

The background of the slide is a light blue gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

WATERSHED MANAGEMENT PLAN AMENDMENT

Lower Minnesota River Watershed District

April 18, 2018

OVERVIEW

1. District Background/History
2. Legal Requirement/Authority/Process
3. Watershed Management Plan Amendment
 1. Plan Amendment Framework
 2. Standards Development Approach
 3. Proposed Standards
 4. Plan Amendment Schedule

District Background/ History

Linda Loomis, Administrator
Naiad Consulting, LLC

WATERSHED DISTRICT PURPOSE

- To conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources. (103D.201)
- to control or alleviate soil erosion and siltation of watercourses or water basins. (103D.201)
- to protect or enhance the water quality in watercourses or water basins. (103D.201)

Legal Requirement/Authority/Process

John C. Kolb, Attorney
Rinke Noonan
Legal Counsel

LEGAL REQUIREMENT

- A watershed management plan is required for watersheds comprising all minor watershed units wholly or partly within the metropolitan area. (103B.231)
- The managers must adopt a watershed management plan for any or all of the purposes for which a watershed district may be established. (103D.401)
- The managers and the board must revise the watershed management plan for the watershed district at least once every ten years after the original watershed management plan is approved. (103D.405)

LEGAL AUTHORITY

- After the watershed plan is approved and adopted, or amended, the local government units having land use planning and regulatory responsibility for territory within the watershed shall prepare a local water management plan, capital improvement program, and official controls as necessary to bring local water management into conformance with the watershed plan. (103B.235)
- The plan shall include standards and schedules for amending the comprehensive plans and official controls of local government units in the watershed to bring about conformance with the watershed plan. (103B.231)

LEGAL PROCESS

- Upon completion of the plan but before final adoption by the organization, the organization must submit the draft plan for a 60-day review and comment period to all counties, the Metropolitan Council, the state review agencies, the Board of Water and Soil Resources, soil and water conservation districts, towns, and statutory and home rule charter cities having territory within the watershed. (103B.231)
- The watershed management organization must respond in writing to any concerns expressed by the review agencies at least ten days before the public hearing. (103B.231)
- The watershed management organization must hold a public hearing on the draft plan no sooner than 14 days after the 60-day review period of the draft plan. (103B.231)

LEGAL PROCESS

- After completion of local review, the draft plan, any amendments thereto, all written comments received on the draft plan, a record of the public hearing, and a summary of changes incorporated as a result of the review process shall be submitted to the Metropolitan Council, the state review agencies, and the Board of Water and Soil Resources for final review. (103B.231)
- The board shall review the plan within 90 days of submittal. (103B.231)

Plan Amendment Process

Della Schall Young, CPESC, PMP
Young Environmental Consulting Group, LLC
Planning and Technical Consultant

STANDARDS DEVELOPMENT APPROACH

RESOURCE MANAGEMENT STRATEGY

PRESERVE

MAINTAIN IN ITS EXISTING STATE

PROTECT

A FORMAL MEASURE INTENDED TO
PRESERVE THE FUNCTION AND VALUE OF
A RESOURCE

RESTORE

TO RETURN TO A FORMER CONDITION OR
THE INTENDED CONDITION

EXISTING MUNICIPAL AND TOWNSHIP STANDARDS REVIEW

Municipalities and Townships

- Bloomington
- Burnsville
- Carver
- Chanhassen
- Chaska
- Egan
- Eden Prairie
- Jackson Township
- Lilydale
- Louisville Township
- Mendota
- Mendota Heights
- Savage
- Shakopee

Standards Reviewed

- Construction Erosion & Sediment Control Standard
- Stormwater Standard (Rate and Volume)
- Floodplain Standard
- Shoreline and Streambank Standard
- Bluff and Steep Slopes Standard

Plan Amendment Process Summary

2016

District held Informational Meetings with Municipalities to assess Standards Implementation

Municipalities asked the District to modify its Plan to match their Comprehensive Plan/ Local Water Management planning schedule

Fall 2016

February & March 2017

Hosted 4 Technical Advisory Commission Meetings (Federal and State Agencies, Cities, Counties, and NGO)

March & April 2017

Met with the cities of Bloomington, Carver, Chaska, Eden Prairie, Savage, and Shakopee, Carver and Scott Counties.

April - July 2017

- Amended the Plan
- 60-Day Review Draft Plan Released

Plan Amendment Process Summary

August 2017

60-Day Review Draft Plan Comment Period Extended

October 2017

- Released Draft Response to comments
- Met with City of Bloomington and Scott County
- Held and continued the Public Hearing

- Met with the cities of Eden Prairie and Bloomington
- Comment period closed on Sept. 20th

August & September 2017

Plan Amendment Process Summary

December 2017

- Revised the Bluff Standard to Bluff and Steep Slope Standard

February 2018

- Hosted Informational Meetings in Bloomington, Eden Prairie(Chanhassen), and Burnsville
- Met with the Cities of Burnsville, Savage, and Carver, and the Minnesota Department of Natural Resources

April 2018


- City of Savage Informational Meeting (potential)
- Revised Comment/ Responses Log
- Public Hearing

- Hosted a meeting with the TAC and Reviewed Draft Bluff and Steep Slope Standard with TAC
- Released the Draft Statement of Need and Reasonableness (SONAR) report

