

## Clean Water Council Meeting Agenda

Monday, October 21, 2024

9:00 a.m. to 2 p.m.

**IN PERSON with Webex Available (Hybrid Meeting)**

### 9:00 Regular Clean Water Council Business

- **(INFORMATION ITEM)** Introductions
- **(ACTION ITEM)** Agenda - comments/additions and approve agenda
- **(ACTION ITEM)** Meeting Minutes - comments/additions and approve meeting minutes
- **(INFORMATION ITEM)** Chair, Committee, and Council Staff update
  - Policy Committee Update
  - Budget and Outcomes Committee Update
  - Ad Hoc Outreach Group Update: **Progress on responses for Public Input**
  - Staff update
    - Proposed meeting calendar for 2025
    - Story map demonstration

### 9:45 **(ACTION ITEM)** Review and Possible Approval of Policy Statements from Policy Committee

### 10:30 BREAK

### 10:45 **Goal of Protecting and Restoring 200,000 Acres in Upper Mississippi River Headwaters**

- Pete Jacobson (DNR fisheries, retired)
- Dan Steward (BWSR, retired)
- Melissa Barrick (Crow Wing SWCD district manager and TSA8 manager)
- Mitch Brinks (TSA 8 GIS Specialist).

### 12:00 Lunch

### 12:30 Continued Discussion on Upper Mississippi Headwaters and/or Road map for 2025 Clean Water Council activities

### 1:45 Public Comment

### 2:00 Adjourn

**Steering Committee Meets Directly After Adjournment**

## Clean Water Council

### September 16, 2024, Meeting Summary

**Members present:** John Barten (Chair/Lakes and Streams Nonprofits), Steve Besser (Fishing Organizations), Rich Biske (Vice Chair/Environmental Organizations), Dick Brainerd (Municipalities), Gary Burdorf (Townships), Gail Cederberg (Met Council), Steve Christenson (Business Organizations), Tannie Eshenaur (MDH), Warren Formo (farm organizations), Brad Gausman (Hunting Organizations), Kelly Gribauval-Hite (Business Organizations), Justin Hanson (BWSR), Holly Hatlewick (SWCDs), Rep. Josh Heintzeman, , Annie Knight (Environmental Organizations), Sen. Nicole Mitchell, Jason Moeckel (DNR), Ole Olmanson (Tribal Governments), Jeff Peterson (UMN), Peter Schwagerl (Farm Organizations), Glenn Skuta (MPCA), Marcie Weinandt (Watershed Districts), and Jessica Wilson (Municipalities).

**Members absent:** Rep. Kristi Pursell, Sen. Nathan Wesenberg, Peter Kjeseth (MDA)

**Others present:** Paul Gardner (CWC), Brianna Frisch (MPCA), Jen Kader (Met Council), Chris O'Brien (Freshwater), Jan Voit (MN Watersheds), Jeff Anderson (Voyageurs Project), Margaret Wagner (MDA), Trevor Russell (Friends of the Mississippi River), Angelica Anderson (Nature Conservancy), Annie Felix-Gerth (BWSR), Judy Sventek (Met Council), Brad Jordahl Redlin (MDA), Sheila Vanney (MASWCD), Jamie Meyer (Bois de Sioux Watershed District), LeRoy Ose (Red River Watershed District), Molly Jansen (Red River Watershed Management Board), Danielle Isaacson (MDA), Alex Trunnell (MN Corn Growers), Chris Meyer (Freshwater), Jim Stark (SWMP), Amy Zipko (MN House of Representatives), Jody Brennan (Scott County)

To watch the Webex video recording of this meeting, please go to <https://www.pca.state.mn.us/clean-water-council/meetings>, or contact [Brianna Frisch](#).

#### Regular Clean Water Council Business

- Introductions
  - This will be Gary Burdorf's last meeting, as he will be retiring.
  - Tannie Eshenaur: Version two of [Minnesota Department of Health \(MDH\) Drinking Water Action Plan](#) is available for public input.
- Motion to approve the September 16<sup>th</sup> meeting agenda and August 19<sup>th</sup> meeting summary by Steve Besser, seconded by Dick Brainerd. Motion carries.
- Chair, Committee, and Council Staff Update
  - Policy Committee Update
  - Budget and Outcomes Committee Update
  - Ad Hoc Outreach Group Update: Categorizing Responses for Public Input
    - The meeting packet contains an executive summary for the response to public input. There are also ten key takeaways overall. People can see where their public comment goes after they provide it.
  - Staff update
    - The story map mockup is in the works and will likely be ready for a first view by the next meeting.
    - A document on federal matching requirements is included in the meeting packet.

#### Budget & Outcomes Committee Report on Clean Water Fund Recommendations FY26-27 (Webex 00:34:00)

- At the Budget and Outcomes Committee (BOC) meeting on September 6, 2024, the BOC developed their budget recommendations for FY26-27. These addressed two scenarios. If the budget is lower than expected (to about \$15 million) or higher than expected (to about \$34 million). The recommendations align with the Clean Water Council's Strategic Plan, provide an increase in seven key programs, and balance about ten million in increases in the Watershed-Based Implementation Funding (WBIF) (with offsets of about ten million in reductions from conservation easement programs). Additionally, investments in the Forever Green Initiative (FGI) empower them to transform Minnesota's agricultural economy toward crops that can help protect soil and water as Minnesota transitions to Sustainable Aviation Fuel. Note, the recommendations were not unanimous (one nay vote).
- In Table 1, there are three items looking to increase in funding (FGI, Voyageurs National Park Water Quality Protection Program, and Stormwater Research & Technology Transfer Program) and two items to decrease in funding (Grants to Watersheds with Approved Comprehensive Watershed Plans (Watershed based

Implementation Funding) and Enhancing Soil Health & Landowner Adoption of Cover Crops for Drinking Water & Groundwater Protection). This will set the recommendations at the appropriate projected budget. Therefore, the BOC is recommending the Council increase the three programs by \$3.9 million and reduce the two programs by \$3.9 million, for a net result of \$307 million.

- In Table 2, the BOC recommends that these two items that were reduced in Table 1 would be the first to receive funding back if there is a greater budget than expected. This would restore \$3.977 million to two programs reduced to achieve \$307M budget, if \$310.977 million becomes available. These two items are considered the highest priority (group A) for restoring funding. Following the idea that these are the last two items to have cuts, so they should be the first two items to receive any additional funding available.
  - *Comment from Gail Cederberg:* I have a concern with funding the Voyageurs National Park Quality Protection Program, considering the multiple public comments that came in asking why the Council is recommending funding for a project for sanitary sewer projects, and not a process. Is this funding going to be the end of it? We don't want to see this funding continue in the future from the Clean Water Funds (CWFs). I think it is a reasonable ask from the public. It is a big project, and I don't think it is in our charter to do that. I understand funds have gone to this before, but we should move on from it quickly.
    - *Response from Steve Besser:* That area of the state has unique geology and chemistry of the lakes. There are certain areas that need more work to complete their plans.
    - *Response from John Barten:* They are not quite close to the end. The Council also provides money for individual septic system relief in other parts of the state. So, the question is, is this different than that? Other than this is a specific project, whereas the others provide funding to the low-income programs (like the subsurface sewage treatment systems (SSTS) program).
    - *Gail Cederberg:* If it is going to continue to provide funding for specific locations versus through a Minnesota Pollution Control Agency (MPCA) program pass through for equity program, it is very different. If we are looking at four more years of this, we will continue to get these comments. I think we need to suggest they look elsewhere for their funding. We really need to monitor what this funding is going to do with this project. A system can be placed in a property like a hotel, and then they could sell it after, and we paid for some of that private property development. We need to be aware and be careful.
    - *Paul Gardner:* When the Voyageurs folks were asked if they would continue to request funding from the CWFs until the CWF sunsets, they did reply that they would continue until then.
    - *Steve Besser:* The Legislature places the funds in the CWFs each budget cycle. We thought we would jump the punch and place the funding in the recommendations, so we have a little more control over where those funds are being pulled from.
    - *John Barten:* It may be prudent for us to have further conversations about other funding.
  - Marcie Weinandt: Regarding WBIF funding, with the additional watersheds that have their plans approved, would they continue to receive the same amount of funds, or do they get less?
    - *Answer from Steve Besser and Steve Christenson:* It should be stable. It is an overall increase, to help cover the new ones coming on. Based on the current predictions, it should be little impact.
    - *Justin Hanson, Board of Water and Soil Resources (BWSR):* Annie Felix-Gerth (BWSR) ran the numbers. It is important that we get the minimum \$90,000. The BOC has been wrestling with this item, recognizing it is important, and looking at programs that needs to be funded if additional funding becomes available; This is one of them.
- In Table 3, they have a list of recommended priorities for increases if the revenue forecast exceeds \$310.977 million. This is group B, also of high priority. The Council can select programs for any additional funds.
- Holly Hatlewick: The root of my "nay" vote it was that the ICT provided the numbers and recommendations based on a thoughtful process. I felt it was important that those numbers hold true, compared to our decisions as a Council. When you work from the local government, and you are provided funding, if that funding is a lot more than expected, if you don't spend the total amount, you may not receive as much the next budget cycle. You must show the need, and you must spend the funds. So, I want to express that was my logic and thought process behind my decision. There is value in all these pieces moving together.

#### **Adoption of Initial Clean Water Fund Recommendations for FY26-27 (Webex 01:30:00)**

- Steve Christenson: I have a motion for the Clean Water Council to endorse the BOC recommendations for:

- Supporting \$3.9 million in budget increases for three items offset by \$3.9 million in budget reductions for two items, as detailed in the meeting packet (Table 1).
- Restoring \$3.9 million in funding for the two items in Group A (Table 2) of the packet as the highest priority, if additional funds become available; and
- Adopting Table 3 as a menu of recommended priorities for increases if revenues exceed \$310.977 million, subject to right of revision to Table 3 at the December meeting.
- Empowering the Clean Water Council Chair and staff to work with the ICT Chair on up to \$1.3 million in adjustments and reconciliations to properly account for the \$1.3 million in unspent funds.
- *Motion seconded by Dick Brainerd.*

*Discussion/Comments/Questions:*

- Brad Gausman: I am asking for a friendly amendment that Table 3 is left out of this motion. It can be understood as a document to review, as a product of the BOC, to look forward to future funding opportunities. I think it should be a separate motion, so it is not tied to the approval of Table 1 and Table 2.
  - *Steve Christenson:* I think that would make it harder down the road. I could be persuaded, but not yet.
  - *John Barten:* If we leave it as part of the motion, in November if we have additional funding, it narrows the focus significantly. I am not sure it is a good thing or a bad thing, but we will be constrained for time. We need to finalize items at the December meeting. We will not have a lot of time to discuss final recommendations – if they are higher or lower.
  - *Marcie Weinandt:* If we decide on this preliminary budget today, is it sent anywhere? Is this an internal item? *Answer from Paul Gardner:* It is internal as we wait for the November budget forecast. Today's action helps the state agencies complete their budget sheets in October. After that, there is a "cone of silence" at MMB until the budget is released. The state agencies are supposed to match up with the CWC.
  - *Dick Brainerd:* I think it makes sense to take some action and include this menu of items.
  - *Paul Gardner:* In October and November, the BOC can add priorities to their lists, if there are about four or five items to be the top items to add additional funding for them. There is time to haggle.
  - *Warren Formo:* I appreciate the discussion. I am not going to make a motion or offer an amendment. I think we can keep it clean and vote on Table 1. I can also recognize that these tables are internal documents, and the state agencies are working on their own tables. Nothing is binding, with different budget outcomes, we will have to revisit if there are big changes in the budget forecast.
  - *John Barten:* Does it help to have the state agencies to have a short menu like this for additional funding? Or is it not helpful to submit to the Governor's Office.
    - Glenn Skuta, MPCA: We all feel differently. I think we will be going off of Table 1. For Tables 2 and 3, we will not be impacted as much. For the Council's sake, you have done a lot of work. It will help you have those final number conversations. It is only a menu.
    - Margaret Wagner, Minnesota Department of Agriculture (MDA): We will use the numbers from Table 1 (with the \$307 million budget). I appreciate Table 2 and 3. It felt better landing on that list, than not acknowledging the funding requests
    - Tannie Eshenaur, MDH: Some of us are on the ICT, and we can carry that information to them.
    - Justin Hanson, BWSR: I don't have anything else to add as input.
  - *Brad Gausman:* I do not want to move forward with an amendment. This discussion was helpful. We are continuing to work on internal documents, so I think it is important context. With time on the calendar, and items still evolving, I am fine with Table 3 being included and moving forward with a vote.
- Reminder, this motion also includes addressing \$1.3 in unspent funds for some defunct competitive grant programs at BWSR and a little bit at MDH on water reuse that has expired. MMB says that these funds aren't included in our \$307 million forecast number but it will be available to spend in the final recommendations in January. BWSR would like its funds to circulate back to the projects and practices grant program.
  - John Barten: This funding returns to the state agency with the endorsement of the Council?
  - Justin Hanson: This is the intent. It can go into projects and practices (#37).
  - Gail Cederberg: Who is doing the repurposing? They haven't spent it. I feel like the Council should decide what to do with the funding. Otherwise, it is not very transparent. If it does get returned to a BWSR project, then that is okay. However, it should be the Council's decision. The transparency is very important. *Response from Paul Gardner:* The state agencies cannot shift funding between legislative



appropriation categories. BWSR is proposing recirculating the funds for a similar intent and purpose, and asking if the Council is okay with that.

- Dick Brainerd: Given the conversation, I am wondering if it should be part of the motion. We may need to have further discussion about it with the subcommittee. *I would move to amend this motion to remove that item from the motion.* Steve Christenson: I accept that amendment to strike this part of the motion, so we can continue discussion on this topic.
- Brad Gausman: I have a friendly amendment: Regarding Table 3, the Council also realizes the larger menu of programs at our disposal and reserves the right to access the full menu of programs.
  - Steve Christenson, I think this is covered with the “*subject to finalization at the December meeting.*”
  - Brad Gausman: I would still read it as limiting the adjustment to only those listed items, and not the full access of programs. If we could have it be “*subject to right of revision*” for Table 3?
  - Steve Christenson: I agree.
- *Reminder of the motion (amended):*
  - *Supporting \$3.9 million in budget increases for three items offset by \$3.9 million in budget reductions for two items, as detailed in the meeting packet (Table 1),*
  - *Restoring \$3.9 million in funding for the two items in Group A (Table 2) of the packet as the highest priority, if additional funds become available; and*
  - *Adopting Table 3 as a menu of recommended priorities for increases if revenues exceed \$310.977 million, subject to right of revision to Table 3 at the December meeting.*

*Motion moves to a vote. There are 14 yays, and 1 nay, and so the motion carries.*

### **Big Picture Items (Webex 02:21:00)**

John Barten: Does anyone from the Council have ideas for how we can address big picture items? I want to open for discussion and brainstorm ideas. For example, Steve Christenson asked how we develop a concrete plan for protecting the hundred thousand acres in the Upper River Basin. Our Strategic Plan says to protect 400,000 acres of DWSMA, assessing barriers. We don't really have a path forward with how we would like to accomplish it. In the next year, how would the Council like to see these numbers addressed.

- Justin Hanson, BWSR: We welcome this discussion.
- Steve Besser: Next year, we can go over the Strategic Plan.
- Rich Biske: I like the idea of going over the Council's work, looking over the last fifteen years. The work is a continuation of what has been done. There is little wiggle room for adaptation, so it would be good to help think beyond that, to get to greater outcomes. We need to be able to think outside of our current box.
- John Barten: It sounds like we need to set aside some time to help direct where we are going, to look at how we can improve our work, and change to get better outcomes. Perhaps on specific outcome issues.
- Jen Kader: I want to point out the statutory outline of the Council's role. Thinking about the outcomes the Council wants to pursue on how to get from one point to the next. Additionally, thinking about which programs must stay past 2034 if the funds sunset. How do we begin shifting some of those to assist in preparing for that change if it comes.

### **Valuing State Investments in Clean Water (Report funded by FY20-21 CWF) by Dr. Bonnie Keeler, University of Minnesota (UMN) (Webex 02:34:30)**

- *An analysis of Minnesota's CWF through the lens of ecosystem services, equity, and climate change.*
- Available online <https://hdl.handle.net/11299/264063>
- This report provides insights to the Council and Legislature to help inform the remaining years of the fund, prioritize future allocations, and suggest recommendations for more efficient and equitable management.
- Research Questions:
  - Have Clean Water Fund investments led to multiple benefits? They pulled data aggregated by MPCA on CWFs statewide, investments by watershed over time. They have been developing spatial data systems, and then integrated the data. There are tradeoffs spatially across the state.
    - They also looked at seven different ecosystem services: drinking water quality, lake recreation, nutrient export, trout angling, lakeshore property value, wild rice production, and wetland bird conservation. The maps show the total amount of investments for each item. On the visual, the brown reveals high priority watersheds with high investments, while the orange reveals high priority

watersheds with relatively low investments. There is high alignment for drinking water quality and nutrient export. There is relatively low alignment with the wetland bird biodiversity and wild rice. This is a high view, there is a ton of complexity and details for how those funds are spent. An important takeaway is that you will not get all the benefits by investing in one thing. Different parts of the state are going to benefit from different investments. There is evidence that CWFs are delivering multiple ecosystem services, but better alignment for some services over others.

- Are CWF investments being implemented equitably? Why consider equity?
  - We know that the Native American households are nineteen times more likely to lack indoor plumbing than white households. About eighty-one percent of households do not test their wells at the frequency the MDH recommends. High income households are 2.4 times more likely to install treatment. Note the CWF investments and the location of federally recognized tribes. The takeaway is that there are limited CWF investments in tribal communities. They also revealed that a minority of the state population (mostly rural) received majority of CWF investments.
- How are climate and equity considered in watershed planning? This is a deeper dive into the 1W1Ps. Especially, equity and climate change considerations in the plans.
  - High quality climate projection data reveals warmer and wetter weather. This is from the University of Minnesota, available to the public. This climate projection data has been included in the 2020 State Water Plan. The researchers were curious how this impacts the watershed planning process. They reviewed all approved and submitted 1W1P (48 total). They read and coded them for mentions of climate, climate change, extreme weather, and equity considerations. They worked to identify trends across plans and exemplary plans that stood out for consideration of climate or equity.
  - They found that all reviewed watershed plans included some mention of climate change but most address it generally, rather than associating climate change with noted action items or goals. There was an increase in the consideration of climate change over time, with greater consideration in more recent plans. Only three plans incorporated data derived from climate change projection models, but not using Minnesota specific data. There were missing connections between climate change and implementation of goals or actions.
  - Regarding equity, there was no mentions of “Black, Hispanic, non-English speakers, people of color” or any other marginalized populations. There were a few mentions of “low income”. There were fourteen plans that cover areas that overlap with federal Tribal Nation reservation land; six make cursory mentions, one has no mention of equity or of Tribal nations in their boundaries. Additionally, compared to 2016 to 2020, the more recent plans (those from 2021-2024) were noted to increase attention to equity or distributional considerations.
- How will climate change affect the implementation of watershed best management practices (BMPs)?
  - They found that from 2010 to 2022 over 4.5 million acres of BMPs were installed in Minnesota. Of these, nearly 1.5 million acres were funded by CWF programs. The researchers also conducted a literature review of climate and BMP effectiveness. The main findings of the review reveal:
    - Increased precipitation may provide more frequent flow pathways for circumventing BMPs, more opportunities for nutrient or soil transport and loss.
    - Changes in atmospheric CO<sub>2</sub>, warmer temps, and extended growing seasons could improve growing conditions for plants increasing the filtering ability of cover crops and other plant-based BMPs; caveat of invasive species and pests.
    - Warmer temperature and longer growing seasons may provide better conditions for denitrifying, bacteria, and increased rates of crop residue decay.
    - Changes to precipitation patterns and temperature are likely to increase sediment and nutrient loading which may overwhelm individual BMPs, making it difficult to meet nutrient and sediment reduction targets.
- Does the CWF have sufficient resources to accomplish multiple water quality goals. The estimates are for 1.6 billion dollars left to spend until 2034. Looking at the Council’s Strategic Plan, they thought they could do a back of the envelope calculation, on the items the Council is looking to invest more funding into. Things they were able to research include:
  - Drinking water is safe for everyone, everywhere in Minnesota. Selected measure: Approximately 400,000 acres of vulnerable land surrounding drinking water wellhead areas statewide are protected

by 2034. Cost is estimated to be \$5.7 billion. Protecting 15% of low value, high vulnerability parcels would be over \$100 million.

- Surface water protection and restoration. Selected measure: Protection of 100,000 acres and restoration of 100,000 acres in the Upper Mississippi River headwaters basin by 2034. The cost of protection is estimated to be between \$84 million to \$254 million. The cost of restoration is estimated to be between \$52.7 million to \$228.5 million.
- All Minnesotans value water and take actions to sustain and protect it. Selected measure: The number of farmers and acres enrolled in the Minnesota Agricultural Water Quality Certification Program, with a target of 5,100 farms and 6.5 million acres by 2030. This would be a one-time cost of certification at \$137 million. Another selected measure was to achieve a goal of five million acres of row crop agriculture that use cover crops or continuous living cover by 2034. This would be estimated to cost \$314 million.
- Groundwater is clean and available to all in Minnesota. The selected measure are the targets for nutrients in the state's Nutrient Reduction Strategy. Another selected measure was the Nitrogen Fertilizer Management Plan, on implementing eighty percent of row crop acres (excluding soybean) by year 2030 and implementing in all remaining townships by year 2034. This would be an estimated \$85.56 million annual cost (looking at all the practices recommended).
- The findings reveal the total costs of meeting selected clean water goals is over \$6 billion, while the estimated total fund remaining in the CWFs is about \$1.6 billion (until 2034).
- Main takeaways:
  - Use demographic data when tracking investments.
  - Encourage and support watershed planners in using climate projections as part of the planning efforts.
  - Encourage watershed planners to consider how BMPs will function and be effective under changing temperature and precipitation regimes.
  - Watershed planning should integrate social and demographic data in actions and goals.
  - Insufficient projected funds to meet all stated water quality goals and the Council's Strategic Plan.

#### *Questions/Comments:*

- Steve Besser: Regarding equity, prior to the last Clean Water Council's Strategic Plan, we had various Legislators specifically ask us not to use the term equity. We talked about equity without saying equity. That may be why it has been excluded. It is troublesome when you have the purse holders telling you something. The current Legislature put in rider language to include a way to celebrate diversity.
- Tannie Eshenaur: Regarding the cost for protecting the 400,000 vulnerable acres, the only protection strategy was outright purchase? *Answer:* Correct. *Response:* Good, because that seemed completely unachievable. We have a whole sweep of protection measures. Finding the data on how acres are being protected is hard.
- Brad Gausman: Did you have conversations with the Clean Water Council as you developed this? *Answer:* It came from the Council. However, it was a conversation four years ago. I think our goal was for it to be useful to the Council. We are required to send it to the Legislature, based on the statutory language.
- Paul Gardner: In your research, did you find any other state that has been able to look at this kind of scope on cost for what it takes to solve water quality issues? *Answer:* The only other one was in Iowa, where they were looking at costs of hypoxia goals, and they looked at how many acres and cost of acres to bring it into compliance. It was a huge number. It is consistent with this sort of research. I can tell you the resources, capacity, data, expertise, and the will here in Minnesota is an outlier relative to other states. Other states are envious of us.

#### **Public Comment (Webex 04:02:00)**

*No public comments at this time.*

#### **Adjournment (Webex 04:04:03)**

# Revenue and Economic Update

October 10, 2024

[mn.gov/mmb](https://mn.gov/mmb)

## Revenues Above February 2024 Forecast

Minnesota’s net general fund receipts for the first quarter of FY 2025 are now estimated to total \$7.624 billion, \$234 million (3.2 percent) more than forecast in the February 2024 *Budget and Economic Forecast*. Net receipts exceeded the forecast amounts for individual income tax and other revenues while corporate and sales tax revenues were below forecast.

Net individual income tax receipts were \$180 million (4.7 percent) more than forecast for the first three months of FY 2025. Lower than expected refunds and receipts above the forecast both contributed to the positive variance. (See page 4 for details.)

Income tax withholding receipts were \$146 million (5.1 percent) higher than forecast. Estimated income tax payments were less than \$1 million (0.1 percent) more than expected. Gross partnership and S Corporation payments were \$21 million (3.9 percent) above the forecast.

Income tax refunds in all categories were below forecast. In total, refunds were \$7.3 million (6.9 percent) below forecast due principally to partnership and S Corporation refunds which were \$5.3 million (17.5 percent) below forecast.

Net sales tax receipts were \$112 million (5.1 percent) below the forecast. Lower than expected gross tax receipts were moderated somewhat by lower sales tax refunds.

Net corporate tax receipts were \$12 million (1.6 percent) below the forecast. This was due to lower-than-expected corporate tax payments, moderated by lower than expected refunds.

Net other revenues were \$178 million (28.8 percent) above the forecast. Higher than expected investment income and estate tax receipts were the principal contributors to this variance.

## Fiscal Year 2024 Revenues Above the Forecast

Minnesota’s net general fund receipts for FY 2024 are now estimated to total \$30.310 billion, \$494 million (1.7 percent) more than projected in the February 2024 *Budget and Economic Forecast*. Net receipts from all major taxes, except sales tax, exceeded the forecast. In the July 10, 2024, *Revenue and Economic Update*, we estimated that revenues would be \$421 million more than forecast. The positive variance is now \$73 million larger, because net revenues attributable to fiscal year 2024 that were received between the end of July and the official close

### Summary of Revenues: July-September 2024 (FY2025, Q1)

(\$ in millions)	February Forecast <sup>2</sup>	Actual	\$ Difference	% Difference
Individual Income Tax	\$3,819	\$3,998	\$180	4.7%
General Sales Tax	2,174	2,062	(112)	(5.1)
Corporate Franchise Tax	778	766	(12)	(1.6)
Other Revenues	619	798	178	28.8
<b>Total Revenues<sup>1</sup></b>	<b>\$7,390</b>	<b>\$7,624</b>	<b>\$234</b>	<b>3.2%</b>

1. Totals may not add due to rounding.  
2. Adjusted for legislative changes.

were higher than our initial estimate. The next official forecast will be released in early December 2024.

## Near-term U.S. Economic Outlook Improves; Fed begins Monetary Easing

### Outlook for GDP Growth

The near-term outlook for U.S. real GDP growth has improved since Minnesota’s *Budget and Economic Forecast* was prepared in February 2024. In their October forecast, SPGMI Global (SPGMI), Minnesota’s macroeconomic consultant, expects annual real GDP to grow 2.7 percent this year and 2.1 percent next year, an improvement from 2.4 and 1.6 percent in their February forecast. SPGMI expects real GDP to grow 1.8 and 1.7 percent in 2026 and 2027, little changed from the February forecast.

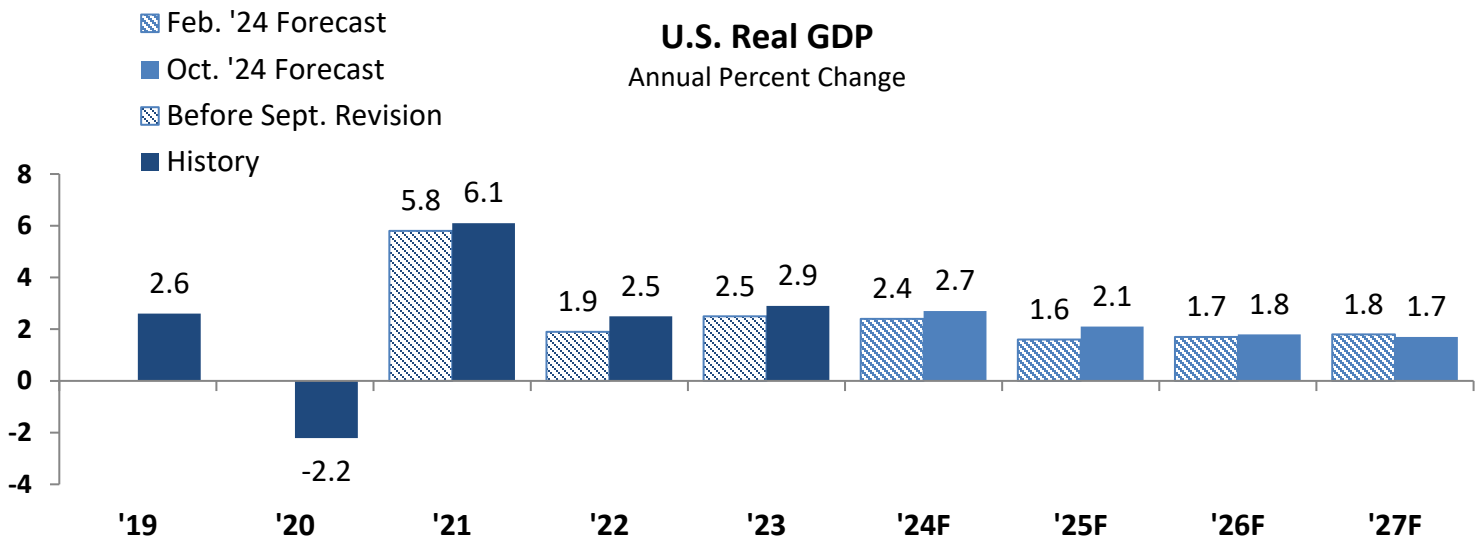
The improved near-term economic outlook is driven by several factors. First, changing expectations for more aggressive rate cuts have led to more favorable financial conditions. Second, the Bureau of Economic Analysis (BEA) significantly revised its employee compensation figures as part of their annual update of the National Economic Accounts. On average, employee compensation in the first half of this year is now estimated to be around \$200 billion higher than initially anticipated, which will bolster consumer spending this year and next. Third, the BEA update indicates that productivity has been stronger than previously estimated. Finally, the BEA’s September 26 revisions to real GDP showed an upward revision to 3.0

percent growth in the second quarter (from 2.8 percent) and a large, upward revision in real gross private investment to 8.3 percent annual growth, both between the third and second estimates. All of these increase the likelihood of higher levels of real economic activity in the near term.

