ATTACHMENT C

On behalf of the Lower Minnesota River East Watershed Partnership, we would like to take this opportunity to express our support in Projects and Programs as well as Legislative Initiatives and Policy Changes that create financial opportunities and resources that address existing and future flooding issues and solutions within the Lower Minnesota River Watershed and throughout the State of Minnesota.

While the Lower Minnesota River East Watershed Partnership is a new entity, the partners within the watershed have worked for many years in addressing altered hydrology and flooding issues. Altered hydrology is considered a non-pollutant stressor and has a strong prevalence in the watershed. This stressor causes flashy flows and volumes (high and low) within a stream system which negatively impacts aquatic life, increases pollutant loading of numerous pollutants (especially sediment), and causes near/in-channel erosion. The frequency and intensity of altered hydrology and flooding is a result of changes in weather patterns and land use activities such as cropping rotations, drainage, and impervious surfaces (Minnesota Pollution Control Agency. (2020). Lower Minnesota River Watershed Restoration and Protection Strategy Report). The annual average rainfall within the Lower Minnesota River Watershed from 1895-2018 has seen an increase in roughly 2.5-3.5 inches. Additionally, the intensity of these precipitation events has worsened with larger rainfall events occurring more frequently (Board of Water and Soil Resources. (2019). Climate Change Trends and Action Plan). Due to an increase in frequency and intensity of precipitation, the water volume and flow rats have also increased over the decades (Jennings, Carrie. (2016). Why so much sand in the Lower Minnesota River? Open Rivers Journal.). Significant losses in organic matter, altering the function and shape of the watercourses in the watershed (approximately 62.3%), crop rotations, and an increase in impervious surface greater than 4% have contributed to altered hydrology and flooding issues within the Lower Minnesota River Watershed (Minnesota Pollution Control Agency. (2020). Lower Minnesota River Watershed Restoration and Protection Strategy Report). There are numerous tools in the toolbox that provide some kind of storage on the landscape as well as reduce water flow rates and volumes. Projects and practices including but not limited to wetland restorations, cover crops, reduced tillage, perennial vegetation, water and sediment control basins, grassed waterways, ravine and streambank stabilization, multipurpose drainage management, and stormwater basins have provide storage benefits and water quality benefits. While there are multiple practices and projects available to help reduce the impacts from altered hydrology and flooding, there is a lack of financial opportunities and policy to support these efforts (Minnesota Pollution Control Agency. (2020). Lower Minnesota River Watershed Restoration and Protection Strategy Report).

The Lower Minnesota River East Watershed Partnership as well as other Watershed Partnerships across the State of Minnesota have the science and data that identify and support the problems and solutions in addressing altered hydrology and flooding; however, we lack the financial opportunities and policies to implement these solutions.

Financial opportunities are by far the most significant barrier when trying to implement projects and practices that address these issues, especially for Greater Minnesota. The 7 County Metro Area has been implementing Comprehensive Watershed Management Plans for decades and as a result has had access to noncompetitive funding opportunities. However, Greater Minnesota is still in their first version of Comprehensive Watershed Management Plans, and until recently, most of Greater Minnesota had to apply for competitive funds in order to install projects and practices that reduce altered hydrology and provide storage on the landscape. Another financial barrier that we come across in Greater Minnesota is

our tax base. Populations in nonmetro areas are traditionally much lower, and therefore, limit the amount of levy dollars that are available to us. Lastly, the presence of Watershed Districts and Management Organizations is another financial barrier. A majority of Minnesota does not have Watershed Districts and Management Organizations to help leverage additional funds for projects and practices that are dedicated to water quality issues. The lack of funding opportunities in Greater Minnesota has made it difficult to implement projects and practices and provide matching funds required for grant funding sources. The projects and practices mentioned previously are expensive and cannot be paid for by only local funds; more grant funding opportunities are needed.

We not only need financial resources to help implement projects and practices on the landscape, but also policies that support these efforts. There are some legislative policies, rules, and statutes that help protect water and resources as well as promote different practices. However, the existing policies do not consider and consider the drastic changes that the State of Minnesota has experienced in recent years when it comes to changes in weather patterns and land use. We need more local and state policies that support protecting water resources, promoting different conversation practices, and incorporating climate resiliency. The impacts from altered hydrology and flooding have negative consequences to our infrastructure, environment, and public health. Furthermore, the costs to fix results from these events is creating an economic burden to Minnesota residents. In the long run, it is much more cost effective to implement projects and practices that prevent altered hydrology and flooding impacts than it is to manage these impacts once they have occurred.

The Lower Minnesota River East Watershed Partnership will continue to work on these issues and has made it a priority in our Comprehensive Watershed Management Plan to actively address altered hydrology and flooding. We thank you for the opportunity to express our thoughts, and concerns, and support in addressing these issues!

Sincerely,

Lower Minnesota River East Watershed Partnership

Submitted By: Watershed Coordinator-Holly Bushman

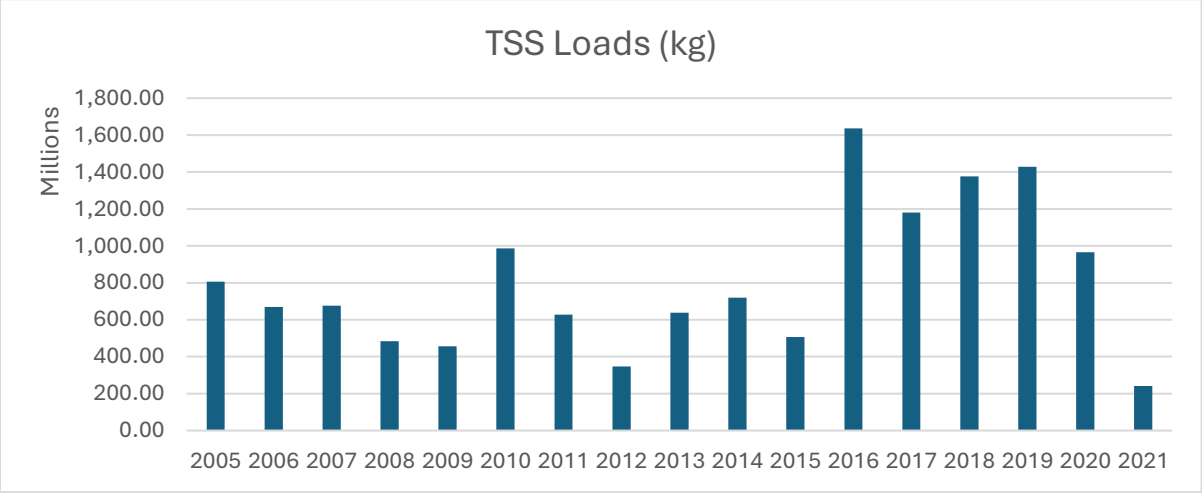
Testimony to the Lower Minnesota River Watershed District: Minnesota River Flooding Causes, Impacts and Amelioration