January 2018

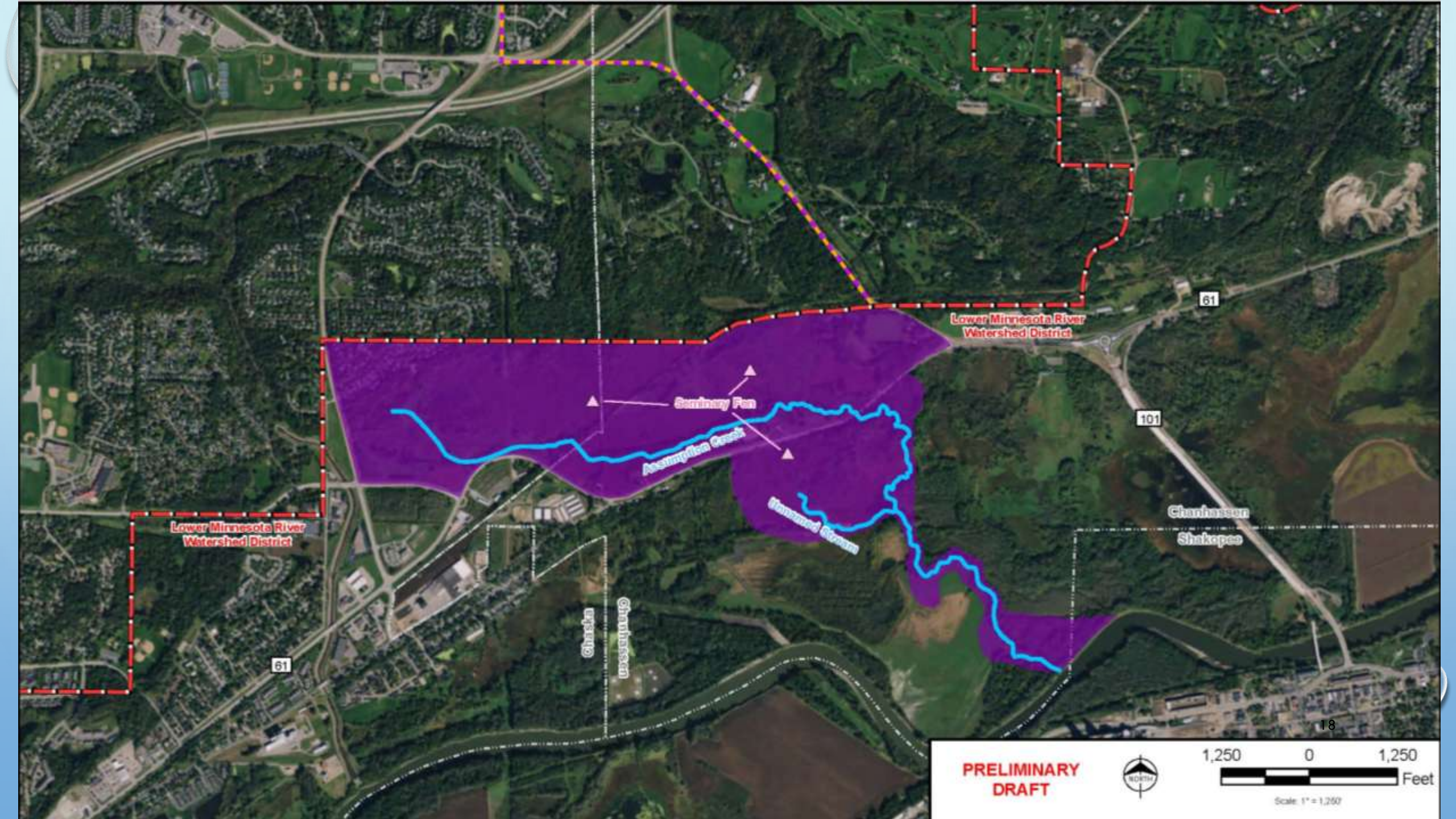
- Board of Managers Workshop

March 2018



High Value Resource Areas

Fens, Trout Lakes and Trout Streams



Lower Minnesota River Watershed District

Lower Minnesota River Watershed District

Secondary Pan

Assumption Creek

St. Joseph River

Charhasson Shalepex

Charhasson

Charhasson

61

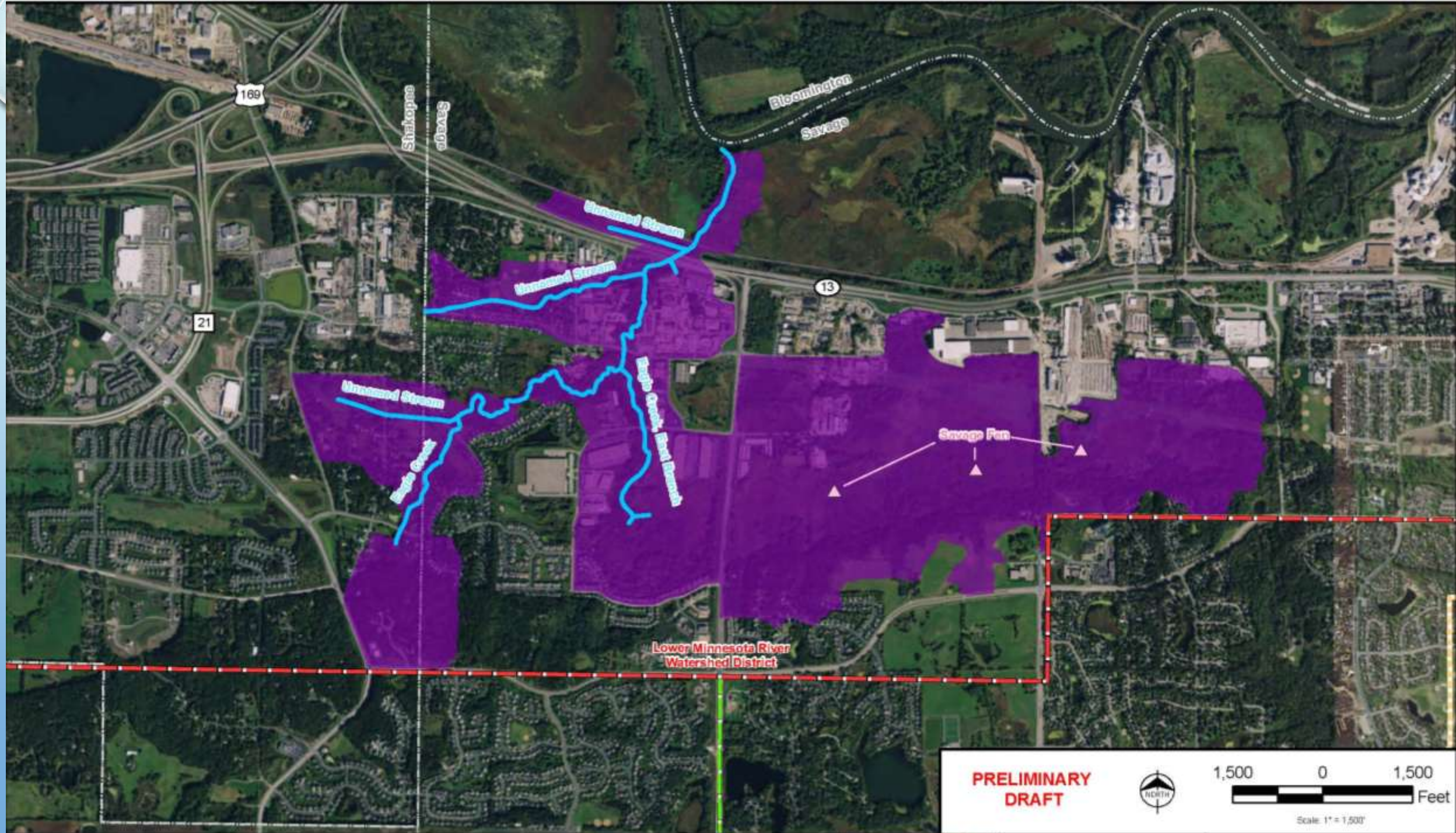
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PRELIMINARY DRAFT



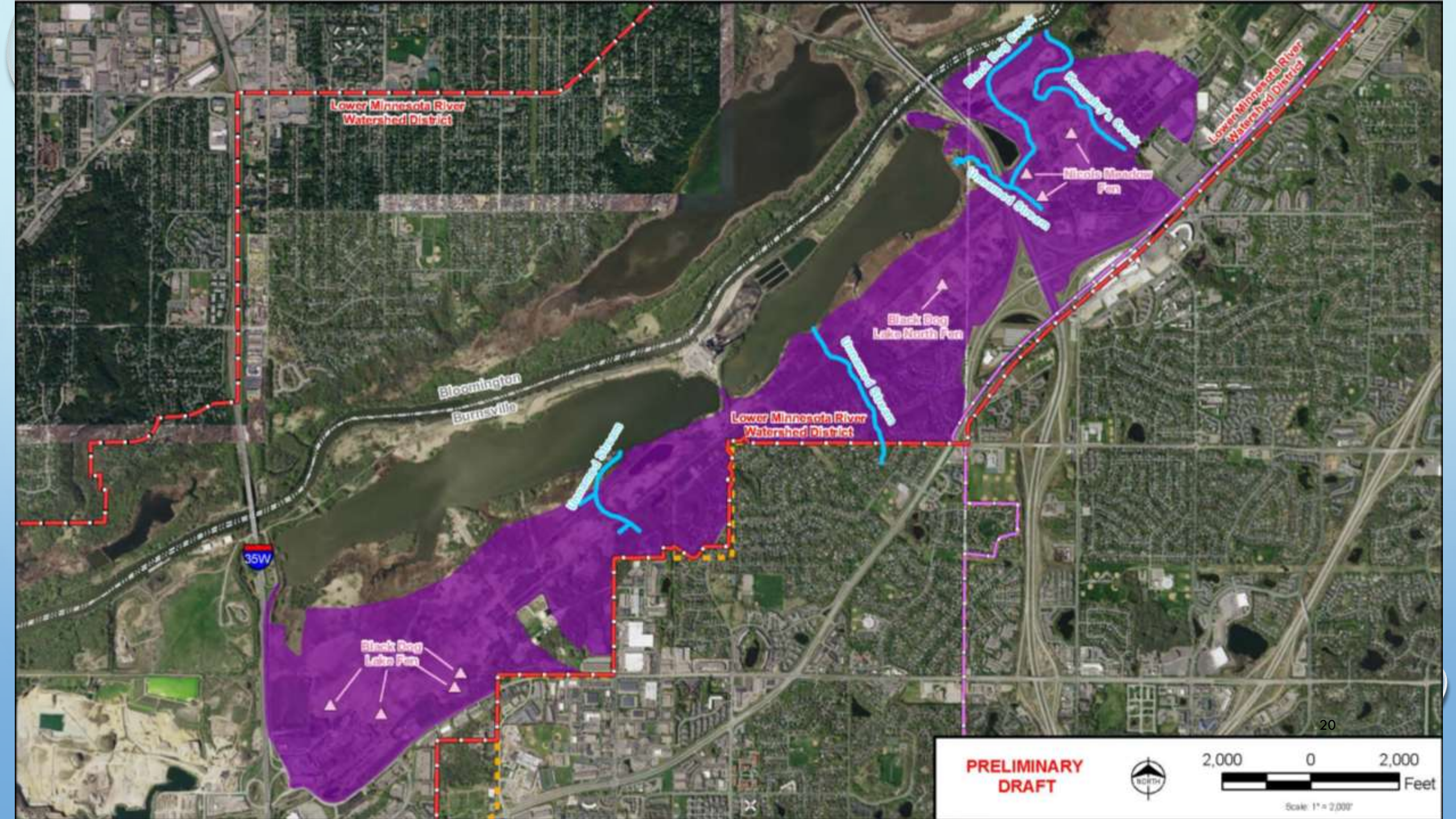
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**PRELIMINARY
DRAFT**



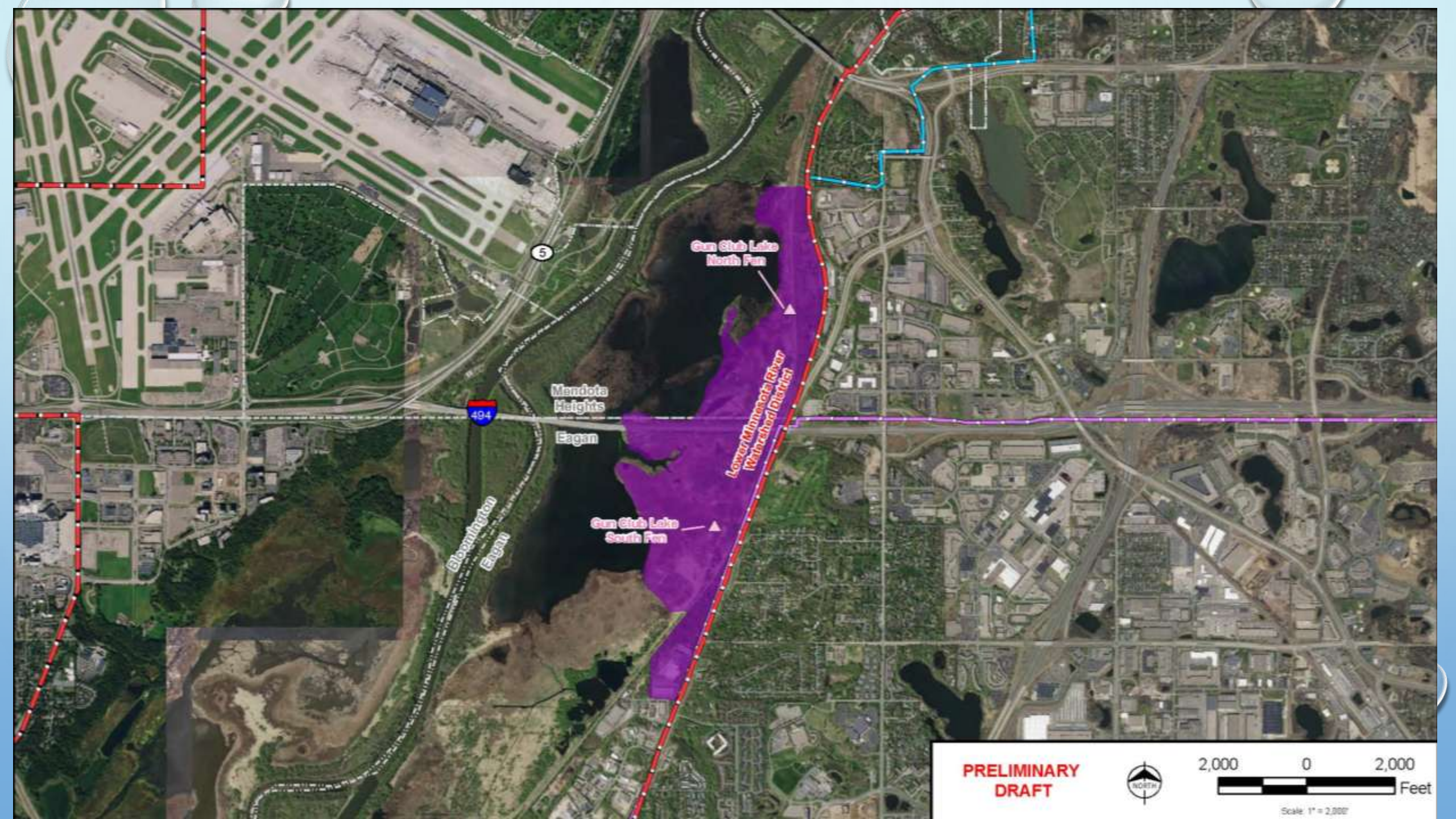
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**PRELIMINARY
DRAFT**



Scale 1" = 2,000'



Gun Club Lake
North Pan

Mandota
Heights

494

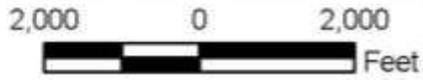
Egan

Gun Club Lake
South Pan

Lower Minnesota River
Watershed District

Bloomington
Egan

**PRELIMINARY
DRAFT**



Scale: 1" = 2,000'



Proposed Construction Erosion and Sediment Control Standard

High Value Resource Areas

- Triggers
 - 5,000sf or more
 - Grading, excavating, filling or storing of more than 50 cubic yards of soil or earth material.
- Standard
 - Erosion and Sediment Control Plan
 - SWPPP for site disturbing 1 acre or more
 - Maintenance and Inspection

Proposed Stormwater Management Standard

High Resource Value Areas

Triggers

- Development, redevelopment, and drainage alterations (including roads) creating new impervious areas greater than 10,000 square feet (sq. ft.).