SPGMI’s October forecast for consumer spending growth in 2024 is 2.6 percent, unchanged from their February outlook. Bolstered by strong wage growth, consumer spending is expected to increase 2.4 percent in 2025, compared to 2.0 percent expected in February. Similarly, SPGMI expects business fixed investment to grow 4.1 percent this year and 2.9 percent next year, compared to 1.8 and 2.1 percent in their February outlook. Employment has also been stronger than expected. SPGMI expects an unemployment rate of 4.2 percent in the fourth quarter this year.

BEA’s third estimate of real GDP growth in the second quarter of 2024 shows an increase of 3.0 percent (annual rate), following an increase of 1.6 percent in the first quarter. SPGMI has substantially raised their forecast for real GDP growth in the third and fourth quarters of 2024 to 2.8 percent in the third quarter and 1.9 percent in the fourth quarter, compared to 1.5 percent growth expected in both quarters in the February forecast.

The SPGMI October baseline forecast for 2024 is consistent with the October Blue Chip Consensus, the median of 50 business and academic forecasts. The October Blue Chip Consensus calls for 2.7 percent growth in 2024, the same as SPGMI’s forecast for this year.



Source: Bureau of Economic Analysis and SPGMI

SPGMI's forecast for 2025 is slightly higher than the Blue Chip Consensus. SPGMI expects real GDP to grow 2.1 percent in 2025, 0.1 percentage points more than the Blue Chip Consensus of 2.0 percent growth next year.

### **Outlook for Unemployment**

The Bureau of Labor Statistics (BLS) reports that in September the seasonally adjusted U.S. unemployment rate was 4.1 percent, down slightly from 4.2 percent in August and 0.3 percentage points higher than the rate in September 2023. Employment rose by 254,000 in September, higher than the average of 203,000 in the prior twelve months. The number of long-term unemployed (those jobless for 27 weeks or more) is 1.6 million, up from 1.3 million one year ago. SPGMI now expects the U.S. unemployment rate to stay at 4.2 percent through the first quarter next year before gradually increasing to 4.6 percent in 2027.

The unemployment rate does not capture those who are not in the labor force or who are in the labor force but are not looking for payroll employment. The labor force increased by 150,000 in September, higher than the average of 110,000 in the prior twelve months. The U.S. labor force participation rate was 62.7 percent in September for the third consecutive month, and little changed from the rate of 62.8 percent one year ago.

### **Outlook for Interest Rates**

The Federal Reserve cut the federal funds rate by 50 basis points at their September meeting, beginning a cycle of monetary easing. Further cuts of 25 to 50 basis points are possible later this year, though in recent Congressional testimony, Fed Chair Powell indicated that the Board would proceed cautiously with future rate cuts. SPGMI expects the federal funds rate will fall below 4.0 percent by mid-2025. Similarly, SPGMI expects the 30-year fixed mortgage rate to fall below 5.5 percent by the third quarter of 2025.

### **Outlook for Inflation and Prices**

SPGMI expects CPI inflation of 2.8 percent in 2024 and 2.0 percent next year. This forecast is little changed from the February forecast when they expected inflation of 2.8 and 1.9 percent in 2024 and 2025, respectively.

SPGMI expects the price of Brent crude oil to average \$76 per barrel in the fourth quarter this year and average \$75 per barrel in 2025. They expect West Texas intermediate crude to average under \$71 per barrel in the fourth quarter and \$69 per barrel in 2025.

### **Alternative Scenarios**

The alternative scenarios for the SPGMI October forecast are not yet available. The following alternatives are based on the September forecast. SPGMI assigns a 55 percent probability to the September baseline outlook.

SPGMI assigns a 25 percent probability to a more pessimistic scenario, characterized by (1) a significant tightening of lending standards by financial institutions that restrains consumer spending and small business activity, and (2) higher energy prices caused by a worsening Russia-Ukraine conflict. Growth in consumer spending and business fixed investment is diminished in 2025, and the price of Brent crude oil is about \$37 per barrel higher throughout the forecast horizon than in the baseline. The unemployment rate reaches 6.5 percent by early 2026, compared to a peak of 4.5 percent in late 2026 the baseline scenario. GDP grows 0.3 percent in 2025, compared to 1.9 percent in the baseline scenario.

In the more optimistic scenario, SPGMI assumes (1) strong credit expansion on the part of financial institutions that supports consumer spending, and (2) a stronger productivity gains than in the baseline. Consumer spending grows 3.0 percent and business fixed investment grows 4.1 percent in 2025, compared to 2.2 percent and 3.1 percent in the baseline. In this scenario, GDP grows 2.6 percent in 2025. The optimistic scenario receives a 20 percent probability.



# Comparison of Actual and Forecast Non-Dedicated Revenues

(\$ in thousands)

	Fiscal Year 2024			July-September 2024		
	FORECAST REVENUES <sup>1</sup>	ACTUAL REVENUES	VARIANCE ACT-FCST	FORECAST REVENUES <sup>1,2</sup>	ACTUAL REVENUES	VARIANCE ACT-FCST
<b>Individual Income Tax</b>						
Withholding	11,950,157	12,012,455	62,298	2,826,663	2,972,171	145,508
Declarations	2,196,000	2,224,130	28,130	421,237	421,631	394
Miscellaneous	1,997,771	1,788,577	(209,194)	138,061	143,523	5,462
Partnership & S Corporation Gross	2,710,767	2,847,584	136,816	537,787	558,941	21,154
Gross	18,854,695	18,872,744	18,049	3,923,748	4,096,266	172,518
Partnership & S Corporation Refunds	130,147	141,942	11,795	30,236	24,958	(5,278)
Individual, Fiduciary, & Withholding Ref.	3,914,548	3,857,796	(56,753)	75,006	72,984	(2,022)
Total Refunds	4,044,695	3,999,737	(44,958)	105,243	97,943	(7,300)
Net Income Tax	14,810,000	14,873,007	63,007	3,818,505	3,998,323	179,818
<b>Corporate Franchise Tax</b>						
Declarations	2,958,295	3,095,256	136,961	760,314	731,674	(28,640)
Miscellaneous	226,314	233,873	7,559	40,482	44,247	3,765
Gross	3,184,609	3,329,129	144,520	800,796	775,921	(24,875)
Refund	184,663	157,892	(26,772)	22,626	10,199	(12,427)
Net	2,999,946	3,171,237	171,291	778,170	765,722	(12,448)
<b>General Sales and Use Tax</b>						
Gross	7,769,640	7,747,914	(21,726)	2,207,442	2,071,739	(135,703)
MPLS Sales Tax Transferred to MSFA	-	-	-	-	-	-
MPLS Sales Tax w/Holding for NFL Stadium	17,997	21,426	3,429	4,654	4,655	1
Sales Tax Gross	7,787,637	7,769,341	(18,297)	2,212,096	2,076,394	(135,702)
Refunds (including Indian refunds)	210,098	213,623	3,525	38,142	14,232	(23,910)
Net	7,577,539	7,555,718	(21,822)	2,173,954	2,062,162	(111,792)
<b>Other Revenues</b>						
Net Estate	245,500	285,885	40,385	65,451	140,465	75,014
Net Liquor/Wine/Beer	112,700	111,468	(1,231)	22,985	21,850	(1,135)
Net Cigarette/Tobacco	531,620	517,905	(13,715)	97,740	109,571	11,831
Deed and Mortgage	235,367	236,245	877	67,261	53,475	(13,786)
Net Insurance Premiums Taxes	526,928	572,633	45,705	132,107	134,616	2,509
Net Lawful Gambling	194,050	194,658	608	34,083	39,022	4,939
Health Care Surcharge	344,813	312,047	(32,765)	19,877	8,980	(10,897)
Other Taxes	20,660	23,085	2,425	-	234	234
Statewide Property Tax	732,459	717,866	(14,594)	14,820	27,576	12,756
DHS SOS Collections	132,076	135,960	3,884	29,825	31,367	1,542
Investment Income	658,300	811,378	153,078	50,736	148,164	97,428
Tobacco Settlement	162,413	165,053	2,640	-	-	-
Dept. Earnings & MSOP Recovery	233,056	238,329	5,273	40,429	45,071	4,643
Fines and Surcharges	65,332	70,778	5,446	10,431	8,684	(1,747)
Lottery Revenues	85,461	93,868	8,407	9,948	4,783	(5,165)
Revenues yet to be allocated	(0)	-	0	-	19,862	19,862
Residual Revenues	156,961	233,264	76,303	25,139	4,082	(21,057)
Other Subtotal	4,437,696	4,720,422	282,726	620,831	797,801	176,970
Other Refunds	9,203	10,099	896	1,551	285	(1,265)
Other Net	4,428,493	4,710,323	281,830	619,281	797,516	178,235
<b>Total Gross</b>	<b>34,264,638</b>	<b>34,691,636</b>	<b>426,998</b>	<b>7,557,471</b>	<b>7,746,382</b>	<b>188,912</b>
<b>Total Refunds</b>	<b>4,448,659</b>	<b>4,381,351</b>	<b>(67,309)</b>	<b>167,561</b>	<b>122,659</b>	<b>(44,902)</b>
<b>Total Net</b>	<b>29,815,979</b>	<b>30,310,286</b>	<b>494,307</b>	<b>7,389,909</b>	<b>7,623,723</b>	<b>233,814</b>

1. February 2024 Budget and Economic Forecast.

2. Adjusted for legislative changes.

## PROPOSED Meeting Dates for Clean Water Council for 2025

<b>Full Council (3<sup>rd</sup> Monday with Exceptions for Holidays)</b>	<b>Budget &amp; Outcomes Committee (1<sup>st</sup> Friday with Exceptions for Holidays)</b>	<b>Policy Committee (4<sup>th</sup> Friday with Exceptions for Holidays)</b>
9 am to 2 pm	9:30 am to 2 pm (if in person)	9:30 am to 12:30 pm (if WebEx) 9:30 am to 2 pm (if in person)
January 27 (MLK on 1/20)	January 3	January 24
February 24 (Prez Day on 2/17)	February 7	February 28
March 17	March 7	March 28
April 21 (Easter Monday-should we move to April 28?)	April 4	April 25
May 19	May 2	May 30 (5/26 is Mem Day)
June 16	June 6	June 27
July 21	July 11 (avoids July 4 <sup>th</sup> )	July 25
August 18	August 1	August 22
September 15-16 (field tour)	September 5	September 26
October 20	October 3	October 24 (no MEA conflict)
November 17	November 7	November 21 (avoids Thxgvgng)
December 15	December 5	December 19 (avoids Xmas)

**Jewish holidays:** December 15<sup>th</sup> (full Council) and 19<sup>th</sup> (Policy Committee) fall during Chanukah but work is permitted.

**Muslim holidays:** Ramadan begins March 1, ending with Eid al-Fitr on March 30 (fasting during day); June 6 is Eid-al Adha, which is a day of celebration and doesn't prohibit working (BOC meeting)

**Hindu holidays:** October 20<sup>th</sup> is Diwali (full Council) but work is permitted

**MEA:** This falls on October 16<sup>th</sup> so there is no conflict.



# Clean Water Council

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## Advanced Drinking Water Protection [NEW DRAFT]

The State of Minnesota should ensure that private well users have safe, sufficient, and equitable access to drinking water. Priority contaminants are nitrate, bacteria, arsenic, manganese, lead, and pesticides. The Clean Water Fund combined with other funding sources (including fees), and appropriate policy should be used to support the following:

- completion of a private well inventory, starting in southeastern Minnesota, as well as timely updates to the Minnesota well index
- information to well users to reduce their risk, including well testing
- local and state capacity to manage testing, mapping, and education
- Stable, reliable funding of cost-effective strategies for private well users to mitigate wells that do not meet Minnesota health-based guidance for five contaminants, with a particular focus on low-income households
- publication of aggregate and anonymized well data
- land use compatible with private well protection (e.g., forage, continuous living cover, working lands easements, etc.), including the prioritization of areas draining to vulnerable private wells
- adequate technical and financial assistance for fertilizer and pesticide management, irrigation education, and manure storage and use
- development and adoption of local government ordinances that require well testing and a disclosure of the testing at the time a property is transferred
- financial support for regulation of feedlots and the land application of manure
- evaluation of current programs for efficacy in meeting drinking water source protection goals
- consider designating acreage that drains to the most vulnerable private wells for protective practices like Drinking Water Supply Management Areas (DWSMAs)

This policy statement supersedes the following policy statements included in previous biennial Council recommendations:

- Advanced Drinking Water Protection [FY24-25]
- Disclosure of Well Water Quality at Time of Sale [FY22-23]
- Advanced Drinking Water Protection [FY16-17]

### Problem

Currently, about 1.2 million Minnesotans get their drinking water from groundwater through a private well. While the State plays a role in protecting drinking water sources, testing and mitigating well water is generally treated as the responsibility of the property owner. The Minnesota Department of Health (MDH) recommends that it be done regularly (annually for **bacteria**; bi-annually for **nitrate**; at least once for **arsenic** and **lead**; and before a baby drinks the water for **manganese**). In limited cases, such as the Township Testing program of the Minnesota Department of Agriculture and a new initiative in southeastern Minnesota, the State provides the funding. However, many private well owners do not test their water. A 2016 Minnesota Department of Health (MDH) survey of private well owners found less than 20% of respondents had tested their well water at the frequency MDH recommends.

Once a well owner tests their water and gets the results, they are better able to know what steps they may need to take to ensure safe drinking water. However, currently owners are under no obligation to

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inform buyers of their property of any high contaminant levels in private drinking water supply system. Education is useful, but some mandates are necessary to increase testing, reporting, and protect the health of private well users. Minnesota Statutes 1031.235 requires sellers of real property to disclose the existence of a well but not water quality results.

Among the most widespread human-caused contaminants in water supply wells is nitrate. Its major source is commercial fertilizer followed by manure spread on farm fields as fertilizer. The state currently uses the Groundwater Protection Rule to protect drinking water supplies in dozens of communities that have high nitrate levels in public water supply wells. In addition, MDH has delineated areas around more than 835 public water supplies that use groundwater. These Drinking Water Supply Management Areas (DWSMAs) are the basis for Drinking Water Protection Plans that help those communities identify and avoid threats to drinking water, often with Clean Water Fund support. The Council's strategic plan requests that approximately 400,000 acres in vulnerable DWSMAs be protected by 2034. There is no equivalent regulation or designation for private wells.

The state also regulates feedlots and the use of their manure to reduce the risk of nitrate entering groundwater, but the time between feedlot inspections is long.

In addition, the University of Minnesota establishes optimal rates for fertilizer and manure application for different geographies, crops, and soil types, with some support from the Clean Water Fund. The Minnesota Agricultural Water Quality Certification Program (MAWQCP)—fully funded by the Clean Water Fund—also has requirements for nitrogen application that match the University's guidelines on more than 1 million acres. The Council would like a monitoring strategy to confirm MAWQCP's modeling for these reductions.

In response to high nitrate levels in southeastern Minnesota, numerous environmental and community advocates petitioned the U.S. Environmental Protection Agency for stronger action. The EPA instructed MDH, the Minnesota Pollution Control Agency, and the Minnesota Department of Agriculture to take action in eight counties to address the situation. Several steps in that response are included below among other proposed solutions from the Council.

### Solutions

- Private well inventory and Minnesota Well Index

In eight counties of southeast Minnesota, MDH has begun inventorying private wells constructed before the 1974 Minnesota Well Code. MDH estimates these wells comprise 40 percent or 12,000 private wells. By incorporating this information into the Minnesota Well Index, MDH will be able to provide information to residents who likely have a poorly constructed well that is more vulnerable to contamination, especially for nitrate. The Council requests that this approach be expanded to the rest of the state by a date certain. In addition, the Council asks that MDH update its software for the Minnesota Well Index to ensure timely updates.

- Information to well users including well testing

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MDH is also educating private well users in the southeast with information about the well inventory, how to get private well water tested for free, and how to get mitigation assistance.

The Council's strategic plan requests that the state provide free well testing over ten years starting in FY24-25 for all private well users. MDH is on track to meet this goal and is focusing on the southeast first. When sending water analysis results, laboratories also include information about how the household can access mitigation if necessary.

- Local capacity

Two MDH pilot programs supported by the CWF built partnerships with local public health agencies in recent years. These partnerships administered grants to provide well testing in Stevens, Grant, and Traverse Counties (Horizon Public Health) and in Olmsted, Fillmore, Winona, Wabasha, and Goodhue Counties (Olmsted Soil and Water Conservation District). Having this local capacity for testing and education is critical for success and should be expanded statewide.

- Strategies for mitigation

Nonpartisan legislative staff have asserted that using the Clean Water Fund for private well mitigation is not consistent with the Legacy Amendment of the State Constitution. The Council argues that repair of pre-code wells should be eligible. In the meantime, state general funds have been made available in FY25 to support private well mitigation such as reverse osmosis systems and the drilling of new wells for low-income households. The Clean Water Fund can be used to educate residents on their options, however, once well testing results are available. The Clean Water Council requests the Legislature provide a stable long-term funding source administered by the Minnesota Department of Health to support private well mitigation. The Minnesota House passed legislation (which did not make it through conference committee) to increase the fee on fertilizer to support private well mitigation. The Council believes this is one option for long-term funding to address nitrate.

- Publication of data

The Council believes that public aggregate data on well testing results will assist in drinking water source protection efforts. An example has been the Township Testing program at the Minnesota Department of Agriculture that has identified townships most vulnerable to nitrate and pesticide contamination. Continued testing will indicate whether prevention efforts are succeeding. In addition to nitrate and pesticides, publication of township level data for other contaminants (bacteria, arsenic, manganese) would also be useful.

- Land use

Policies and incentives are in place to ensure landowners have options available to convert land use away from nitrogen-intensive crops in Drinking Water Supply Management Areas (DWSMAs) or acreage that drains to vulnerable private wells. The Clean Water Fund and other sources can support working lands easements, wellhead protection easements, continuous living cover, and forage such as hay. The Council suggests that the Board of Water and Soil Resources consider paying up to fair market value for permanent wellhead protection easements since commitments for this program are low, or otherwise accelerate enrollments in this or other programs.

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- Technical and financial assistance

The Department of Agriculture and the Board of Water and Soil Resources provide many opportunities to farmers to reduce runoff or infiltration of nitrates. They include an irrigation extension staffer, field days, nitrogen application education, conservation equipment assistance, low-interest equipment loans, soil health grants and education, manure storage grants, administration of the Groundwater Protection Rule, and updated crediting ratios for manure application. This work would not be possible without the Clean Water Fund and should continue.

- Development and adoption of local government ordinances

The Council has advocated for the requirement that private wells should be tested for five contaminants and the results disclosed at the time a property is transferred. This proposal has not been successful at the Legislature. In the meantime, the Council asks that MDH develop model ordinances with contributions by the Metropolitan Council and promote adoption by local governments.

For example, since 1998, Dakota County Ordinance number 114 requires testing a private well for bacteria, nitrate, arsenic, and manganese (added in 2019) within 12 months prior to a real estate transfer. The ordinance updates in 2019 also require that water quality issues are addressed through treatment or well replacement prior to sale.

Ordinances should require property owners to test and to inform any renters of their property of test results.

- Financial support of regulation of feedlots and the land application of manure

The MPCA issues State Disposal System (SDS) and National Pollution Discharge Elimination System (NPDES) permits for feedlots with more than 1,000 animal units. The Clean Water Council supports the MPCA's revisions proposed in late 2024 to these permits. Requirements include seasonal restrictions of manure on row crops and for cover crops for manure application (among others). The Council has asked the MPCA for information on how often these feedlots are inspected, either by counties with delegated authority to enforce permits with county feedlot officers or the state in other counties. The average inspection interval appears to be about ten years, but the MPCA inspects more frequently for feedlots in areas with higher risk to vulnerable groundwater. The Council supports additional general funds or fee revenue to increase inspection frequency.

- Evaluation

The Council seeks data from agencies on the efficacy on all the programs listed above that describe actual and modeled nitrate and contaminant reduction, durability of reductions, and cost effectiveness. As the Legacy Amendment expiration date of June 2034 looms, the Council would like to focus investments where they will provide the most rapid progress. Program dashboards would be the most useful in the next biennial Clean Water Fund biennial report.

- Designation of private well areas

The Council suggests a dialogue with state agencies on the feasibility of creating a DWSMA-like tool for townships with high nitrate levels. The purpose would be to explore a regulatory approach like the Groundwater Protection Rule but for private wells.

# Clean Water Council

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## Drainage Policy Statement [approved by Policy Committee, awaiting full Council approval]

The State of Minnesota should:

1. **Identify more opportunities** for multi-purpose drainage management (MDH) and water storage that improve water quality and complement Watershed Restoration and Protection Strategies (WRAPS) and One Watershed One Plan (1W1P).
2. Request data to **quantify the effectiveness of Multi-Purpose Drainage Management** relative to nutrient transport and hydrologic changes compared to traditional drainage systems, and an **estimate of the hydrologic impact** of drainage projects on downstream rivers and streams.
3. **Support opportunities for training of drainage engineers, drainage commissioners, and other relevant professionals** on the benefits of MDM and resources available, to encourage line-item estimates for conservation practices, and to encourage cost-benefit analysis of water storage and its resulting impact on drainage system and maintenance costs.
4. Develop a **drainage endorsement** for the Minnesota Agricultural Water Quality Certification Program (MAWQCP) with the input of the Drainage Work Group and other stakeholders.

## Background

There are almost 20,000 miles of open agricultural drainage ditches and countless miles of subsurface agricultural drain tile in Minnesota. These drainage systems have benefits to landowners, and in many circumstances can improve water quality compared to using conventional farming practices without drainage.

Drainage systems—especially older systems than can be more than 100 years old—can also alter downstream hydrology considerably. This altered hydrology is among the factors resulting in higher peak flows in rivers and streams, leading to higher erosion and channel destabilization. Channel destabilization in the Minnesota River basin, for example, is responsible for the majority of sediment and nutrient transport downstream into Lake Pepin. In addition, drain tile can transport nitrogen/nitrate and dissolved phosphorus directly to ditches, lakes, rivers, and streams without the benefit of treatment. Improving water quality from drainage systems must be part of our water management framework to meet water quality goals.

New drainage and drainage improvements represent an opportunity to design and install systems in ways that help reduce nutrient losses to surface water and positively affect the timing and flows of drainage water into surface waters. These efforts combined with wetland restoration and water retention can have positive impacts upon water quality in agricultural landscapes.

For reference, several statutes govern drainage in Minnesota:

- Minnesota Drainage Law in [Minn. Stat. 103E](#)
  - [Changes in 2014](#) to the statute require drainage authorities to consider a proposed project's impacts on water quality, peak flows, sedimentation, etc., explore different funding and technical assistance sources that could address these impacts, and use early coordination among stakeholders to bring about these changes.
- Minnesota Watershed Law in [Minn. Stat. 103D](#).

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There are several entities that discuss drainage regularly and provide oversight and technical assistance.

- **Board of Water and Soil Resources (BWSR):** According to Minn. Stat. 103D, engineer reports must be filed with the board for examination and for an advisory report.
- **[Drainage Work Group](#) (DWG):** The Drainage Work Group's purpose is to: 1) to foster science-based mutual understanding about drainage topics and issues and 2) to develop consensus recommendations for drainage system management and related water management, including recommendations for updating Minn. Stat. Chapter 103E drainage and related provisions.
- **Drainage Authorities:** Drainage Authorities (counties or watershed districts) “act as the drainage system’s governing body – administer proceedings and procedures; approve petitions; hold hearings; make findings; issue orders; appoint engineer(s), viewers, and inspector(s); engage or retain attorney(s); apportion costs; etc.”
- The **[Local Government Water Roundtable](#)** is an affiliation of three local government associations, the Association of Minnesota Counties, Minnesota Association of Soil and Water Conservation Districts, and Minnesota Watersheds. The roundtable helped develop the 1W1P program and advises state agencies on other watershed funding and related management issues.
- **[Minnesota Department of Natural Resources \(DNR\):](#)** The DNR must receive the following from drainage authorities: 1) repair and maintenance-related documents that affect public waters; 2) redetermination of benefits affecting DNR lands; 3) reestablishment of records; 4) technical guidance documents; 5) project and improvement-related documents; and 5) assessments. According to Minn. Stat. 103D and 103E, engineer’s reports must be filed with the commissioner for examination and for an advisory report.
- **Minnesota Department of Agriculture (MDA):** The MDA implements the **[Minnesota Agricultural Water Quality Certification Program \(MAWQCP\)](#)**, a comprehensive partnership that includes federal, state, and local public sector entities, as well as private sector collaborations, providing certification services to Minnesota’s farms.
- **[Drainage Management Team \(DMT\):](#)** According to BWSR, the DMT is an interagency team comprised of staff members from state and federal agencies as well as academic institutions that meet regularly to coordinate and network regarding agricultural drainage topics.

Finally, drainage authorities report that they also seek guidance from several other resources.

- **[Minnesota Public Drainage Manual](#) (MPDM):** According to BWSR, “The MPDM is a detailed reference document about Minnesota Statutes, Chapter 103E Drainage, for drainage authorities, their advisors (attorneys, engineers, county auditors, watershed district secretaries, viewers, drainage inspectors), and others involved with state drainage law.”
- University of Minnesota **[Guide to Agricultural Drainage](#)**
- **[Iowa Drainage Guide](#)**
- **[Impacts of Subsurface Agricultural Drainage on Watershed Peak Flows – Briefing Paper #1](#)**
- **[Water Management Options for Subsurface Drainage – Briefing Paper #2](#)**
- **[Water Management Options for Surface Drainage – Briefing Paper #3](#)**
  - **[Briefing Paper #3 PowerPoint Presentation](#)**

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In addition, the Legislature makes appropriations for conservation drainage management and assistance from the General Fund, as shown in this 2023 appropriation:

*Conservation Drainage Management and Assistance (\$2 million).* BWSR will provide funding for Minnesota drainage authorities under M.S. 103E to plan and construct drainage water quality management practices into drainage system projects. This program is a continuation from FY2022-2023 and provides for financial and technical assistance to Minnesota's Public Drainage Authorities and Soil and Water Conservation Districts to facilitate planning, design, and installation of conservation practices on drainage systems that will result in water quality improvements.

### Specifics on Policy Recommendations

Identify more opportunities for multi-purpose drainage management (MDH) and water storage

The Council recommends a systematic approach in identifying drainage system reaches and drained parcels that would provide the greatest water quality improvement opportunities. State statute has recommended "early coordination" in the past, but this was before the creation of the One Watershed One Plan approach.

In 2014, the Legislature made changes (Minn. Stat. 103E.015 Subd. 1a.) in the drainage law to encourage more collaboration that would result in more conservation drainage projects.

When planning a drainage project or a repair under section 103E.715, and prior to making an order on the engineer's preliminary survey report for a drainage project or the engineer's report for a repair, the drainage authority shall investigate the potential use of **external sources of funding** to facilitate the purposes indicated in section 103E.011, subdivision 5, and alternative measures in subdivision 1, clause (2). This investigation shall include **early coordination** with applicable soil and water conservation district and county and watershed district water planning authorities about potential external sources of funding and technical assistance for these purposes and alternative measures. The drainage authority may request additional information about potential funding or technical assistance for these purposes and alternative measures from the executive director of the Board of Water and Soil Resources.

Since that time, there have been many examples of collaboration among soil and water conservation districts (SWCDs), watershed districts (WDs), the state, drainage authorities, and landowners. The Red River Basin appears to be further ahead than other parts of the state in this area, with plans for 100,000 acre feet of storage including more than 11,000 wetland restorations. The Board of Water and Soil Resources (BWSR) makes regular grants through the Multi-Purpose Drainage Management (MDM) program, competitive grant opportunities, and Watershed Based Implementation Funding (WBIF) that improve water quality in drainage systems. The DNR is adding a Drainage Coordinator position in FY24 to better assist with early coordination work.

The Clean Water Fund has also supported MDM and water storage. Examples include:

- BWSR Wetland restoration easements (\$10 million appropriated for FY24-25)
- BWSR Watershed Based Implementation Funding (\$79 million) with some funds for restoration



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- DNR Nonpoint Source Restoration and Protection Activities (\$3.2 million)
- DNR Water Storage (\$1 million)

It should be noted that several Clean Water Fund appropriations support improved water quality from drained parcels that are working lands. For example, several of these programs support on-farm practices such as alternative tile intakes.

- MDA Minnesota Agricultural Water Quality Certification Program (\$7 million and see below)
- BWSR Watershed Based Implementation Funding (\$79 million) for on-field practices
- MDA Conservation Drainage Management and Assistance (\$2 million)
- BWSR Working Land and Floodplain Easements (\$5 million)
- MDA Agricultural Best Management Practices Loan Program (\$9.598 million)

After noting that landowners could not wait for its annual MDM grant opportunities, BWSR is now making quarterly grants to increase the number of applications. The RFP for MDM also explicitly states that eligible activities in grant proposals must include improvement of downstream water quality. Both developments are welcome.

Despite all these positive developments and projects, the Council believes that many more opportunities exist for conservation drainage.