Norman Senjem, Lake Pepin Legacy Alliance (retired, Minnesota Pollution Control Agency)
November 7, 2024

Problem

Its geologic history, beginning with the formation of the Glacial River Warren some 12,000-14,000 years ago, has made the Minnesota River and its tributaries "primed to erode", in the words of recent investigators. Today's Minnesota River occupies a narrow slit in the immense channel carved by Warren's raging meltwaters from Glacial Lake Agassiz. Tributaries descend several hundred feet down the sides of today's Minnesota River valley, carving their own valleys into the ancient escarpment. The innate tendency of the riverine landscape to erode has been exacerbated in recent times by the drainage of most wetlands in the basin, replacement of native prairie with cultivated fields and hard surfaces, and a warming, wetter climate. Average annual rainfall in Minnesota has increased by 3.4 inches, and rain events of six inches or more are four times more common since 2000 than in the previous three decades (Minnesota Department of Natural Resources).

Altogether, these forces have contributed to more frequent flooding and increased transport of sediment. Mean annual flow of the Lower Minnesota River has more than doubled since 1990. In a recent wet period, 2016-2020, total suspended solids (TSS) load near the mouth of the Minnesota River approached



or exceeded one million metric tons per year, unprecedented for the period of record (Metropolitan Council Environmental Services). The coring of bed sediments in Lake Pepin has shown that rates of sediment deposition from the Minnesota River, which accounts for more than three-fourths of sediment loading to the lake, have increased 10-fold since European settlement (St. Croix Watershed Research Station).

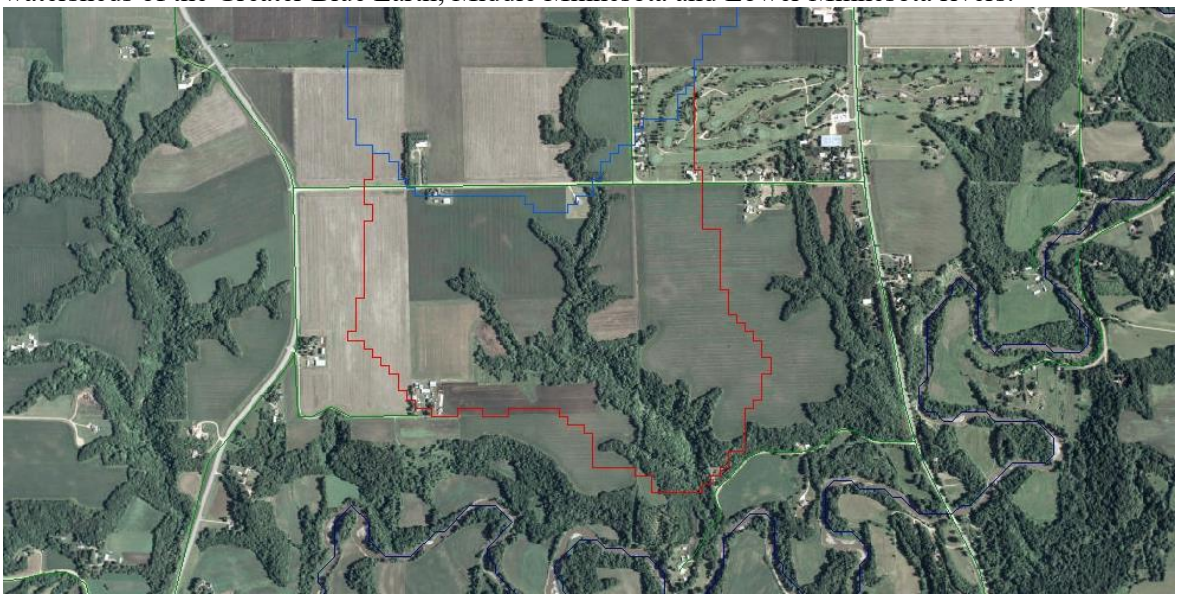
River scientists of various specialties have learned much about the problem of sediment in recent years. It is now generally accepted that most of the suspended sediment load from the Minnesota River comes from "near-channel" sources – stream bluffs, banks and ravines. These kinds of erosion occur along the lower, steeper reaches of tributaries as they descend from the surrounding plateau down to the Minnesota River hundreds of feet below, deepening and extending their valleys by back cutting upstream. Episodes

of higher stream flow, caused by more intense precipitation falling on a landscape largely devoid of wetland storage, erode and undermine riverbanks and bluffs at their base, or toe, whereupon they collapse into the stream and are carried away by powerful currents. Surface runoff from rainfall or snowmelt events form gullies and ravines (large gullies) down the steep valley walls of tributaries. Altogether, it is estimated that, on average, 60-85 percent of sediment transported down the Minnesota River comes from near-channel sources.

Solution

Different solutions are called for in controlling erosion from stream banks and bluffs, on the one hand, and gullies and ravines, on the other. In the case of the former, most emphasis has been on creating increased areas of water storage on the landscape, often through restoration of former wetlands previously drained and converted to crop production. A significant proportion of the landscape needs to be converted to water storage in order to reduce water runoff sufficiently to abate stream flow and the erosion of riverbanks and bluffs. With farmland prices at historic highs, averaging near $10,000 per acre, widespread restoration of converted wetlands has become a relatively costly solution. There is a need to identify priority sites for wetland restoration to ensure that scarce public funds produce the greatest possible benefit.

Ravine erosion is concentrated in areas downstream of “nick points”, or abrupt increases in stream gradient, where tributaries rush to their confluence with the main stem. Ravines are prevalent in the watersheds of the Greater Blue Earth, Middle Minnesota and Lower Minnesota rivers.

