grantor"), hereby conveys and quitclaims to **ONE ROOF COMMUNITY HOUSING**, a non-profit corporation under the laws of the State of Minnesota ("Grantee"), real property in St. Louis County, Minnesota, legally described as follows:

See attached **Exhibit A**.

Check here if all or part of the described real property is Registered (Torrens)

together with all hereditaments and appurtenances belonging thereto.

This Deed is subject to that certain Public Housing Demolition/Disposition/Conversion Use Agreement (the "Use Agreement") between U.S. Department of Housing and Urban Development ("HUD"), Grantor, and Grantee dated _____, 2026 and recorded in the Office of the Registrar of Titles of St. Louis County, Minnesota on _____, 2026 as Document No. _____. Pursuant to and subject to the terms of the Use Agreement, should the Grantee fail to meet its obligations under the Use Agreement, the fee title to the real property described in this Deed shall automatically revert to the Grantor.

Check applicable box:

- The Seller certifies that the Seller does not know of any wells on the described real property.
- A well disclosure certificate accompanies this document or has been electronically filed. (If electronically filed, insert WDC number: _____.)
- I am familiar with the property described in this instrument and I certify that the status and number of wells on the described real property have not changed since the last previously filed well disclosure certificate.
- This deed transfers real property in exchange for \$3,000 or less of consideration.

HOUSING AND REDEVELOPMENT AUTHORITY OF
DULUTH, MINNESOTA, a public body corporate and politic
under the laws of the State of Minnesota.

By Jill A. Keppers
Its Executive Director

State of Minnesota, County of St. Louis

This instrument was acknowledged before me on _____, 2026, by Jill A. Keppers, as
Executive Director of the HOUSING AND REDEVELOPMENT AUTHORITY OF DULUTH, MINNESOTA, a public body
corporate and politic under the laws of the State of Minnesota.

(stamp)

(signature of notarial officer)

THIS INSTRUMENT WAS DRAFTED BY:
Fryberger, Buchanan, Smith & Frederick, P.A.
302 West Superior Street, Suite 700
Duluth, MN 55802-5150
JBA / 13848-323

TAX STATEMENTS FOR THE REAL PROPERTY DESCRIBED
IN THIS INSTRUMENT SHOULD BE SENT TO:
One Roof Community Housing
12 E. 4th Street
Duluth, MN 55805

**EXHIBIT A
LEGAL DESCRIPTION**

Tract B, REGISTERED LAND SURVEY NO. 82, according to the recorded plat thereof, St. Louis County, Minnesota, EXCEPT that part described as follows:

Commencing at the Southwest corner of said Tract B; thence on an assume bearing of North 18 degrees 46 minutes 31 second East, along the Westerly line of said Tract B 353.68 feet to the point of beginning of the parcel herein described; thence continue North 18 degrees 46 minutes 31 seconds East, along said Westerly line 58.69 feet; thence North 00 degrees 33 minutes 43 seconds East, along said Westerly line 7.71 feet; thence South 70 degrees 46 minutes 57 seconds East 92.74 feet to the Westerly right of way line of Harbor Highlands Drive; thence South 11 degrees 05 minutes 06 seconds West, along said Westerly right of way line 28.47 feet; thence South 19 degrees 13 minutes 03 seconds West, along said Westerly right of way line 37.82 feet; thence North 70 degrees 46 minutes 57 seconds West 93.85 feet to the point of beginning. Said parcel contains 6,163 square feet or 0.14 acres.

Torrens Property, Certificate of Title No. 327976.

PLANNING COMMISSION, CITY OF DULUTH, MINNESOTA

RESOLUTION FOR PLSUB-2510-0013

RESOLUTION OF THE CITY OF DULUTH PLANNING COMMISSION FINDING AN
UNNECESSARY HARDSHIP, WAIVING STRICT COMPLIANCE WITH MINN. STAT. 462.358
AND UDC 50-37.5

WHEREAS, the Housing and Redevelopment Authority of Duluth, Minnesota (the “HRA”) has proposed to plat Tract B, Registered Land Survey No. 82 (the “Land”) as “HARBOR HIGHLANDS FIRST ADDITION” (the “Plat”); and

WHEREAS, the HRA intends to convey most of the Land to One Roof Community Housing, a Minnesota nonprofit corporation (the “Developer”); and

WHEREAS, development of the Land requires the release of various Declarations of Trust (the “Declarations of Trust”) in favor of U.S. Department of Housing and Urban Development (“HUD”); and

WHEREAS, the preliminary plat approval approved by the Commission required the HRA to satisfy the following unfulfilled condition: “Provide space for right of way be dedicated for the future connection of Lake Avenue in the plat” (the “Lake Avenue Condition”); and