BWSR and watershed managers have quantified water storage goals in comprehensive watershed management plans (One Watershed One Plan). Drainage systems could provide opportunities for temporarily storing water to reduce peak flows or installing BMPs for water quality. With some exceptions, the plans usually do not identify specific segments of those drainage systems that collectively add up to the volume needed to meet a watershed's water storage or water quality goals.

The Clean Water Fund could be used to fund soil and water conservation districts, counties, and watershed districts to identify specific opportunities for drainage authorities, who could then apply for follow-up funding for MDM, water storage, restoration, Watershed Based Implementation Funding, etc. This effort would look at a drainage system as a whole and would in effect serve as a sub-watershed analysis but for the system's ditches.

### Quantify Effectiveness of Multi-Purpose Drainage Management

The Council would like BWSR to provide evidence of MDM's effectiveness for water quality compared to traditional drainage systems, especially regarding nutrient transport and hydrologic changes. This would allow for an evaluation of MDM compared to other water quality appropriations from the Clean Water Fund.

The Clean Water Fund also supports the DNR's streamflow monitoring network. As part of comprehensive planning, the network could confirm and update hydrological models used for drainage improvement projects.



## Clean Water Council

DRAFT FY24-25 Policy Statements as of 27 September 2024

### Train Drainage Engineers and Drainage Authorities

Undoubtedly, there are skilled professionals and drainage authorities with the right experience, but there does not appear to be any dedicated training available for drainage engineers focused solely on improvement of water quality in drainage systems. Since engineers are the ones who suggest designs to landowners—and drainage commissioners approve them—having these professionals aware of opportunities for technical assistance and funding as well as the watershed-based approach to improving water quality would be useful. The MPCA Smart Salting certification program would be a possible model.

### Drainage Endorsement at MAWQCP

The Minnesota Agricultural Water Quality Certification Program (MAWQCP) is completely funded by the Clean Water Fund. More than 1200 farms and more than 900,000 acres are certified as of July 2023. The MAWQCP appropriation also includes grants to producers for specific practices.

There are already certain drainage practices that must be used to receive certification. For example, a farm with drain tile cannot be certified without installing [alternative tile intakes](#) that reduce the flow of nutrients and sediment into surface waters. MAWQCP has documented 504 cases of improved drain tile practices in the process of certification, and 41 farms received MAWQCP grant funding to install them for a total of \$101,507. The Council supports this and future water storage criteria that would resolve any downstream channel destabilization before receiving certification.

Overall, the program includes farms with saturated buffers and wetlands that receive and filter tile water. In addition, some farms (but not many) have drainage water management systems with gates to open and close at different heights to hold water in the field.

MAWQCP also includes endorsements for several categories where farmers are going beyond certification requirements in a certain area: integrated pest management; climate smart farm; soil health; irrigation management, and wildlife. The Council recommends the development of a conservation drainage endorsement.

A drainage endorsement would reward farmers that go beyond the drainage requirements for certification, including restoration of drained lands. MAWQCP staff indicate that they are open to the idea but require cooperation from all stakeholders involved to develop the criteria. Drainage-endorsed farms could qualify for 90 percent cost-share grants from the program instead of the current 75 percent maximum.



# **Land Protection Efforts in the Upper Mississippi Headwaters Basin**

**Clean Water Council**

**October 21, 2024**



# Needed: Science Based Methodologies to Protect High Value Fisheries and Forest Resources

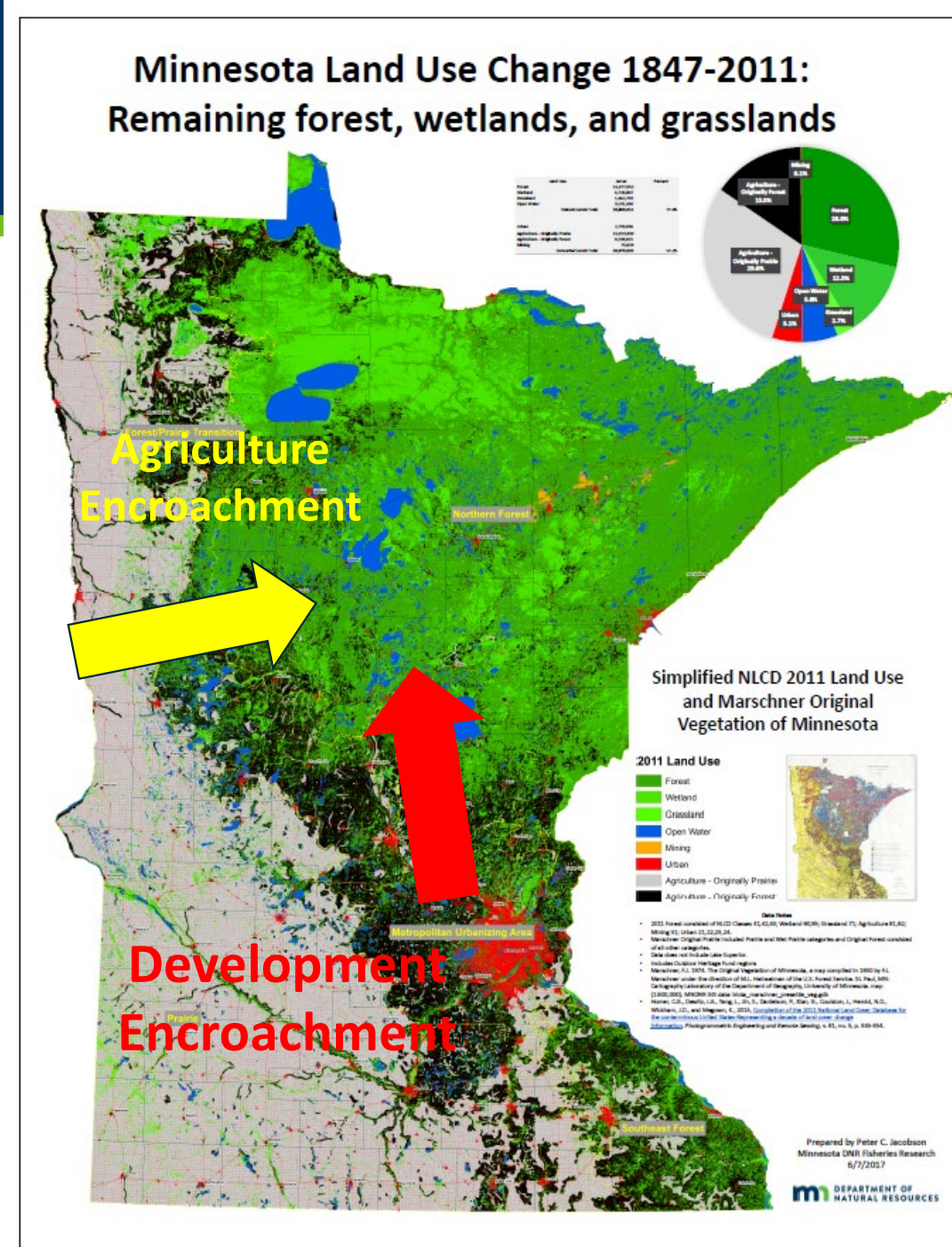


- \$2.4 billion in direct expenditures from anglers
- \$9 billion in direct economic contribution of MN forest products
- Even greater indirect economic impacts

# Context – Minnesota's Forests

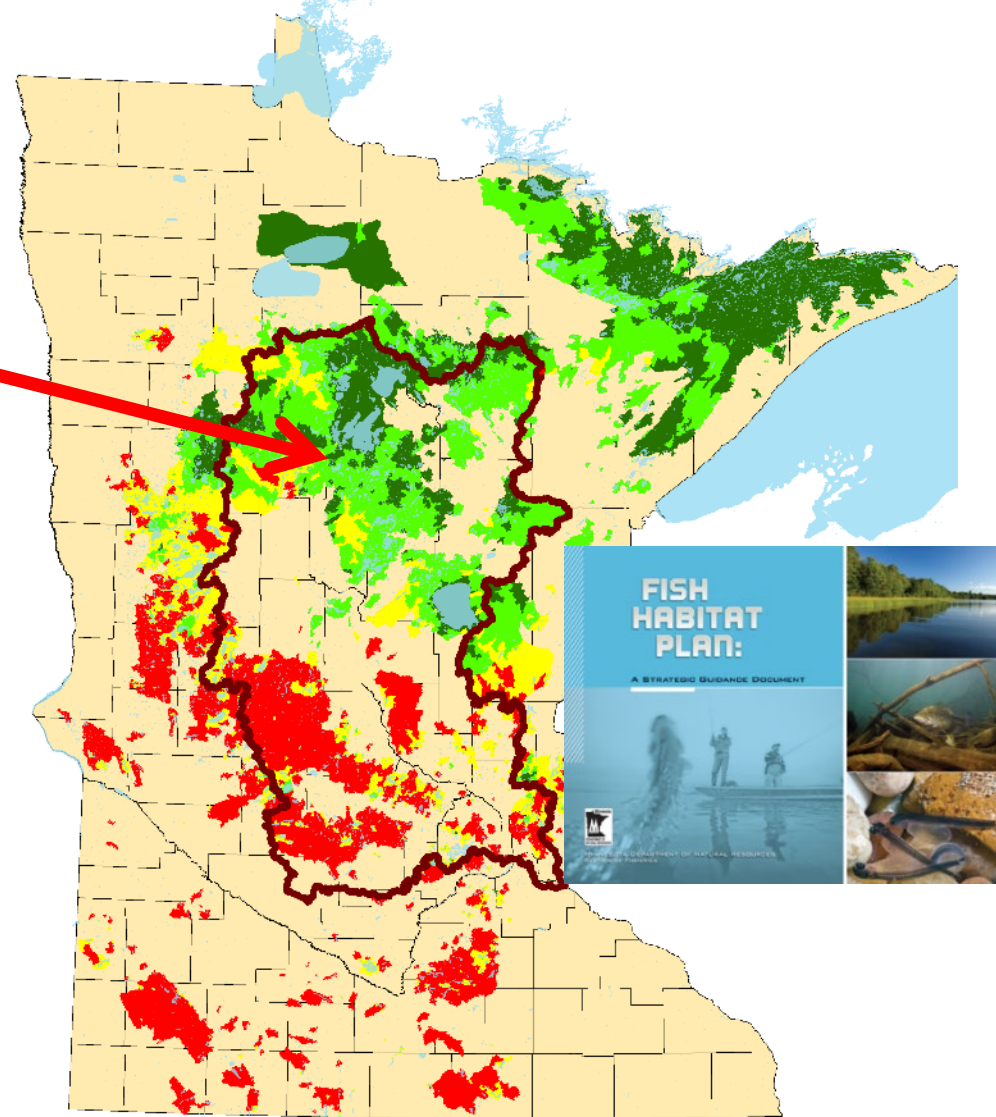
# The MN Forestland Cover Story

- Total area - 54 M acres
- Presettlement - 32 M acres
- Today - 17 M acres

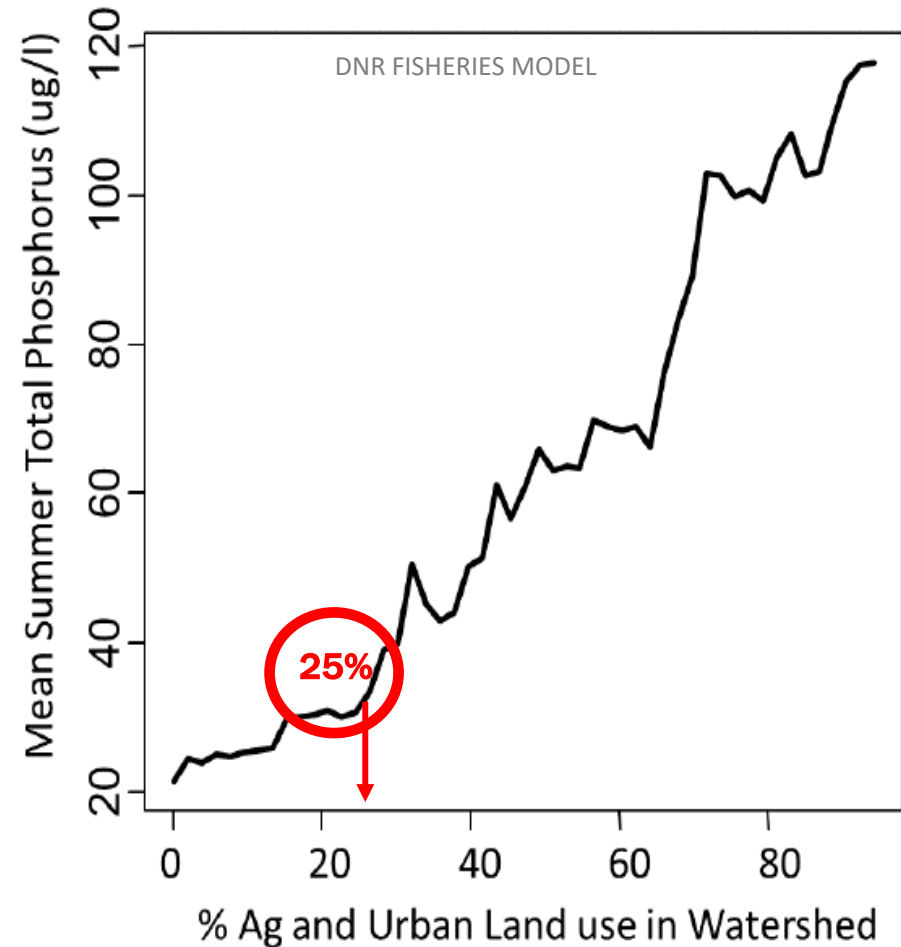




# Is there a tipping point for watershed disturbance?



# What is “Protection”?



**Because** 25% Watershed Disturbance can cause increased phosphorus concentrations in lakes

**Therefore:** Protect 75% of the Watershed to protect lakes

Defining “Protection”

Conservation  
Easements



Public Waters



Public Land



Wetlands (WCA)



Forest Stewardship  
contracts



# Focus: Northern Half of Upper Miss. Basin

THE LIGHT GREEN AREA REPRESENTS LAKES THAT HAVE LOW LEVELS OF DISTURBANCE & GOOD WATER QUALITY, THUS WE CAN PROTECT THE MOST HABITAT AT THE LEAST EXPENSE.

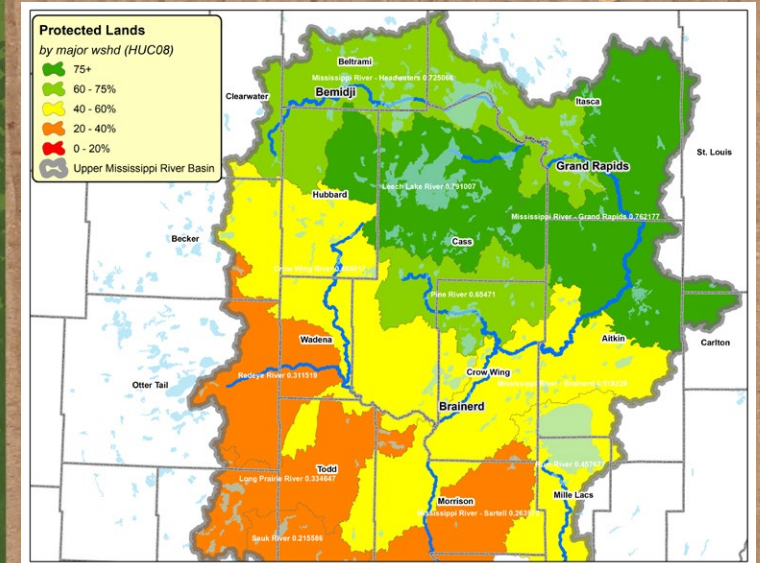
- Little to no disturbance or land use conversion
- Low disturbance. The protection "Sweet Spot"!
- Intermediate disturbance. Declining water quality.
- Mostly disturbed lands. Poor water quality.

*The "Sweet Spot"*

## Designed for Protection

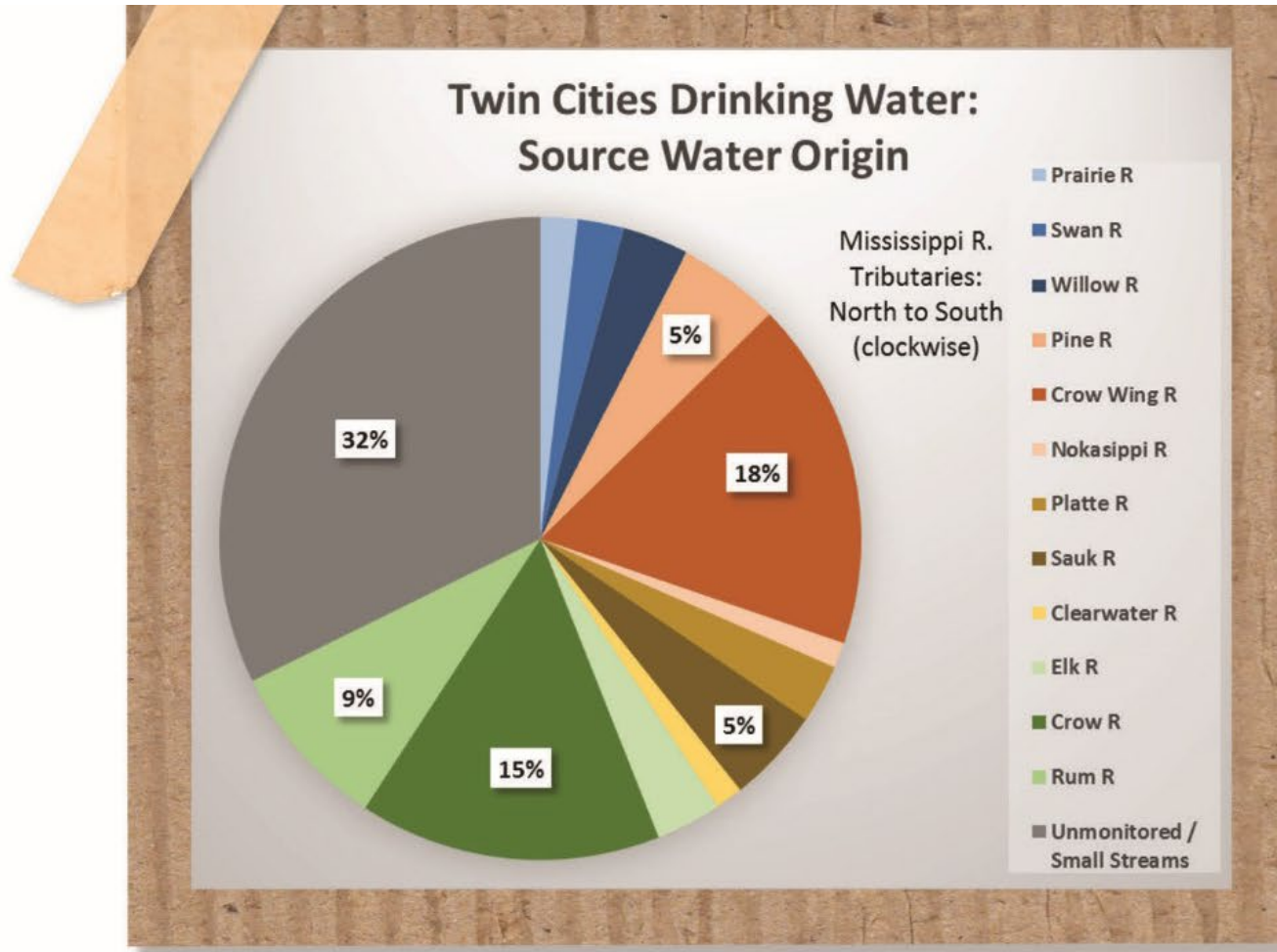
FOCUS IS ON THE UPPER HALF OF THE BASIN WHERE THERE ARE: SANDY SOILS, LOW SLOPE, NUMEROUS LAKES / WETLANDS (STORAGE), FORESTED LANDSCAPE, INTACT HYDROLOGY, AND HIGH QUALITY HABITAT (AQUATIC & TERRESTRIAL)

- Many opportunities for protection
- High Return on Investment
- Water Quality + Habitat
- Complicated Ownership Pattern
- Many of the best of the best lakes in the state
- How to Prioritize?





# Healthy Forests = Clean Water Downstream



## SOURCE-WATER

The upper Mississippi basin serves as Minnesota's largest source-water. It is the primary water source for the cities of St. Cloud, Minneapolis, and St. Paul.

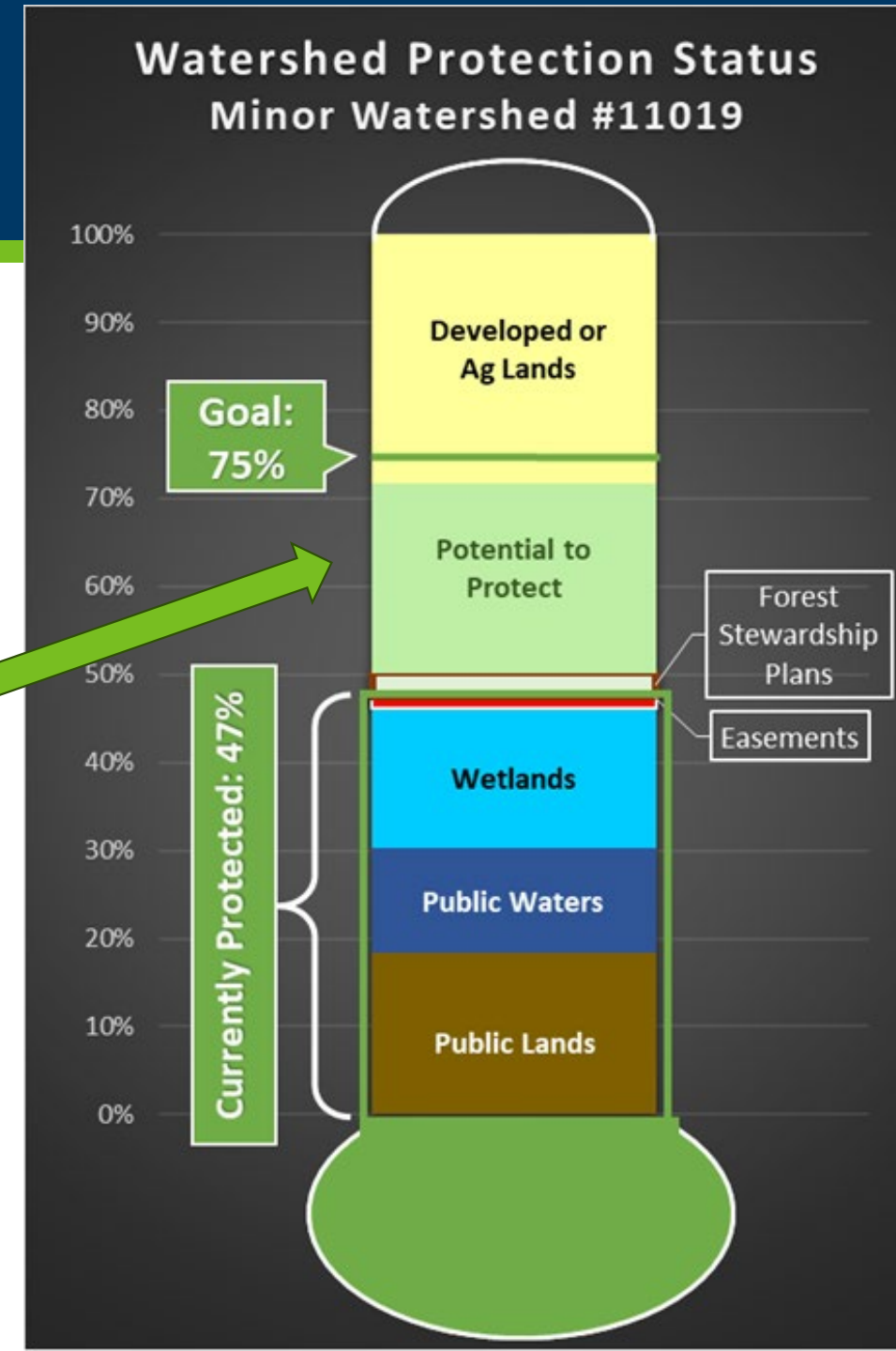
Protecting Lakes, Streams, & Forests  
in the Upper Mississippi River Basin



# Where do we focus conservation efforts??

## Focus:

- Priority Lake Watersheds
- Forested
- Large-tracts (20+ acres)
- = Potential to Protect
- Parcel-based outreach (RAQ)
- Partnership with DNR PFM program
- Constant Watershed Tracking



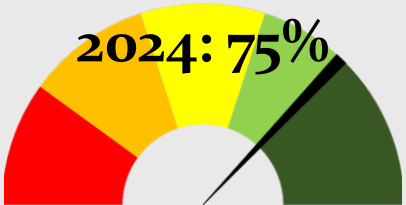
# Celebrating our successes!

- 2252 Acre Lake in Hubbard County
- Deep-water fishery: 133 feet deep
- 10 Miles of Shoreline
- Cisco Refuge Lake
- Large Watershed (100 sq. miles)
- Headwaters to Leech Lake

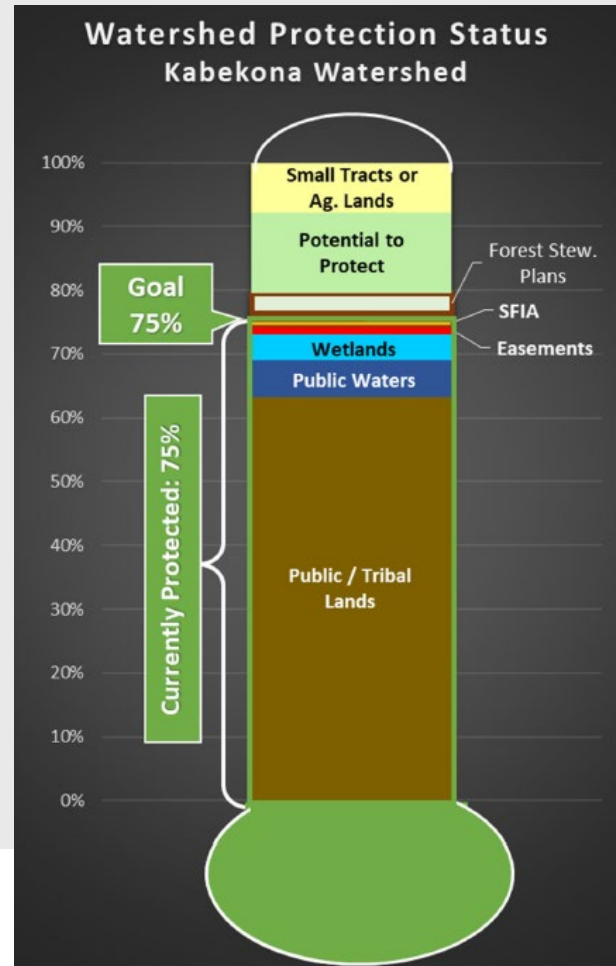
2016: 72%



2024: 75%



75% Goal Met!