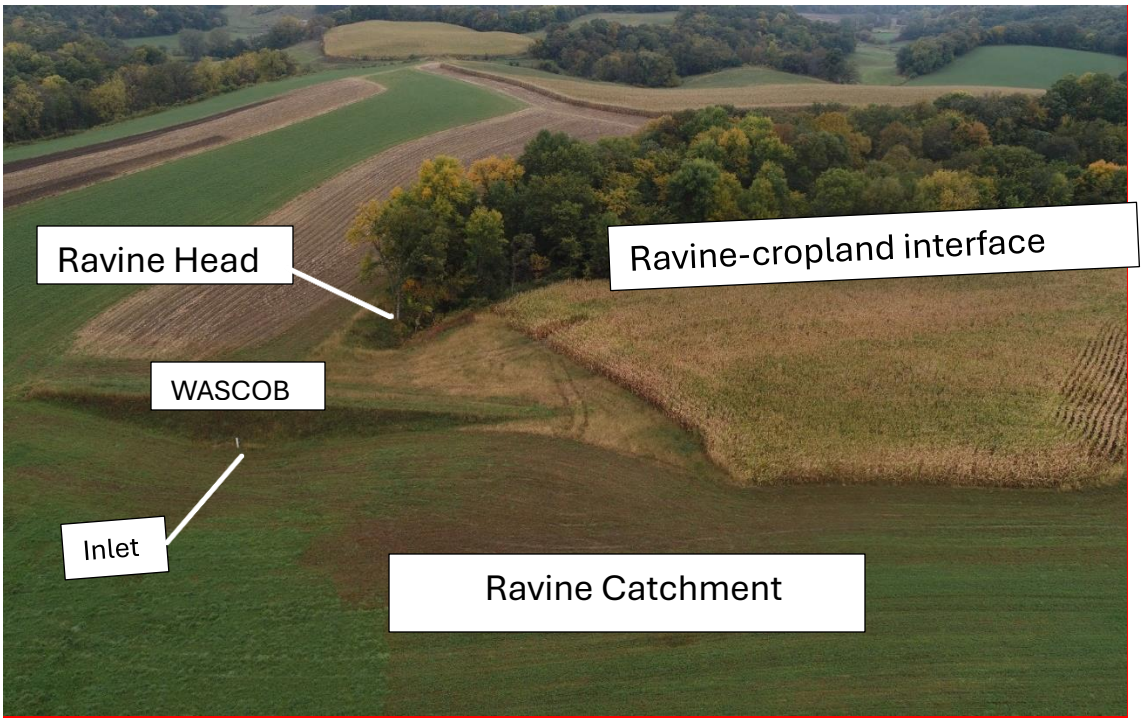


Thousands of ravines spread into the landscape of Minnesota River tributaries such as south of Mankato near the mouth of the Blue Earth River, shown here.

Surface runoff erodes gullies at field edge. Ravines can form further downhill. -

Tile drainage outlets can form plunge pools at the head of ravines.

To control water runoff and soil erosion from gullies and ravines requires examining ways of reducing and containing runoff at multiple locations: the area that drains to the ravine, called the catchment; the ravine head; the interface between cropland and a high-gradient slope with potential for gully and ravine formation; and the walls and bed of the ravine itself. The following potential interventions for each of these areas likely need to be applied in combinations to effectively control runoff from the high-precipitation events that are more common today:



- Catchment: Two practices which can significantly improve water storage and infiltration in the area draining to a ravine are cover crops and restored wetlands. **Cover crops** such as winter rye are seeded in the fall and produce a living ground cover early in the spring. The cover crop must be killed with herbicide or crimping prior to planting a row crop such as corn or soybeans. No-till

or strip-till seeding of soybeans or corn preserves the enhanced infiltration capacity of the desiccated cover crop. A second option for the catchment, **restored wetlands**, will increase water storage and infiltration, thereby reducing runoff to the ravine head, the downstream tributary, and the main stem Minnesota River.

Drilling soybeans no-till into standing cover crop.
Nicollet County SWCD

Emerged soybeans in cover crop residue.
Nicollet County SWCD

- Ravine Head: A conservation structure typically used at this location is the **Water and Sediment Control Basin (WASCOB)**, designated CP-638 in the Field Office Technical Guide of the Natural Resources Conservation Service. WASCOBs are dams designed to effectively contain, and gradually release through a protected outlet, runoff from a rainfall event of up to one in ten-year frequency (3.4 inches) in a 24-hour period. A U.S. Army Corps of Engineering modeling study of Seven Mile Creek watershed found that WASCOBs contained runoff from moderate floods, but that additional measures were needed for higher-runoff events. WASCOBs combined with cover crops provided the greatest degree of runoff control of the options studied.

Constructed WASCOB at head of ravine, Goodhue County SWCD

- Ravine-Cropland Interface: In this zone, **a buffer of perennial vegetation** can be used to convert concentrated flow at the field edge to sheet flow which more readily infiltrates into the soil. Such

buffers can prevent the formation of new gullies and reduce the volume of runoff into existing gullies and ravines. A conservation practice called Minnesota CP-38E, developed by technicians for the Seven Mile Creek watershed in Nicollet County, is available throughout the state to enroll ravine/cropland interface areas in the Conservation Reserve Program. Farmers use this practice to "square the field" along irregular edges bordering ravines.

- In-Ravine: Within ravines, well-placed logs or wood beams or well-managed vegetative ground cover on side slopes can reduce erosion. The Corps of Engineers study found that **ground cover vegetation** could reduce sediment load and promote savannah restoration in south- and west-facing walls with less than 20-degree slopes. Vegetation had little effect on steeper ravine sidewall erosion driven by undercutting and mass wasting.

Proposal: Reduce Ravine Runoff:

Based on this analysis, it is suggested that the Lower Minnesota River Watershed District work with partners to advance a legislative agenda focused on reduction of runoff and soil erosion from ravines. Not only are ravines a major source of runoff to the main channel; most of the solutions do not entail removal of significant acreage from crop production. This proposal promotes a "treatment train" approach to deal with high-rainfall events by implementing a set of practices within the ravine catchment, ravine head, ravine/cropland interface and in the ravine itself. Local technicians should design the treatment train to control runoff and ravine erosion from events which exceed the current WASCOB design standard. The goal is to integrate multiple conservation efforts to keep pace with the trend of higher, more intense, rainfall events.

The Minnesota Legislature should support the following incentives to encourage adoption of a treatment train approach to ravine erosion control:

- Catchment incentives.
  - Identify wetlands within ravine catchments as **priorities for restoration** with state and federal funding.
  - Create a **Conservation Reserve Enhancement Program (CREP)** for wetland restoration within ravine catchments. CREP combines state funding from the Reinvest in Minnesota (RIM) program with the federal CRP to purchase permanent easements from participating landowners.
  - Fund **incentives for cover crops** followed by no-till or strip-till planting of row crops within ravine catchments.

- Cropland/Ravine interface incentives.
  - Based on experience in the Seven Mile Creek watershed, promote implementation of **perennial vegetation buffers** to square off fields along the ravine/cropland interface. Dedicate state CRP acreage and funds to implementation of Minnesota CP-38E from the CRP continuous signup program.

- Ravine Head incentives.
  - Establish ravine heads as a priority location for WASCOB (CP-638) structures.

    - Use state funds to cover part of federal cost-share requirements.
    - Provide **additional technical assistance** to One Watershed/One Plan joint powers organizations and soil and water conservation districts to implement WASCOBs and related best management practices. Consider providing such support through existing regional Soil and Water Conservation District technical joint powers boards.

- In-Ravine incentives.
    - Where establishment of ground cover on ravine side slopes appears practical, provide technical assistance and cost-share to establish perennial vegetation.