Standard

- Rate - meet existing conditions for the 2, 10 and 100-year 24 hour events using Atlas-14

Proposed Stormwater Management Standard

High Resource Value Areas

Standard (Con't)

- Volume
 - 1.1 inches of runoff retained for new and re development projects
 - transportation projects shall capture and retain the larger of the following: 0.55 inches from new or reconstructed surface or 1.1 inches of runoff from the net increase in impervious area
- Water Quality
 - New Development shall have 60% annual removal of TP and 80% removal for TSS.
 - Redevelopment shall achieve a net decrease (on an average annual basis) of TP and TSS.

Proposed Water Appropriation Standard

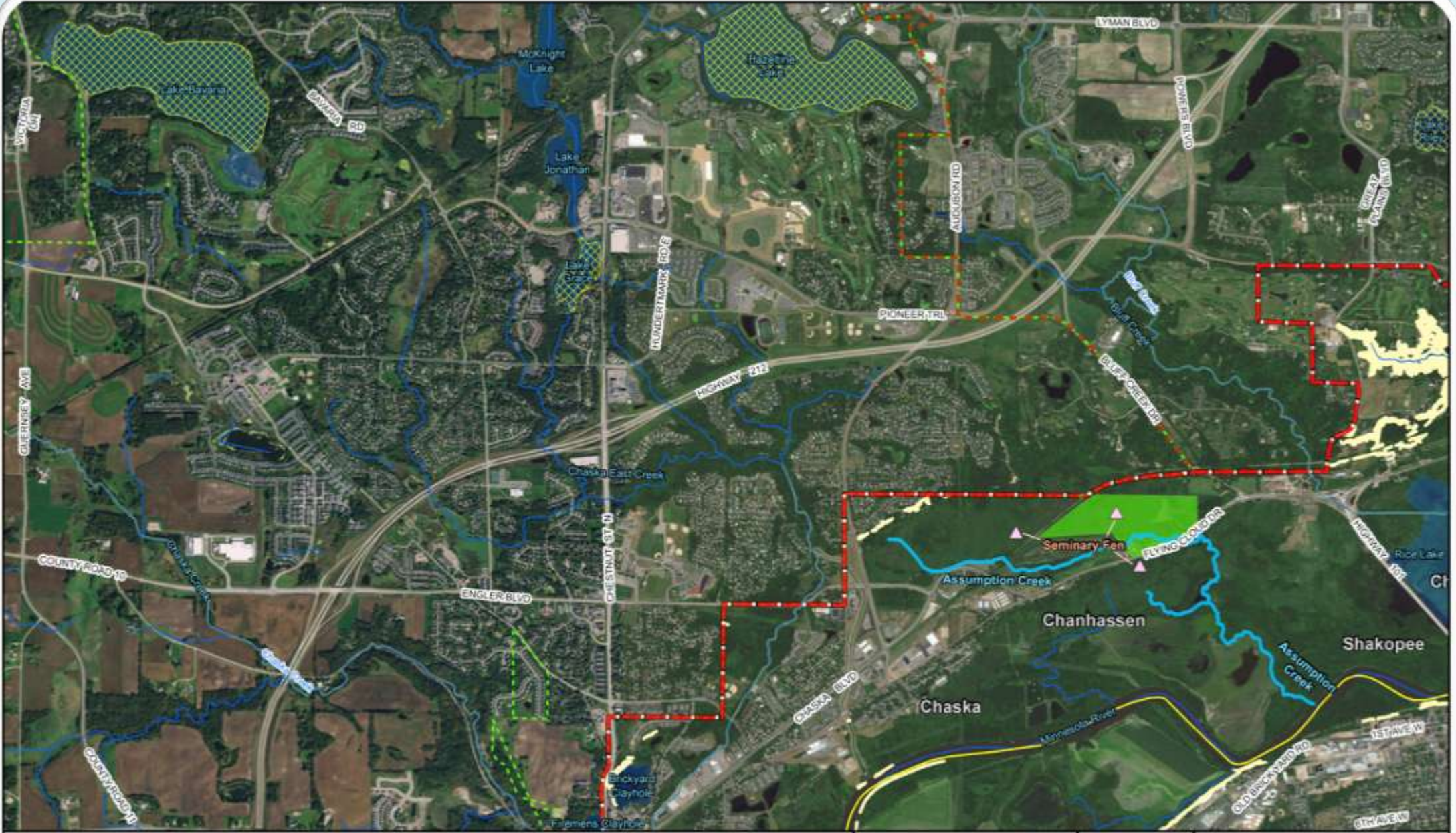
High Resource Value Areas

- Trigger
 - Dewatering activities and Groundwater appropriations (less than and greater than 10,000 gallons per day and 1 million gallons per year)
- Standard
 - Demonstrate no net change in groundwater levels
 - Discharge Management Plan

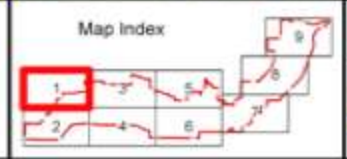
Proposed Floodplain and Drainage Alteration Standard

- Trigger
- Standard
- Regulates all waterbodies. Suggest modifying it to regulate all public waters, wetlands subject to the Wetland Conservation Act (WCA), and public drainage systems subject to the Minnesota buffer law.
- Regulates to the 100-year high water elevation. Suggest modifying it to regulate to the FEMA base flood elevation.
- ‘No Rise’ certificate for projects that places fill in the floodplain

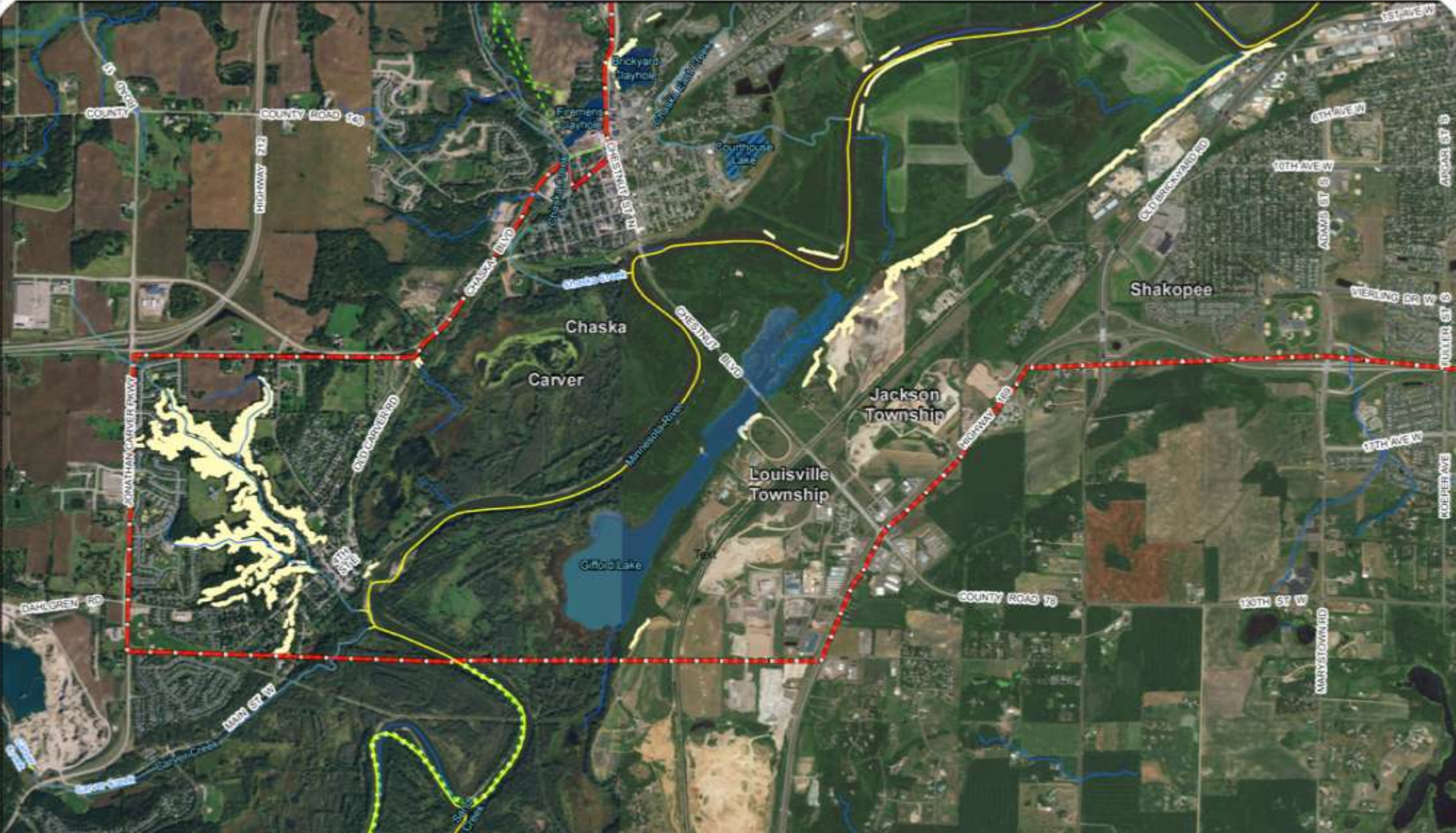
Steep Slope Areas



- | | | | |
|-----------------------------|-----------------------------|-------------------------------|----------------------|
| 30% Slope | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| Carver County | Stream/River | PVA Water | Trout Stream |
| Riley-Purgatory-Bluff Creek | Impaired River or Stream | Impaired Lake | Calcareous Fen Point |
| Scott | Impaired Lake | Calcareous Fen Point | Municipal Boundary |
| Lower MN River | | | |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
 1 of 9
 October 2017