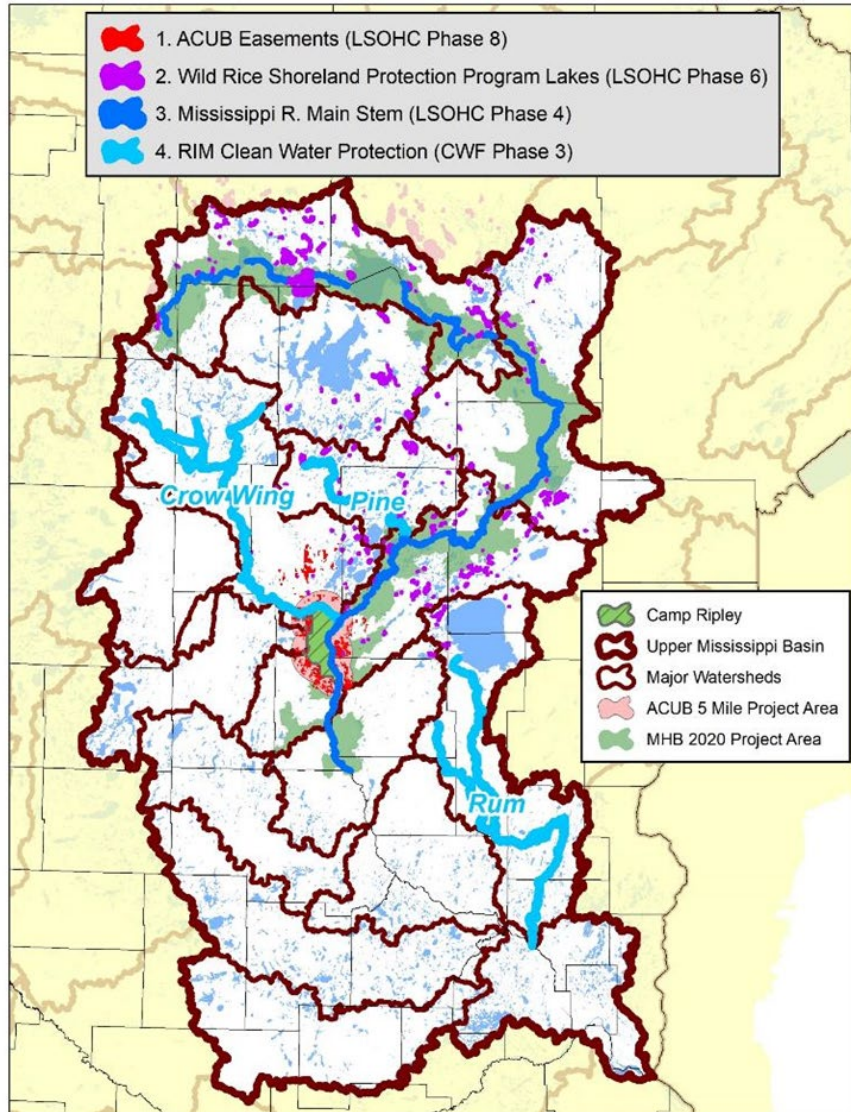


# Many Amazing Partners

- **Federal:** US Forest Service, Dept. of Defense (ACUB)
- **State:** DNR, BWSR, Dept. of Health
- **County:** Land Departments, Mississippi Headwaters Board (first 8 counties)
- **Soil & Water Conservation Districts/MASWCD Technical Service Areas**
- **NGOs:**
  - Northern Waters Land Trust
  - MN Land Trust
  - The Conservation Fund
  - Trust for Public Lands
  - The Nature Conservancy



# 15 years of Protection Projects: **\$160 Million**



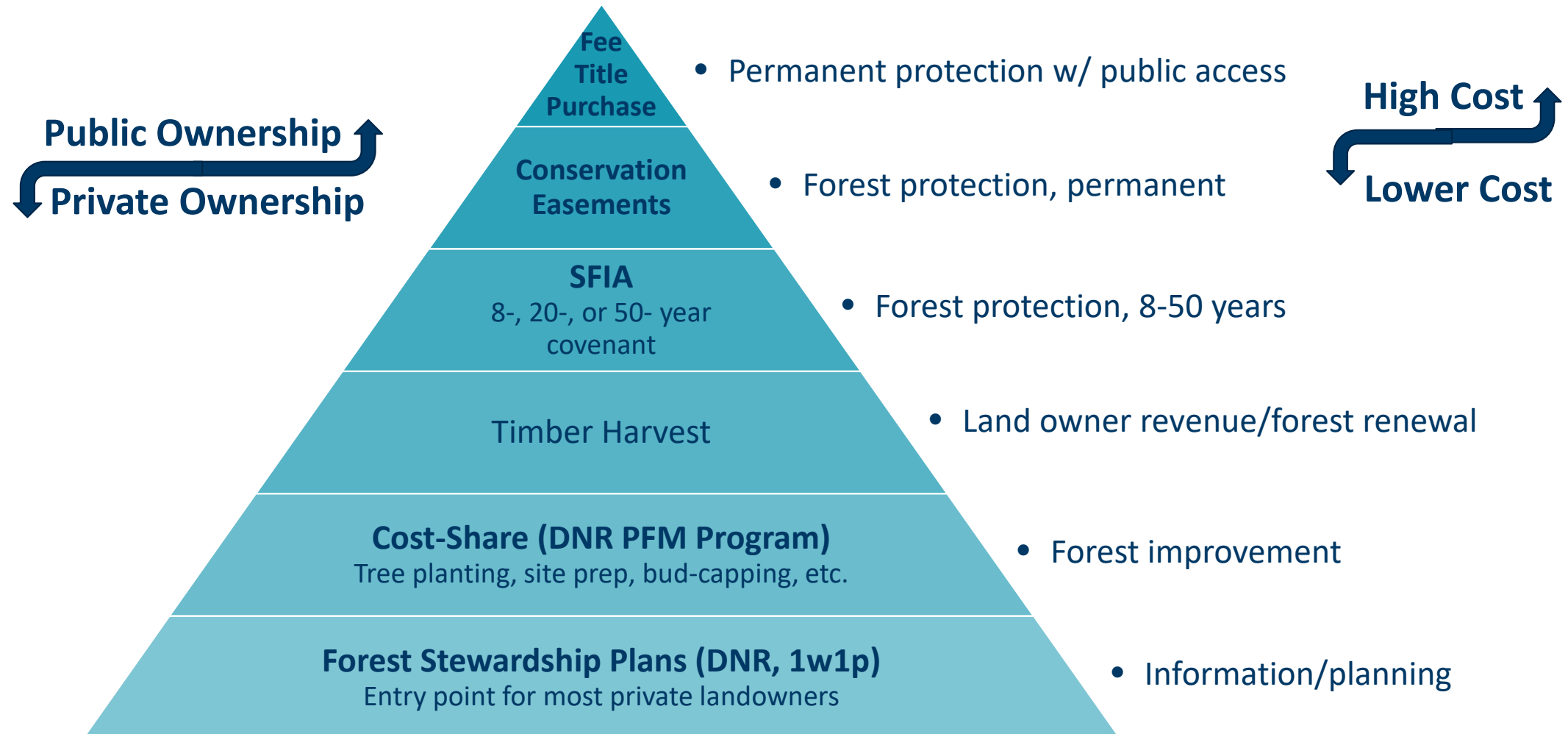
Project	# of Phases	Primary Geography	Protection Type	Project Start Year	Funding Source(s)	Total Funding Amount
Camp Ripley Sentinel Landscape ACUB Habitat Protection Program	12	Camp Ripley & vicinity	Easements	2010	OHF	\$23.2 Million
Camp Ripley ACUB Protection	2 cooperative agreements	Camp Ripley & vicinity	Easements	2006	DOD/NGB	\$47 Million
Wild Rice	7	10+ counties	Easements	2012	OHF	\$9 Million
Mississippi Headwaters Habitat Corridor Project	7	First 400 miles of Miss. R. (incl. headwaters lakes & tributaries)	Easements, Acquisition	2016	OHF, CWF	\$25.7 Million
Clean Water Critical Habitat (Northern Waters Land Trust, MLT)	10	Cass, Hubbard, Crow Wing, Aitkin	Easements, Acquisition	2014	OHF	\$27.8 Million
Lakes of Biological Significance (Northern Waters Land Trust, MLT)	3	Crow Wing, Cass, Hubbard, Wadena, Aitkin, Carlton, Itasca, Beltrami, Koochiching, St. Louis, Lake, Cook	Easements	2021	OHF	\$8.4 Million
RIM Critical Shorelands (multiple rivers)	4	Pine R, Crow Wing R, Rum R.	Easements	2016	CWF, TNC	\$11 Million
Protecting North-Central Minnesota Lakes	1	Camp Ripley, Aitkin & Crow Wing Co.	Easements, BMPs	2017	ENRTF	\$0.75 Million
Targeted RIM Easement & Acquisition to the Parcel	3	Pine R. & Leech Lake R. Watersheds	Easements, Acquisition	2020	OHF	\$6.6 Million

# PFM Implementation Toolbox



***Landowners choose!***

# Legislative Tools for Moving the Needle to 75%



# Guidance Document

## Table of Contents

- Problem Statement
- Background – What is “Protection”?
- Can Watershed Protection Planning/Implementation be Conducted at Multiple Geographic Scales?
- Can the 75% Protection Goal be Achieved?
- What are the Tools for Protection?
- What is the Cost for Protection?
- How has the Protection Methodology Been Integrated into Water and Forest Planning?
- Landscape Stewardship Plans (DNR Forestry) & Delivery of PFM Services
- Conclusion

DEVELOPING A WATERSHED “PROTECTION”  
METHODOLOGY FOR THE FORESTED ZONE OF  
MINNESOTA

A summary of 10+ years of local and state efforts.

June 2020

DRAFT



Prepared by:



## Forestland Protection Guide:

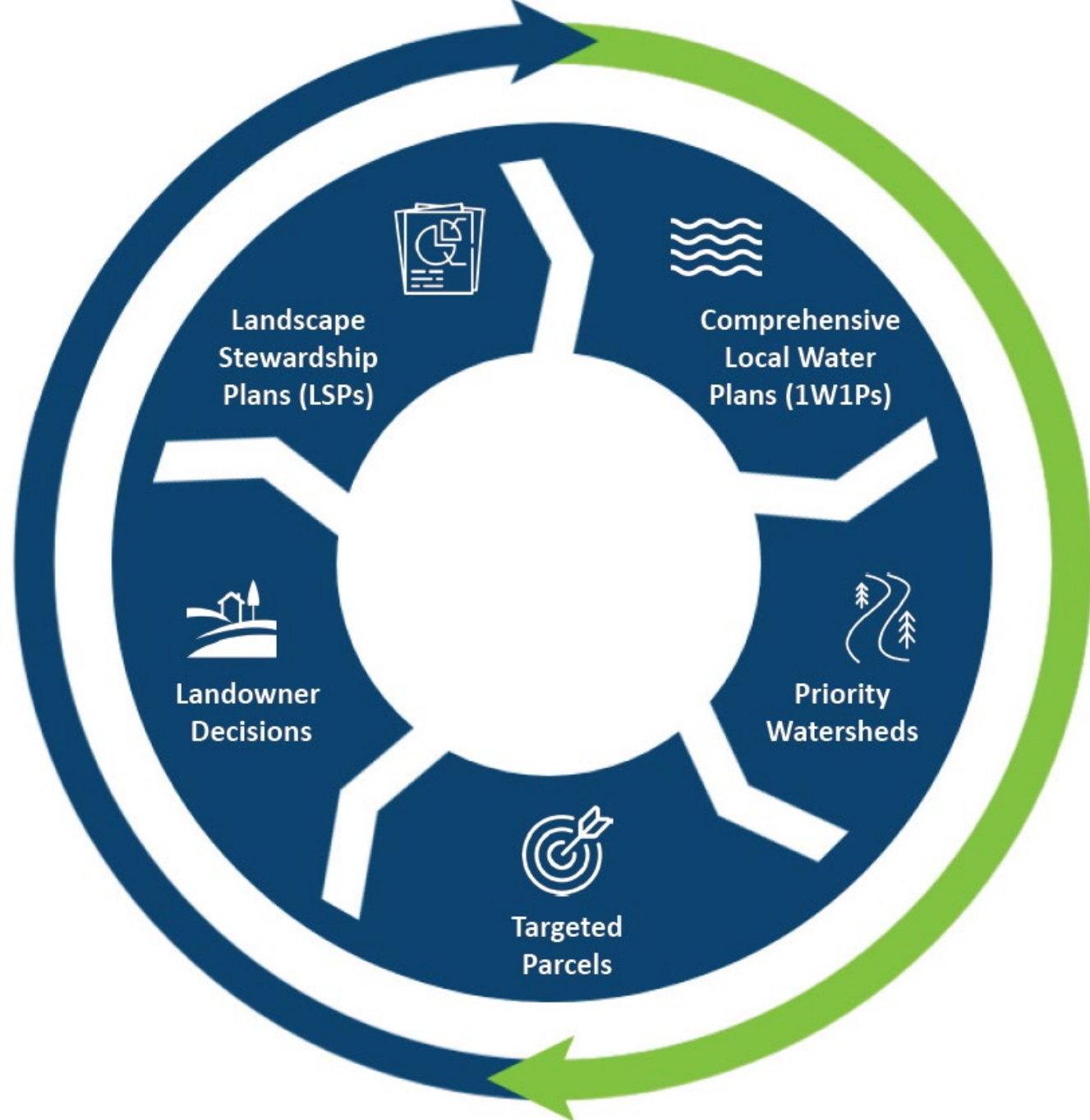
Developing a Watershed Based Protection Methodology  
for the Forested Regions of Minnesota

December 2022



# Constant Watershed Tracking Framework:

## *Mississippi Headwaters Watershed Landscape Stewardship Plan*

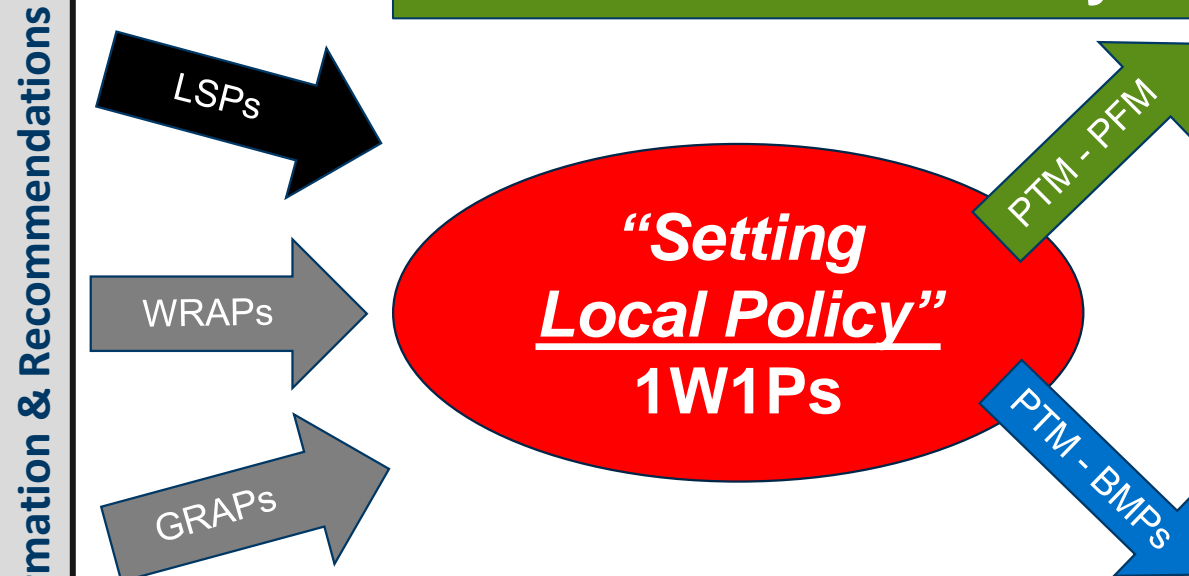


*Primary components of Private Forestry Management on a landscape level*

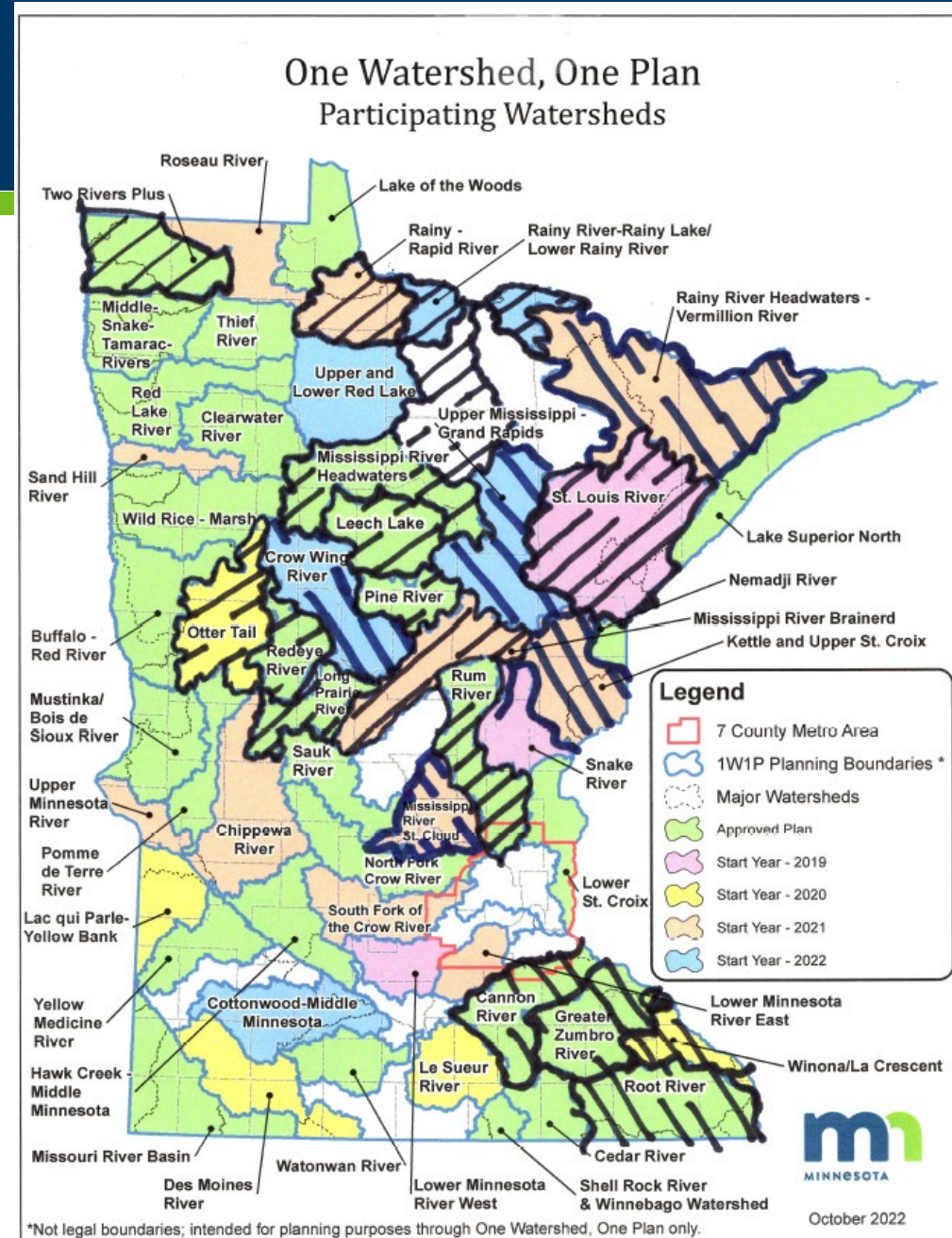


# LSP Status / 1W1P Integration

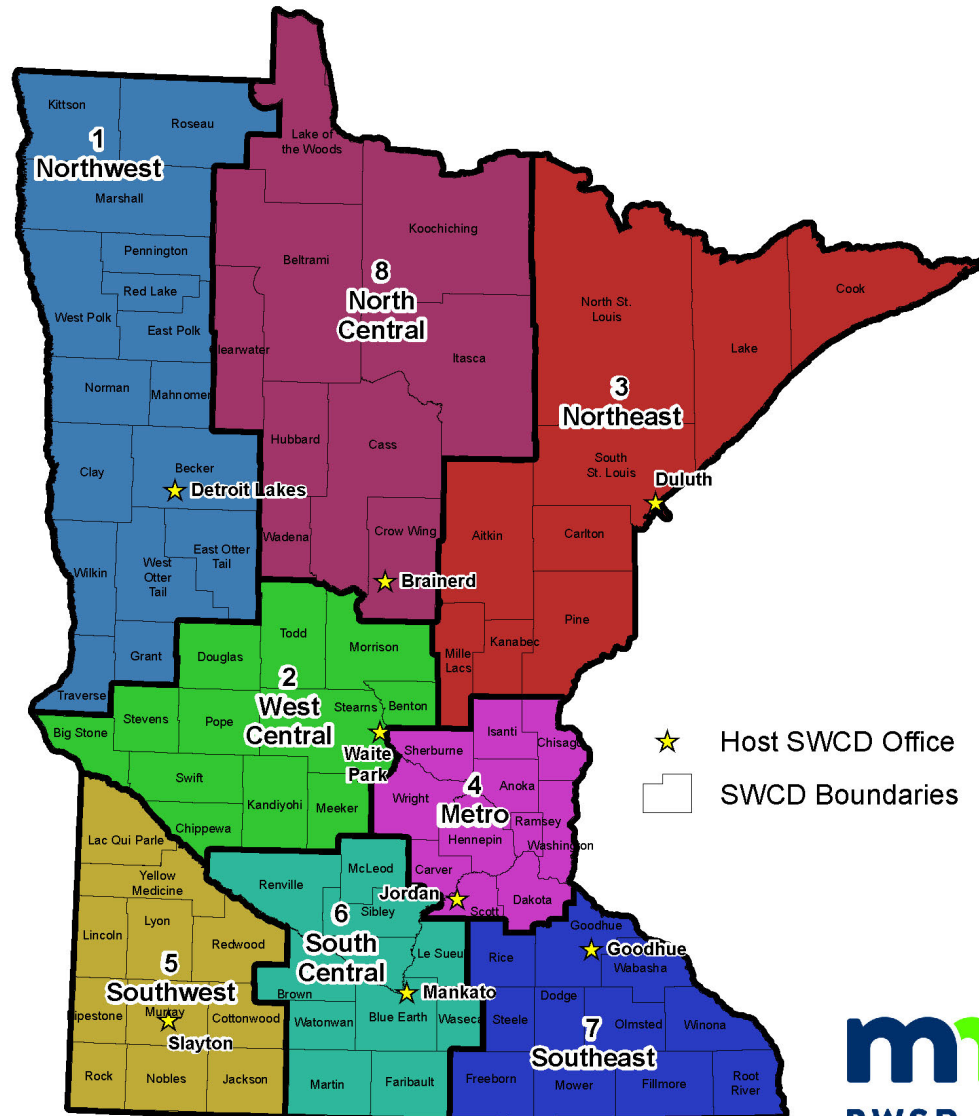
*“Implementation”*  
Protected Forested Watersheds  
= Forest Economy \$\$\$