In addition to these incentives, the legislative program should fund educational and promotional resources for use by local units of government, as well as a regional information-education campaign to raise awareness of the importance of controlling ravine erosion, and resources available to landowners.

Impact

Ravine erosion has not received the attention proportionate to its impact locally and downstream in the Minnesota River basin. Addressing this widespread but largely hidden problem needs to be considered on the same level as the related issue of wetland restoration as a means of reducing runoff and abating flooding problems. This proposal, if adequately funded, would begin to treat ravine erosion as a serious environmental concern with downstream ramifications as well as local impacts. It would provide economic incentives for a menu of options to fit each individual situation. If successful, it would begin to normalize the practice of controlling runoff from ravines, reducing erosion of farmland at field edges, with often minimal need to use up cropland to implement conservation practices. For example, six acres of land would provide a mile-long 50-foot-wide buffer strip at the ravine/cropland interface, far more than most projects require. WASCOBs often take up little or no farmland. While cumulative impacts are difficult to estimate, each project by design would contain runoff from events of a once in ten years frequency, and often of more extreme events, based on the treatment train approach. A focus on regions of high ravine density, such as the Greater Blue Earth, Middle Minnesota and Lower Minnesota watersheds would expedite achievement of measurable results in stream flow and sediment loss.

Testimony to the Lower Minnesota River Watershed on
1-8-25
From Scott Sparlin, Executive Director, Coalition for a Clean Minnesota River, and Coordinator/Facilitator for the Minnesota River Congress.

My name is Scott Sparlin, I live in the heart of Minnesota River Valley in New Ulm, Brown County. The organizations I work for (The Coalition for a Clean Minnesota River-The Minnesota River Congress) have been advocating on behalf of clean water and our state's namesake river watershed for the past 36 years.

We are recommending two critical actions for consideration by the Lower Minnesota River Watershed District that when accomplished will improve multiple natural and scientific conditions in the river for both the short term and the long term.

The first of the two recommendations is to join with others who are currently legislatively advocating for appropriations for our new state Water Quality and Storage Program. We ask that you urge your Legislative Advisor to seek out and work with others who have engaged in this effort already. Also the Legislative Advisor should aggressively work on behalf of the Watershed District specifically, emphasizing the role the district plays in keeping the lower 25 miles of the river open to barge traffic related businesses via dredging responsibilities and expenditures. The Board of Water and Soil Resources will be recommending 50 million dollars over the next biennium and that is the amount others are initially working with.

The Second of the two recommendations is for the Lower Minnesota River Watershed District to join efforts currently underway in creating a Minnesota River Basin Commission/Management Board. We advise the board to support the effort in every way appropriate including directing your Legislative Advisor to collaborate with those supporting entities and organizations who seek to see this action come to fruition. Since the dissolution of the former Minnesota River Board in 2014, we, along with a growing group of others, feel this has become a very apparent missing component needed in order to address the multiplicity of systemic issues that affect the river's general conditions. The following testimony lays out how this initiative to create the entity we are recommending you become part of, came to be.

In 1988 an extensive study of the Minnesota River began at the direction of the Minnesota Pollution Control Agency (MPCA) called the Minnesota River Assessment Project. After 2 years of comprehensive scientific study it revealed what firsthand observers had already intuitively anticipated, a severely polluted river system.

Subsequently in 1990 Minnesota Governor Arne Carlson directed the MPCA to begin a two-year planning process called the Minnesota River Implementation Project. This

process was designed to create and develop actions which would result in the improvement of water quality conditions in the main stem and thirteen tributary watersheds. Those assembled by the MPCA represented a diverse cross section of stakeholders and citizens called the Citizens Advisory Committee (CAC). After 2 years of scientific presentations and extensive debate the committee produced a set of 10 recommendations for action.

One of the ten recommendations was to establish a Minnesota River Commission whose charge would be to ensure government accountability and citizen participation in meeting Minnesota River cleanup goals. The first charge of the new commission would be establishing goals for the cleanup effort. Here is the actual wording from the report, (It is hoped that this report and the work of the Minnesota River Assessment Project will guide and expedite the planning efforts of the Commission.) The board would also provide a broad oversight of major agency activities related to the Minnesota River and facilitate inter-agency cooperation. Further the board would evaluate the effectiveness of expenditures. They would also advocate for and educate people about the river and the restoration effort. Another responsibility would be to hold an annual event on the state of the river. The Commission would not be involved in the day-to-day operations of agencies but would have access to information and the decision-makers within those agencies. In addition to being accountable to the citizens of Minnesota, the Commission would also report to the Governor and the Legislature.

In 1994 Senator Dennis Frederickson introduced a bill in the Minnesota Legislature of which I testified on behalf of, to establish the Minnesota River Commission. The components of that bill are reflected in the Citizens Advisory Committee recommendation which accompanies this document. Although it has been 30 years since that time, many of the elements and components from that bill need to be options under consideration today.

During that same session of the Legislature of which that bill was introduced, another bill had been introduced to create a different entity of which membership consisted exclusively of one County Commissioner from each of the 36 counties of the Minnesota River Basin.

The state was quite willing at the time to turn the responsibility over to counties to see what they would do about the pollution challenges the river had at the time. Subsequently the county entity structure idea passed and the Minnesota River Commission bill failed. The Minnesota River Basin Joint Powers Board was then created and signed into law.

Fast forward to 2014, after 20 years of existence, 2 years of planning and even providing a way forward with funding options, the counties decided to call it quits and turn the responsibility of reducing pollution and damages caused in the Minnesota River

Watershed over to the State of Minnesota. Since that time there has been no attempt by the State of Minnesota to comprehensively and collectively address the complicated diversity of issues that are associated with the watershed.

That brings us to today. We have reached a water management crisis in the Minnesota River Watershed. Due to land use practices both urban and rural we continue to experience increased losses to infrastructure, business, recreation and a host of other societal costs which are at an unacceptable rate and putting many Minnesotans at varying degrees of risk. Exacerbating this condition is the climatic trend and future prediction of increased rainfalls in short periods of time. Flood rates from Summer rainfall now contribute more to flooding than normal spiring snowmelt. The combination of all these factors leads first to small and medium sized tributary streambank erosion. Then the dislodged sediments combined with the increased rate flows enable even more sediments and nutrients to be delivered to our lakes, major tributaries, and main stems where they then flow downstream to the Mississippi River, Lake Pepin and ultimately the Gulf of Mexico.
The time to get serious about this at a state level is long past due. That is why we feel it is time to create a Minnesota River Management Board that reflects a true cross-section of greater public representation than what was attempted prior. The makeup of the management board is certainly up for discussion/debate; however our network believes strongly that citizen membership should make up at least half of the voting membership. This was clearly reflected in feedback we received from our 16th Minnesota River Congress event held in June of this year.