- | | | | |
|------------------------|-----------------------------|-------------------------------|----------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Carver County | Stream/River | PWS Water |
| | Scott | Impaired River or Stream | Trout Pond/Lake |
| | Lower Mly River | Impaired Lake | Calcareous Fen Point |
| | | Municipality Boundary | |

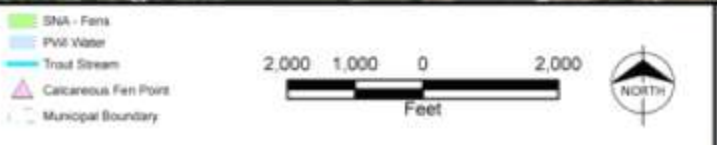


Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map 30
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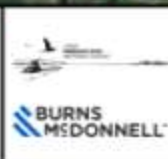
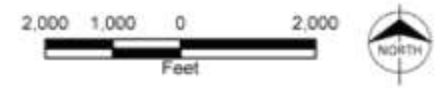
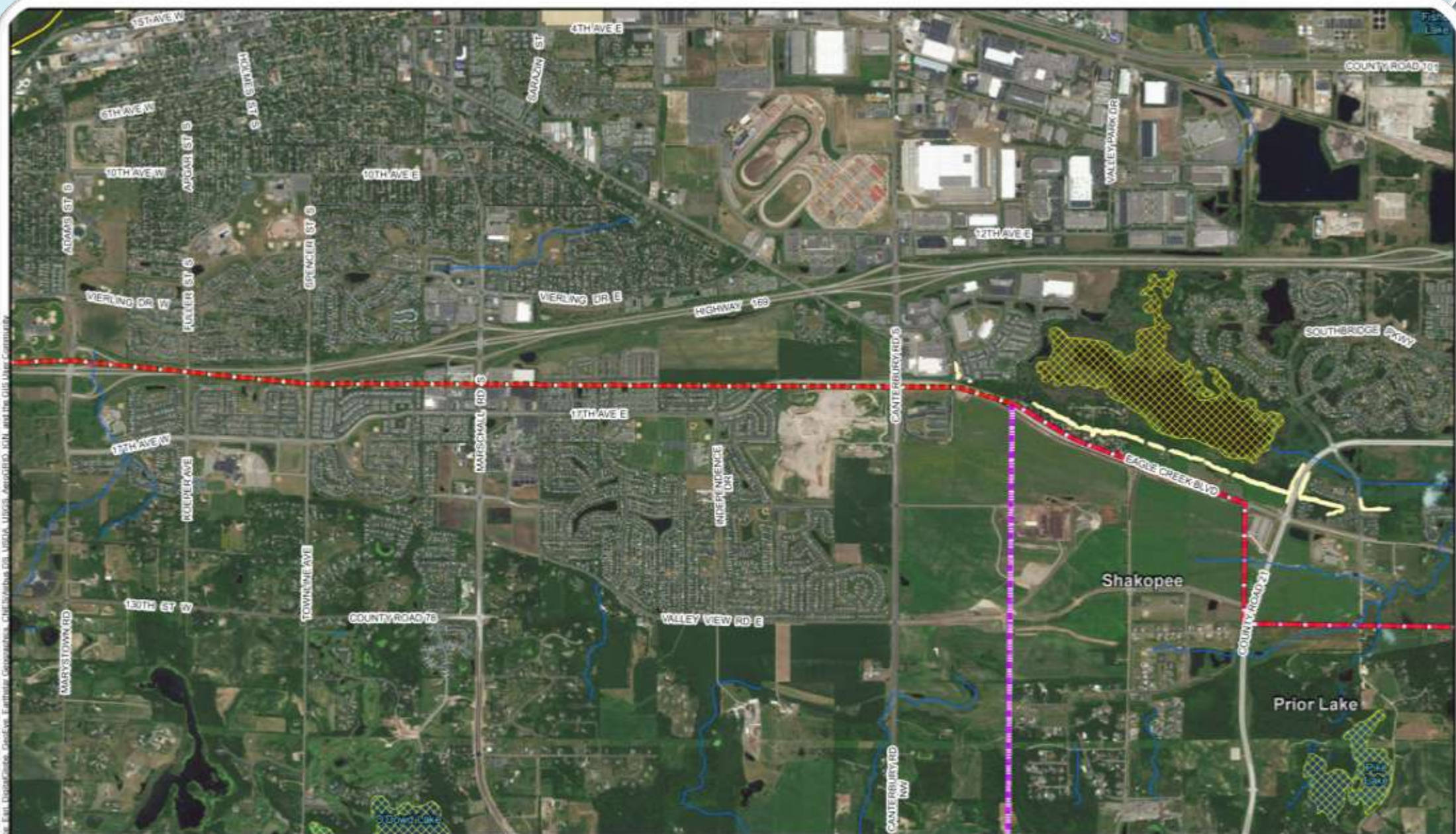


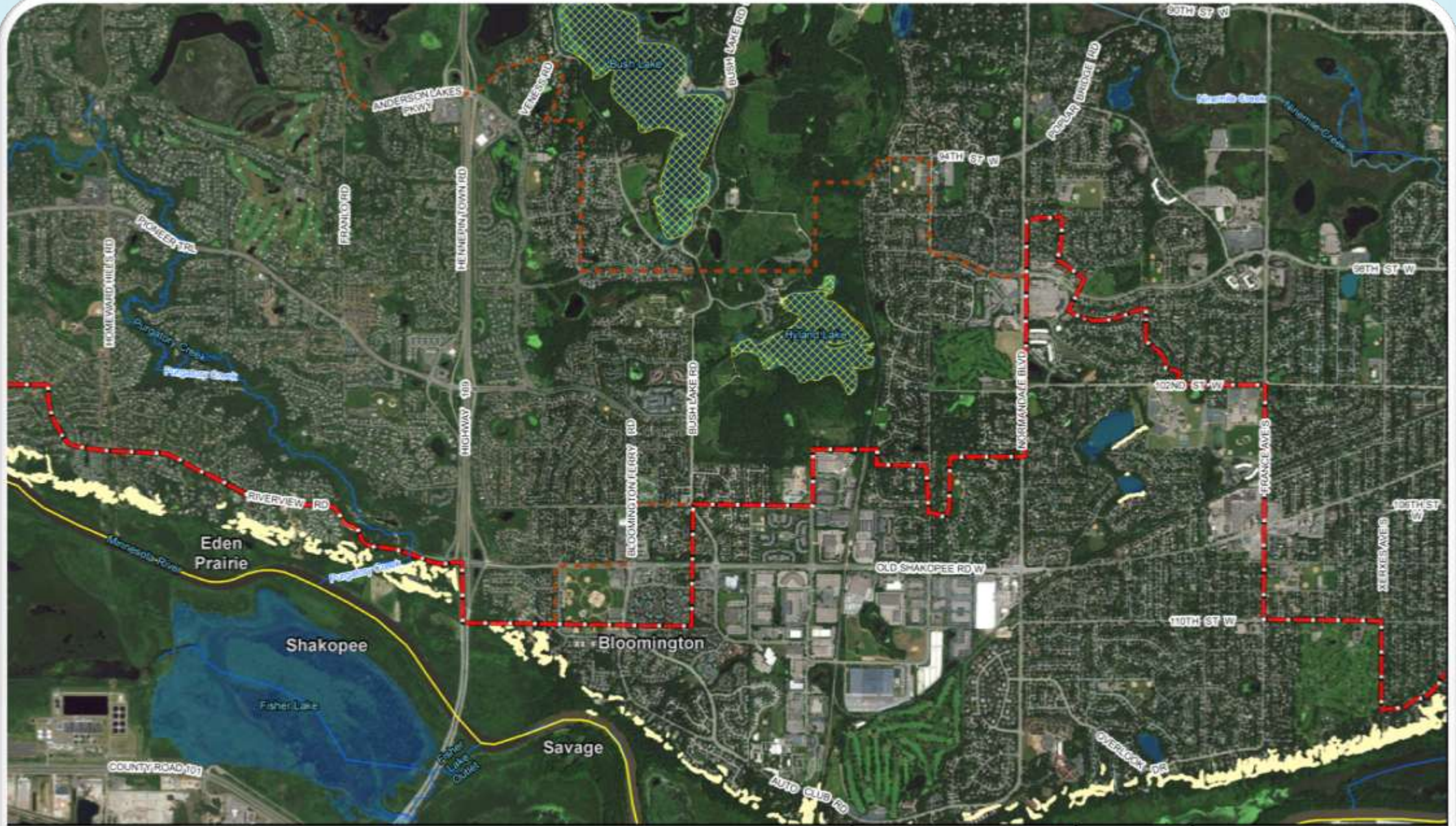
Map Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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|-------------------------------|------------------------------------|--------------------------------------|----------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Riley-Purgatory Bluff Creek | Stream/River | PWI Water |
| | Scott | Impaired River or Stream | Trout Stream |
| | Lower MN River | Impaired Lake | Calcareous Fen Point |
| | | | Municipal Boundary |

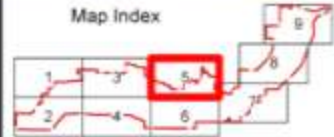
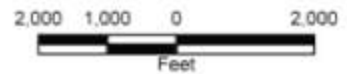


Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map 31
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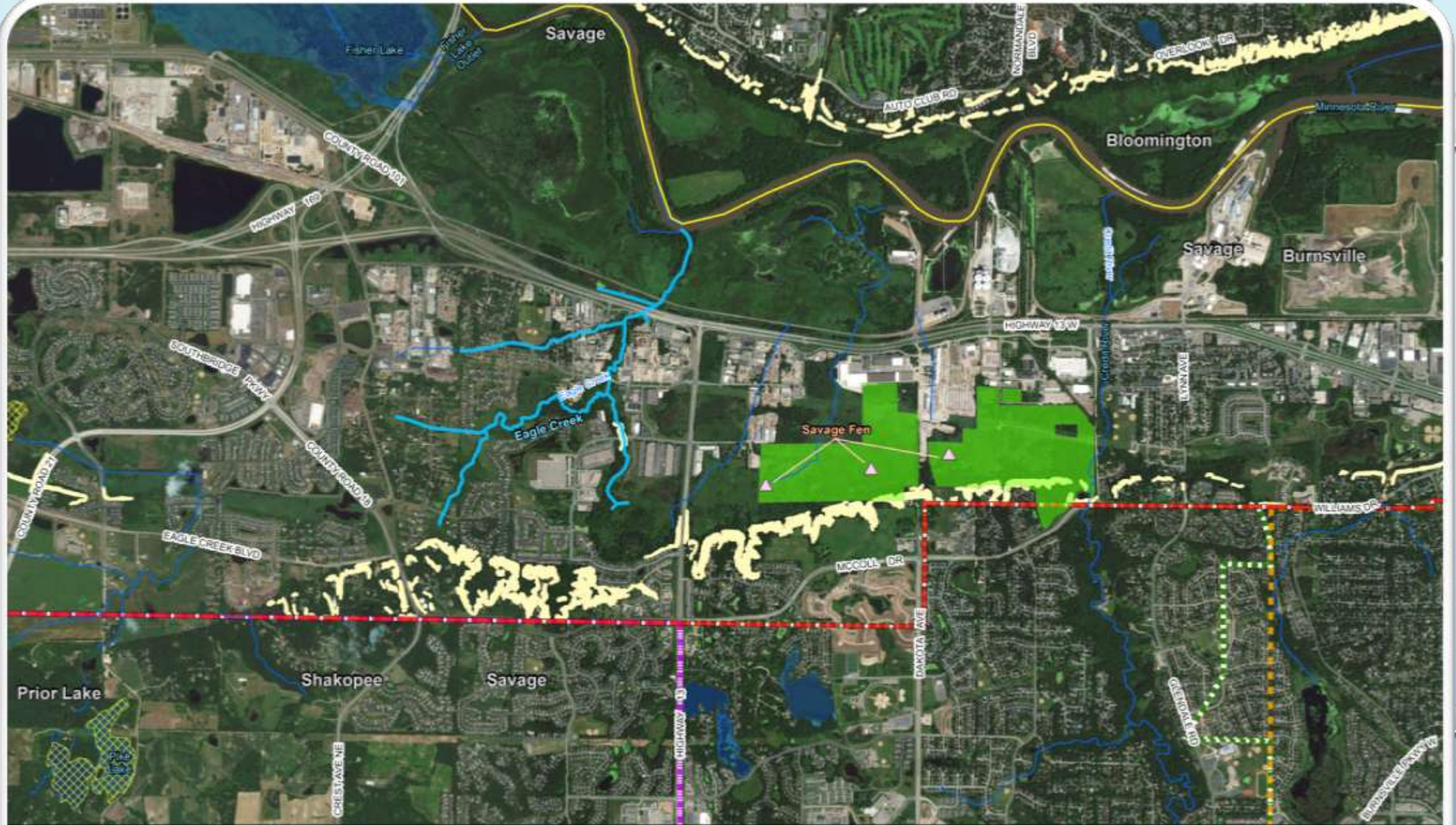




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| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Riley-Purgatory-Bluff Creek | Stream/River | PWI Water |
| | Scott | Impaired River or Stream | Calcareous Felt Point |
| | Lower MN River | Impaired Lake | Municipal Boundary |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
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 October 2017

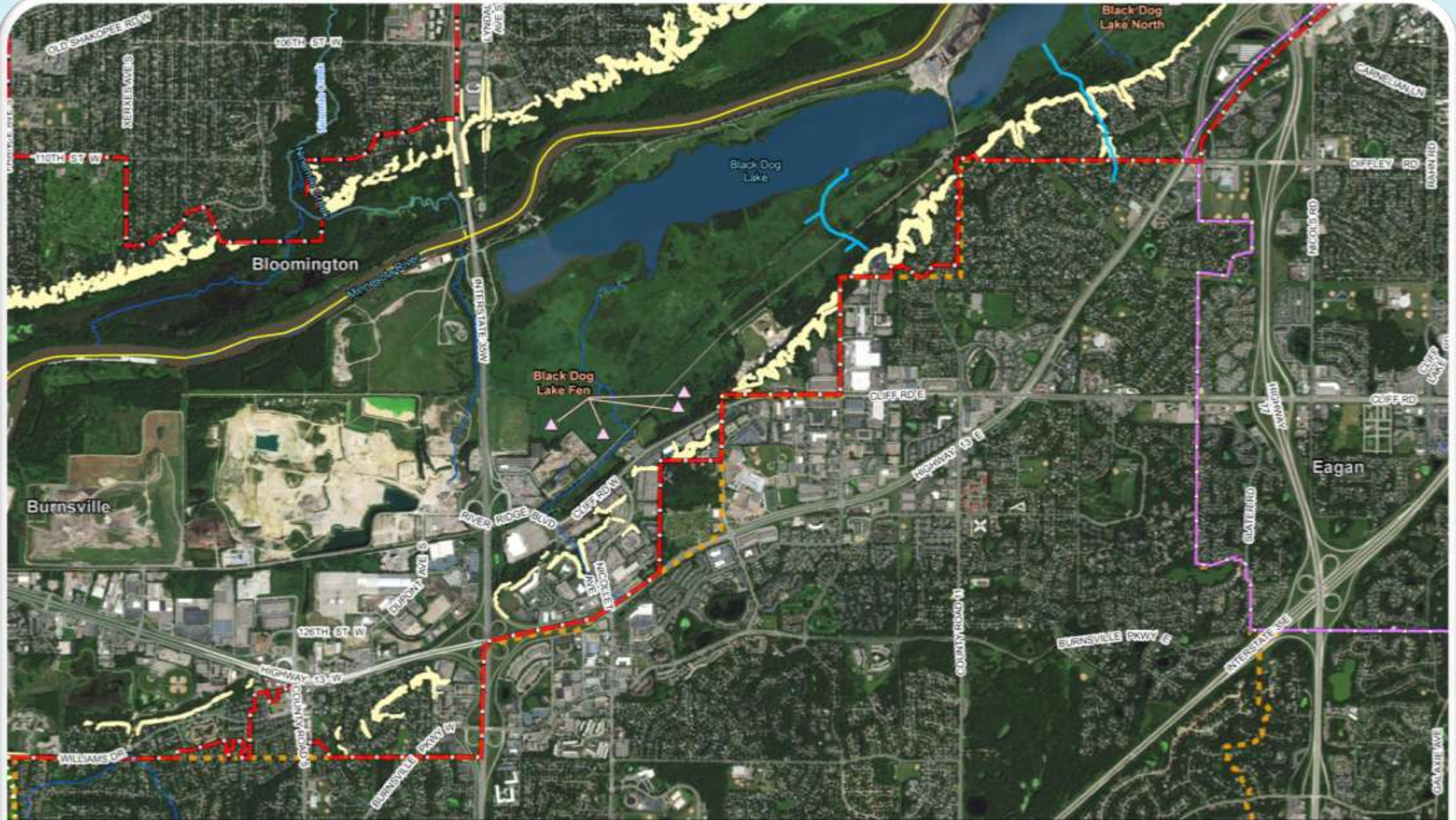


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| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SINA - Fens |
| 30% Slope | Black Dog | Stream/River | PHM Water |
| | Scott | Stream | Trout Stream |
| | Lower MN River | Impaired Lake | Calcareous Fen Point |
| | | | Municipal Boundary |

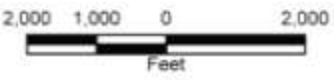


Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map 34
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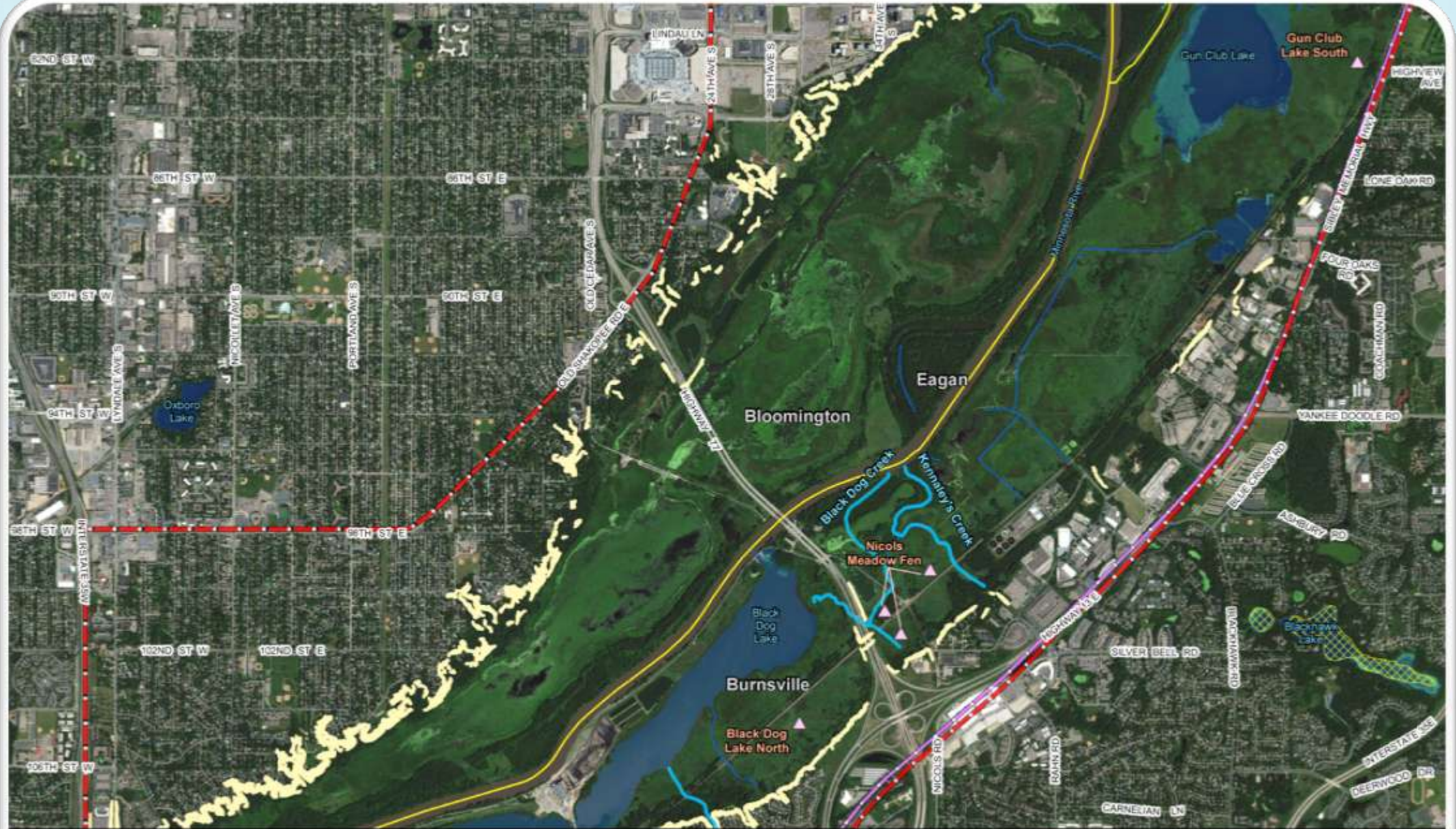
LMRWD Watershed Plan Amendment Slides