*“Implementation”*  
Clean Water  
= Tourism Economy \$\$\$

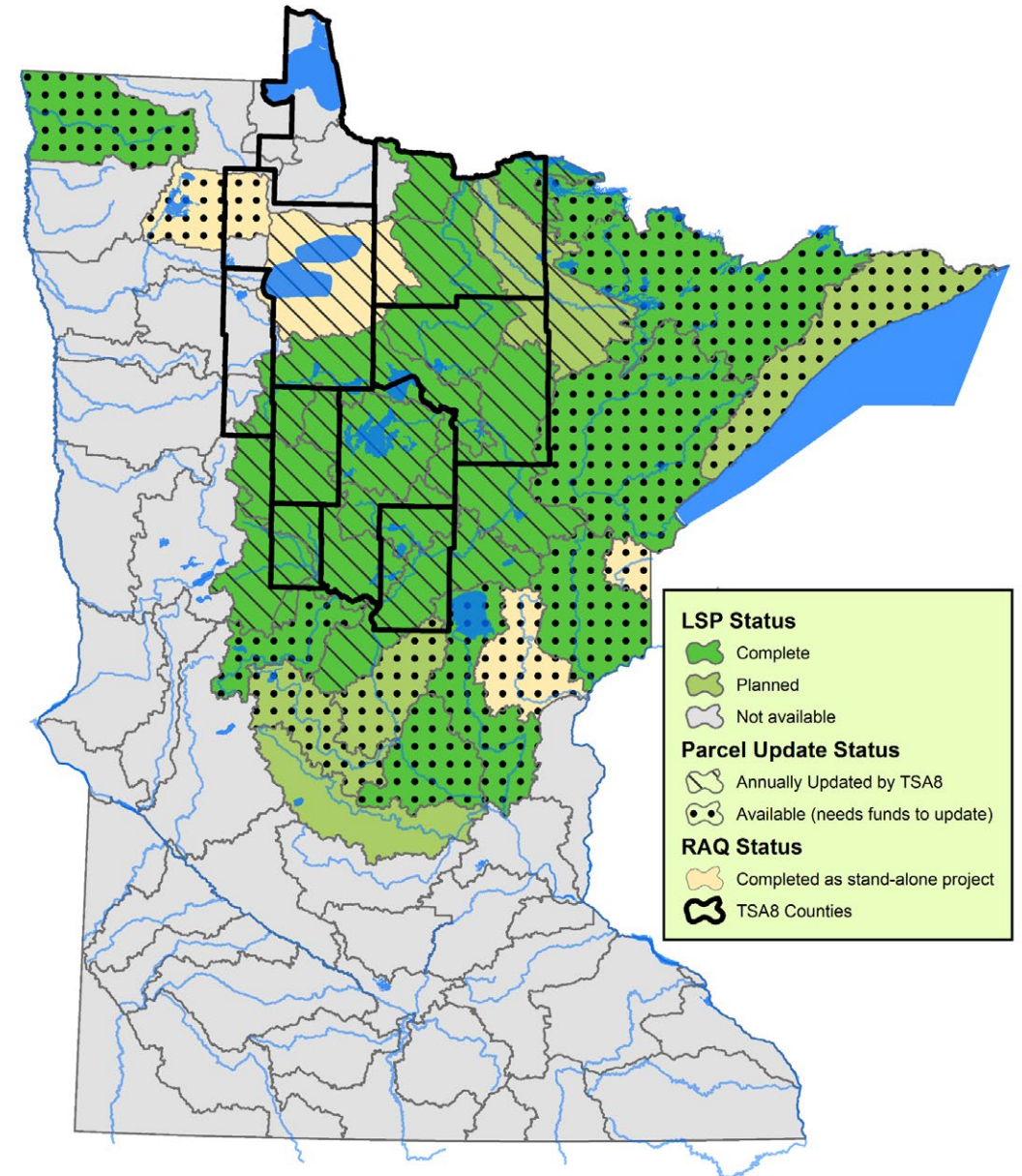


# Minnesota Association of Soil & Water Conservation Districts & SWCD Technical Service Areas



May 2019



# Landscape Stewardship Plan (LSP) Status Map

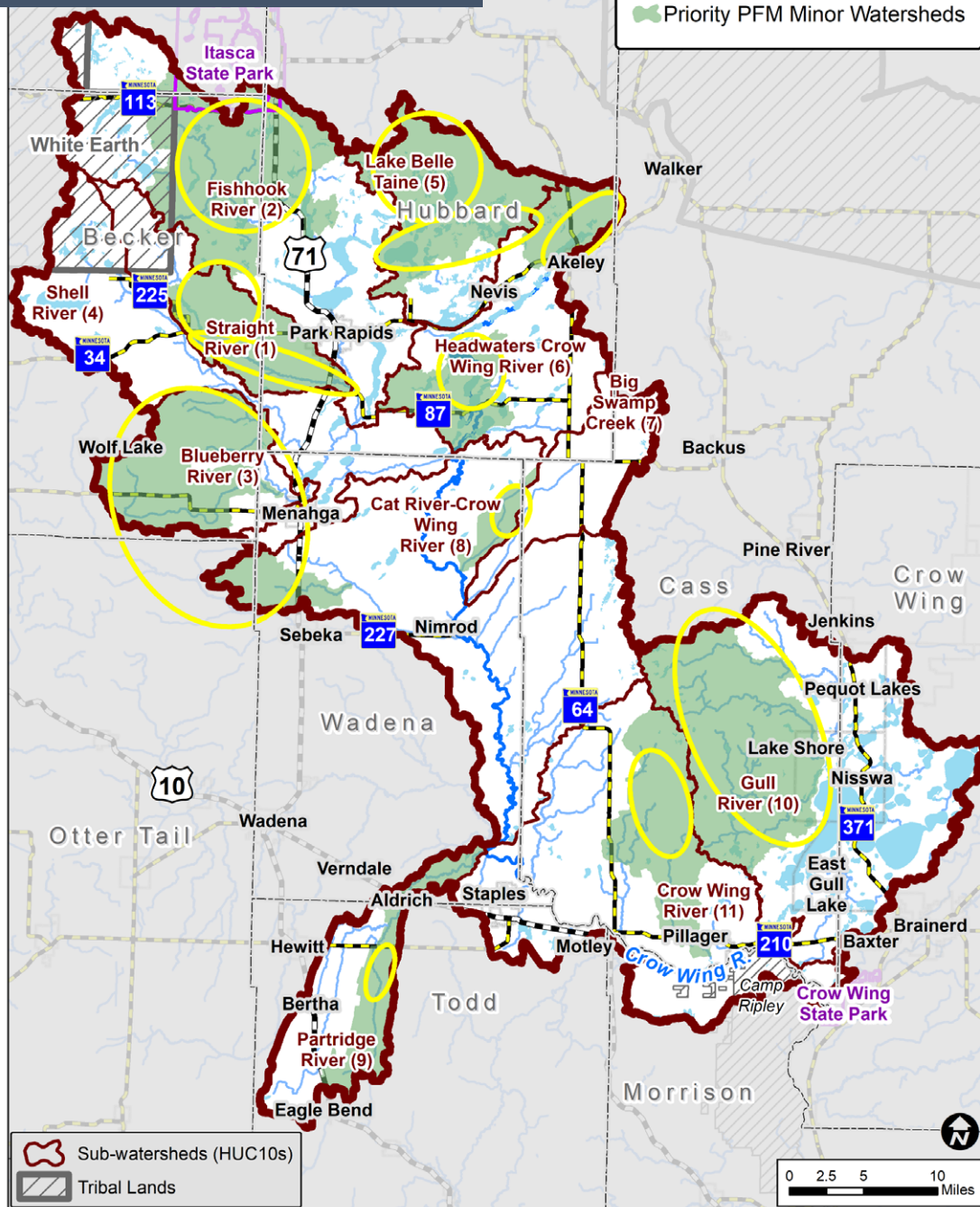


Map Date: October 2024



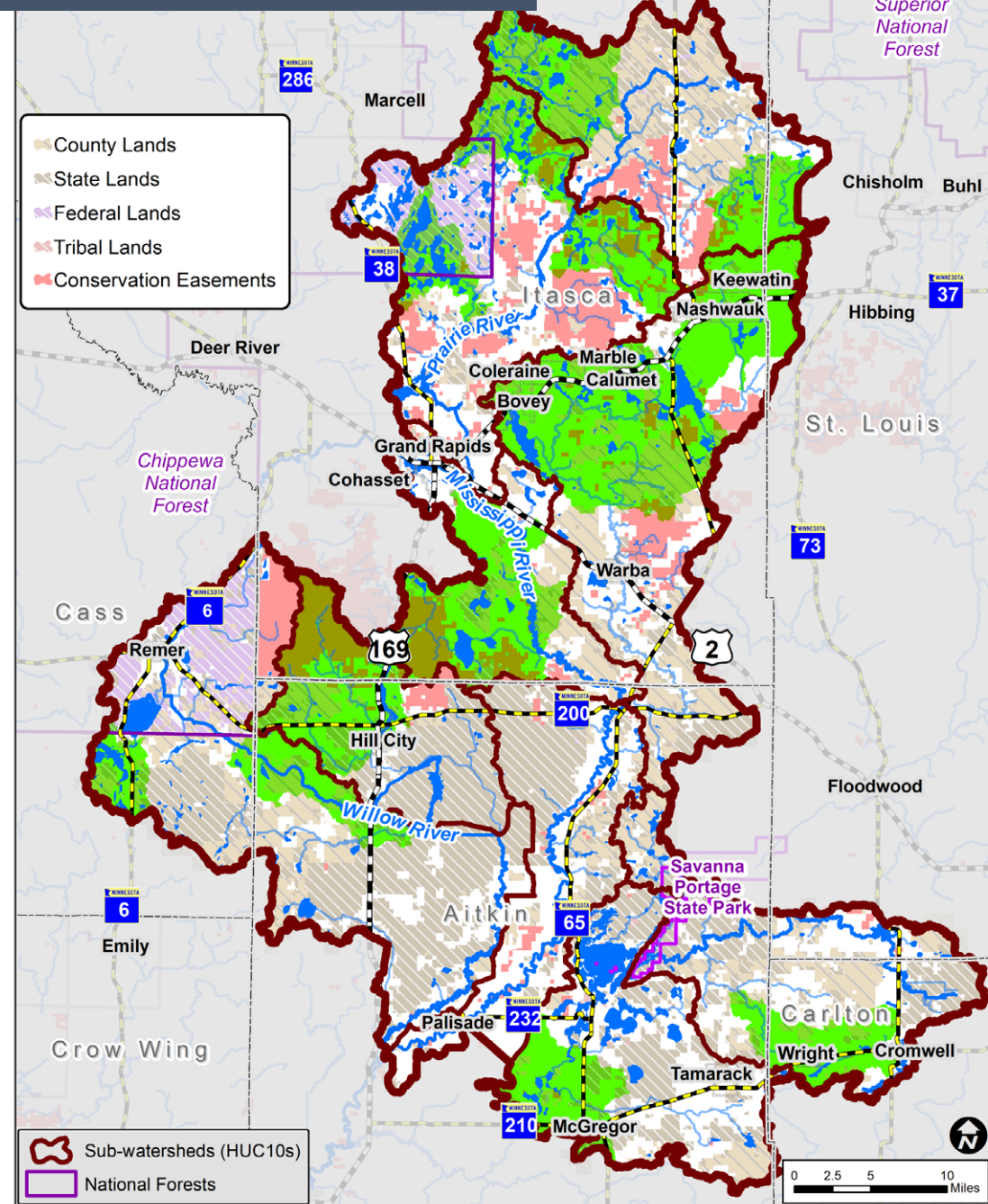
# Crow Wing River Watershed

-  PFM Focus Areas
-  Priority PFM Minor Watersheds



# Mississippi River Grand Rapids

-  Priority PFM Minor Watersheds



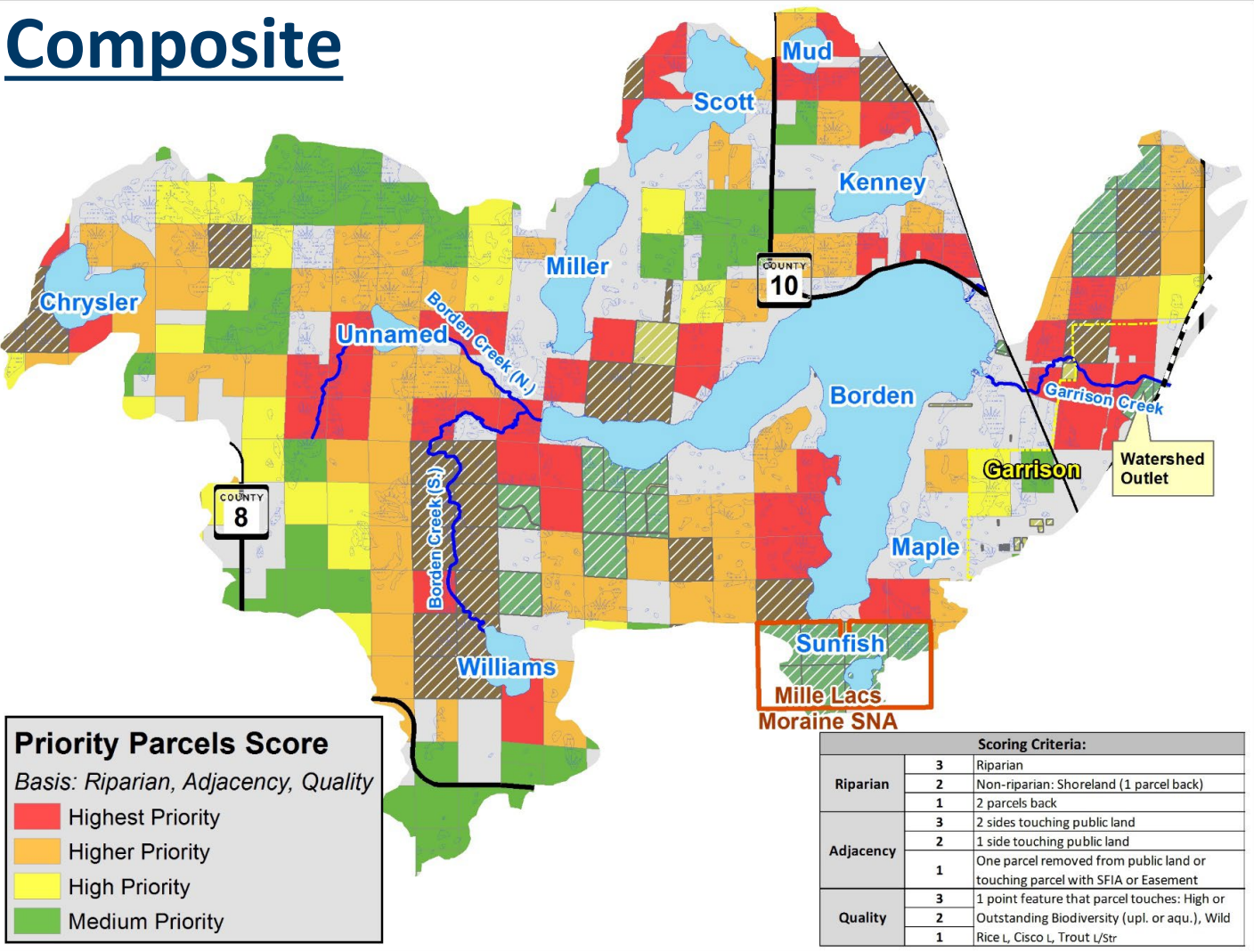
# RAQ Scoring

Scoring Criteria:		
R	<u>R</u> iparian	3 Riparian
		2 Non-riparian: Shoreland (1 parcel back)
		1 2 parcels back
A	<u>A</u> djacency	3 2 sides touching public land
		2 1 side touching public land
		1 One parcel removed from public land or touching parcel with SFIA or Easement
Q	<u>Q</u> uality*	3 1 point for each feature that the parcel touches: such as High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L,
		2
		1



# RAQ Scoring: Borden Lake

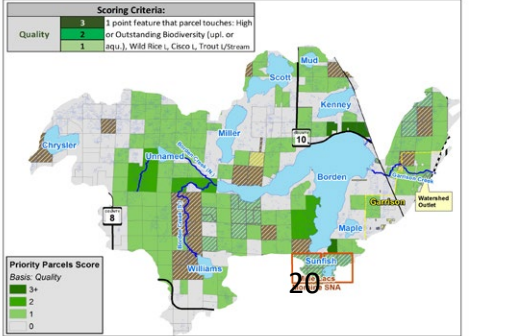
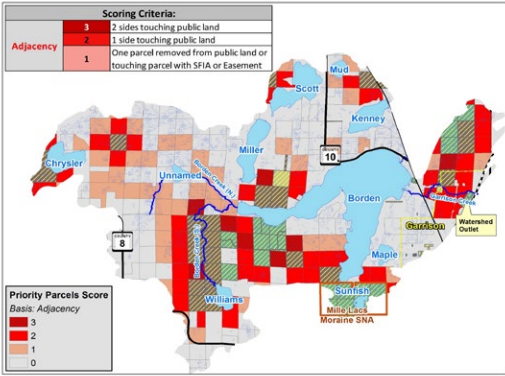
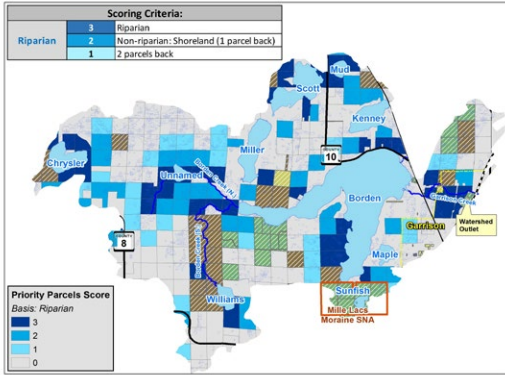
## Composite



R

A

Q





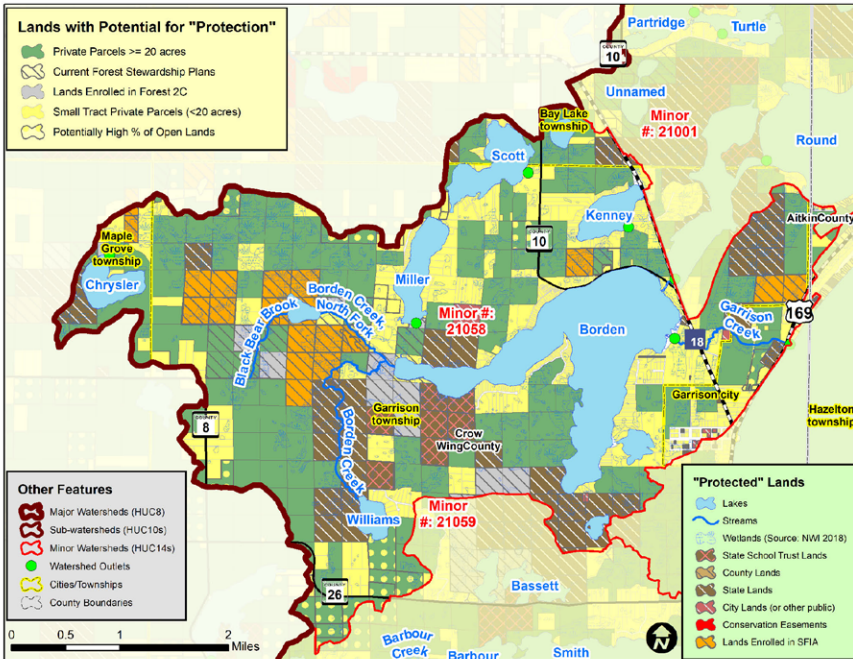
# Drilling Down to the Parcel (*Rum R. Example*)

## Protection

## RAQ

2780 acres (25%)  
Needed for 75% Goal

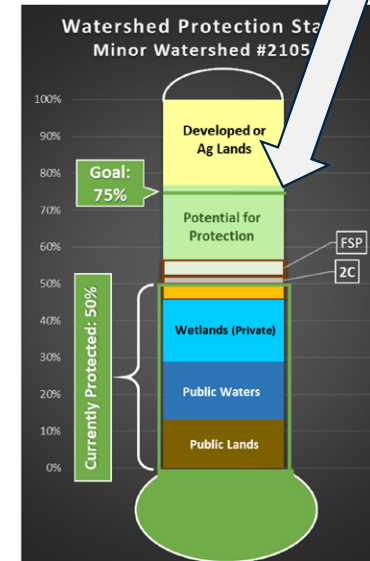
### What is the Potential to Protect the Borden Lake Minor Watershed (Minor 21058)?



#### Water Quality Trends / Impairments:

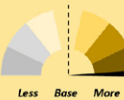
**Improving:** Borden  
**Declining:** Scott, Miller  
**Impaired:** None  
**Stable (No Trend):** Kenney

**Forests for the Future**  
Score: 98 (out of 175)



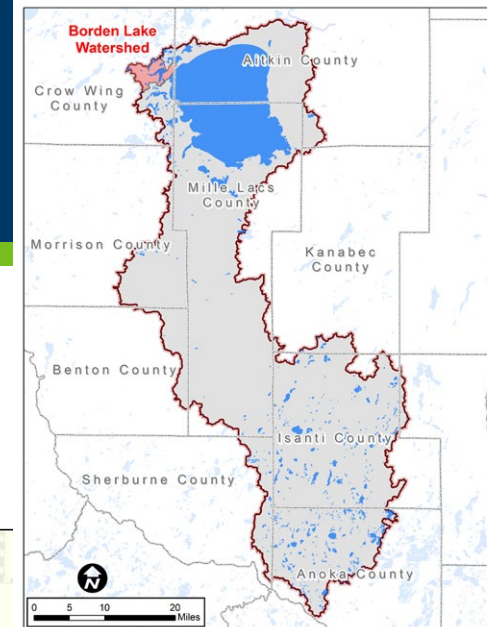
#### Habitat Quality Meter (Habitometer):

- Cisco Lake
- Trout Stream
- Lake of Outstanding Biodiversity
- Priority Shallow Lake
- Priority Wild Rice Lake
- Outstanding Terrestrial Biodiversity
- High Wildlife Action Network Score



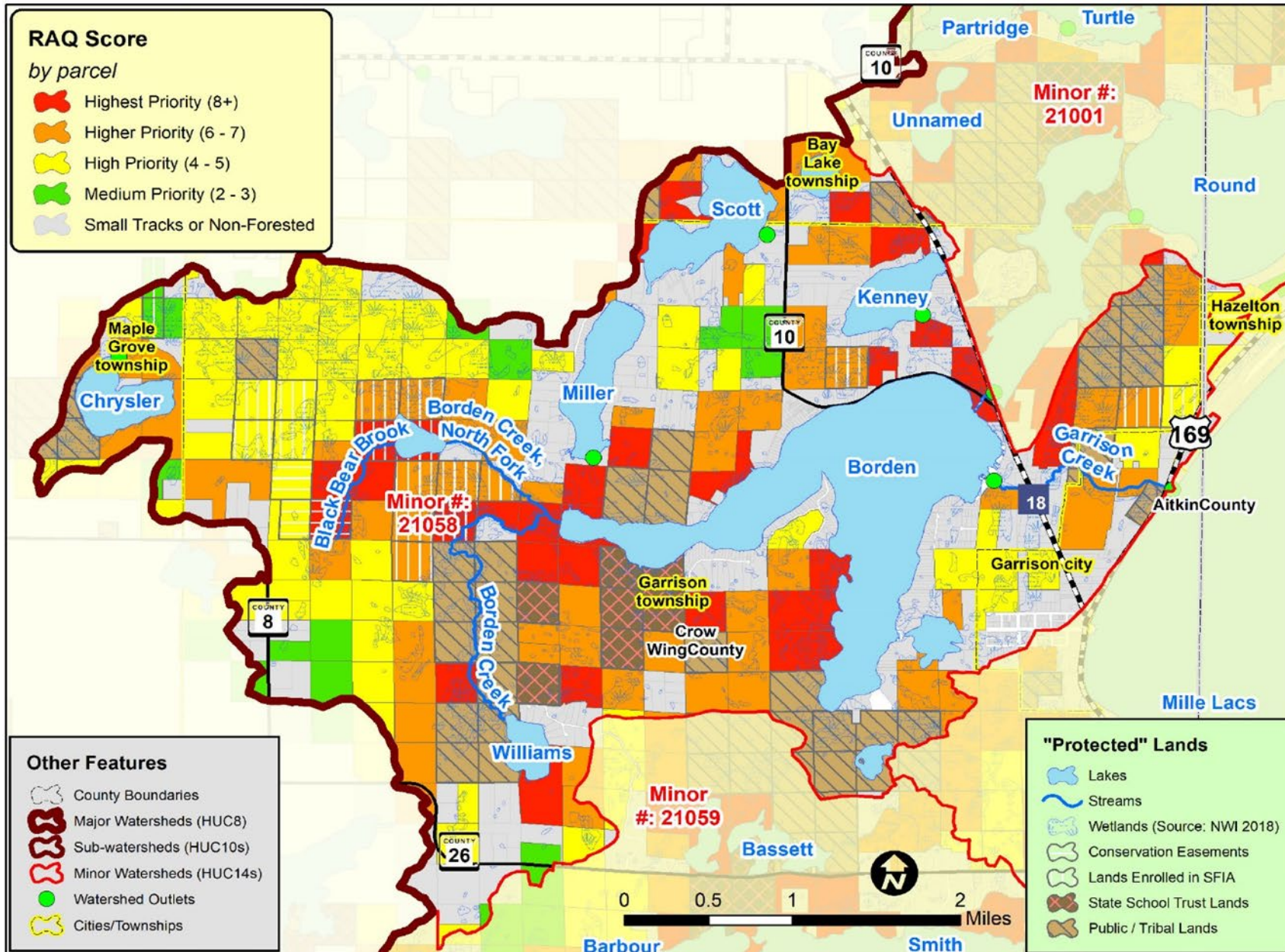
#### "Protected" Lands

- Lakes
- Streams
- Wetlands (Source: NWI 2018)
- Conservation Easements
- Lands Enrolled in SFIA
- State School Trust Lands
- Public / Tribal Lands





# RAQ Scoring for Parcels in Minor Watershed #21058



Scoring Criteria:		
Riparian	3	Riparian
	2	Non-riparian: Shoreland (1 parcel back)
	1	2 parcels back
Adjacency	3	2 sides touching public land
	2	1 side touching public land
	1	One parcel removed from public land or touching parcel with SFIA or Easement
Quality*	3	1 point for each feature that the parcel touches: High or High or Outstanding Biodiversity (upl. or aqu.), Wild Rice L, Cisco L, Trout L/Streams, et. al.
	2	
	1	

\* Quality is locally determined and for this project included other features, including groundwater resources. In addition to those listed above, for this project quality also included:

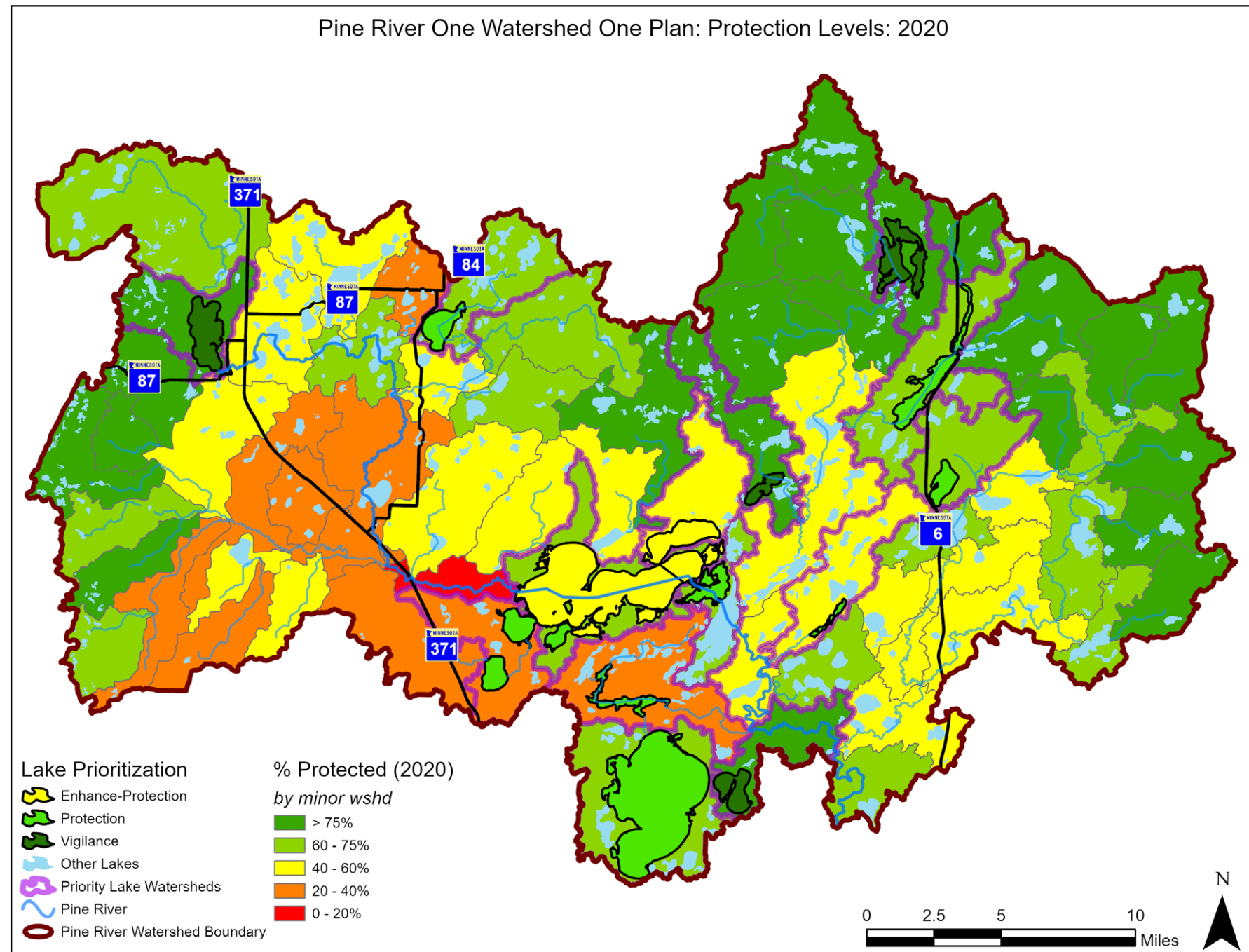
- Priority Shallow Lakes
- Old Growth Forests (DNR)
- Lakes with Exceptional IBI Scores (DNR)
- Drinking Water Supply Management Areas (MDH)
- Source Water Assessment Areas (MDH)
- Medium High or High Wildlife Action Network Score (DNR)
- High Sensitivity to Near-Surface Materials
- Rare Species (DNR)...see disclaimer below

Rare species data included in the RAQ scoring: Copyright 2018, State of Minnesota, Department of Natural Resources. Rare species data included here were provided by the Division of Ecological and Water Resources Division, Minnesota Department of Natural Resources (DNR), and were current as of May 2018. These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present.



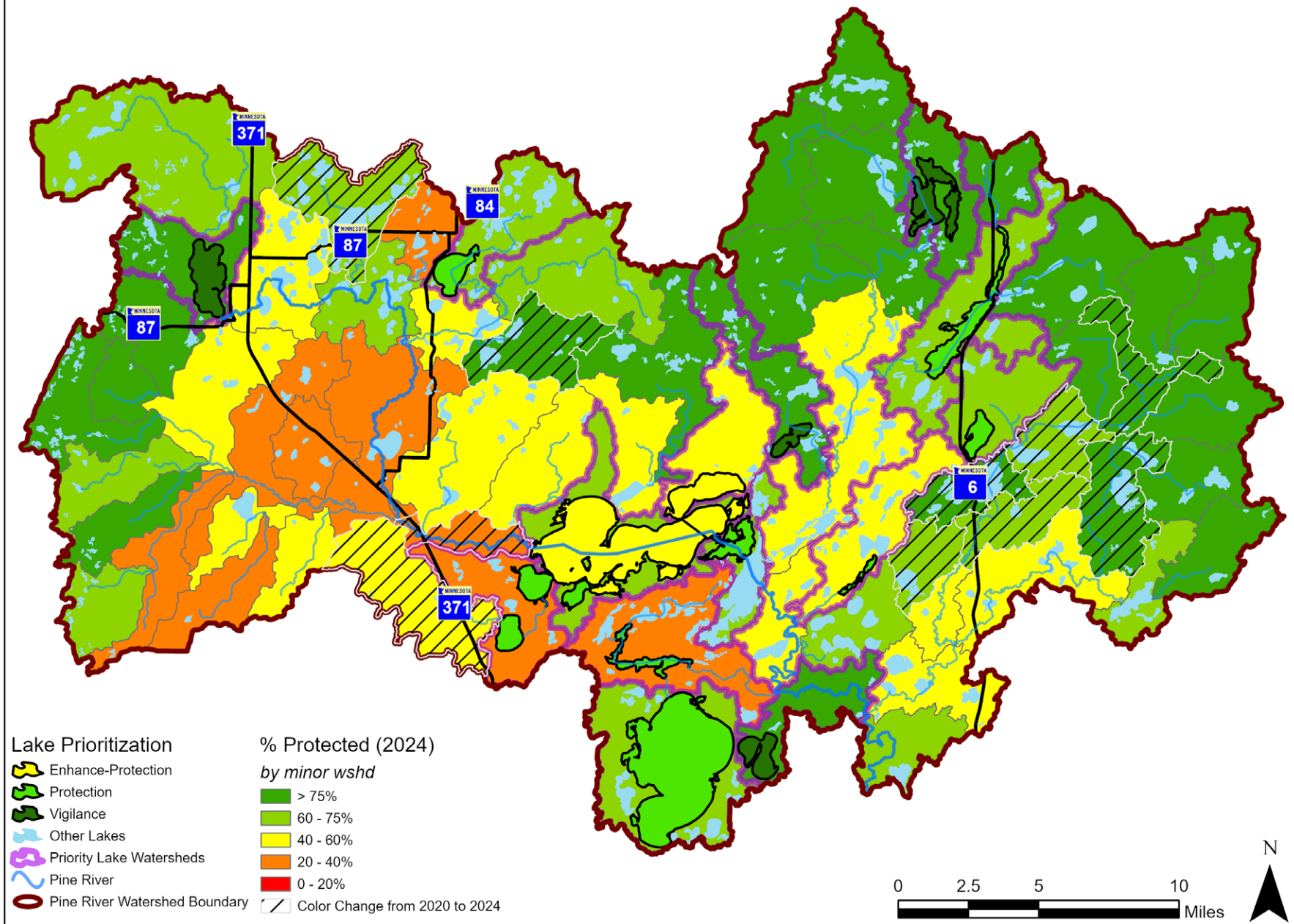
# Track Changes Over Time

Pine River Watershed: 2020



## Pine River Watershed: 2024

### Pine River One Watershed One Plan: Protection Levels: 2024



# Clean Water Council Strategic Plan

**Goal:** Build capacity of local communities to protect and sustain water resources.

**Strategy:** Maintain and increase capacity of Minnesotans to improve water quality.

**Action:** Support local efforts to engage lakeshore property owners and private landowners.

**Measure:** Protection of 100,000 acres and restoration of 100,000 acres in the Upper Mississippi River headwaters basin by 2034.