I will close my testimony today by adding that the Water Quality and Storage Program which is administered by the Board of Water and Soil Resources is receiving high levels of interest from landowners in the Minnesota Basin and is asking for 50 million dollars per biennium appropriations from the legislature. Our network urges the Lower Minnesota River Watershed District to advocate for support the program and the request to the fullest extent possible.

ESTABLISH A MINNESOTA RIVER COMMISSION TO OVERSEE RESTORATION

Rationale

A new institutional structure is needed to ensure government accountability and citizen participation in meeting Minnesota River cleanup goals. The Citizens' Advisory Committee proposes the creation of the Minnesota River Commission.

Action Plan The functions of the Commission will include:

- Establishing goals for the cleanup effort. (It is hoped that this report and the work of the Minnesota River Assessment Project will guide and expedite the planning efforts of the Commission.)
- Providing broad oversight of major agency activities related to the Minnesota River and facilitating inter-agency cooperation.
- Evaluating the effectiveness of expenditures.
- Advocating for and educating people about the river and the cleanup effort.
- Holding an annual conference on the state of the river.
- The Commission will not be involved in the day-to-day operations of agencies, but will have access to information and the decision-makers within those agencies. In addition to being accountable to the citizens of Minnesota the Commission will report to the Governor and the Legislature.

The following structure is recommended.

Citizens-These members should be chosen to represent the diversity of interests in the river basin farmers, businesspeople, educators, and conservationists. These citizens should be knowledgeable about and actively interested in the Minnesota River. To convince the general public that the Commission is not just another government agency, it is essential that at least half the members of the Commission come from this group.

Local organizations

These members should be elected officials or agency staff who have already been working to clean up the river and who have been cooperating with other local organizations in that effort.

State agencies

These members should be the Commissioners or Deputies of agencies directly involved in Minnesota River issues, including MPCA, BWSR, MDA, and MDNR. In addition, one or more top representatives from Minnesota Extension Service (MES) or the University of Minnesota should be included.

Dakota communities

Members should include representatives of the Shakopee Mdewakanton, Lower Sioux, Upper Sioux, and Prairie Island Dakota communities.

Costs The costs, estimated at $100,000 per year, will include staff and administrative support as well as per diem expenses for Commission members.

Potential Operations Considerations for Minnesota River Management Board
(what would/could it do/provide for?)

These are draft ideas

- A hearing communications setting and opportunity, to consider and identify basin specific systemic water management process changes needs. Subsequent policy change/modification considerations for recommendation to all accountable implementing state and/or local entities. A place to present high profile sets of circumstances as an example of what potential large scale actions need to be set in motion to affect a more desirable outcome.
- Coordination and up to date information sharing among all participants and provide for regular public outreach communications of all forms of public media.
- A potential for scale sized partnerships to accomplish basin-wide positive outcomes for multiple interests.
- The potential to collectively develop innovative basin-wide initiatives for needed major funding proposals.
- A chance for state agencies to show/report they can work together to accomplish a goal which has been a state focus of interest since 1988.
- A chance for innovations coming from the private sector to showcase outcomes related to water quality/quantity condition improvements.
- A place for the public to have truly relevant questions directed appropriately and answered.

Potential Structure Makeup Considerations
These are from the 1994 recommendations

The following structure is recommended.

Citizens-These members should be chosen to represent the diversity of interests in the river basin farmers, businesspeople, educators, and conservationists. These citizens should be knowledgeable about and actively interested in the Minnesota River. To convince the general public that the Commission is not just another government agency, it is essential that at least half the members of the Commission come from this group.

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Dakota communities

Members should include representatives of the Shakopee Mdewakanton, Lower Sioux, Upper Sioux, and Prairie Island Dakota communities.

Other potential member organizations to consider for inclusion
(A list for discussion on membership makeup and size)

Minnesota State University Mankato, Water Resources Center
Minnesota Farmers Union
MN Corn Growers Assn.
MN Soybean Growers Assn.
MN Cattlemen's Assn.
Land Stewardship Project
Minnesota Soil Health Coalition
Izaak Walton League (UMRI)
Ducks Unlimited
Pheasants Forever
MN Fish
The Coalition for a Clean Minnesota River
Clean Up our River Environment
Friends of the Minnesota Valley
Minnesota Center for Environmental Advocacy
Lake Pepin Legacy Alliance
MN Conservation Federation
Anglers for Habitat
Mankato Paddling and Outing Club
Retired Land Engineers

Minnesota Watershed Dist. Mgrs.
County Commissioners
US Fish and Wildlife Service
Area 2 Joint Powers Board
Redwood Cottonwood Rivers C A
US Army Corps of Engineers
Conservation Minnesota
MN Well Owners Assn.
MN Wastewater Operators Assn.
Catholic leadership representation
Lutheran leadership representation
Faith Community representation
Districts 5 and 6 SWCD Reps.

(Could these be categorized and specialized?)

Comments to the LMRWD from River Watch, Program of Friends of the Minnesota Valley

Hello, my name is Tom Crawford, Program Director for Friends of the Minnesota Valley River Watch. My organization is dedicated to preparing future scientists and stewards with the skills and knowledge they need to become clean water advocates.

My organization has three recommendations for the Lower Minnesota River Watershed:

1. The LMRWD takes on responsibility as the legal advocate for the well-being of the downstream communities on the county, and state levels.
2. Further expand funding for educational programs related to the hydrology of the Lower Minnesota River and its tributaries.
3. Become the primary advocate for reducing the negative effects of chloride on the Minnesota River, with a specific focus on getting local organizations into the Smart Salting training by the MPCA.

Recommendation 1

Problem: The Minnesota River is considered impaired on a number of water quality metrics including sediment and nitrate. These problems compound the further downstream you travel. All of the communities along the Minnesota River are connected and those downstream are highly impacted by water management practices of communities upstream. Currently there is no entity responsible for representing the welfare and interests of the Minnesota River's downstream communities as they bear the brunt of upstream water management practices that exacerbate damages from pollution and flooding (widespread public and private agricultural drainage for example).

Solution: The Lower Minnesota River Watershed District is positioned to take on the role as legal advocate (or responsible government unit) to work towards mitigating or eliminating the negative impacts on our downstream communities that are clearly caused by the water management practices of upstream entities.

Outcome: The Lower MN River Watershed District works with upstream watershed districts to eliminate and mitigate the downstream impacts of their water management plans, policies, and current practices. If there is a lack of cooperation, litigation may become necessary to ensure the health and well-being of downstream communities are not being ignored and written off.

