Mississippi River Headwaters One Watershed, One Plan

Policy/Advisory Committee Meeting #9

Date: January 31, 2020

Time:

9:00am - 12:00pm

Location:

Beltrami Administration Building, 701 Minnesota Street NW, Bemidji, MN 56601

Staff Support: Zach Gutknecht Note taker: Megan FitzGerald

County Commissioners and Staff: Craig Gaasvig, Dick Downham, Davin Tinquist, Ted Van Kempen, Charlene Christenson, , Brent Rud, Zach Gutknecht, Megan FitzGerald, Daniel Swenson, John Ringle,

Eric Buitenwerf, Dan Hecht.

Invitees:

SWCD Supervisors and Staff: Del Olson, David Peterson, Marcel Noyes, Ted Lovdhal, Clearwater SWCD

Supervisor, Andy Arens, Kelly Condiff, William Lee, Chester Powell.

BWSR Staff: Chad Severts Board Conservationist, Jeff Hrubes Clean Water Specialist

Pre-work: Review: Minutes, Financial Update, and Landscape Stewardship Plan

Please bring: 1W1P binder (Policy Committee)

Agenda Items

Торіс	Purpose	Presenter	Time allotted
✓ Call to Order		Craig Gaasvig, Chair	9:00am
✓ Review and Approval of Agenda	DECISION	Craig Gaasvig, Chair	5 min.
✓ Review and Approval of Minutes	DECISION	Craig Gaasvig, Chair	5 min.
✓ Financial Update	DECISION	Staff Support	15 min.
 ✓ Plan Update Landscape Stewardship Plan Overview Protection toolbox January Advisory Meeting Overview Website updates 	DISCUSSION	Staff Support	40 min.
 ✓ 1W1P Operational Arrangements • How would we like to operate as a group? • Supporting documents • Review JPC vs JPE 	DISCUSSION	Staff Support	60 min.

	 Review example agreements from Leech Lake River and Lake of the Woods 			
✓	Adjourn and Determine Next Meeting Date	DESCISION	Craig Gaasvig, Chair	5 min.

Attachments to agenda:

- December Minutes, Pages 3-5
- Financial Summary, page 6
- Landscape Stewardship Plan, pages 7 46
- Protection toolbox, page 47
- Advisory January newsletter, page 48
- JPC vs JPE document, page 49
- Example agreements from Leech Lake River and Lake of the Woods 1W1Ps, pages 50 72

Policy Committee Ground Rules and Expectations

In addition to following the requirements of the Memorandum of Agreement and bylaws, Policy Committee Members will:

- 1. Actively prepare for, attend, and participate in all scheduled meetings* of the Policy Committee.
- 2. Actively engage in the decision-making process for watershed-based planning with the understanding that goals, objectives, and action items of the water plan must be prioritized, targeted, and measureable.
- 3. Initiate and/or assist with providing opportunities for constituents to be appraised of updated progress of the watershed-based planning process.
- 4. Regularly update their respective Boards on the progress of the watershed planning process.
- 5. Utilize the technical resources of their respective entities to assist and inform their decisions in the water planning process.

Mississippi River Headwaters

One Watershed, One Plan

Policy Committee

Meeting #8

Date: December	6,	2019
----------------	----	------

Time:

9:00am - 12:00pm

Location:

Beltrami Administration Building, 701 Minnesota Street NW, Bemidji, MN 56601

Staff Support: Zach Gutknecht Note taker: Megan FitzGerald

Attendees

Zach Gutknecht, Beltrami SWCD
Del Olson, Beltrami SWCD
Davin Tinquist, Itasca County
Dick Downham, Cass County
Andy Arens, Itasca SWCD
Brielle Prokosch, Clearwater SWCD
Kelly Condiff, Cass SWCD

Ted Lovdahl, Itasca SWCD
Marcel Noyes, Hubbard SWCD
Dave Peterson, Cass SWCD
Chester Powell, Clearwater SWCD
Harlan Strandlien, Clearwater SWCD
Craig Gaasvig, Beltrami County
Ted Van Kempen, Hubbard County

Agenda Items

Call to Order

• Mississippi River Headwaters 1W1P Policy Committee Chair Craig Gaasvig called the meeting to order at 9:00 am.