# What's Next? = Priority Lakes

**Total Lakes = 4100**

## Filter by Size:

436 Lakes > 400 acres

## Remove:

- Impaired
- Already 75% Protected
- Shallow/wild rice/NE Lakes
- High wshd disturbance

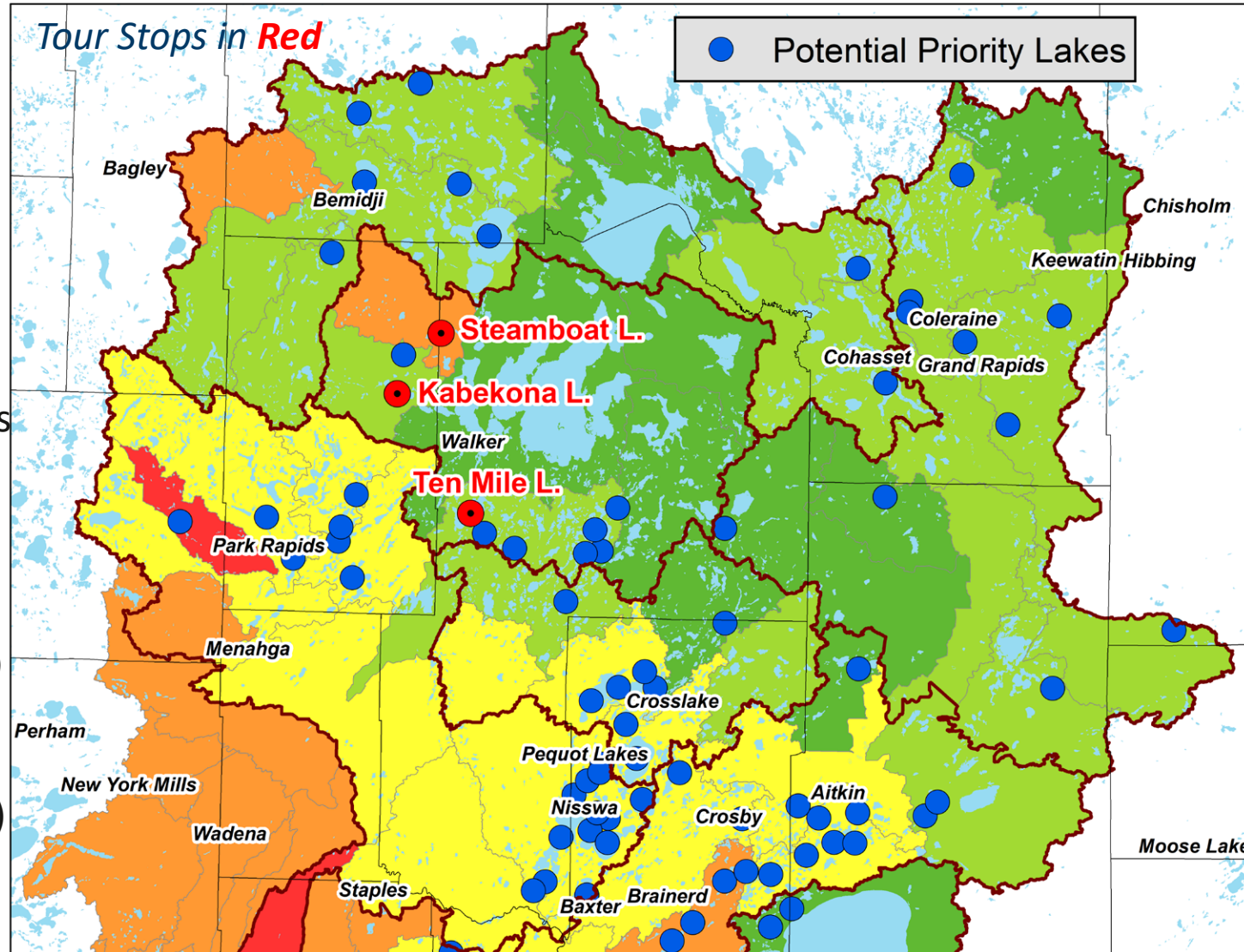
## Focus on Intersection of:

- Risk (*Phos. Sensitivity*)
- Quality (*Lakes of Biological Sig.*)

## Include:

- Local Priority Lakes (1w1p)

**= 60+/- Priority Lakes**



## **Selected Priority Lakes:**

Cass, Gull, Pelican  
Whitefish, North Long  
Pokegama, Woman, Deer  
Big, Edward, Plantagenet  
Bay, Swan, Bemidji  
Farm Island, Long, Trout,  
Steamboat, Fish Hook,  
Turtle, Round, Belle Taine,  
Cedar, Big Trout, Thunder,  
Birch, South Long, Hubert,  
Roosevelt, Pleasant, Serpent,  
Borden, Garfield, Ada

## **Total Valuation of Above Lakes:**

**>10 Billion**

Lake Name	DNR ID #	Lake Acres	Shoreline (miles)	County(s)	Major Watershed	Lakeshed Protected %	Lakeshed Disturbed %	# of Lakeshed Catchments	Adjusted Acres Needed for 75% Goal	Implement- ation Focus	Estimated RIM Easement Cost (75%)	Estimated RIM Easement Cost (60%)
Mule*	11020000	538	7.2	Cass	Leech Lake R.	74.5%	8.9%	2	0	Upstream	\$0	\$0
Woman*	11020102	4,925	25.2	Cass	Leech Lake R.	70.7%	8.5%	37	0	Upstream	\$0	\$0
Round	1002300	554	3.7	Aitkin	Miss. R. - G.R.	74.8%	11.3%	1	2	Homeshed	\$2,150	\$0
Round	1013700	636	3.7	Aitkin	Miss. R. - Brainerd	68.5%	8.8%	1	93	Homeshed	\$84,019	\$0
Ada <sup>u</sup>	11025000	970	7.0	Cass	Pine R.	73.4%	10.3%	5	128	Upstream	\$115,269	\$0
Kabekona	29007500	2,456	10.6	Hubbard	Leech Lake R.	75.2%	9.8%	6 / 1	156	Homeshed	\$140,381	\$0
Hammal	1016100	403	4.8	Aitkin	Miss. R. - Brainerd	63.1%	12.2%	1	213	Homeshed	\$191,373	\$0
Fish Trap	49013700	1,233	12.2	Morrison	Long Prairie R.	75.4%	10.3%	3 / 1	241	Homeshed	\$216,767	\$0
Lone	1012500	439	5.6	Aitkin	Miss. R. - Brainerd	49.9%	28.2%	1	253	Homeshed	\$227,314	\$91,362
Shallow	31008400	549	5.1	Itasca	Miss. R. - G.R.	54.9%	15.1%	1	269	Homeshed	\$241,831	\$61,387
Nord	1011700	448	6.0	Aitkin	Miss. R. - Brainerd	56.7%	17.0%	1	275	Homeshed	\$247,634	\$44,398
Girt*	11017400	442	9.5	Cass	Leech Lake R.	70.5%	8.7%	38 / 1	356	Both	\$320,054	\$0
Round <sup>o</sup>	18037300	1,662	6.4	Crow Wing	Crow Wing R.	62.2%	11.3%	7 / 1	385	Homeshed+	\$346,614	\$0
Sullivan	49001600	1,116	7.8	Morrison	Miss. R. - Sartell	54.8%	22.9%	12	395	Upstream	\$355,765	\$0
Nokay^	18010400	765	5.3	Crow Wing	Miss. R. - Brainerd	61.7%	11.2%	7	427	Both	\$384,443	\$0
Rush <sup>u</sup>	18031100	729	12.6	Crow Wing	Pine R.	58.6%	16.2%	83 / 2	446	Upstream	\$401,776	\$0
Thunder	11006200	1,361	15.3	Cass	Miss. R. - G.R.	70.5%	5.7%	2	480	Homeshed+	\$431,920	\$0
Round <sup>~</sup>	1020400	734	5.0	Aitkin, CW	Rum R.	61.4%	10.1%	2	559	Upstream	\$503,485	\$0
Clearwater^	18003800	965	9.5	Crow Wing	Miss. R. - Brainerd	52.0%	7.7%	1	574	Homeshed	\$516,686	\$179,582
Hubert/Gladstone	18037500 18033800	1,744	9.6	Crow Wing	Crow Wing R.	61.0%	9.5%	3	597	Upstream	\$537,272	\$0
Sylvan	11030400	977	12.6	Cass	Crow Wing R.	58.2%	9.8%	1	610	Homeshed	\$549,215	\$59,345
Pelican	18030802	8,538	24.3	Crow Wing	Pine R.	61.9%	12.5%	15 / 5	666	Homeshed+	\$599,586	\$0
Roosevelt	11004302	1,227	11.5	Cass, CW	Pine R.	76.2%	6.1%	10	707	Homeshed+	\$635,850	\$0
Spirit <sup>x</sup>	1017800	566	7.0	Aitkin	Miss. R. - Brainerd	54.0%	15.9%	12 / 3	708	Both	\$637,343	\$133,154
Garfield	29006100	1,041	7.7	Hubbard	Leech Lake R.	52.9%	19.5%	1	760	Homeshed	\$683,661	\$218,965
Birch*	11041200	1,332	14.3	Cass	Leech Lake R.	74.6%	7.0%	7	765	Homeshed	\$688,500	\$115,437
Edward <sup>o</sup>	18030500	2,738	23.8	Crow Wing	Crow Wing R.	60.1%	11.9%	2	824	Homeshed+	\$741,262	\$0
Blackwater*	11027400	773	7.6	Cass	Leech Lake R.	60.7%	12.5%	5 / 3	850	Both	\$765,000	\$257,950
Upper Mission	18024200	897	5.7	Crow Wing	Miss. R. - Brainerd	59.4%	11.1%	3	932	Homeshed+	\$838,371	\$34,237
Gull	4012000	2,328	13.2	Beltrami	Miss. R. - Headwaters	60.3%	15.5%	1	1,022	Homeshed	\$920,239	\$0

Lake Name	DNR ID #	Lake Acres	Shoreline (miles)	County(s)	Major Watershed	Lakeshed Protected %	Lakeshed Disturbed %	# of Lakeshed Catchments	Adjusted Acres Needed for 75% Goal	Implementation Focus	Estimated RIM Easement Cost (75%)	Estimated RIM Easement Cost (60%)
Spider	29011701	542	12.4	Hubbard	Crow Wing R.	36.8%	24.2%	1	1,132	Homeshed	\$1,019,039	\$619,017
Shamineau	49012700	1,464	9.4	Morrison	Long Prairie R.	66.5%	27.7%	3	1,149	Homeshed+	\$1,034,097	\$0
Long/Dam	1008900 1009600	1,040	9.7	Aitkin	Miss. R. - Brainerd	59.0%	10.5%	2	1,440	Homeshed+	\$1,296,142	\$79,203
Big Trout <sup>u</sup>	18031500	1,368	8.4	Crow Wing	Pine R.	55.4%	9.9%	1	1,597	Homeshed	\$1,437,571	\$338,007
Farm Island <sup>x</sup>	1015900	2,069	13.0	Aitkin	Miss. R. - Brainerd	53.7%	16.2%	9 / 3	1,757	Both	\$1,580,870	\$281,003
North Long <sup>o</sup>	18037200	6,220	20.2	Crow Wing	Crow Wing R.	62.1%	11.2%	6 / 4	1,896	Homeshed+	\$1,706,579	\$0
Hill	1014201	697	7.4	Aitkin	Miss. R. - G.R.	68.4%	11.0%	2	1,918	Homeshed	\$1,726,133	\$488,131
Plantagenet	29015600	2,581	11.3	Hubbard	Miss. R. - Headwaters	73.1%	10.0%	22 / 1	2,050	Homeshed	\$1,845,194	\$879,055
Deer	31071900	4,175	22.2	Itasca	Miss. R. - Headwaters	61.9%	8.3%	6 / 4	2,261	Upstream	\$2,035,298	\$17,735
Swan	31006702	2,144	12.4	Itasca	Miss. R. - G.R.	59.4%	18.7%	14	2,346	Both	\$2,111,809	\$630,942
Borden <sup>~</sup>	18002000	1,059	11.3	Crow Wing	Rum R.	57.6%	10.8%	10	2,364	Both	\$2,127,605	\$408,524
Pleasant <sup>*</sup>	11038300	1,141	10.3	Cass	Leech Lake R.	67.8%	9.1%	12 / 5	2,694	Upstream	\$2,424,977	\$1,267,182
Trout	31021600	1,880	14.1	Itasca	Miss. R. - G.R.	53.5%	14.1%	2	3,006	Both	\$2,705,553	\$821,049
Ossawinnamakee	18035200	709	13.7	Crow Wing	Pine R.	53.7%	13.1%	21 / 6	3,745	Both	\$3,370,216	\$2,050,612
Bay <sup>x</sup>	18003400	2,427	22.4	Crow Wing	Miss. R. - Brainerd	51.9%	16.4%	6	3,939	Both	\$3,545,364	\$1,241,775
Cass	4003000	16,354	38.8	Beltrami, Cass	Miss. R. - Headwaters	64.3%	16.4%	148 / 59	4,005	Upstream	\$3,604,500	\$0
Cullen Chain	18040300 18037700 18037600	1,449	14.7	Crow Wing	Crow Wing R.	34.3%	21.2%	7	4,990	Both	\$4,491,305	\$2,836,460
Pokegama	31053201	5,823	43.0	Itasca	Miss. R. - Headwaters	66.8%	10.6%	7 / 4	6,138	Homeshed+	\$5,524,428	\$1,290,265
Fish Hook	29024200	1,746	9.9	Hubbard	Crow Wing R.	66.7%	13.1%	38 / 4	6,507	Homeshed+	\$5,856,725	\$3,420,947
Lower Hay <sup>u</sup>	18037800	701	4.4	Crow Wing	Pine R.	38.1%	25.4%	5	6,702	Upstream	\$6,031,510	\$3,576,382
Cedar	1020901	1,580	21.8	Aitkin, CW	Miss. R. - Brainerd	45.9%	17.9%	13	7,587	Both	\$6,828,174	\$3,313,841
Turtle	4015900	1,666	10.2	Beltrami	Miss. R. - Headwaters	48.3%	22.6%	9	8,493	Both	\$7,643,426	\$3,348,816
Total						615 / 284		91,411		\$82,270,295		\$28,104,762



# Thank You!!





# Questions/Discussion

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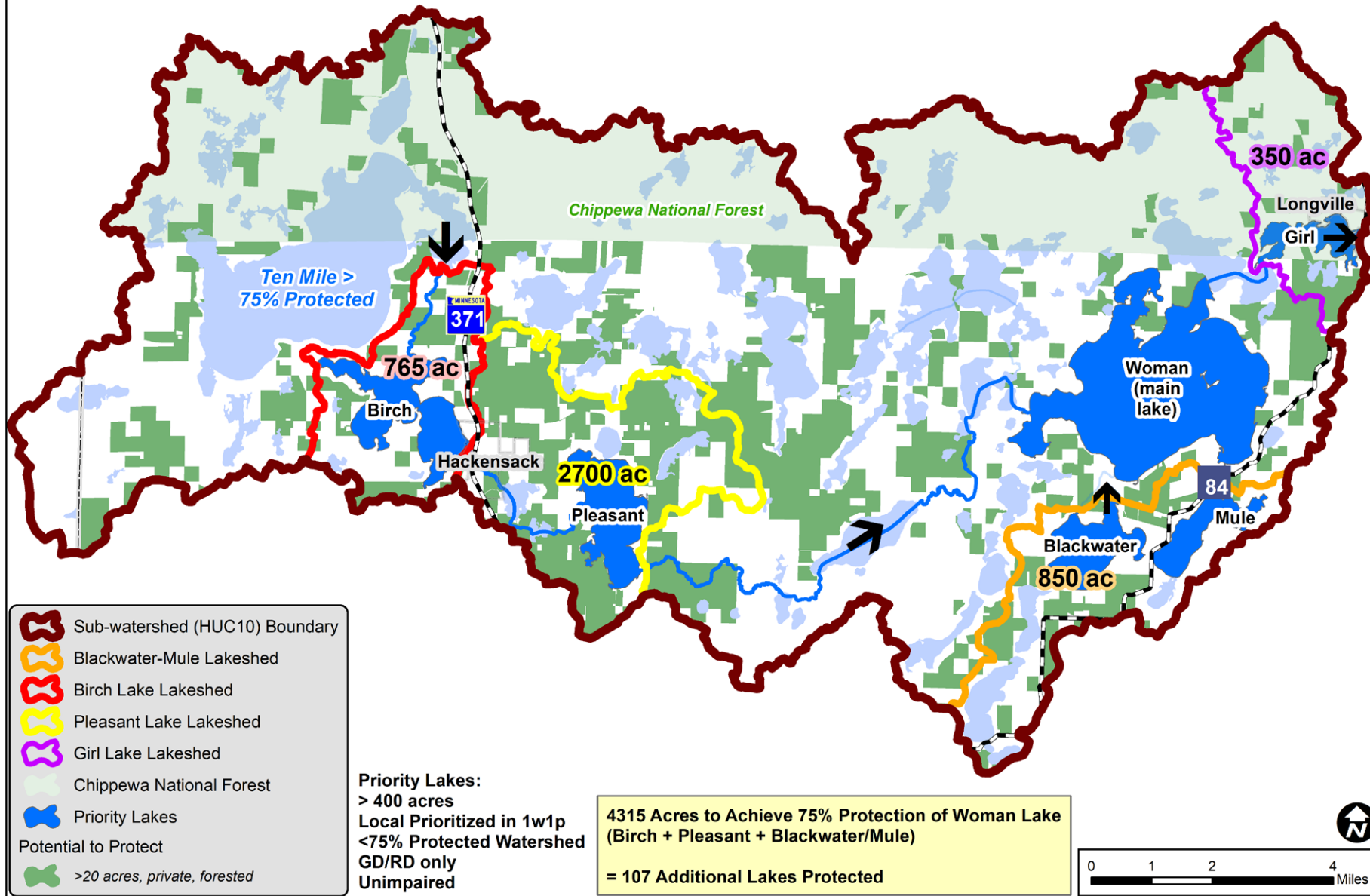


**Melissa Barrick**

District Manager

# Priority Lakes in the Boy River / Woman Lake Sub-watershed

Cass County, MN



Lake Name	DNR ID #	# of Lakeshed Catchments	Adjusted # of Lakeshed Catchments	Adjusted Protection %	Adjusted Acres Needed for Goal				Cost Range	
					75%	70%	65%	60%	Estimated RIM Easement Cost (75%)	Estimated RIM Easement Cost (60%)
Belle Taine	29014600	20	19	58.0%	11,726	8,277	4,827	1,378	\$10,553,738	\$1,240,074
Fifth Crow Wing	29009200	10	10	40.3%	12,010	10,281	8,552	6,822	\$10,808,780	\$6,140,136
Upper/Lower South Long	18009600 18013600	15	7	38.8%	12,061	10,393	8,725	7,057	\$10,855,101	\$6,351,018
Steamboat	11050400	8	8	35.8%	28,128	24,538	20,947	17,357	\$25,314,975	\$15,621,314
Whitefish	18031000	81	70	59.8%	32,574	21,858	11,143	427	\$29,316,888	\$384,007
Gull	11030500	54	37	46.8%	40,682	33,475	26,267	19,059	\$36,614,198	\$17,152,992
Bemidji	4013002	74	52	54.4%	59,355	44,944	30,532	16,121	\$53,419,725	\$14,508,972
Prairie**	31038400	82	N/A	76.7%	0	0	0	0	\$0	\$0
<b>Total</b>		<b>344</b>	<b>203</b>		<b>196,537</b>	<b>153,765</b>	<b>110,993</b>	<b>68,221</b>	<b>\$176,883,404</b>	<b>\$61,398,513</b>



# Water Quality Inserts in Woodland Stewardship Plans

## 1 The state of Headwaters

No water flows in to Minnesota, it all flows out.

That makes us stewards of many waters. The map below shows our state broken into counties (the white lines), by major watershed (the various blue sections), and by water flow (the orange, red, and yellow arrows).

**North to the Arctic**  
The Red River and Rainy River watersheds flow north into the Arctic Ocean.

**Forests = Clean Water**  
Clean water is a by-product of healthy forests. Water quality is directly connected to our forests and woods, which act as a giant sponge. The water that leaves the forest is clean, with few pollutants, for a state where waters begin!

## 5 Protect forests, protect water

**Forested Lands Retain Water**  
Forests and well-vegetated land serve as a giant natural sponge. Flattening and shifting streambeds, a healthy variety of plants and their deep root systems retain soil, soak up water and filter contaminants. Woodlands protect both groundwater and surface water. Native cover also proper infiltration of the water into underground aquifers.

**Developed Lands Shed Water**  
When woodlands are converted to other uses, rain and snowmelt runoff increases. Increased runoff carries more sediment and contaminants like chemicals and excess nutrients to surface water. Infiltration and groundwater recharge is reduced. Increased flows can diminish streams and decrease water quality.

## 5 Options for landowners

Your Woodland Stewardship Plan is key to unlocking a host of options that range from keeping your woods healthy to financial incentives.

**1 Keep your woodlands intact**  
Forests have local positive public benefits. For the most part, members and resources are available to assist private landowners. You might be eligible to receive either direct payments by enrolling in the Sustainable Forest Incentive Act (SFIA) program.  
• A lump sum payment by selling your woods permanently in a conservation easement.

**Add more trees and native vegetation to your land**  
• Replant trees on woodlands that have been converted to other uses.  
• Plant trees and native vegetation near streams, rivers, and shorelines.

**Make your woods healthier and more resilient**  
Follow the forest steward recommendations in your Woodland Stewardship Plan.  
Project your restoration include:  
• Make natural disturbance with a woodland harvest.  
• Use desired tree species to grow with a woodland improvement cut.  
• Encourage the survival of native trees and plants by removing non-native species.  
• Increase tree species diversity by encouraging the growth of low canopy trees on your property and planting other site-appropriate native trees.

## Private Forests. Pristine Waters.

The Importance of Woodland Stewardship Plans for Minnesota's Private Forests and Waters.

**mi DEPARTMENT OF NATURAL RESOURCES**

**mi BOARD OF WATER AND SOIL RESOURCES**

**One Watershed One Plan**

**CLEAN WATER LAND & LEGACY**

**The Great Lakes**  
The Lake Superior basin flows through the great lakes and into the Atlantic Ocean.

**St. Croix River Watershed**

**The Mighty Mississippi**  
All other Minnesota waters flow into the Mississippi and Missouri river basins and the on to the Gulf of Mexico.

## 2 Watershed 101

A watershed describes an area of land that contains a common set of streams and rivers that all drain into a larger body of water.

The key word with watersheds is "Connections." The water within a watershed is always moving. Groundwater and surface water are connected. Your land is connected to neighboring properties. Together they may be connected to a stream which leads to a lake or larger river. Streams and rivers form extensive drainage networks. What you do on your land has the potential to affect many other places. Protecting one means protecting all. You can start to make that happen.

**Forests filter water like a sponge**  
Water quality is directly connected to our forests. Rain and snowmelt are trapped and can infiltrate the forest ground. Forests filter away excess water and filter out pollutants. Water runoff that emerges from a forest is in very clean. Healthy forest lands help keep our watersheds healthy.

Below is an example of an actual watershed breakdown.

**Major Watershed "HUC08"**  
Acres = 850,000 (1340 sq. miles)

**Subwatershed "HUC10"**  
Acres = 104,000 (163 sq. miles)

**Minor Watershed "HUC14"**  
Acres = 19,000 (30 sq. miles)

\* Hydrologic Unit Codes (or HUCs) refer to the number of digits for each unique watershed. It is part of the National Watershed Boundary Dataset (NWBD) maintained by the United States Geological Survey (USGS). Hydrologic units in the WSD are arranged in a nested, hierarchical system with lower numbers representing larger watersheds.

## 4 The magic number is 25%

Watershed land cover was analyzed for new lakes in Minnesota. Increased runoff brings phosphorus to lakes which cause harmful algae blooms.

The phosphorus concentration in lakes goes up dramatically when more than 25% of the watershed is disturbed.

At least 73% of a watershed. Some lands (shown in Dark & Light Green) are lands that are at a tipping point.

## Native plant communities

**The native plant community**  
Let the forest grow what it was intended to grow. The native plant community grows best in its own soil and type of disturbance. The native plant community grows best in its own soil and type of disturbance. The native plant community grows best in its own soil and type of disturbance.

Work with the land not against it. Allow the forest to be what it was ecologically meant to be.

The land was formed by glaciers. Below is an example of glacial soil deposits.

**Retreating glacier**  
**Rolling moraines, loamy & clay soils**  
= Mixed hardwood forest

**Flat, sandy outwash plain**  
= Pine forest

Woodlands hold economic, recreational, and ecological value. However, the economic and recreational value of woodlands hinges on the woodlands ecological strength. You can't have the two without the one.

**Make your woods healthier and more resilient**

Follow the forest steward recommendations in your Woodland Stewardship Plan.

Project your restoration include:

- Make natural disturbance with a woodland harvest.
- Use desired tree species to grow with a woodland improvement cut.
- Encourage the survival of native trees and plants by removing non-native species.
- Increase tree species diversity by encouraging the growth of low canopy trees on your property and planting other site-appropriate native trees.

**de...**

- Forest ecosystems
- Diverse plant and wildlife habitat
- Clean water for recreation
- Healthy fish habitat

Helping landowners see how their woodlands connect to their watersheds...



## SOURCE- WATER

The upper Mississippi basin serves as Minnesota's largest source-water.

It is the primary water source for the cities of St. Cloud, Minneapolis, and St. Paul.

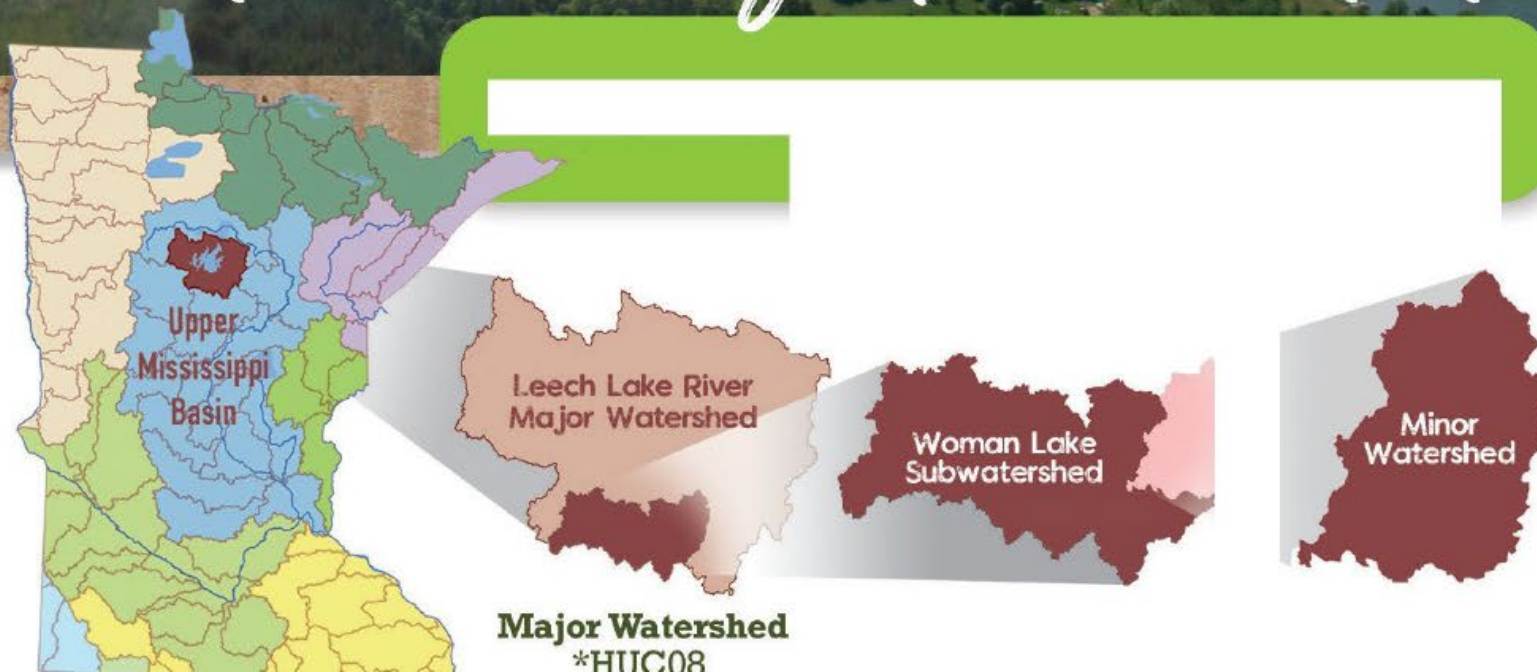


### WITHIN THE BASIN:

- 15 Major Watersheds
- 112 Sub-watersheds
- 1349 Minor watersheds



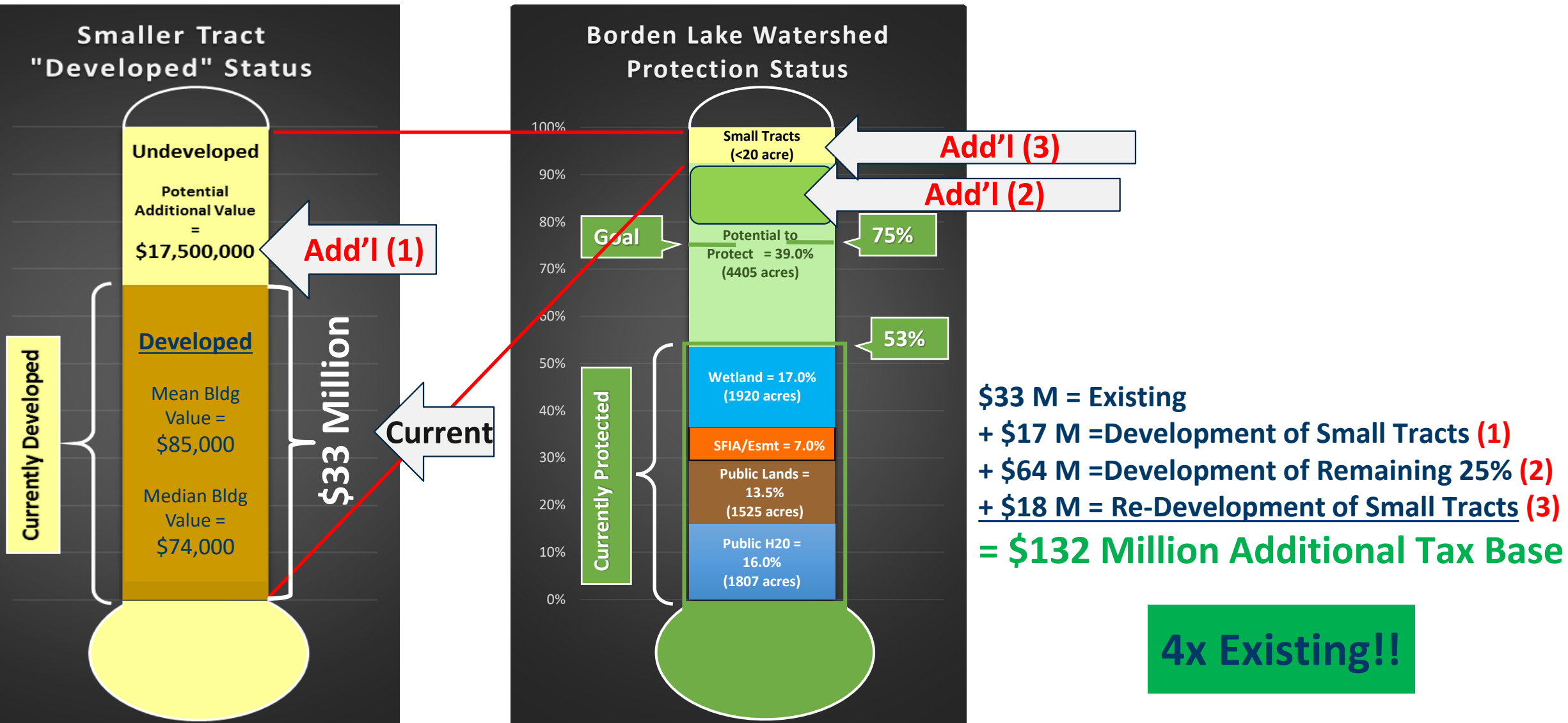
## Watershed Geographic Context



**ALMOST NO WATER  
FLOWS INTO  
MINNESOTA, IT ALL  
FLOWS OUT:**

Red/Rainy to Arctic  
Great Lakes to Atlantic  
Mississippi to Gulf

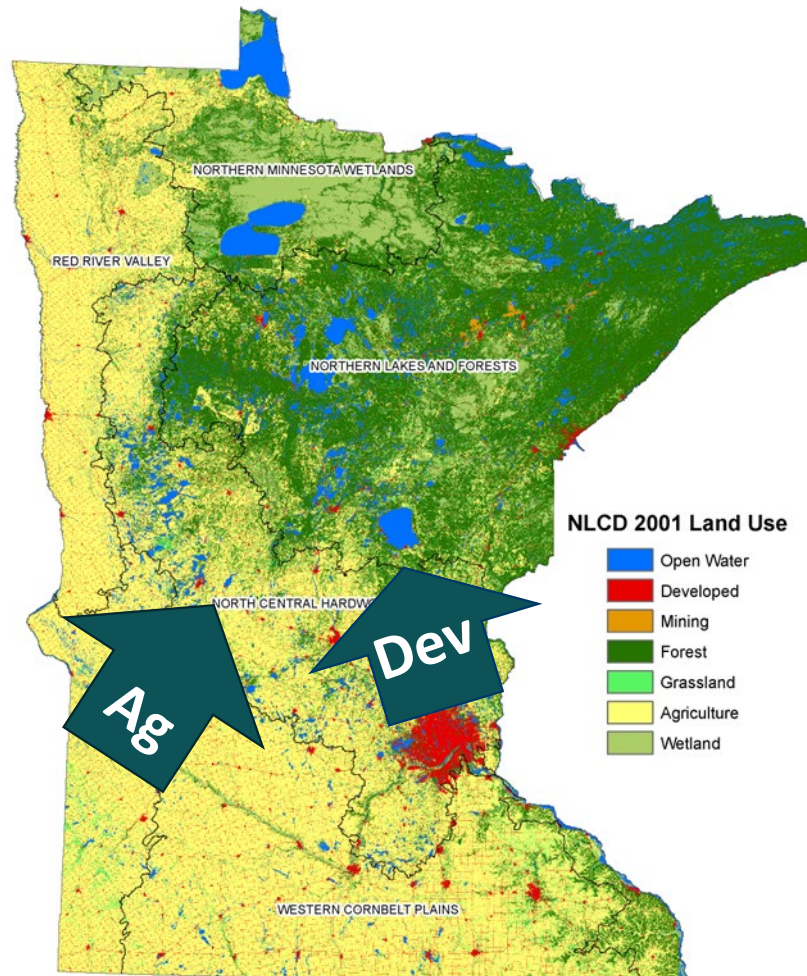
# Lake Protection...with Room to Grow!