Recommendation 2

Problem: Within the Minnesota River Valley, there are a number of wonderful conservation organizations focused on the current and future health of Minnesota's waters. There is not, currently, a well funded entity with a focus on educating the LMRWD's students on the importance of water science and conservation. The LMRWD has taken important steps to improve this problem in the short term, however, I would like to see an even greater investment in education in the Lower Minnesota River Region, since water is the most important resource on our planet and it will take the collective awareness and skills of all people in the region to ensure the safety and sustainability of our water resources.\

Solution: This problem can be approached in a few ways. A decentralized model would have the LMRWD's allocate more money towards funding existing educational programs in the region. A centralized model would have the LMRWD expand its own education and outreach programs to include full time educators that can cover the region's schools and grow awareness through community events based around water recreation, changes in the river basin, water science demonstrations, science camps etc.

Outcome: The ideal outcome is that all students in the region experience at least one event hosted by the LMRWD that highlights some combination of water science, river history, personal action, ongoing clean water efforts, careers in the water sector, or possible solutions to problems facing the Minnesota River. We, as a species, rely on water, and we need a strong push to become riverside communities invested in the health of our river.

3815 American Blvd E
Bloomington MN 55425
mnvalleyrefugefriends.org
763-264-7592

Date

November 18, 2024

Lower Minnesota River Watershed District:

The Minnesota Valley Refuge Friends Inc. is a non-profit organization established to protect the integrity of the Minnesota Valley National Wildlife Refuge, increasing public understanding and appreciation of the Refuge, conducting educational and information programs to develop knowledge of the Refuge and to stimulate public and private decisions making and action to improve the quality of the Refuge.

The activities of the Lower Minnesota River Watershed District (District) are important and are critical to the long-term environmental health and water quality of the Minnesota River. The plants, fish and wildlife of the Minnesota River, its bluff lands and associated wetlands depend on the oversite and action of the District. We share and applaud your work to protect, preserve and make wise use of the ground and surface waters of the Lower Minnesota Valley.

One immediate area of concern that we share is the proposed realignment and restoration of the Ike's Creek spring fed stream which feeds into the Long Meadow Lake Marsh Unit of the Minnesota Valley National Wildlife Refuge. The U.S. Fish and Wildlife Service (Service) proposes to restore the geomorphology of the creek to enhance brook trout habitat and improve the creek's water quality.

To accomplish this goal, the Service proposes to remove old water control structures, culverts, stone and concrete walls and pipes that have been constructed over the past 80 years to facilitate fish rearing. The proposed action will restore fish connectivity between the Minnesota River (via the Long Meadow Lake Marsh), to the spring fed creek, while maintaining public access and enjoyment of the wildlife of the area.

We fully support this proposed action and encourage the District to provide financial, logistical and planning help to make this restoration a model of agency cooperation. The benefits to the fish, wildlife and people who enjoy the resources of the Refuge are enormous. The District has identified Ike's Creek and its surrounding environment as a high value resource area, we encourage your direct support for the Service's proposed restoration plan.

We appreciate your efforts to educate the public on the protection of Ike's Creek by creating educational/informational signage along the creek. And we appreciate your working with adjacent landowners on tools to reduce snow, silt and salt products from entering Ike's Creek.

We also support your development of rules to govern soil erosion and sediment control, floodplain and drainage alteration, stormwater management, and the development on steep slopes within the boundaries of the District. We support your identification of high-level resource areas and bluff protection efforts.

The Minnesota Valley Refuge Friends Inc. look forward to working with the Service and the District to help improve the natural resources of the Lower Minnesota River Valley.

Tom Worthington
Vice President
Minnesota Valley Refuge Friends, Inc.

SHAKOPEE

November 27, 2024

Lower Minnesota River Watershed District
112 5th Street East, Suite 102
Chaska, MN 55318

Re: Lower Minnesota River Watershed District – Testimony for 2025 Legislative Agenda and Contribute to Actionable Solutions.

Watershed Board and Staff:

Thank you for the opportunity to provide written testimony on the 2025 legislative agenda and contribute to actionable solutions request. Thank you for your partnership to the city on several past and current projects including the Shakopee Minnesota Riverbank Stabilization project, Lewis Street Parking Lot Underground Infiltration project, Ridge Creek Park Stream Restoration project, Downtown Shakopee Water Quality Study, and chloride reduction initiatives including a brine system and weather station. On behalf of the City of Shakopee, please accept the following comments.

Problem 1: There is significant erosion along the Minnesota River streambanks and within the watershed along tributary streams, gullies and steep slopes/bluffs. Erosion causes damage to property and infrastructure and is a sediment source which carries pollutants impacting water quality and the need to dredge the Minnesota River.

Solution 1: Work with community partners on projects to stabilize erosion along the Minnesota River streambanks, tributary streams, gullies, and steep slopes/bluffs. Continue project support for the Shakopee Minnesota Riverbank Stabilization project through partnership and funding from the Lower Minnesota River watershed cost share program, grants and bonding. Policy is in place within urbanized areas to mitigate impacts from new development that may cause erosion issues. There are many unique situations that can lead to erosion issues within the watershed, however continued support of projects through partnerships and funding from bonding, grants and/or cost share programs is recommended. Advocate for policy changes in the greater Minnesota River Basin at the state level to reduce Minnesota River flooding and corresponding river velocities that lead to local Minnesota River streambank erosion.

Outcome 1: Minnesota River streambanks are stabilized and protect public infrastructure. Improved water quality from stabilized streambanks, gullies and steep slopes/bluffs. Reduction in river dredging activities.

Problem 2: Flooding causes damage to city infrastructure and impacts access of infrastructure during and after flood events. Major flooding can have significant financial costs to repair damage and to restore infrastructure during and after floods. There are significant impacts on traffic when there are road closures, including river crossings, which result in increased traffic delays along US HWY 169.

Solution 2: To reduce regional flooding issues (Minnesota River flooding), advocate for regional solutions in the greater Minnesota River Basin like flood storage reduction projects and policy changes at the state level to reduce Minnesota River flooding. Policy is in place

within urbanized areas to mitigate impacts of flooding from new development. To reduce flooding along tributary streams within the watershed, support community partners in addressing these issues. Support through partnerships and funding from bonding, grants and/or cost share programs.

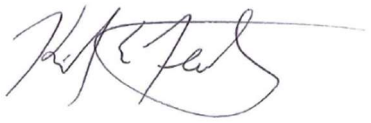
Outcome 2: Reduction in flood frequency/severity and decrease of impacts to infrastructure and traffic.

Problem 3: There are water quality impairments to the Minnesota River, tributary streams, lakes and wetlands throughout the watershed. Many of the impairments are from nutrients, turbidity, bacteria and chloride.

Solution 3: There is policy in place within urbanized areas to mitigate impacts from new development that may cause impairments. Where impairments exist, work with community partners on projects to reduce pollutants and work towards achieving any state required reduction goals. The city of Shakopee partnered with Lower Minnesota River Watershed District to complete a water quality feasibility study of the Downtown Shakopee area. Several projects were identified in the study to reduce sediment and nutrients of which two projects have been constructed and a third is planned. Support erosion stabilization projects which reduce sediment and initiatives to reduce bacteria and chloride. Continue support for implementation of water quality improvements through partnerships and funding from bonding, grants and/or cost share programs.