Review and Approval of Agenda

Motion by Ted Lovdahl to approve the agenda. Motion seconded by Del Olson. Motion carried and approved.

Review and Approval of Minutes

There were no minutes from the October meeting because there was not a quorum. Motion by Davin
Tinquist to approve the minutes from the August 2 Policy and Advisory Committee meeting. Motion
seconded by Marcel Noyes. Motion carried and approved.

Financial Update

A financial update through November 2019 was provided. The update included Beltrami SWCD staff time
associated with the watershed tour in August as well as administrative work and time spent on drafting the Land
and Water Resources Inventory. A line showing year-to-date expenses was also added to the report. Motion by
Ted Lovdahl to approve the budget and expenses. Motion seconded by Del Olson. Motion carried and
approved.

Plan Update

- Zach shared the October and November newsletter updates from the Advisory Committee meetings. Zach has been meeting with small groups of issue experts including the City of Bemidji, Minnesota Department of Health, the Leech Lake Band, and the Forest Service to get their input on the plan.
- There have been suggestions on how to prioritize resources. Instead of organizing them based on protection, restoration, and land management, they will be organized by issue statement (forestry, lakeshed, wetlands, etc.). Prioritization will be based on a combination of priority and risk.

Lands can be tracked using a table displaying known management and unmanaged lands by watershed and land
use.

1W1P Operational Arrangements

- Jen Wolf, MCIT, provided an overview of different types of operational agreements for the implementation period of the MRH 1W1P, including Joint Powers Collaborations and Joint Powers Entities
- Joint Powers Collaboration forms no new entity, assumes no legal liability, and has no independent authority (authority lies in SWCDs and counties that are members of the collaboration).
- Joint Powers Entity a free-standing entity with its own board and liability.
- To determine the appropriate structure, the following should be considered: What are the goals trying to be achieved? What are the roadblocks to these goals? What are the options? What are the pros/cons? Will working cooperatively help to reach goals?
- Request to have Zach and Chad compile some existing examples of cooperative agreements and share with the group.

Land and Water Resource Inventory Comments

• Comments and corrections should be sent to Megan.

Adjourn and Determine Next Meeting Date

- Motion by Del Olson to set the next meeting date as Friday, January 31 from 9am-noon. Motion seconded by Ted Van Kempen. Motion carried and approved. A backup date was set as February 7 from 9am-noon.
- Motion by Ted Lovdahl to adjourn the meeting. Motion seconded by Ted Van Kempen. Motion carried and approved.

Attachments to agenda:

- October Minutes
- Financial Summary
- Advisory October Minutes
- Draft Plan Outline
- Issue Priorities

Policy Committee Ground Rules and Expectations

In addition to following the requirements of the Memorandum of Agreement and bylaws, Policy Committee Members will:

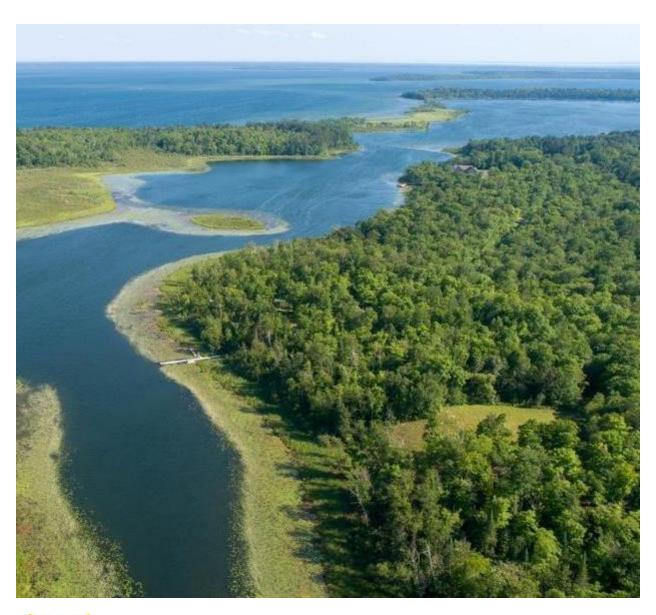
- 1. Actively prepare for, attend, and participate in all scheduled meetings* of the Policy Committee.
- 2. Actively engage in the decision-making process for watershed-based planning with the understanding that goals, objectives, and action items of the water plan must be prioritized, targeted, and measureable.
- 3. Initiate and/or assist with providing opportunities for constituents to be appraised of updated progress of the watershed-based planning process.