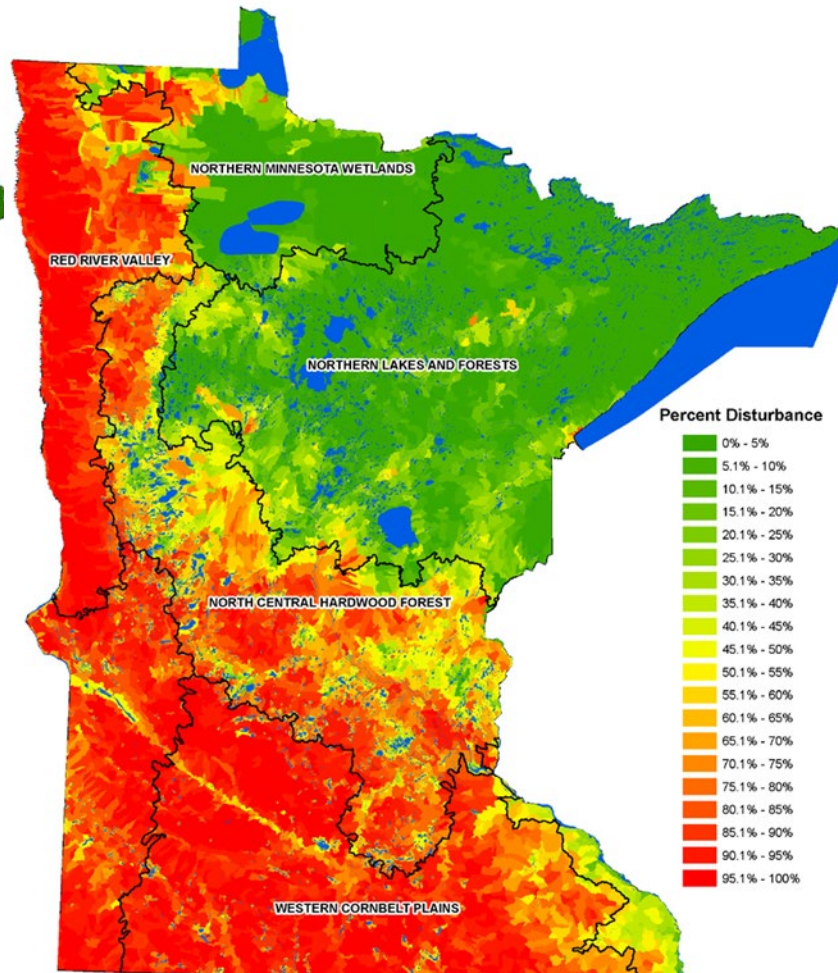


# Minnesota: Diverse & Competing Land Uses

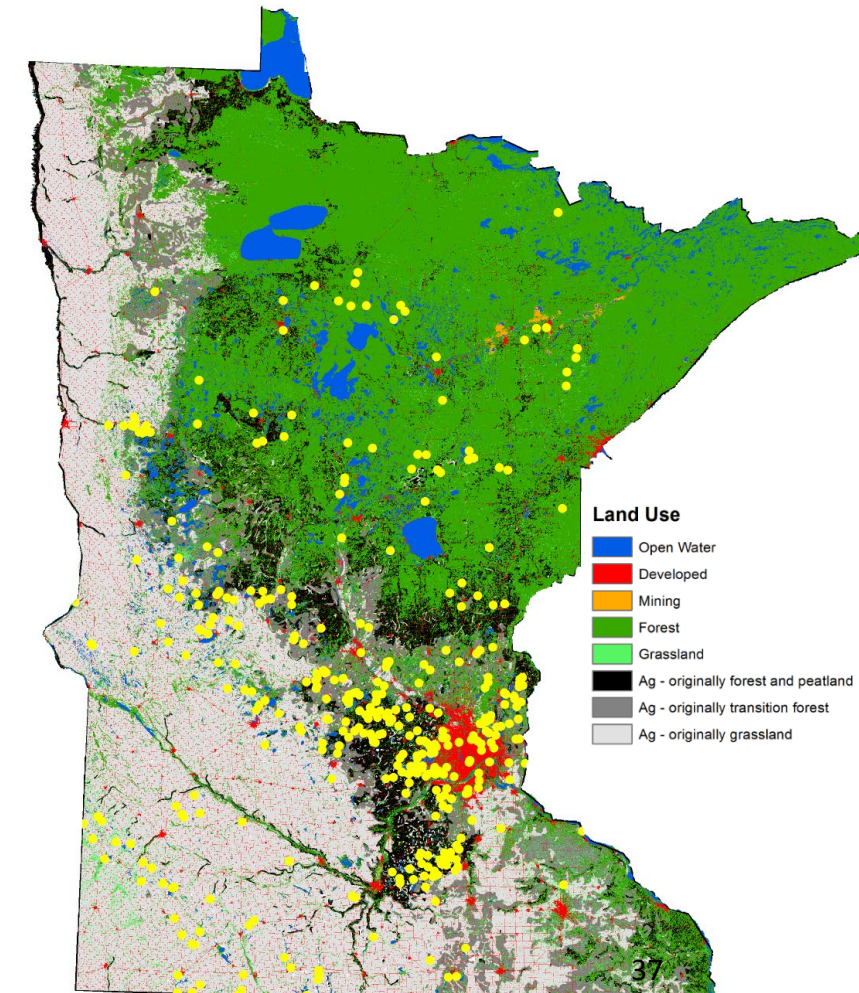
Minnesota Land Use



Land Use Disturbance within Local Watershed Catchments



Converted Lands & Impaired Waters



# Habitat and Water Quality Protection: Successful Protection Efforts in the Upper Mississippi Basin

## Successful LSOHC Projects:

Camp Ripley Buffer Program (ACUB):  
\$10 M (+ \$50 M Federal)

Wild Rice (6+ Phases): \$9 M

Mississippi Headwaters  
Board (5 Phases): \$16+ M

Pine-Leech Watershed Protection: \$4 M

Clean Water Act: 1971

- Impaired Waters / Restoration Focus
- **No Protection Methods**

## Protection Methodologies:

- Large Lake Screening (2008)
- 75% Watershed Goal: DNR Fisheries (2010)
- Crow Wing County Water Plan (2013)
- "RAQ" Parcel Targeting (2016)

## Successful Clean Water Council Projects:

Pine River: \$3 M

Crow Wing River: \$3 M

Rum River: \$3 M

Forest Landscape  
Stewardship Plan (DNR)

Funding \$\$:  
SFIA, 2C, FFF  
Easements,  
Cost-Share

## One Watershed One Plan (1W1P)

Leech, Pine, Rum, Redeye, Miss. Headwaters, Sauk, Crow (north fork)

WRAPS (MPCA)

## Priority Lakes/Watersheds

- Larger, Unimpaired, High Quality
- <75% Protected (at risk)

1W1P  
Watershed  
Based Funding,  
Increased SWCD  
Capacity \$\$

## Targeted Implementation to Landowners

- Sell the "Toolbox", Landowner's Choose!

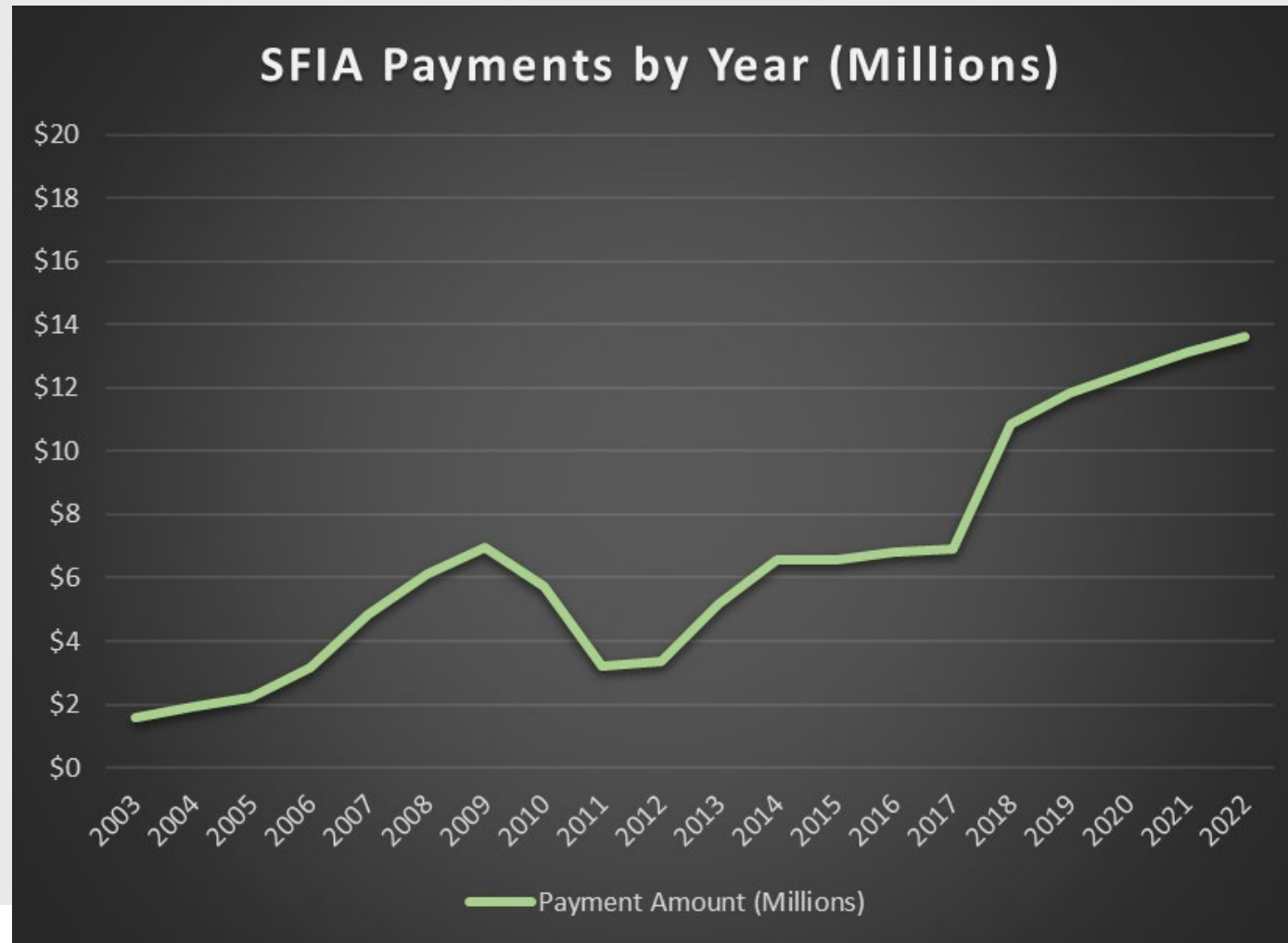


# Protected Status of Major Watersheds in Mississippi Basin

Major Watershed	Watershed Acres	Forest Lands (ac)	% Forested*	% Protected	Strategy
Leech Lake River	857,971	560,736	65.4%	79.1%	Vigilance
Mississippi River - Grand Rapids	1,332,798	979,498	73.5%	76.2%	Vigilance
Mississippi River - Headwaters	1,228,889	799,294	65.0%	72.5%	Sweet Spot!
Pine River	500,887	338,948	67.7%	65.6%	Sweet Spot!
Mississippi River - Brainerd	1,076,300	539,590	50.1%	52.1%	Further to go
Crow Wing River	1,268,959	667,797	52.6%	46.3%	Further to go
Rum River	1,013,794	322,607	31.8%	45.8%	Further to go
Long Prairie River	565,078	135,945	24.1%	33.5%	Limited
Redeye River	572,069	143,895	25.2%	31.2%	Limited
Mississippi River - Sartell	656,115	138,344	21.1%	26.4%	Limited
Mississippi River - St. Cloud	717,376	128,179	17.9%	25.6%	Limited
Sauk River	666,750	68,068	10.2%	21.6%	Limited
North Fork Crow River	644,320	87,281	13.5%	<20%	Limited
South Fork Crow River	944,854	33,848	3.6%	<20%	Limited
Mississippi River - Twin Cities	818,100	68,776	8.4%	<20%	Limited

\* Includes woody wetlands

# What about SFIA?

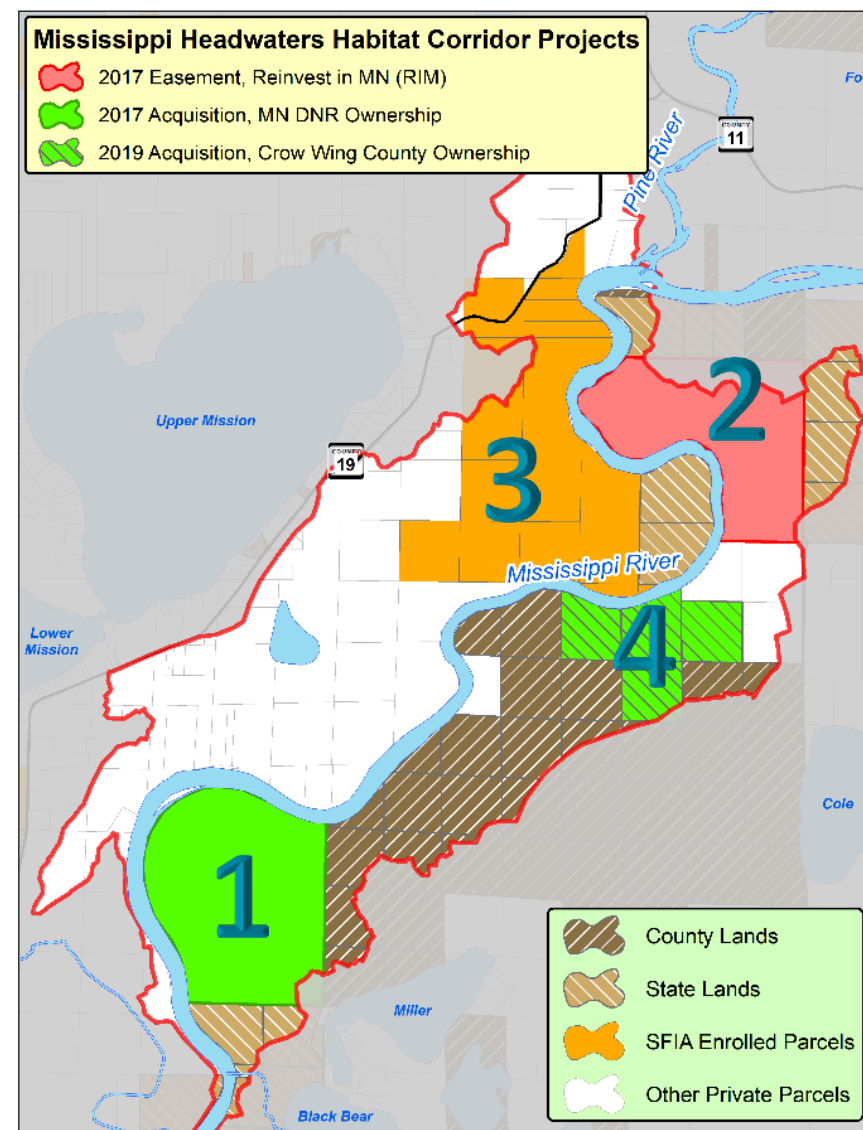
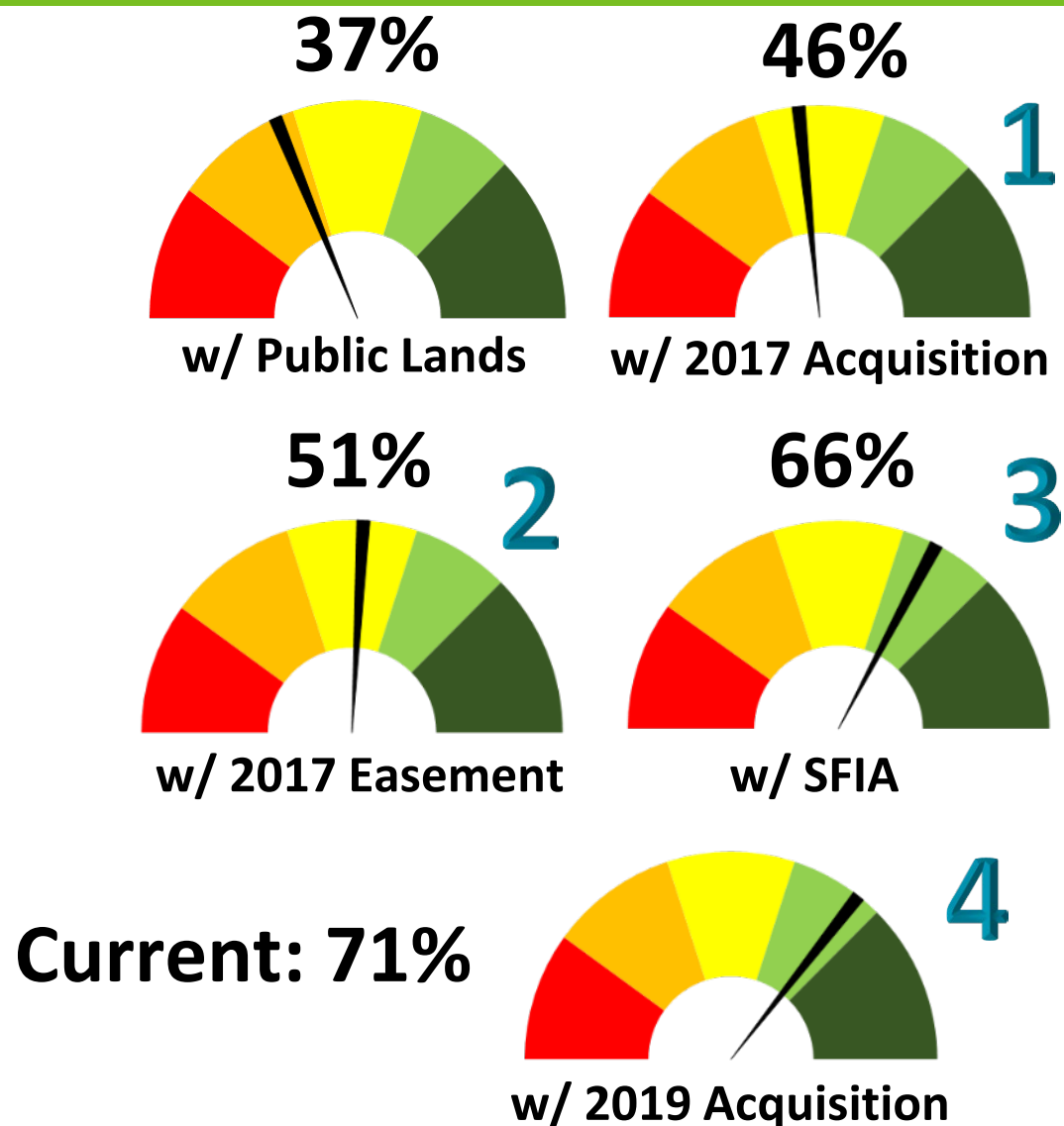


# Supplemental Funds for Coordination / Staff

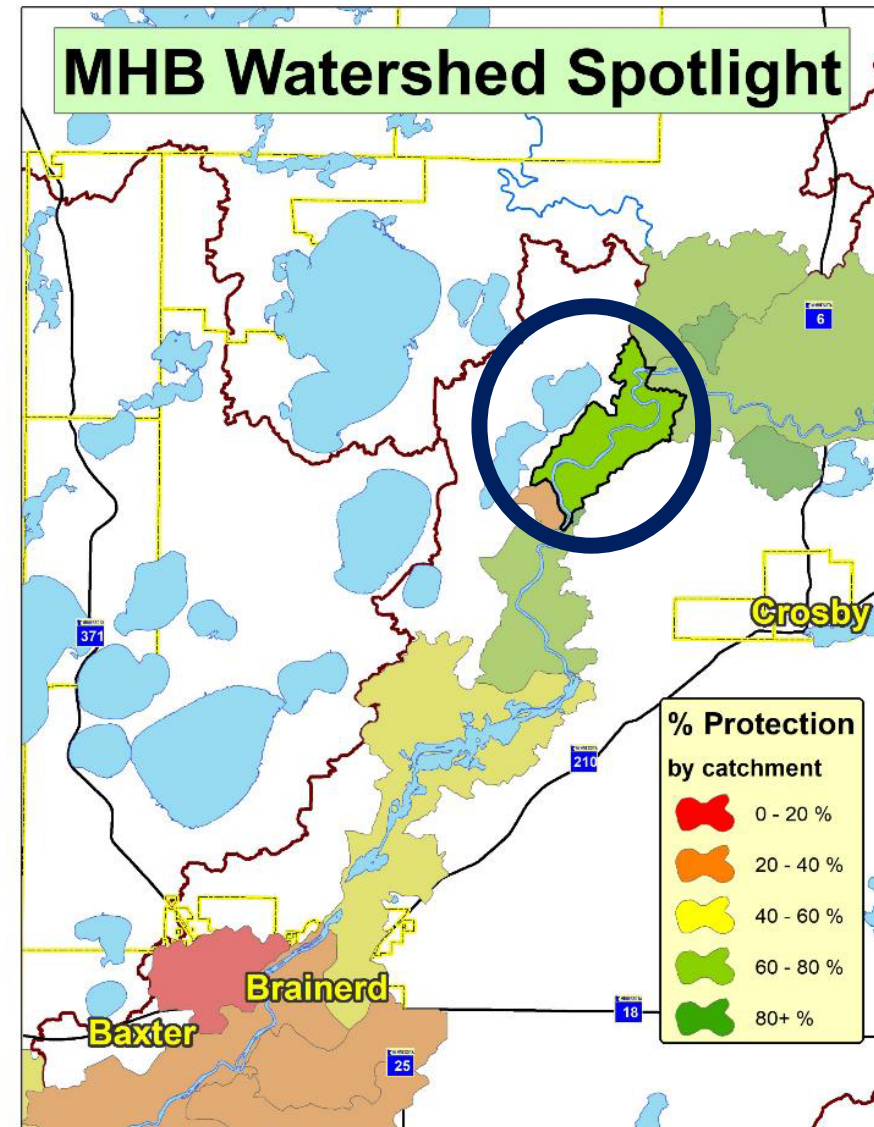
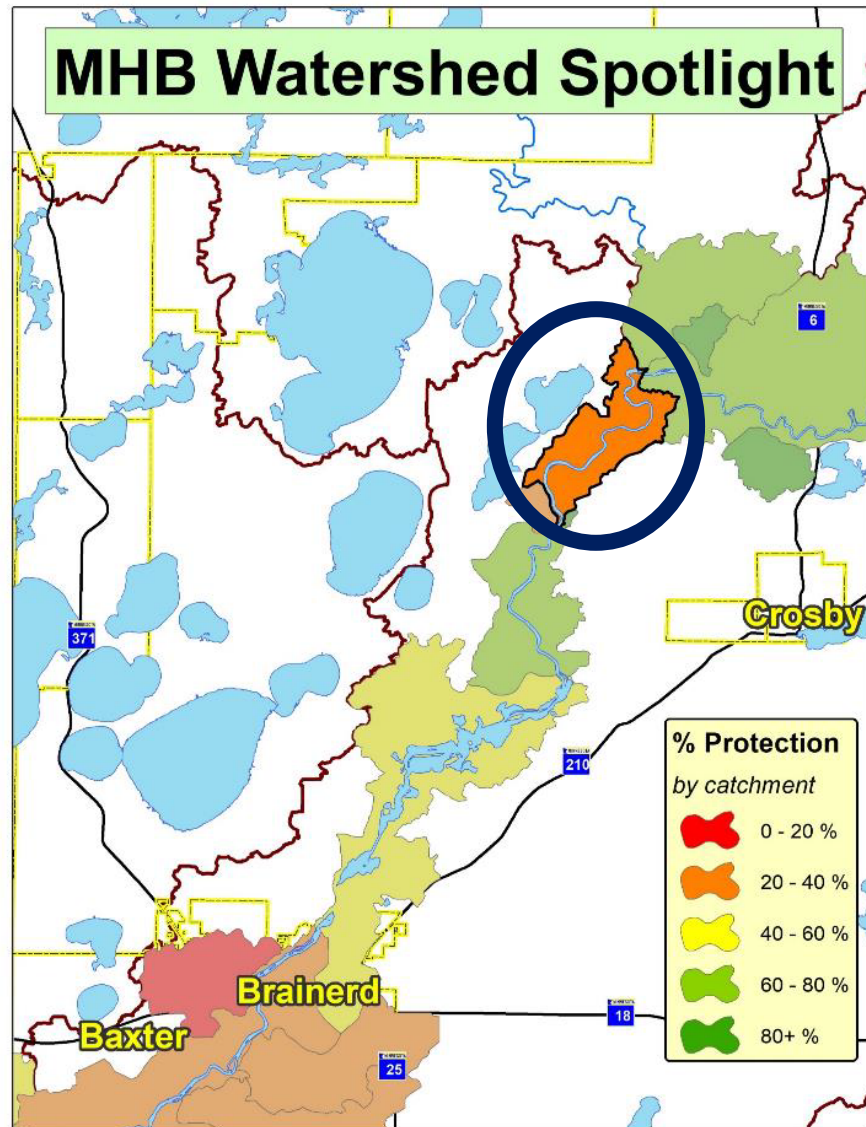
- FY 24 US FS LSR. Priority Lakes Project. DNR Forestry + Hubbard SWCD
- FY 24 LCCMR. Priority Lakes Project. Hubbard SWCD.
- ML 24 LSOHC. Pine Leech - Phase 3. Crow Wing SWCD.
- FY 23 US EPA Env'l Ed Local Grant. Hands-On Collaborative Forest Regeneration. Hubbard SWCD.
- FY 23 EPA MPCA 319 Small Watershed Grant. Steamboat Watershed. Hubbard SWCD
- FY 24 – 26 DNR PFM Clean Water funds. Hubbard SWCD.
- CPL School Forest Project Grant. Hubbard SWCD