Outcome 3: Water quality is improved to the Minnesota River, tributary streams, lakes and wetlands throughout the watershed.

Regards,



Kirby Templin, PE
Water Resource – Environmental Manager

C: William H. Reynolds, City Administrator
Alex Jordan, City Engineer

Gmail Lower Minnesota River Watershed District <lowerminnriverwd@gmail.com>

Jan. 8 Listening Session - Comments from Eagan

1 message

Jenna Olson <jenna.olson@eaganmn.gov> Thu, Dec 19, 2024 at 12:17 PM
To: Lower Minnesota River Watershed District <admin@lowermnriverwd.org>
Cc: Brian Leyendecker <brian.leyendecker@eaganmn.gov>, Gregg Thompson <gregg.thompson@eaganmn.gov>

Dear Board Members,

Thank you for the opportunity to provide feedback to the Lower Minnesota River Watershed District, ahead of the January 8th listening session. My name is Jenna Olson, and I serve as the Water Resources Manager for the City of Eagan. I am writing on behalf of the City, following our recent annual check-in with staff from the Watershed District.

During our annual check-in, staff requested feedback on ways the District could provide more effectve support to Eagan. While we have no concerns about the support we currently receive, one opportunity did come up related to coordination with the railroad. As you are aware, Eagan and several other communities within the District are bordered to the west by rail lines owned and operated by Union Pacific. Beyond these rail lines is DNR property, and ultimately the Minnesota River. The State-owned property includes several sensitive natural resource areas, including multiple fens.

The City is responsible for several culverts along the rail corridor. Maintaining these structures is critical, as they provide hydrologic connectivity between water resources in the City, and the floodplain / wetland areas along the river. Unfortunately, the railroad is notoriously difficult to coordinate with – which makes conducting even simple maintenance activities nearly impossible.

Our request is for the Lower Minnesota River Watershed District to help facilitate a be er working relationship between the railroad and the communities that border it within the District. As a major landowner within a critical resource area, it is in everyone's best interest to bring Union Pacific to the table as a collaborator. Further, the infrastructure at issue is vital to the integrity of the rail lines themselves – lines that are at times supporting rail cars carrying materials that could pose a risk to the environment if released.

Again, we appreciate the opportunity to provide comments to the District, and look forward to continuing our shared commitment toward environmental protection in the future.

Sincerely,

Jenna Olson

Water Resources Manager

City of Eagan – Department of Public Works

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Lower Minnesota River Watershed District (LMRWD) Public Listening Session 08 January 2025

Problem – Ike's Creek, the only Stream in Hennepin County with Trout is at risk.

Ike's Creek a groundwater/spring fed stream with its headwaters in Bloomington's Forest Glen Park across the street from the Mall of America is a hidden, little-known jewel. Downstream of the Park, it flows through the private property of Kelly Farm and then through MN Valley National Wildlife Refuge into Long Meadow Lake. The spring supplies Ike's Creek with a consistent, high-volume supply of cold water *(See Figure #1)*. But, in personal communications with both Linda Loomis from Lower MN River Watershed District and Vicki Sherry from MN Valley National Wildlife Refuge (MVNWR), both awareness and support of this fragile ecosystem is needed before water quality deteriorates to the point that it no longer supports the resident Brook Trout.

Figure #1 Ike's Creek and surrounding properties. Source: Screen capture from Vicki Sherry's presentation delivered Nov 2023 to City of Bloomington's Sustainability Commission.

Good News:

- The MVNWR released an Environmental Assessment (EA), MVNWR EA document, last month (October 2024). The MVNWR is proposing to initiate a 2025 project to enhance the habitat for existing brook trout and improve the water quality for their portion of Ike's Creek.
- Buckthorn removal in Forest Glen Park has begun by volunteers in coordination with the City and the non-profit, Bloomington Neighbors Nurturing Nature (BNNN). And a plan for complete restoration has been proposed (See Figure 2):
  - Plant &/or seed native grasses & forbs in Phase 1 area that will thrive on a south facing slope.
  - Remove invasives in Phase 2 & 3 areas, and plant/seed natives good for the north slope area.
  - Restore, as possible, the area to 1800's biome of Oak Openings & Barrens (See Figure#3).
  - Ensure appropriate maintenance of the entire area, ensuring Ike's Creek has correct vegetation nearby to help shade and keep water temperature below 70F.

Problem – Ike's Creek, the only Stream in Hennepin County with Trout is at risk. (continued)