- 4. Regularly update their respective Boards on the progress of the watershed planning process.
- 5. Utilize the technical resources of their respective entities to assist and inform their decisions in the water planning process.

2019 Mississippi River Headwaters One Watershed, One Plan Partnership GRANT BUDGET & EXPENSES

		LEAD		ESTIMATED	COST									2019	STAF	F EXPENS	SES					
Plan Development Costs				Consultants	Partnership	Total	P	\pril	May	Ju	une	July	Augu	ust	Sept	ember	October	Ν	lovember	December	Rem	aining Funds
	Pre-Planning											P	re-Pl	lanning								
Aggregate watershed information		Partnersh	ip	\$ -	\$ 8,000.00	\$ 8,0	00	\$ -	\$ -	ς	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	8,000.00
Notify plan review authorities and host public kickoff	f meeting	Partnersh	ip	\$ -	\$ 12,000.00	\$ 12,0	00	\$ -	\$ -	ç	\$ -	\$ 1,021.43	\$ 1,	,350.26	\$	-	\$ -		\$ -		\$	9,628.31
	Plan	ining													Plar	nning						
Write the land and water resources narrative		Partnersh	ip	\$ -	\$ 9,000.00	\$ 9,0	00	\$ -	\$ -	Ş	\$ -	\$ 704.03	\$	91.83	\$	122.44	\$ 122.	44	\$ 367.32		\$	7,591.94
Identify and prioritize resources and issues		Partnersh	ip	\$ 1,000.00	\$ 27,000.00	\$ 28,0	00	\$ -	\$ -	ç	\$ 1,998.45	\$ 1,110.25	\$	932.61	\$	333.08	\$ 665.	44	\$ 1,554.35	\$ 754.9	7 \$	20,650.85
Establish measurable goals		Partnersh	ip	\$ 5,000.00	\$ 28,000.00	\$ 33,0	00	\$ -	\$ -	ç	\$ -	\$ -	\$	-	\$	355.29	\$ 1,232.	38	\$ 1,643.17	\$ 821.5	9 \$	28,947.58
Develop a targeted implementation schedule		Partnersh	ip	\$ 3,500.00	\$ 13,000.00	\$ 16,5	00	\$ -	\$ -	ç	\$ -	\$ -	\$	-	\$	266.46	\$ 710.	56	\$ 621.74	\$ 461.8	\$6 \$	14,439.38
Describe implementation programs		Partnersh	ip	\$ 4,500.00	\$ 10,000.00	\$ 14,5	00	\$ -	\$ -	,	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -	\$ 488.5	1 \$	14,011.49
Determine plan administration and coordination		Partnersh	ip	\$ 1,000.00	\$ 7,000.00	\$ 8,0	00	\$ -	\$ -	ç	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	8,000.00
Write draft plan for review		Partnersh	ip	\$ 4,100.00	\$ 20,000.00	\$ 24,1	00	\$ -	\$ -	ç	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	24,100.00
F	Plan Review and Submission									P	lan Revi	iew a	and Subm	nission								
Conduct formal review		Partnersh	ip	\$ 1,000.00	\$ 1,000.00	\$ 2,0	00	\$ -	\$ -	۷,	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	2,000
Write final plan and submit to BWSR		Partnersh	ip	\$ 4,150.00	\$ 5,000.00	\$ 9,1	50	\$ -	\$ -	,	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	9,150
	Other	Costs													Othe	r Costs						
Expenses: printing, travel		Partnersh	ip	\$ 10,000.00	\$ 10,000.00	\$ 20,0	00	\$ -	\$ -	,	\$ -	\$ -	\$	-	\$	-	\$ -		\$ -		\$	20,000.00
SUBTOTAL: Plan Development						\$ 184,2	50														\$	166,519.55
Administration Costs	LGU Lead	Hourly Rate	Hours			Total								Admi	inistr	ation Co	sts					
Fiscal Coordination	Beltrami SWCD	50	70			\$ 3,5	00	\$ -	\$ -	Ş	\$ -	\$ 133.23	\$	-	\$	-	\$ 266.	46	\$ -		\$	3,100.31
Grant Reporting (Elink)	Beltrami SWCD	50	44			\$ 2,2	00	\$ -	\$ -	Ş	\$ -	\$ 88.82	2 \$	-	\$	-	\$ -	. !	\$ -		\$	2,111.18
Policy /Advisory Committee Coordination	Beltrami SWCD	50	255			\$ 12,7	50	\$ 1,058.37	\$ 1,326.9	91 \$	\$ 1,975.11	\$ 1,313.73	\$	664.39	\$	244.88	\$ 636.	17 :	\$ 672.17	\$ 183.6	6 \$	5,732.99
Meeting Expenses (facility, materials, food)						\$ 5,0	00	\$ -	\$ 878.0	9 9	\$ 25.76	\$ -	\$	75.23	\$	6.54	\$ -		\$ -		\$	4,014.38
Publication Expenses (notices, invitations)						\$ 5,0	00	\$ -	\$ -	9,	\$ -	\$ 71.88	\$	-	\$	-	\$ -		\$ -		\$	4,928.12
SUBTOTAL: Administration						\$ 28,45	\$ 28,450				\$	19,886.98										
CONTINGENCY (add 10% to final amount)						\$ 21,27	70														\$	21,270.00
			,			,		,			,		,		Ť	,	,		1	TD Expens	es \$	10,924.33
TOTAL						\$ 233,97	70													YTD Balan	e \$	196,752.19