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| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Black Dog | Stream/River | PH ₂ O Water |
| | Eagan-Inver Grove | Impaired River or Stream | Trout Stream |
| | Scott | Impaired Lake | Calcareous Fen Point |
| | Lower MN River | | Municipal Boundary |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
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 October 2017



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|-------------------------------|------------------------------------|--------------------------------------|---------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Eagan-Inver Grove | Stream/River | PW3 Water |
| | Scott | Impaired River or Stream | Trout Stream |
| | Lower MN River | Impaired Lake | Catareous Fen Point |
| | | | Municipal Boundary |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
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|-------------------------------|------------------------------------|--------------------------------------|----------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Eagan-Inver Grove | Stream/River | PW Water |
| Lower MS River | Impaired River or Stream | Impaired Lake | Calcareous Fen Point |
| Scott | Lower MN River | Municipal Boundary | |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
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EXISTING BLUFF STANDARD PROPERTY SUMMARY

PRELIMINARY

Bloomington	Burnsville	Carver	Chanhassen	Chaska	Eden Prairie
511	286	121	54	33	145

Eagan	Fort Snelling	Lilydale	Mendota	Mendota Heights	Met. Airport Co.
37	5	1	15	16	1

Savage	Shakopee
109	88

Proposed Steep Slope Standard

- **Definitions modification**
 - Bluff, bluff impact zone, bluffline, top of bluff, and toe of bluff will be removed from Appendix K
- **Steep Slope**
 - Natural topography feature having an average slope of eighteen (18) percent or greater measured over a horizontal distance of twenty-five (25) feet or more.

Proposed Steep Slope Standard

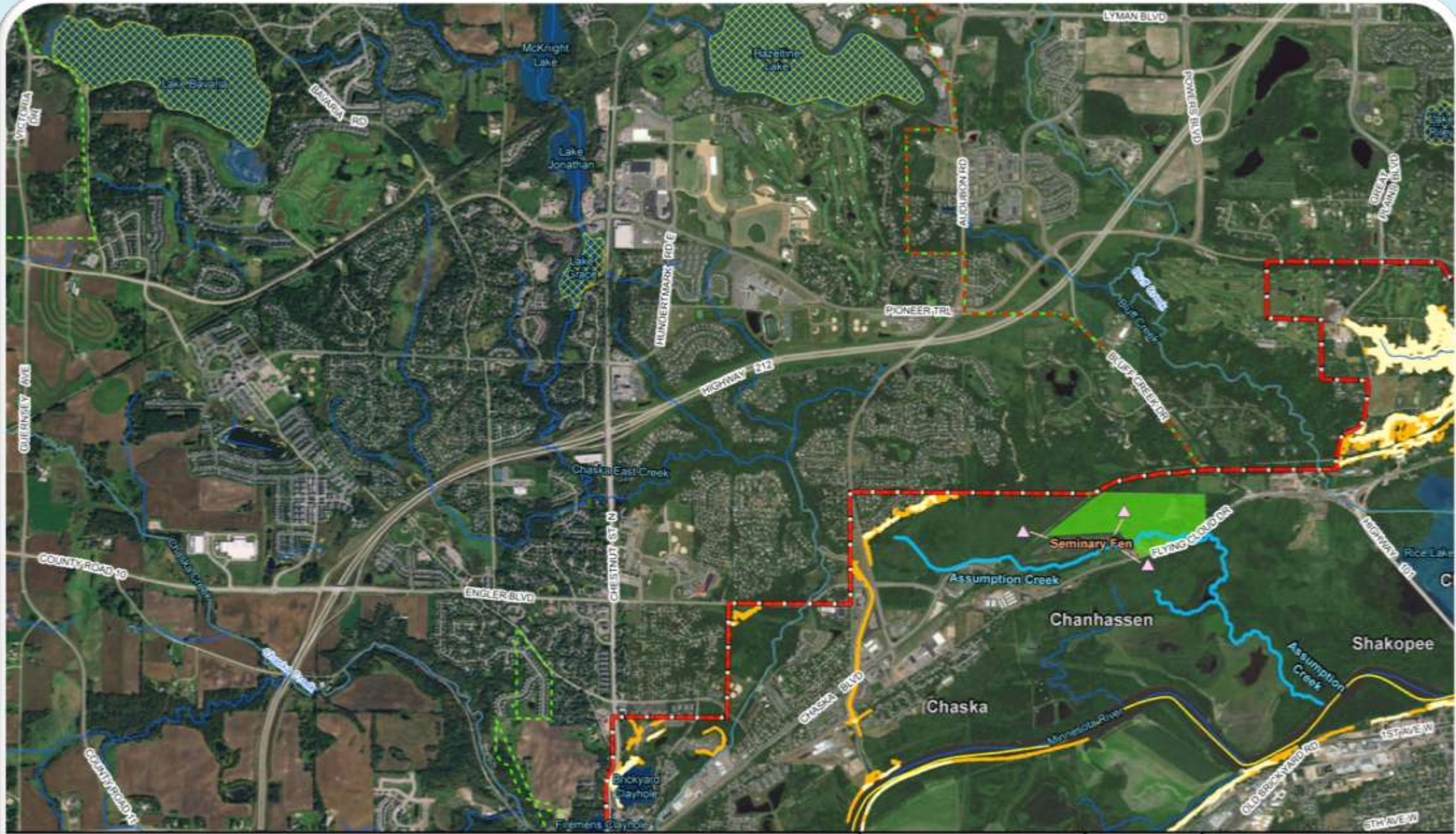
- Trigger
 - Activities that involves the excavation of **50 cubic yards or more of earth**, or alteration or removal of **5,000 square feet or more** of surface area or vegetation within the overlay District.
 - Activities requiring municipal/LGU grading, building, parking lot, foundations or **other commercial or residential permits** that result in a net increase in impervious surface or stormwater runoff within the overlay district

Proposed Steep Slope Standard

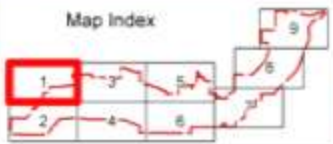
- Requirements
 - A professional engineer registered in the State of Minnesota certifies the suitability of the area for the proposed activities, structures or uses resulting from the activities
 - Implement erosion and sediment control best management practices (BMPs) include site stabilization and slope restoration measures to ensure the proposed activity will not result in:
 - adverse impacts to adjacent and/or downstream properties or water bodies;
 - unstable slopes conditions; and
 - degradation of water quality due to erosion, sedimentation, flooding, and other damage₄₁

Proposed Steep Slope Standard

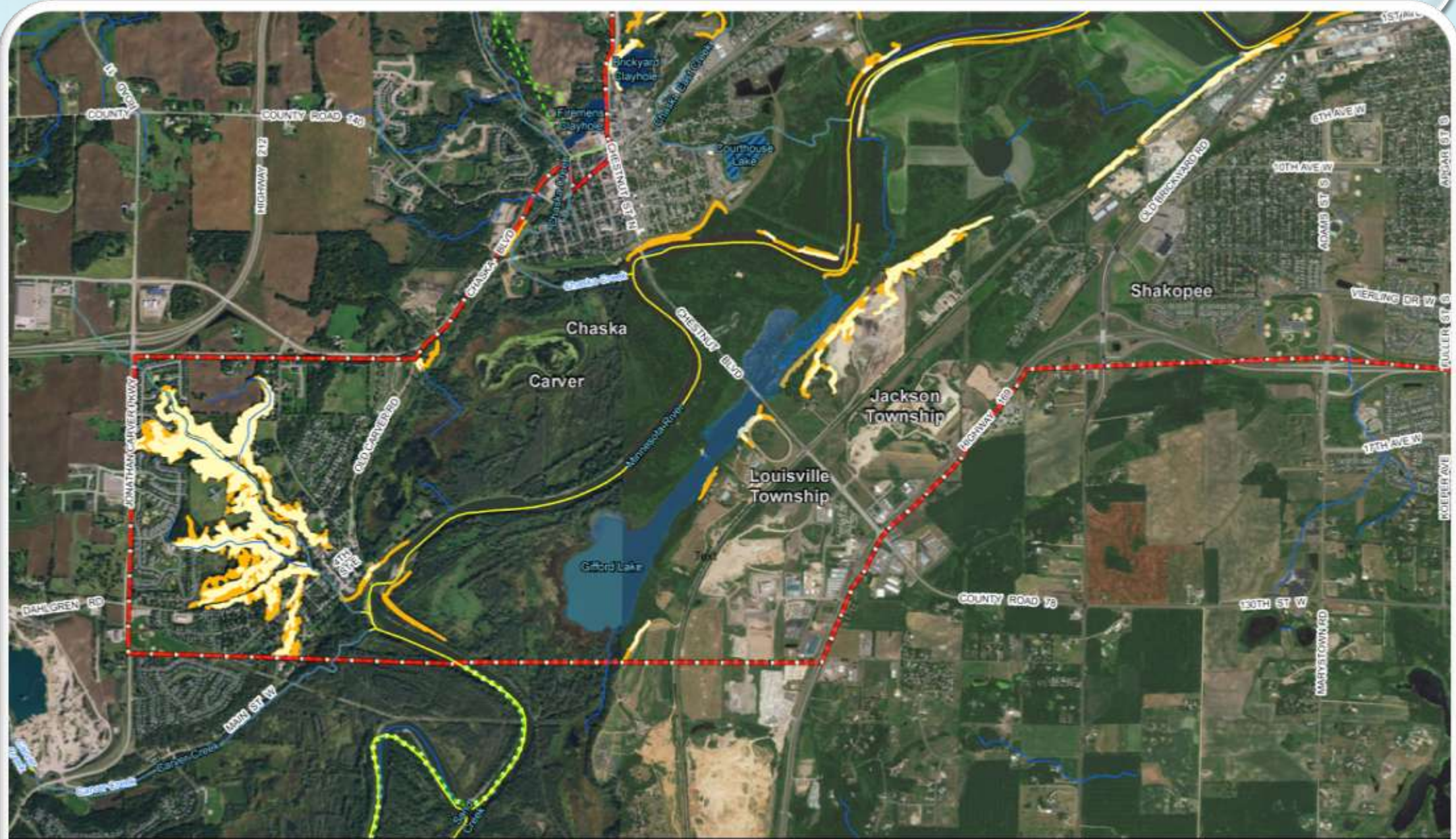
- Requirements (*Cont.*)
 - Preservation of existing hydrology and drainage patterns. Land-disturbing activities may not result in any new water discharge points on steep slopes
 - Stormwater ponds, swales, infiltration basins, or other soil saturation-type features shall not be constructed within the overlay district