# Implementation Success Story: Mississippi River

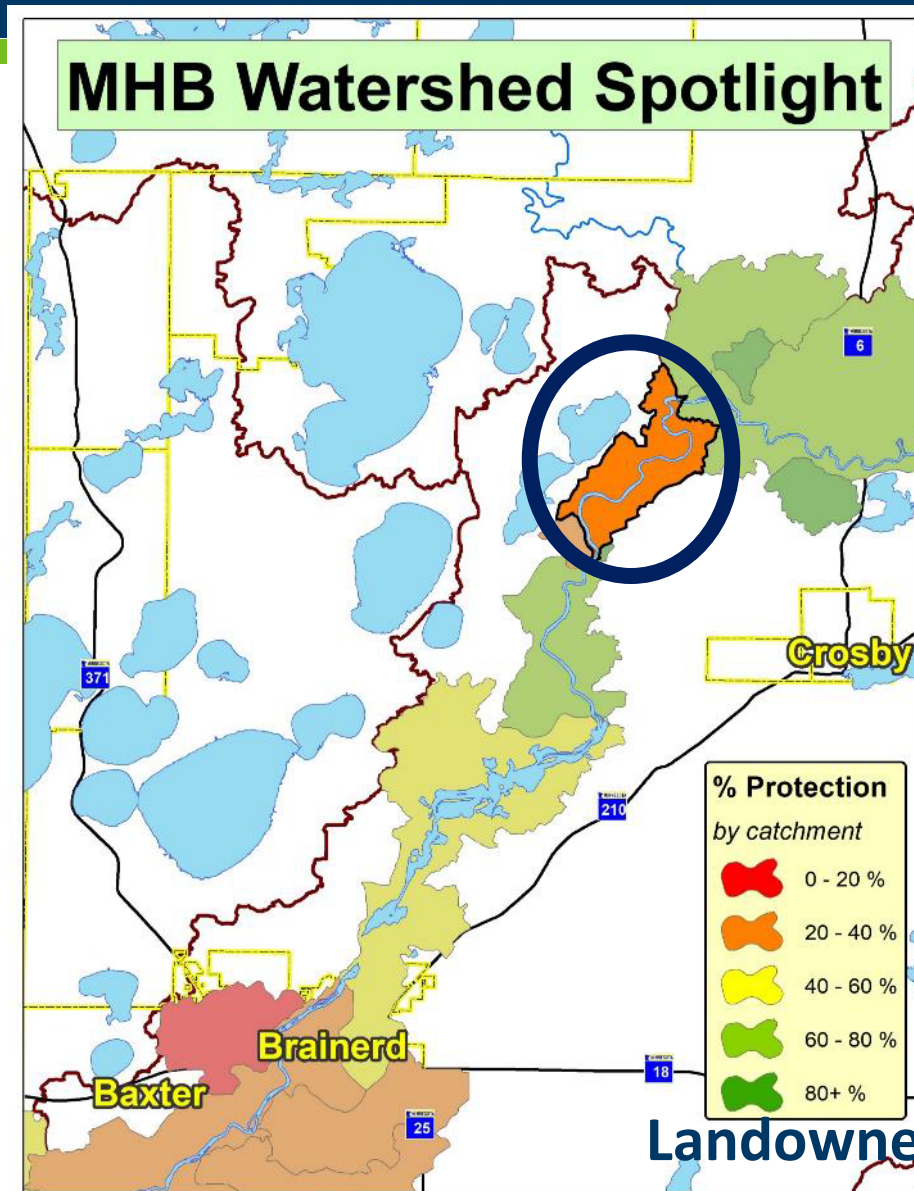


# Implementation Success Story: Mississippi River

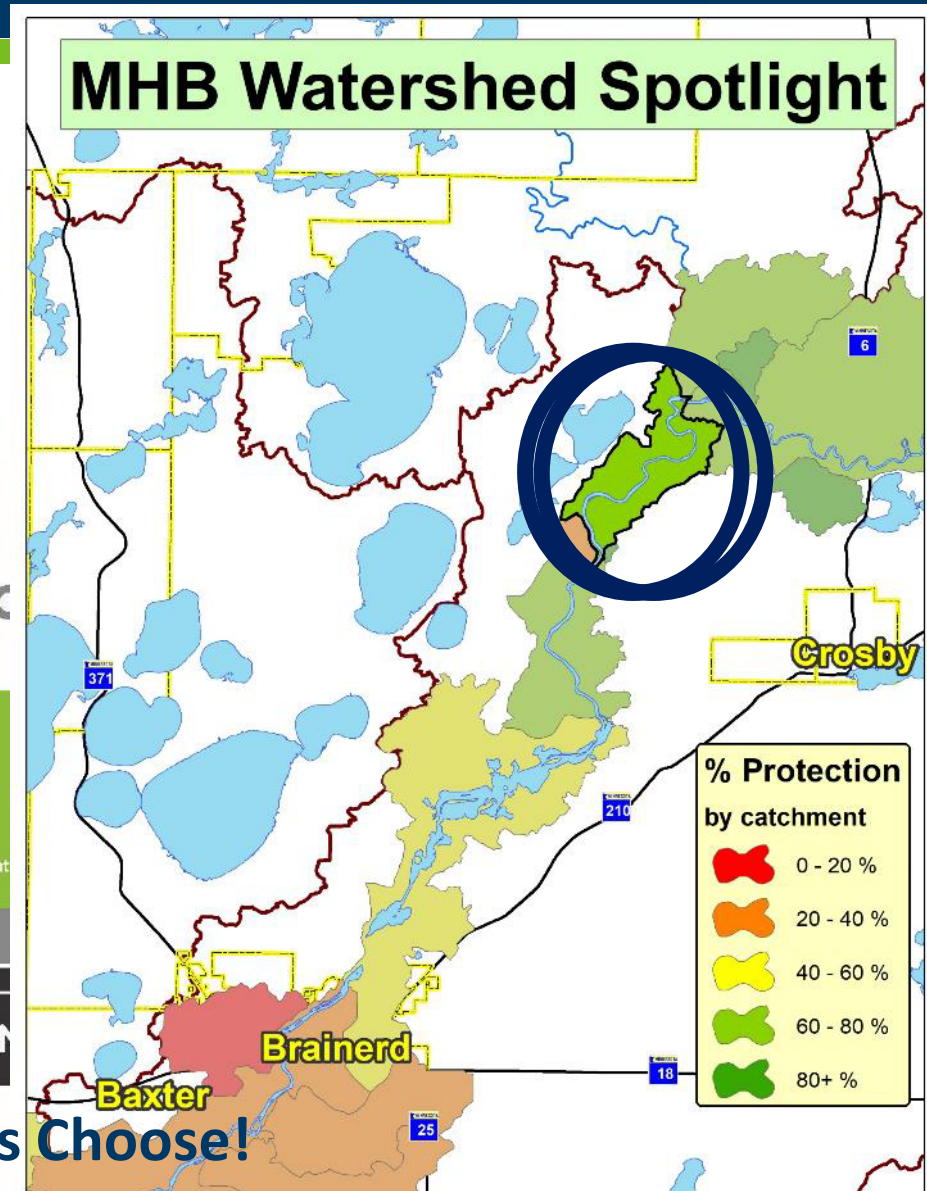




# Implementation Success Story: Mississippi River



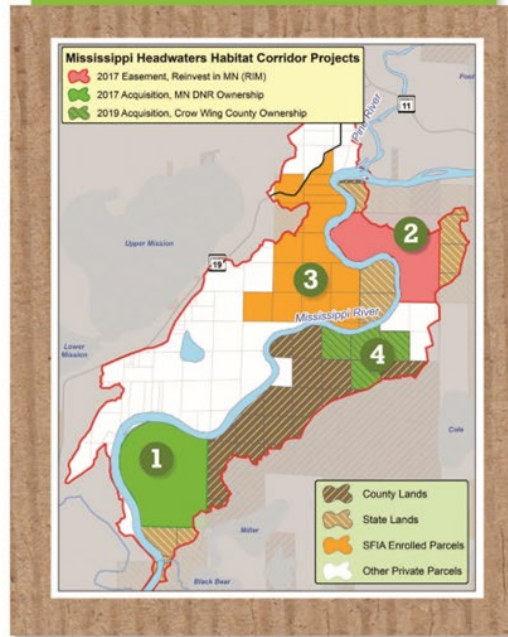
Landowners Choose!





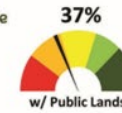
# Project Spotlight

## Mississippi River Targeted Easements & Acquisition



### PROGRESSION OF PROTECTION

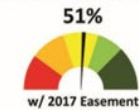
In this project spotlight, you can follow the progression of protection as lands are enrolled in conservation programs, easements, or purchased. The map to the left shows parcels along the river, the numbers show the timeline of protection steps. It begins with the watershed hovering at 37% protection.



- 2017 Land acquisition along the riverbank. MN DNR Ownership. Protection climbs from 37% to 46%.



- 2017 Land enrolled in RIM. (Reinvest in MN) Protection jumps from 46% to 51%.



- Land parcels enrolled in SFIA. Sustainable Forest Incentive Act. Protection climbs from 51% to 66%.

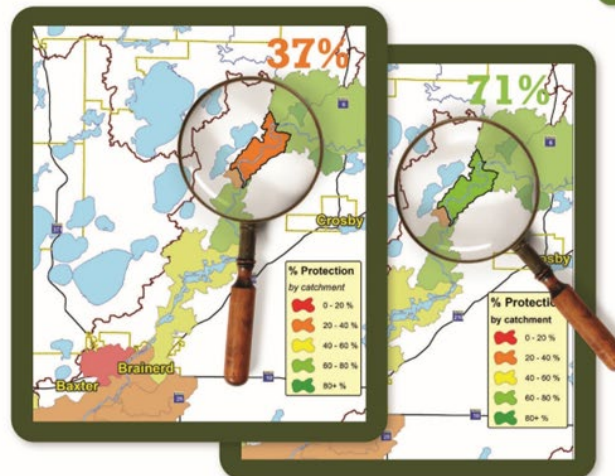


- 2019 Land acquisition by Crow Wing County. Protection has nearly reached the target goal of 75% protection.



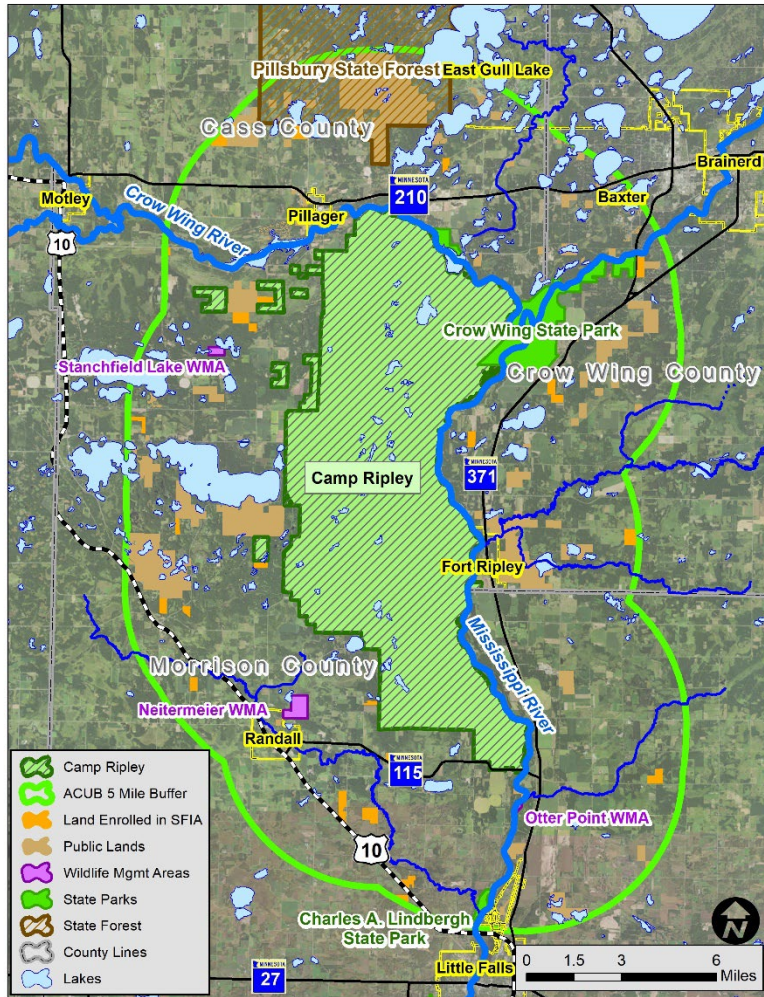
### CONSERVATION TEAMWORK

It takes a coordinated conservation team of many to move the needle, including SWCDs, Counties, NGOs, State & Federal Government Agencies, and engaged landowners.

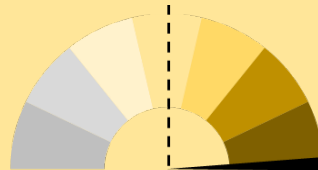


# Protection Summary in ACUB 5-mile Buffer

Pre-ACUB: 34%



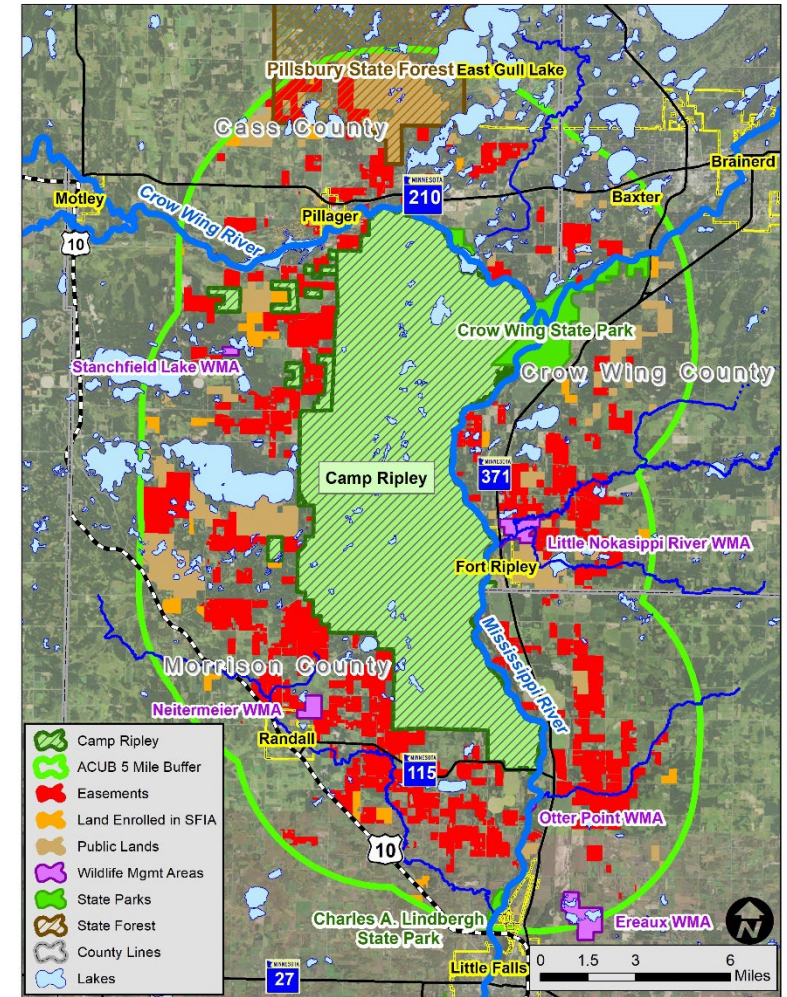
## Habitat Quality Meter (Habitometer):



Less Base More

- High Terrestrial Biodiversity
- High Wildlife Action Network Score
- Wild Rice Lakes
- Trout Streams
- Stream Confluences
- Lakes of High/Outstanding Biodiversity
- High Fisheries Habitat

Current: 49.5%





# Managing Private Forests on a Landscape Level

*A multi-agency effort to manage private forest lands on a watershed scale for multiple public and private benefits.*



## Purpose

This document outlines the major steps that partners are taking to proactively increase the strategic delivery of services to help private forest landowners manage their land while also protecting water resources.

## Issue

Forested landscape are a mix of private, tribal, and public land. Managing private forest lands is complicated by the large number of owners and of the multiple entities that provide service to private landowners. Additionally, private forest lands have the greatest risk of conversion to non-forest uses, especially lands that are not actively managed.

## Goal

Significantly increase the protection and management of private forest lands that help protect water quality and provide a range of benefits by:

- Helping landowners get a Woodland Stewardship Plan to enroll in the Sustainable Forest Incentive Act.
- Enrolling private forest lands into conservation easement programs.
- Purchasing land for public use.

## Importance of Private Forests

Nearly 191,000 private woodland owners in Minnesota collectively own more than 6 million acres (about one-third) of the state’s total forest land. These are individuals, families, cooperatives, or small businesses who own woods for a wide range of reasons.

Private woodlands provide important benefits such as clean air and water, scenic beauty, wildlife habitat, hunting, angling, birdwatching, and the raw materials to make paper and other wood products. Minnesota’s landowners help enhance these benefits for themselves and others through active involvement in caring for the health of their woods. Having a Woodland Stewardship Plan is an important step in helping private landowners actively manage their forests. Roughly 6,940 individual plans that are less than 10 years old have been written for 964,000 acres, or 16 percent of private forest lands.

As natural water filters, forests play important roles in keeping water clean. Trees and leaves slow the movement of rain to the ground. This slower-moving rain picks up less sediment when it hits the soil. Additionally, forest soils contain large pore spaces that trap sediment and pollutants. As a result, rainwater that leaves a forest to recharge groundwater or flows into lakes and rivers is clean. Keeping forests on the landscape is one of the best ways to protect drinking water. Forests along shorelines are particularly important, as they serve as the last barrier to filter contaminated runoff before it reaches a lake or river.

## Landscape Stewardship Plans

A landscape stewardship plan (LSP) is a multi-landowner Forest Stewardship Plan written to address landscape-level issues across all ownerships. LSPs are used to develop local, comprehensive watershed management plans. Plans are based on:

- Investing in priority areas.
- Building a collaborative network of service providers that effectively work together to serve more landowners.
- Appealing to interests of both landowners and service providers.
- Managing for results.
- Encouraging flexibility when working with private landowners since every situation is unique.

## Comprehensive Local Water Plans: One Watershed, One Plan

Plans created through the Minnesota Board of Water and Soil Resources’ One Watershed, One Plan (1W1P) program are called comprehensive watershed management plans that address:

- Protecting, restoring, and improving surface water and groundwater quality.
- Protecting, restoring, and improving places where surface water and groundwater is stored and retained.
- Minimizing public spending to correct flooding and water quality problems.
- Enhancing, restoring, and establishing wetlands.
- Identifying priority areas for riparian zone management and buffer development.
- Protecting and enhancing habitat of fish and wildlife habitat and water recreational facilities.

## Prioritize-Target-Measure Approach

### Priority Watersheds

Recognizing that not all resources and issues can be addressed at the same time is essential to managing watersheds. Prioritizing down to the minor watershed is critical to the success of the landscape level plan approach. This allows private landowners to relate to and not feel threatened by the plan.

### Targeted Parcels

Actions are targeted to specific areas and issues within the priority watershed, down to the parcel level within minor watersheds. This is done to target landowners whose woods will provide the most benefits.

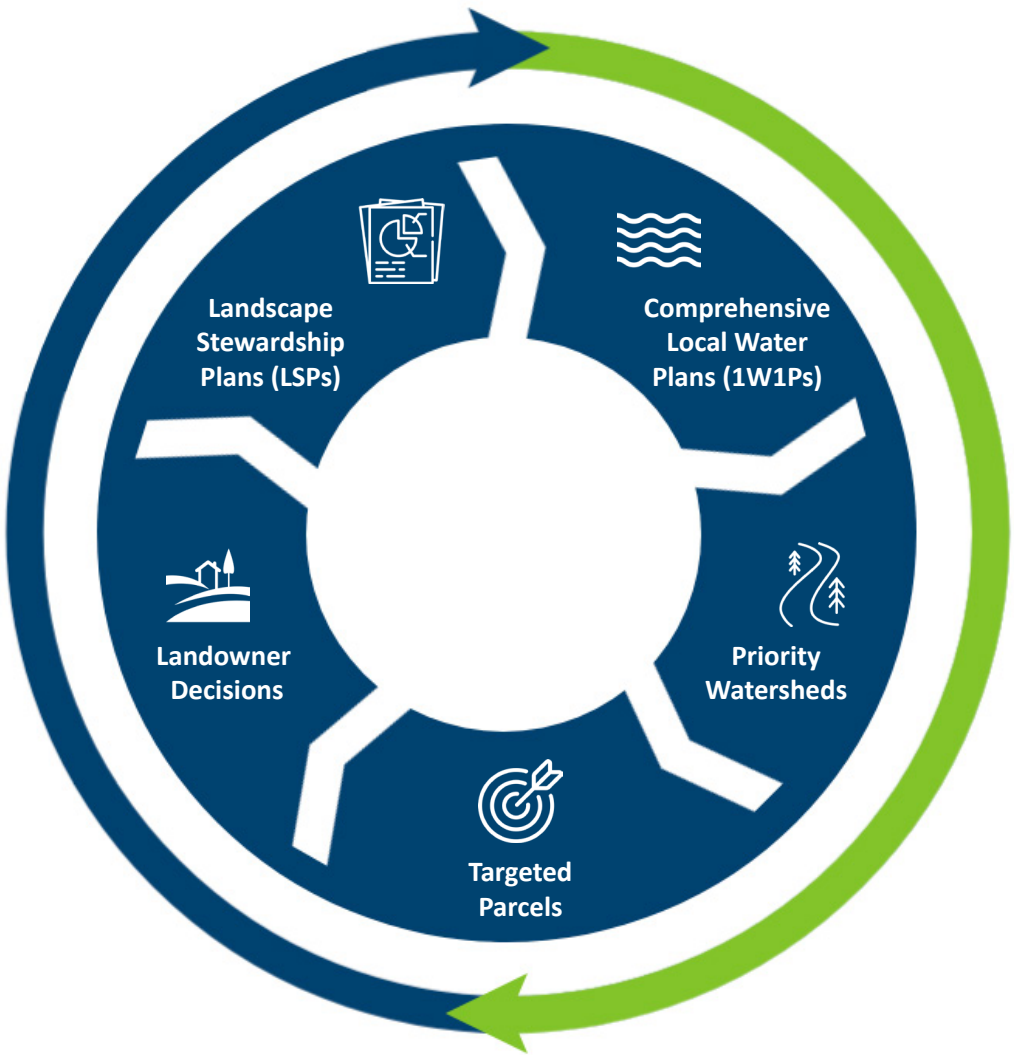
### Measure Success of Landowner Decisions

Monitoring happens when a landowner decides what actions they want to take—such as selling their land, enrolling into a conservation easement program, or enrolling into the Sustainable Forest Incentive Act—to measure progress toward management goals.

## Results

Through Landscape Stewardship Plans and the Minnesota Forest Action Plan, the state’s plan that guides the use of federal funds for forest management, the DNR and partners are working together to address the following national priorities:

- Conserve working forest land: Conserving and managing working forest landscapes for multiple values and uses.
- Protect forests from harm: Protect forests from threats, including catastrophic storms, flooding, insect and disease outbreaks, and invasive species.
- Enhance public benefits from trees and forests: Including air and water quality, soil conservation, biological diversity, carbon storage, and forest products, forestry related jobs, production of renewable energy, and wildlife.



*Primary components of Private Forestry Management on a landscape level*



Partners and Primary Roles

Landowners

Landowners are the recipients of outreach and education services. They act as final decision makers, funders, and implementers for projects to manage Minnesota’s private forests.

Minnesota Department of Natural Resources Forestry Division (DNR Forestry)

DNR Forestry takes a leading role on education and outreach to private woodland owners. They provide program administration and funding for Woodland Stewardship Plans, DNR Private Forest Management cost-share program, Sustainable Forest Incentive Act and 2c Managed Forest Land incentives programs, and Forests for the Future and Forest Legacy conservation easement programs.

Minnesota Board of Water and Soil Resources (BWSR)

BWSR takes a leading role on program administration for the state cost-share program, One Watershed, One Plan, and funds Reinvest in Minnesota easements for private forestry management purposes.

Local Government Units (LGUS): Soil and Water Conservation Districts (SWCDs) and Counties

LGUs take a leading role on implementing state and federal cost share practices, project coordination and implementation, website maintenance, and program administration for 2c Managed Forest Land and Green Acres incentive programs and Reinvents in Minnesota conservation easement program.

Consulting Foresters

Consulting foresters play a lead role in writing Woodland Stewardship Plans and helping private woodland owners with timber harvests and woodland management efforts.

United States Forest Service (USFS)

USFS plays a supporting role by providing program guidance and funding for the Forest Legacy and Cooperative Forest Management programs.

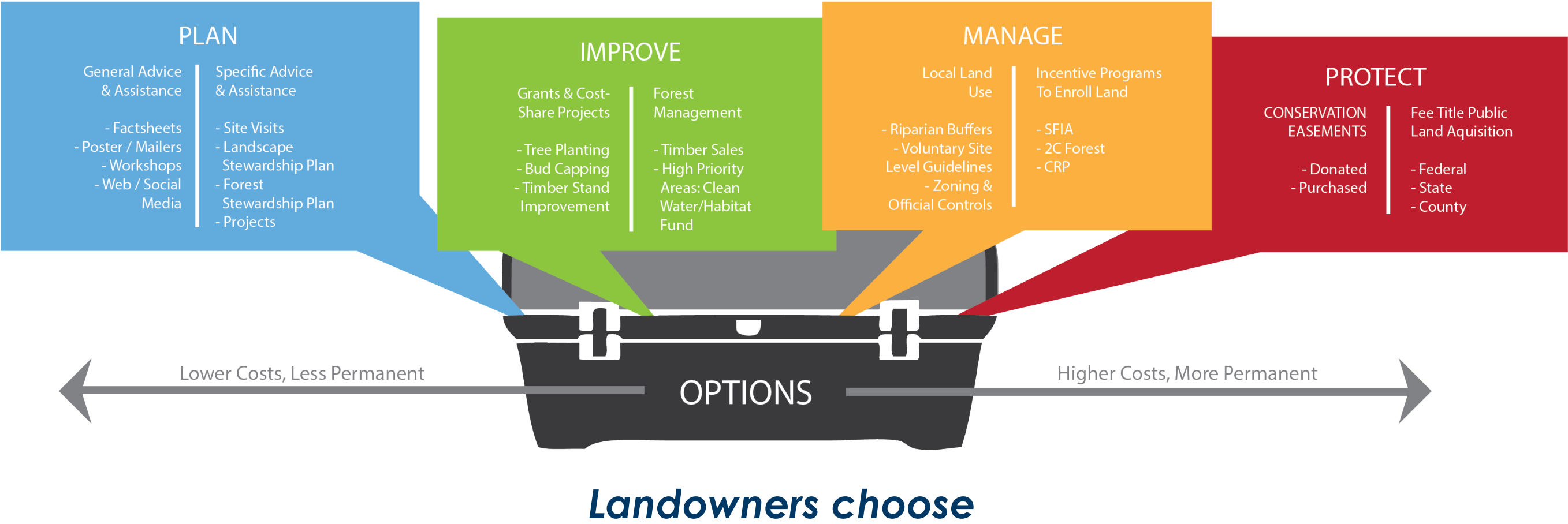
USDA Natural Resources Conservation Service (NRCS)

NRCS takes a leading role on Conservation Activity Plans and provides program administration and funding for Environmental Quality Incentives, Conservation Stewardship, and Healthy Forests Reserve programs.

Local Forestry Technical Teams

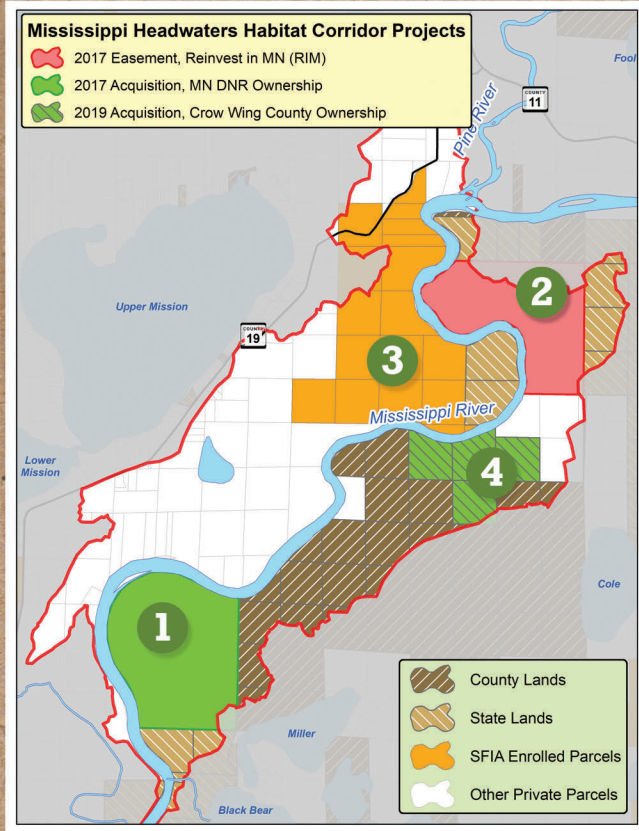
A group of professionals (DNR, SWCD, Consulting Foresters, BWSR, etc.) who work collaboratively to implement Landscape Stewardship Plans and watershed management plans (through 1W1P) by engaging private forest landowners in forest management.

Private Forest Landowner Implementation Toolbox



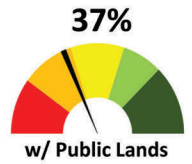
# Project Spotlight

## Mississippi River Targeted Easements & Acquisition



## PROGRESSION OF PROTECTION

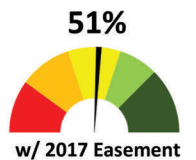
In this project spotlight, you can follow the progression of protection as lands are enrolled in conservation programs, easements, or purchased. The map to the left shows parcels along the river, the numbers show the timeline of protection steps. It begins with the watershed hovering at 37% protection.



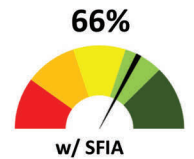
**1** 2017 Land acquisition along the riverbank. MN DNR Ownership. Protection climbs from 37% to 46%.



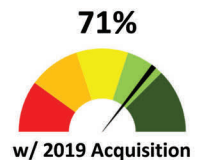
**2** 2017 Land enrolled in RIM. (Reinvest in MN) Protection jumps from 46% to 51%.



**3** Land parcels enrolled in SFIA. Sustainable Forest Incentive Act. Protection climbs from 51% to 66%.



**4** 2019 Land acquisition by Crow Wing County. Protection has nearly reached the target goal of 75% protection.



## CONSERVATION TEAMWORK

It takes a coordinated conservation team of many to move the needle, including SWCDs, Counties, NGOs, State & Federal Government Agencies, and engaged landowners.