WHEREAS, the final plat approved by the Commission on March 27, 2025 required the HRA to sign a development agreement committing to the construction of the unfulfilled condition within two years after the approval of the final plat; and

WHEREAS, in order to facilitate achieving the Lake Avenue Condition, the HRA had previously removed the area identified for the Lake Avenue Connection from its request to release the Declarations of Trust with HUD; and

WHEREAS, HUD has approved the disposition of the Land and sale to the Developer, except the area identified for the Lake Avenue Connection, which said area is described by the following metes and bounds description:

That part of Tract B, REGISTERED LAND SURVEY NO. 82, according to the recorded plat thereof, St. Louis County, Minnesota, EXCEPT that part described as follows:

Commencing at the Southwest corner of said Tract B; thence on an assumed bearing of North 18 degrees 46 minutes 31 second East, along the Westerly line of said Tract B 353.68 feet to the point of beginning of the parcel herein described; thence continue North 18 degrees 46 minutes 31 seconds East, along said Westerly line 58.69 feet; thence North 00 degrees 33 minutes 43 seconds East, along said Westerly line 7.71 feet; thence South 70 degrees 46 minutes 57 seconds East 92.74 feet to the Westerly right of way line of Harbor Highlands Drive; thence South 11 degrees 05 minutes 06 seconds West, along said Westerly right of way line 28.47 feet; thence South 19 degrees 13 minutes 03 seconds West, along said Westerly right of way line 37.82 feet; thence North 70 degrees 46 minutes 57 seconds West 93.85 feet to the point of beginning. Said parcel contains 6,163 square feet or 0.14 acres.

(the excepted part referred hereto as the “Lake Avenue Connection Lot”); and

WHEREAS, conveyance of the Land, except the Lake Avenue Connection Lot, by metes and

bounds, is not in compliance with Minn. Stat. § 462.358 or Section 50-37.5 of the City’s Unified Development Chapter (the “UDC”); and

WHEREAS, further amendment to the documents HUD has approved will lead to unnecessary hardship and unreasonable delay in the recording of the Plat and development of the Land into single-family homes; and

WHEREAS, Minn. Stat. § 462.358, Subd. 4b(c) and UDC Section 50-37.5 both provide that in any case in which compliance with the restrictions of the statute or ordinance will create an unnecessary hardship and failure to comply does not interfere with the purpose of the subdivision regulations, the planning commission may waive such compliance by adoption of a resolution to that effect and the conveyance may then be filed or recorded; and

WHEREAS, the Commission finds that an unnecessary hardship exists given the current requirements of HUD to convey the Land, except the Lake Avenue Connection Lot, via metes and bounds, and given a significant delay that would be required to amend HUD’s approval of the disposition of the Land; and

WHEREAS, after conveyance of the Land, except the Lake Avenue Connection Lot, to the Developer, the HRA and the Developer will jointly Plat the Land into HARBOR HIGHLANDS FIRST ADDITION, and the recording of said plat will cure any nonconformity related to the Lake Avenue Connection Lot; and

WHEREAS, waiver of the strict requirements of UDC Section 50-37.5 does not interfere with the purpose of the subdivision regulations in this case.

NOW, THEREFORE, BE IT RESOLVED by the Commission as follows:

RESOLVED, that pursuant to Minnesota Statutes Section 462.358, Subd 4b(c), the Commission finds an unnecessary hardship caused by the documents pertaining to the release of the Declarations of Trust as currently approved by HUD, which convey a portion of the Land by metes and bounds to the Developer prior to the recording of the plat.

FURTHER RESOLVED, pursuant to Minnesota Statutes Section 462.358, Subd 4b(c) and UDC 50-37.5, the Commission hereby waives the requirements of UDC Section 50-37.5 to allow the conveyance of the Land, except the Lake Avenue Connection Lot, to the Developer, prior to recording of the Plat, provided that such conveyance is recorded concurrently with the Plat.

Dated: _____, 2026

President

ATTEST:

Secretary

This instrument was drafted by:
James B. Aird
Fryberger Law Firm

302 W. Superior St., Suite 700
Duluth, MN 55802

HARBOR HIGHLANDS FIRST ADDITION

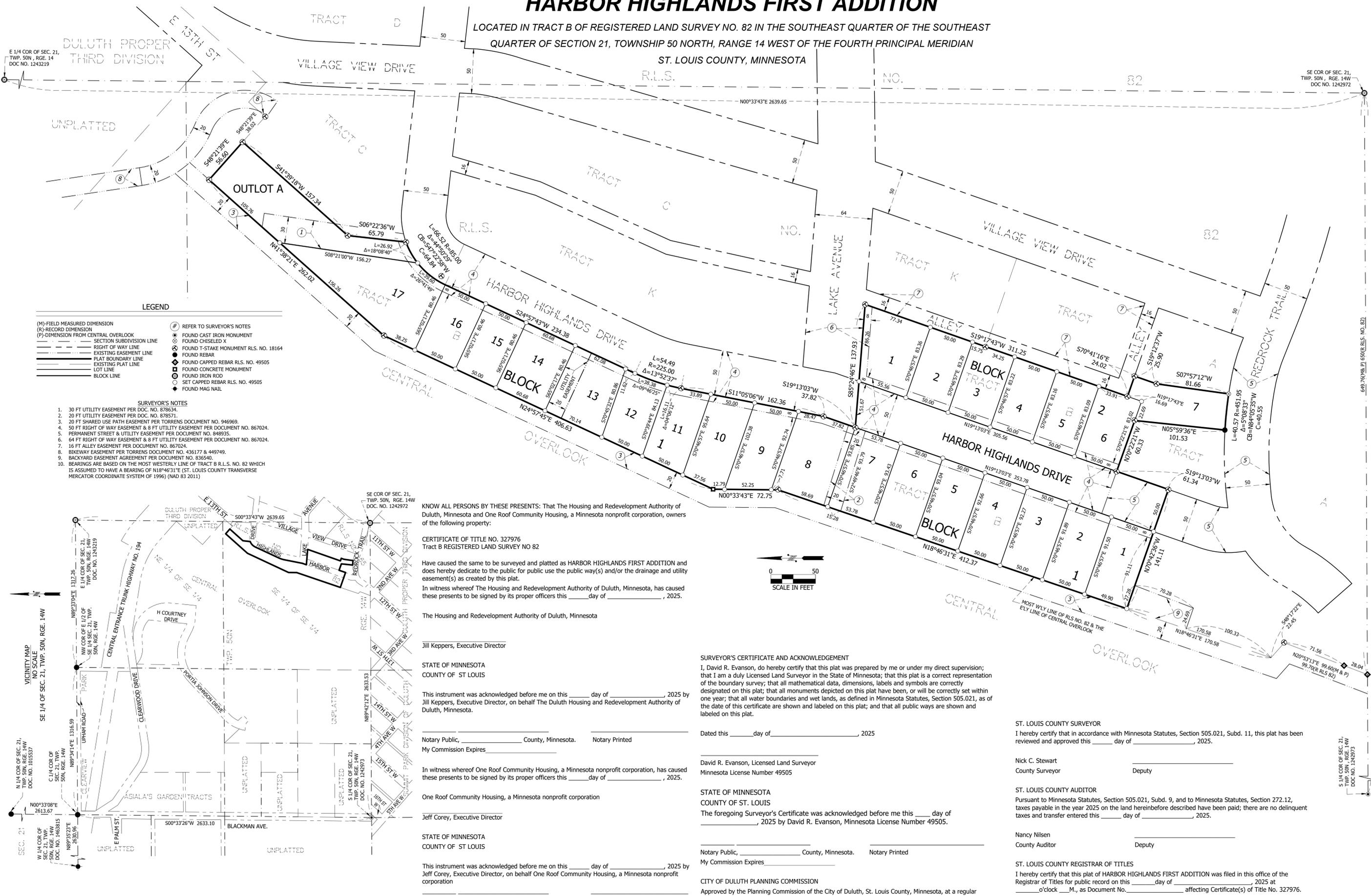
LOCATED IN TRACT B OF REGISTERED LAND SURVEY NO. 82 IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 50 NORTH, RANGE 14 WEST OF THE FOURTH PRINCIPAL MERIDIAN

R.L.S.

NO.

82

SE COR OF SEC. 21, TWP. 50N., RGE. 14W, DOC. NO. 1242972



LEGEND

- (M) - FIELD MEASURED DIMENSION
- (R) - RECORD DIMENSION
- (P) - DIMENSION FROM CENTRAL OVERLOOK
- SECTION SUBDIVISION LINE
- RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PLAT BOUNDARY LINE
- EXISTING PLAT LINE
- LOT LINE
- BLOCK LINE
- ⊙ REFER TO SURVEYOR'S NOTES
- ⊙ FOUND CAST IRON MONUMENT
- ⊙ FOUND CHISELED X
- ⊙ FOUND T-STAKE MONUMENT R.L.S. NO. 18164
- ⊙ FOUND REBAR
- ⊙ FOUND CAPPED REBAR R.L.S. NO. 49505
- ⊙ FOUND IRON ROD
- ⊙ SET CAPPED REBAR R.L.S. NO. 49505
- ⊙ FOUND MAG NAIL