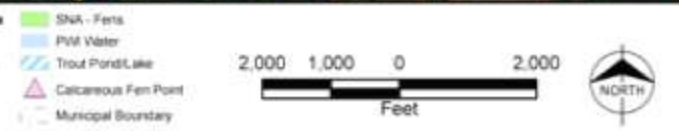
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|-------------------------------|------------------------------------|--------------------------------------|---------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Carver County | Stream/River | PVI Water |
| Additional with 18% Slope | Riley Purgatory-Bluff Creek | Impaired River or Stream | Trout Stream |
| | Scott | Impaired Lake | Catareous Fen Point |
| | Lower MN River | | Municipal Boundary |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
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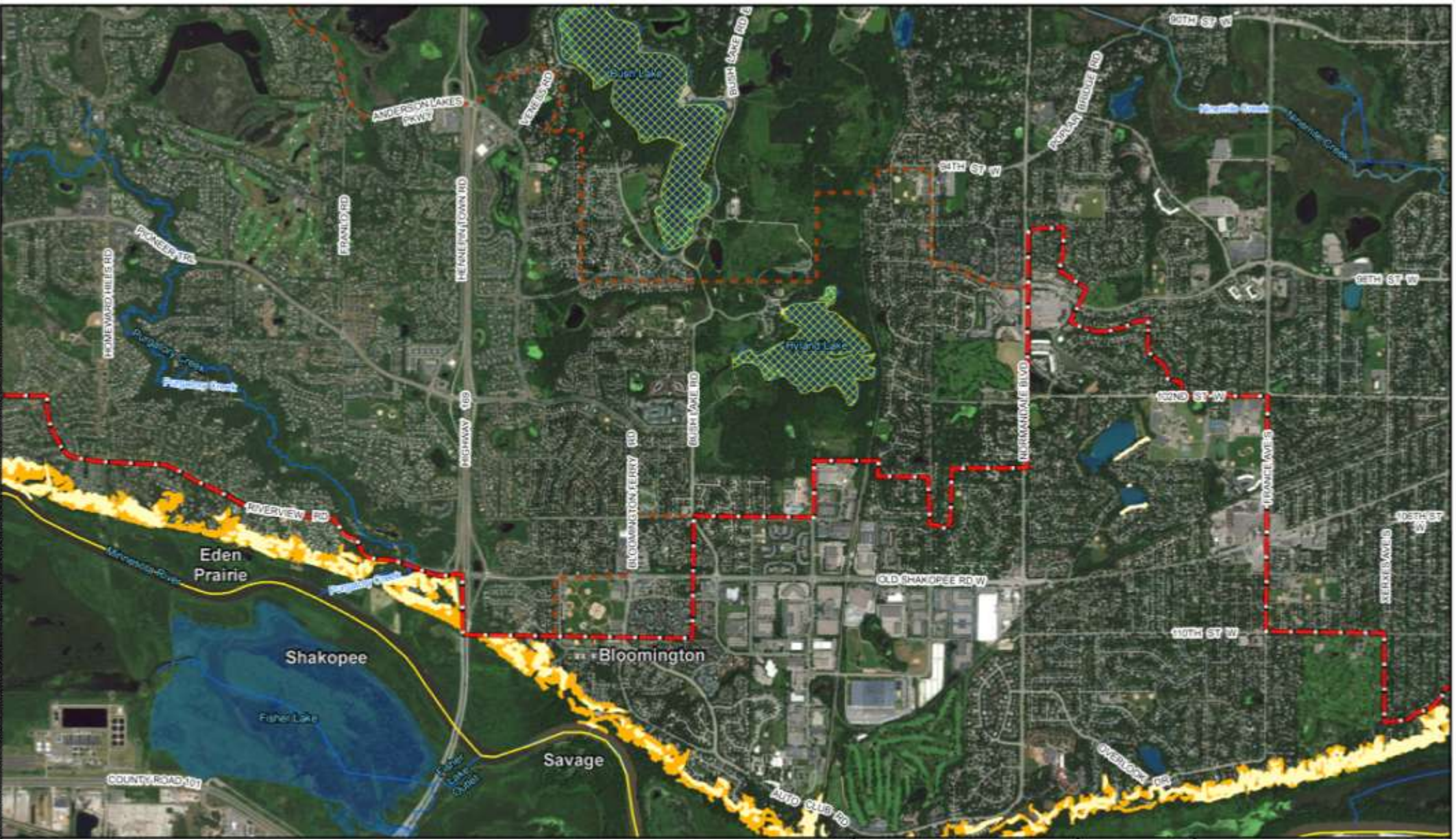


- Bluff Overlay District**
 - 30% Slope
 - Additional with 18% Slope
- Watershed District Boundary**
 - Carver County
 - Scott
 - Lower MN River
- MNDNR Publicly Available Data**
 - Stream/River
 - Impaired River or Stream
 - Impaired Lake
- SNA - Fens**
- PVI Water**
- Trout Pond/Lake**
- Calcareous Fen Point**
- Municipal Boundary**

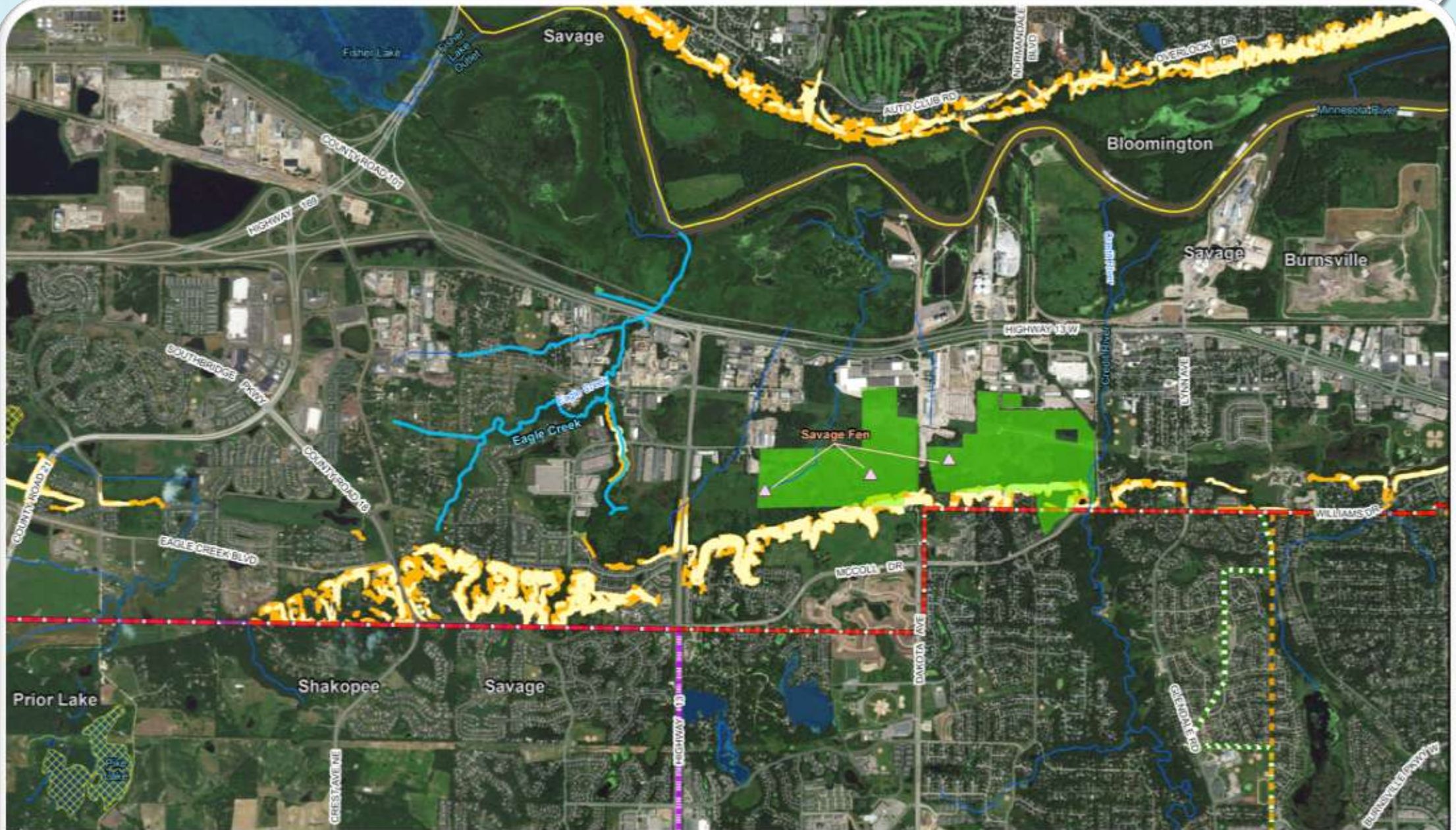


Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map 44
 Figure L1
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 October 2017

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 COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 Source: Esri, MNDNR, Minnesota Geospatial Information Office, Burns & McDonnell Engineering Company, Inc.