Mississippi Headwaters Watershed Landscape Stewardship Plan









Add local logos

Table of Contents

Table of Contents	2
Introduction	1
Purpose and Scope	1
Forest and Water Resources Context	1
Linking Landscape Stewardship and Local Water Planning	2
Partners and Process	2
Analysis of Forest and Water Resources	3
Introduction	3
Resource Context	3
Risk/Quality Assessment	9
Forest Conservation Opportunity Areas	10
Key Observations and Conclusions	11
Forest Land Protection – Current Status	12
Private Forest Stewardship – Current Status	12
The Vision	13
Mission	13
Vision	13
Major Watershed Forestry Goals	13
Coordinated Roles to Increase Forest Land Protection and Stewardship	13
Goal 1: Forest Land Protection	14
Goal 2: Promote Private Forest Stewardship	15
Vision Summary	16
Subwatershed Guidance	16
Minor Watershed Methodology and RAQ Scoring	26
Making it Happen	27
Coordination Strategies	27
Demonstration Projects	36

Credits

Introduction

Forests play a critical role in keeping water clean by absorbing and filtering water, preventing erosion through soil stabilization, and allowing for groundwater recharge. The National Association of State Foresters recognized the connection of healthy forests to clean water with its policy statement: "Water, in all its uses and permutations, is by far the most valuable commodity that comes from the forest land that we manage, assist others to manage, and/or regulate."

Purpose and Scope

Recognizing the critical linkages between forests and water quality, the Minnesota Department of Natural Resources (DNR) and the Minnesota Board of Water and Soil Resources (BWSR), together with local partners and private landowners, are teaming up to develop watershed-based landscape stewardship plans across the forested regions of the state.

The Mississippi Headwaters Major Watershed in North Central Minnesota is home to the true source of the nation's premier river. It is also a lake rich watershed including some of the state's largest lakes. Research of over 1,300 lakes by DNR Fisheries revealed impacts of land use disturbance in a watershed and importance of protecting private lands. There is perhaps no better place in this country to advance the protection and management of working forest lands on a landscape level than this watershed.

The Mississippi Headwaters Watershed Landscape Stewardship Plan (LSP) is a 10-year tactical plan focused on guiding the protection and management of working forests on private lands on a watershed basis. The goal of this plan is to empower teams of service providers to work together with private landowners and land managers to strategically protect working forest lands and promote private forest stewardship to enhance both private and public benefits that forests provide. Investing resources for private forest management in the parts of the watershed where the public benefits can be stacked (e.g. tourism, timber, habitat, etc.) provides the greatest return on investment for the citizens of Minnesota.