SURVEYOR'S NOTES

1. 30 FT UTILITY EASEMENT PER DOC. NO. 878634.
2. 20 FT UTILITY EASEMENT PER DOC. NO. 878571.
3. 20 FT SHARED USE PATH EASEMENT PER TORRENS DOCUMENT NO. 946969.
4. 50 FT RIGHT OF WAY EASEMENT & 8 FT UTILITY EASEMENT PER DOCUMENT NO. 867024.
5. PERMANENT STREET & UTILITY EASEMENT PER DOCUMENT NO. 848935.
6. 64 FT RIGHT OF WAY EASEMENT & 8 FT UTILITY EASEMENT PER DOCUMENT NO. 867024.
7. 16 FT ALLEY EASEMENT PER DOCUMENT NO. 867024.
8. BIKEWAY EASEMENT PER TORRENS DOCUMENT NO. 436177 & 449749.
9. BACKYARD EASEMENT AGREEMENT PER DOCUMENT NO. 836540.
10. BEARINGS ARE BASED ON THE MOST WESTERLY LINE OF TRACT B R.L.S. NO. 82 WHICH IS ASSUMED TO HAVE A BEARING OF N18°46'31"E (ST. LOUIS COUNTY TRANSVERSE MERCATOR COORDINATE SYSTEM OF 1996) (NAD 83 2011)

KNOW ALL PERSONS BY THESE PRESENTS: That The Housing and Redevelopment Authority of Duluth, Minnesota and One Roof Community Housing, a Minnesota nonprofit corporation, owners of the following property:

CERTIFICATE OF TITLE NO. 327976
Tract B REGISTERED LAND SURVEY NO 82

Have caused the same to be surveyed and platted as HARBOR HIGHLANDS FIRST ADDITION and does hereby dedicate to the public for public use the public way(s) and/or the drainage and utility easement(s) as created by this plat.

In witness whereof The Housing and Redevelopment Authority of Duluth, Minnesota, has caused these presents to be signed by its proper officers this ____ day of _____, 2025.

The Housing and Redevelopment Authority of Duluth, Minnesota

Jill Keppers, Executive Director

STATE OF MINNESOTA
COUNTY OF ST LOUIS

This instrument was acknowledged before me on this ____ day of _____, 2025 by Jill Keppers, Executive Director, on behalf The Duluth Housing and Redevelopment Authority of Duluth, Minnesota.

Notary Public, _____ County, Minnesota. Notary Printed
My Commission Expires _____

In witness whereof One Roof Community Housing, a Minnesota nonprofit corporation, has caused these presents to be signed by its proper officers this ____ day of _____, 2025.

One Roof Community Housing, a Minnesota nonprofit corporation

Jeff Corey, Executive Director

STATE OF MINNESOTA
COUNTY OF ST LOUIS

This instrument was acknowledged before me on this ____ day of _____, 2025 by Jeff Corey, Executive Director, on behalf One Roof Community Housing, a Minnesota nonprofit corporation

Notary Public, _____ County, Minnesota. Notary Printed
My Commission Expires _____

SURVEYOR'S CERTIFICATE AND ACKNOWLEDGEMENT
I, David R. Evanson, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data, dimensions, labels and symbols are correctly designated on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.021, as of the date of this certificate are shown and labeled on this plat; and that all public ways are shown and labeled on this plat.

Dated this ____ day of _____, 2025

David R. Evanson, Licensed Land Surveyor
Minnesota License Number 49505

STATE OF MINNESOTA
COUNTY OF ST. LOUIS

The foregoing Surveyor's Certificate was acknowledged before me this ____ day of _____, 2025 by David R. Evanson, Minnesota License Number 49505.

Notary Public, _____ County, Minnesota. Notary Printed
My Commission Expires _____

CITY OF DULUTH PLANNING COMMISSION
Approved by the Planning Commission of the City of Duluth, St. Louis County, Minnesota, at a regular meeting thereof, on the ____ day of _____, 2025.

President, Duluth City Planning Commission Executive Secretary, Duluth

ST. LOUIS COUNTY SURVEYOR
I hereby certify that in accordance with Minnesota Statutes, Section 505.021, Subd. 11, this plat has been reviewed and approved this ____ day of _____, 2025.

Nick C. Stewart
County Surveyor Deputy

ST. LOUIS COUNTY AUDITOR
Pursuant to Minnesota Statutes, Section 505.021, Subd. 9, and to Minnesota Statutes, Section 272.12, taxes payable in the year 2025 on the land hereinbefore described have been paid; there are no delinquent taxes and transfer entered this ____ day of _____, 2025.

Nancy Nilsen
County Auditor Deputy

ST. LOUIS COUNTY REGISTRAR OF TITLES
I hereby certify that this plat of HARBOR HIGHLANDS FIRST ADDITION was filed in this office of the Registrar of Titles for public record on this ____ day of _____, 2025 at ____ o'clock ____ M., as Document No. _____ affecting Certificate(s) of Title No. 327976.

Wendy Levitt
Registrar of Titles Deputy