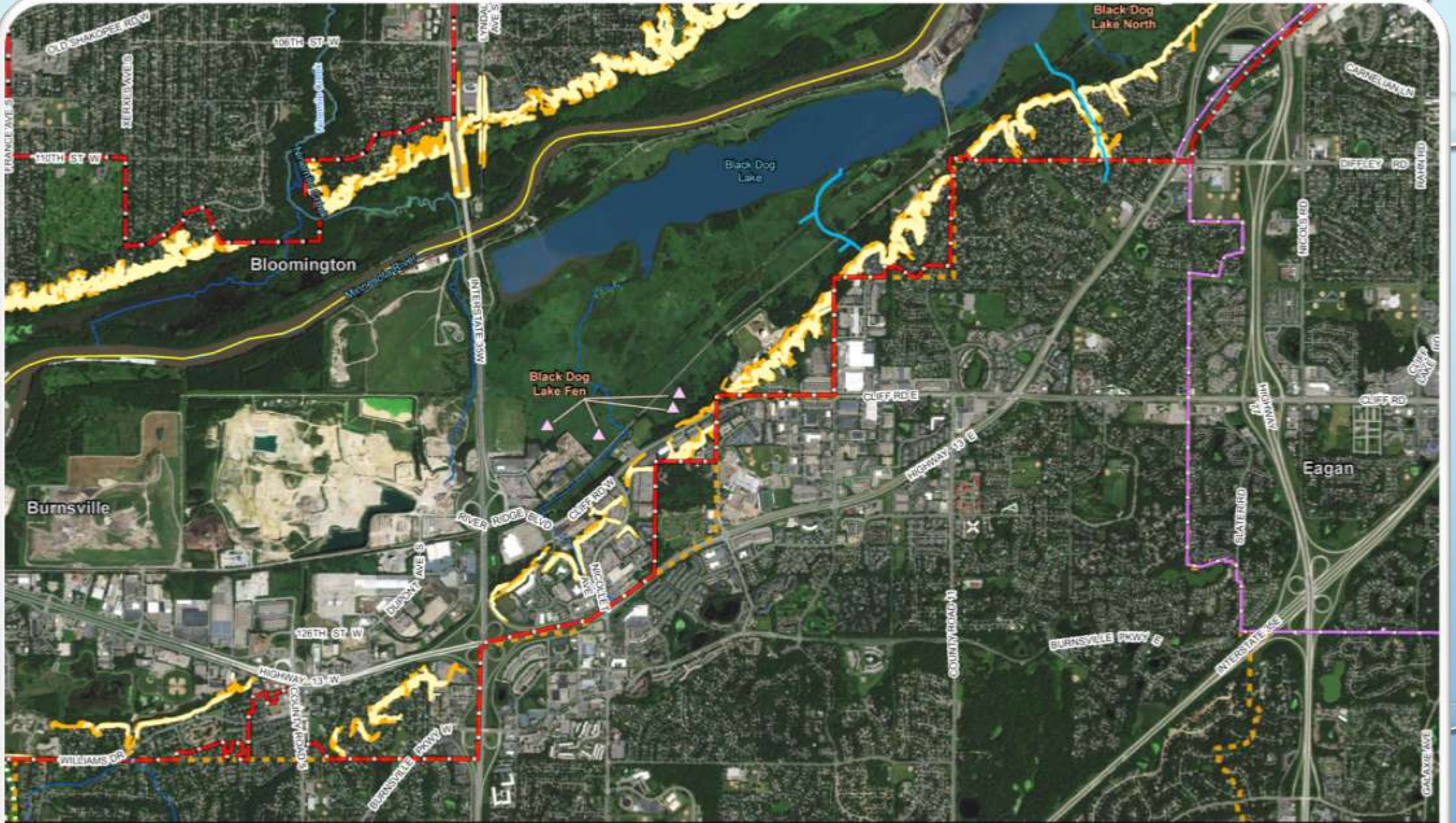
Bluff Overlay District 30% Slope Additional with 18% Slope	Watershed District Boundary Riley-Purgatory Bluff Creek Lower MN River	MNDNR Publicly Available Data Stream/River Impaired River or Stream Impaired Lake	SNA - Ferns PWA Water Calcareous Fern Point Municipal Boundary	Map Index 		Lower Minnesota River Watershed District Draft Bluff Overlay District Map Figure L1 5 of 9 October 2017	47
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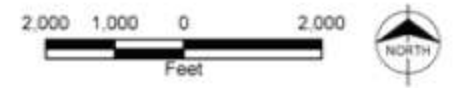
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|-------------------------------|------------------------------------|--------------------------------------|----------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Black Dog | Stream/River | PVI Water |
| Additional with 18% Slope | Prior Lake-Spring Lake | Impaired River or Stream | Trout Stream |
| | Scott | Impaired Lake | Calcareous Fen Point |
| | Lower MN River | | Municipal Boundary |



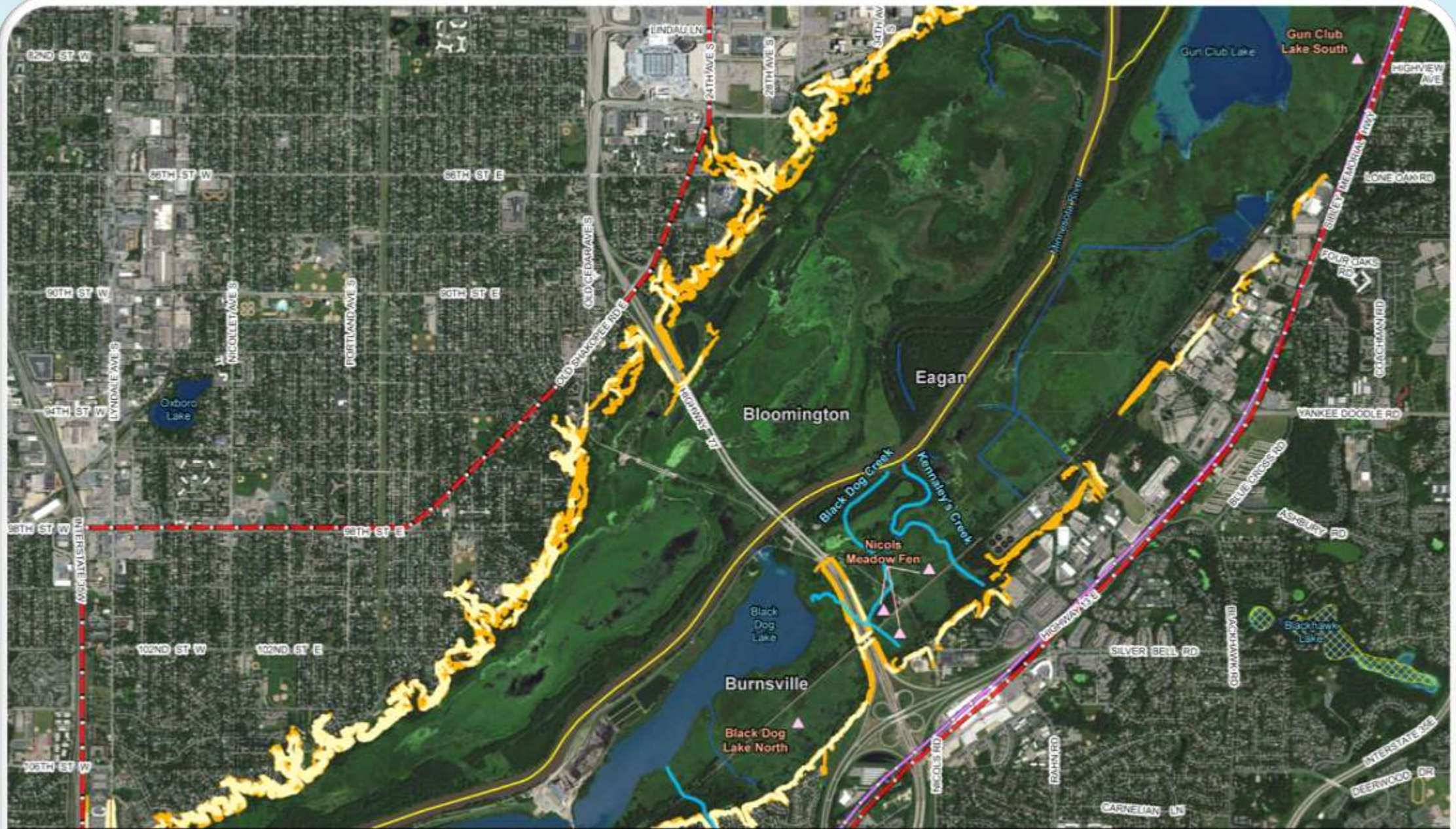
Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map
 Figure L1
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 October 2017



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|-------------------------------|------------------------------------|--------------------------------------|----------------------|
| Bluff Overlay District | Watershed District Boundary | MNDNR Publicly Available Data | SNA - Fens |
| 30% Slope | Black Dog | Stream/River | PW1 Water |
| Additional with 18% Slope | Eagan-Inner Grove | Impaired River or Stream | Trout Stream |
| | Scott | Impaired Lake | Calcareous Fen Point |
| | Lower MN River | | Municipal Boundary |



Lower Minnesota River Watershed District
 Draft Bluff Overlay District Map 49
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Bluff Overlay District

- 30% Slope
- Additional with 18% Slope

Watershed District Boundary

- Eagan-Inver Grove
- Scott
- Lower MN River

MNDNR Publicly Available Data

- Stream/River
- Impaired River or Stream
- Impaired Lake

SNA - Fens

- PM Water
- Trout Stream
- Calcareous Fen Point
- Municipal Boundary



Lower Minnesota River Watershed District
 Draft Bluff Overlay District M50
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 October 2017

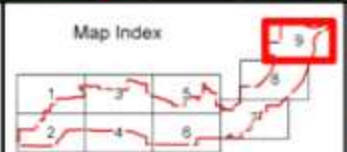


Bluff Overlay District
 20% Slope
 Additional with 18% Slope

Watershed District Boundary
 Egan-Inver Grove
 Lower MS River
 Scott
 Lower MN River

MNDR Publicly Available Data
 Stream/River
 Impaired River or Stream
 Impaired Lake

SHA - Fens
 PVI Water
 Calcareous Fen Point
 Municipal Boundary



Lower Minnesota River Watershed District
 Draft Bluff Overlay District M51
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Existing Bluff Standard vs. Proposed Steep Slope Standard Property Summary

Preliminary

	Bloomington	Burnsville	Carver	Chanhassen	Chaska	Eden Prairie
Existing	511	286	121	54	33	145
Proposed	676	363	159	65	84	229
Net Change	165	77	38	11	51	84

Existing Bluff Standard vs. Proposed Steep Slope Standard

Property Summary

Preliminary

	Eagan	Fort Snelling	Lilydale	Mendota	Mendota Heights	Met. Airport Co.
Existing	37	5	1	15	16	1
Proposed	49	5	1	16	16	1
Net Change	12	0	0	1	0	0

	Savage	Shakopee
Existing	109	88
Proposed	239	199
Net Change	130	111

Plan Amendment Process Summary – Next Steps