Forest and Water Resources Context

The Mississippi Headwaters Major Watershed is in the heart of Minnesota's lake country. An assessment of the resources in the watershed described in the first part of this plan found that:

- Public land ownership dominates the watershed. Private lands are concentrated on the western and eastern sides around the cities - Bemidji, Grand Rapids and Deer River.
- Forests and wetlands are largely intact, especially in the center of the watershed. Land conversions include agricultural uses moving in from the west and urban development around the cities and shoreland areas.
- Management activities over many years have converted forests from conifer-dominated to deciduous-dominated cover types.
- High-quality water resources provide abundant recreation opportunities and source water for major populations centers downstream (St. Cloud and the Twin Cities). Water quality is dependent on maintaining significant levels of forest land cover across the watershed.



Linking Landscape Stewardship and Local Water Planning

Landscape stewardship is an "all lands" approach to forest management. Created by the US Forest Service, it addresses multiple conservation challenges through the practical application of science and collaboration. It is based on five working principles: 1) Invest in priority areas, 2) Build a collaborative network of service providers that effectively work together to serve more landowners, 3) Appeal to interests of both landowner and service providers, 4) Manage for results, and 5) Encourage flexibility at all levels to be more adaptive and cooperative in serving customers. Watershed based landscape stewardship plans analyze the critical contexts between land cover and water quality in ways useful to local water planning.

The One Watershed One Plan (1W1P) Program administered by BWSR in partnership with local units of government across the state develop plans at the major watershed (HUC 8) scale. As described in Minnesota Statutes §103B, these plans must address: 1) surface water and ground water; 2) storage and retention systems; 3) groundwater recharge; 4) flooding and water quality problems; 5) wetlands; 6) riparian zone management and buffers; and 7) fish and wildlife habitat and water recreational facilities.

Setting priorities is the first step in BWSR's strategic "Prioritize-Target-Measure" (PTM) approach to water resource planning and conservation. In managing watersheds, it is essential to recognize that not all valued resources and issues can be addressed at the same time. Prioritizing public and private investments through forest land protection down to the minor watershed level is a critical function in the LSP process. The second step is to target action towards more specific areas and issues within the priority watersheds. Through landscape stewardship plans, targeting is done down at the specific parcel level within priority minor watersheds. To measure is the ability to demonstrate progress towards the achievement of management goals over time. After landowners decide what actions to take and implementation occurs, landscape stewardship plans provide guidance on monitoring.

Partners and Process

This plan was developed by a team of resource professionals working in the watershed. The list of project partners is provided in the Appendix. Data, maps and reports detailing land cover, hydrology, and an array of natural resource topics developed by the project staff were provided to the LSP planning team. The team reviewed and discussed this material at three meetings as a basis to help shape this plan. This planning process was funded by a grant from the US Forest Service.

Plan Content – Using this Plan

The primary audience of this plan are the service providers who work with the (_____insert number) private forest landowners in the Mississippi Headwaters Major Watershed. Service providers include soil and water conservation districts, consulting foresters, DNR, NRCS and conservation organizations. This Plan is generally organized into three parts including: 1) analysis of forest and water resources, 2) vision and goals, and 3) guidance for implementing the plan. The Appendix (create link) provides additional background information designed to be actively used by the team of service providers to help them work mire effectively together to serve greater numbers of landowners on a consistent basis.

Ultimately it is the landowner's choice as to which level of forest protection works for them and how active they want to manage their woods. This plan seeks to help service providers increase their intentionality together to increase the strategic delivery of services to landowners and provide a full suite of forest management options to them.

Analysis of Forest and Water Resources

Introduction

The first part of this plan provides background information on the setting of the Mississippi Headwaters Major Watershed and the conditions of its forest and water resources. It also introduces concepts to help increase the ability of service providers to deliver private forest management services.

Resource Context

The Mississippi Headwaters Major Watershed is in the far northern part of the Upper Mississippi Basin and directly underneath the Laurentian Divide, beyond which all water flows north to the Hudson Bay. The Basin starts in Lake Itasca and ends at Lock and Dam Number 2 near Hastings. It covers about 20,100 square miles and is the only major drainage basin located entirely in Minnesota. The Upper Mississippi Basin is the most important source water in Minnesota – supplying both St. Cloud and the Twin Cities – as well as a contributor of source water for every major population center along the Mississippi River.

As its name implies, the Mississippi Headwaters Major Watershed Fig 1. Watershed forms the headwaters to both the Upper Mississippi Basin and the categorization framework. entire Mississippi River. The Mississippi Headwaters Major Watershed drains about 1,961 square miles and is composed of nine HUC 10 subwatersheds (Fig) which correspond to major streams and lakes in the region. The subwatersheds are further subdivided into 121 minor watersheds (HUC 14), each averaging 15.9 square miles.