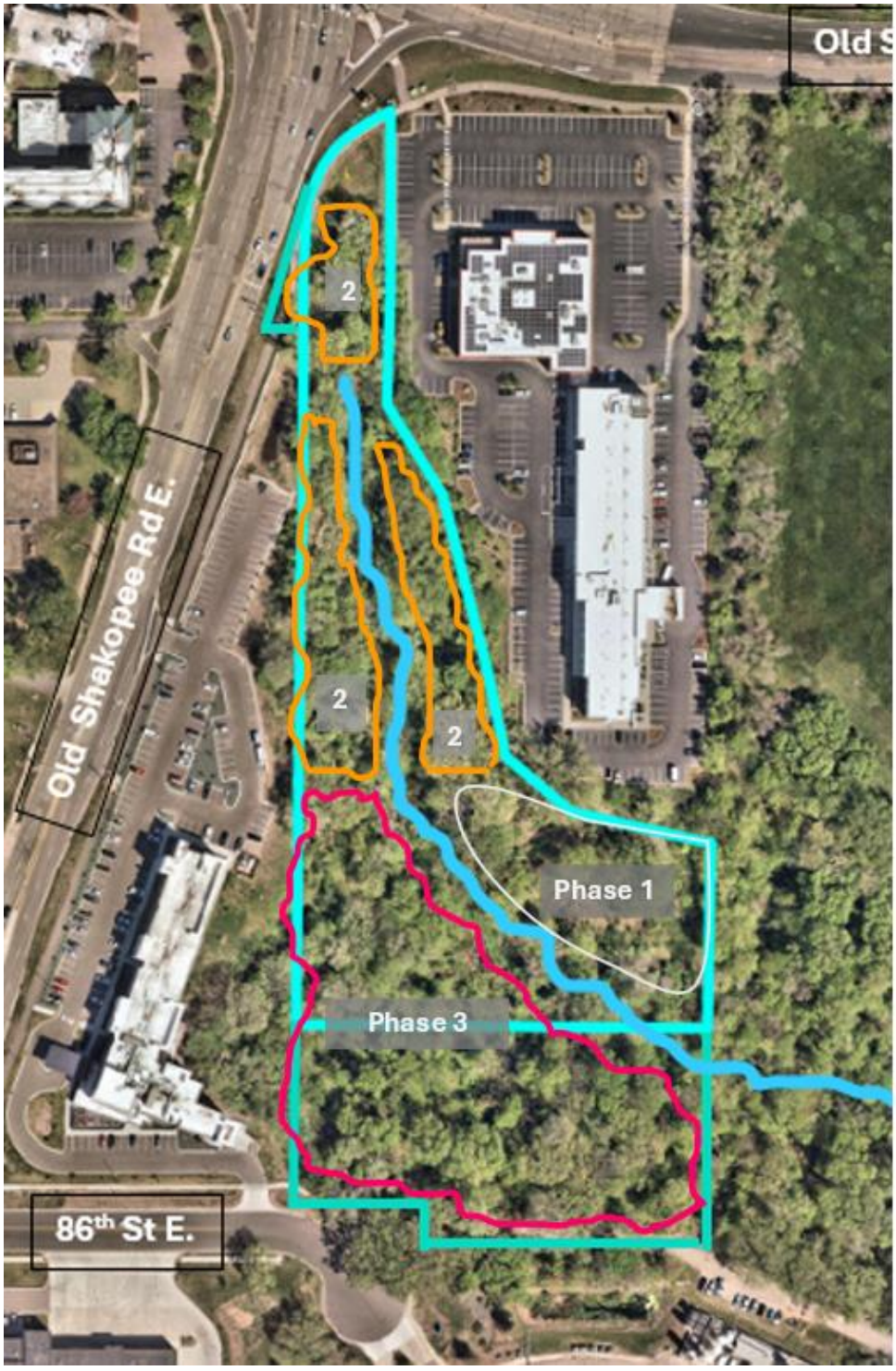

Figure #2. Detailed map of a 3-phase effort to restore a natural biome to Forest Glen Park.

Bad News:

- MVNWR proposed 2025 project for Ike's Creek only addresses US Fish and Wildlife Service property.
- The City of Bloomington has no funding nor staff to complete the 3-phase plan in Forest Glen Park.
- The work being done in the MVNWR is at risk of being degraded if attention is not given to Forest Glen Park.

Problem – Ike's Creek, the only Stream in Hennepin County with Trout is at risk. (continued)

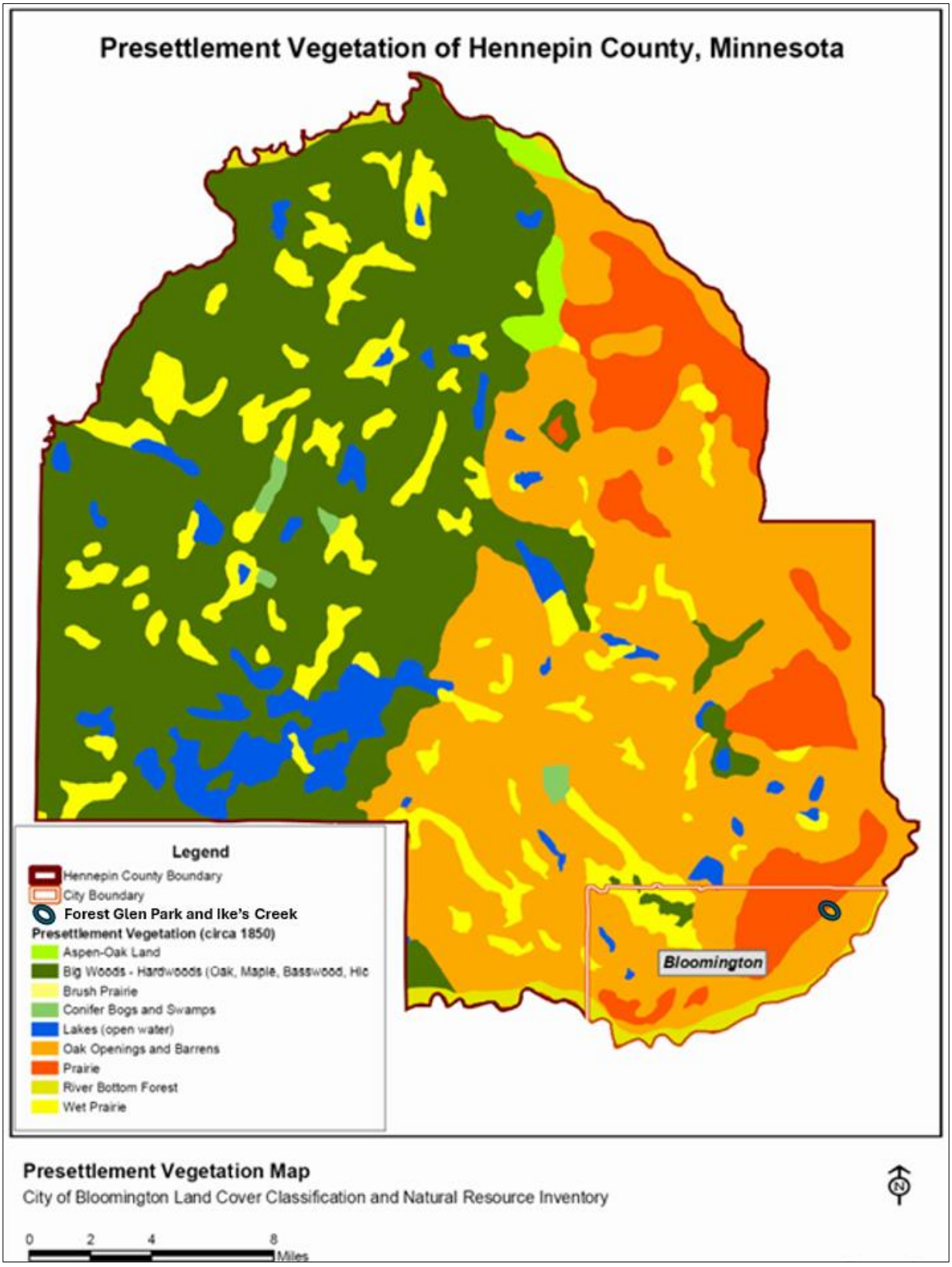

Figure #3. Pre-settlement Vegetation of Hennepin Co. with Forest Glen Park and Ike's Creek located.
Source: *Natural Resources Inventory of the City of Bloomington, Minnesota - 2007.*

Solution – Address the entire extent of Ike's Creek restoration

- Ensure the MVNWR proposed 2025 project for Ike's Creek on US Fish and Wildlife Service property is implemented.
- Support the 3-phase plan in Forest Glen Park with a funding solution.

Outcome – The degradation risk of Ike's Creek water quality will be greatly reduced.

Tom Fahey, Master Naturalist and Group Volunteer Coordinator for both BNNN & MVNWR

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