Smaller than minor watersheds are catchments, which is the area between pour points, and it is also the level at which watersheds can be classified to a protection or restoration strategy as defined by the MN DNR Fisheries Lake Habitat Framework – see Fig 1 and Fig 3. Most of the catchments in the Mississippi Headwaters Major Watershed fall into either the "Vigilance" or "Protection" categories, with "Full Restoration" catchments around Bemidji and Grand Rapids.

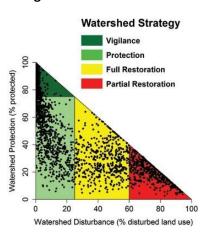
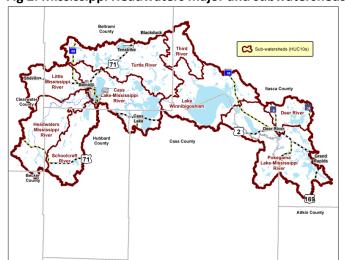
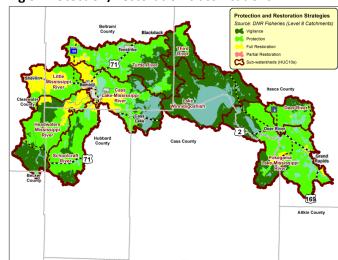


Fig 2. Mississippi Headwaters major and subwatersheds. Fig 3. Protection/Restoration classifications.





Geomorphology

The Mississippi Headwaters Major Watershed is largely characterized as level to gently rolling lake plains and outwash plains through which the Mississippi River flows. Areas of hummocky and steep terrain do occur near the watershed's southwest, southeast, and north central borders. These areas are typically end moraines or stagnation moraines. Till plain (ground moraine) deposits also are present and are most concentrated in the southwestern portion of the watershed in association with the Itasca Moraine.

Surface deposits have a strong impact on vegetation development. In general, fire-dependent communities are present on the coarse sand and gravel soils of outwash plains or localized deposits of sand and gravel within moraines and till plans. In contrast, mesic hardwood forests are usually found on heavier soils with impermeable layers that can perch snow melt or rainfall. These soils are often associated with moraines and till plains, or occasionally glacial lake sediments. The peatlands forests developed on level, poorly drained areas - such as glacial lake beds - while wet forests systems are found in areas with periodically saturated soil.

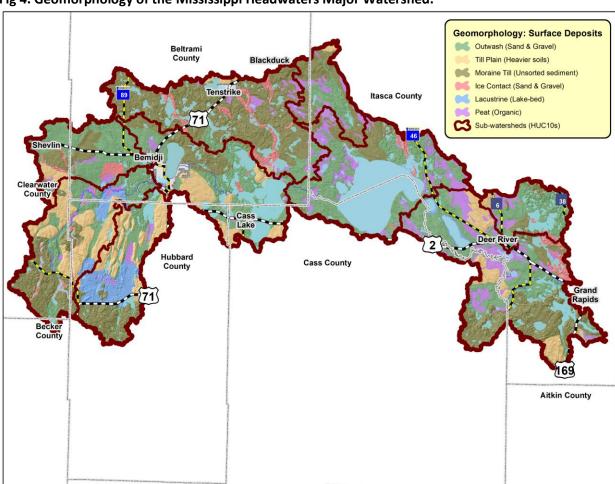


Fig 4. Geomorphology of the Mississippi Headwaters Major Watershed.

Land Cover

Prior to European settlement, the Mississippi Headwaters Major Watershed was covered by forests, wetlands, lakes, and small pockets of prairie. Today, the landscape continues to be largely forested with moderate amounts of wetlands, open water, agriculture, and small amounts of development. Overall, the land cover has been most modified around the western half of the watershed, where much of the forest has been converted to agriculture – see Fig 5 below. This is particularly noticeable in the Little Mississippi Subwatershed to the west of Bemidji, and to a lesser extent in other subwatersheds near Bemidji. Conversely, the portion of the watershed in and near the Lake Winnibigoshish Subwatershed remains largely intact and has abundant forest, wetland, and water resources.

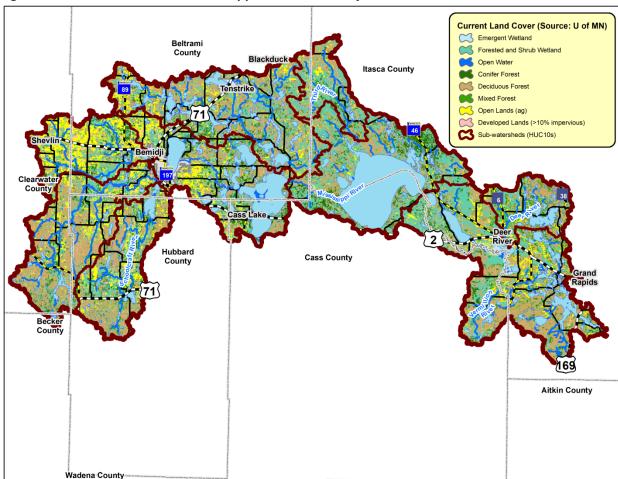


Fig 5. Current land cover in the Mississippi Headwaters Major Watershed.

Ecological Setting

The Mississippi Headwaters Major Watershed is uniquely situated at the western edge of the Laurentian Mixed Forest Province and the historical extent of the great white pine forest that stretched from eastern Maine to western Minnesota. This region is located entirely in the Minnesota Drift & Lake Plains ECS Section and largely in the Chippewa Plains ECS Subsection, with small portions intersecting the Pine Moraines & Outwash Plains and the St. Louis Moraines Subsections.

The next level below the ECS Subsection is the Land Type Association (LTA). LTA's are units within Subsections that are defined using glacial landforms, bedrock types, topographic roughness, lake and

stream distributions, wetland patterns, depth to ground water table, soil parent material, and pre-European settlement vegetation. The Mississippi Headwaters Major Watershed has portions of 18 LTAs (Fig 6), although over half of the area is covered by only three of them: the Bemidji Sand Plain (24% of watershed), Blackduck Moraine (17%), and Rosey Lake Plain (14%).

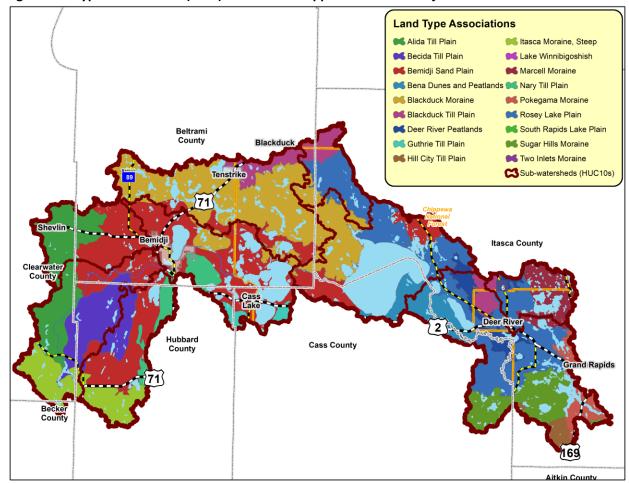


Fig 6. Land Type Associations (LTAs) of the Mississippi Headwaters Major Watershed.

In presettlement times the vegetation was a mixture of conifer and deciduous forests. White pine and red pine were present on the moraines, and jack pine was the dominant cover type on outwash plains and sandy lake plains. Hardwoods also grew on sheltered areas of the moraines, generally close to large lakes, as well as on the Sugar Hills Moraine south of Grand Rapids. Forested lowlands were occupied by black spruce, tamarack, white cedar, and black ash.

As a result of the logging of northern Minnesota's forests in the late 1800's and early 1900's, along with subsequent forest management practices, the composition of the forest has changed dramatically. In the area around the Mississippi Headwaters Major Watershed the forest shifted away from conifers and towards deciduous species (Table 1). Aspen is now the most common trees species and is found in both pure and mixed stands throughout the watershed.

Table 1. Change in tree species composition in since presettlement.

Species	Change	Species	Change
White pine	Decline, 5 to 10-fold	Aspen	Increase, 2 to 3-fold
Tamarack	Decline, 3 to 5-fold	Red maple	Rare as bearing tree
White spruce	Decline, 3 to 5-fold	Red oak	Rare as bearing tree
Jack pine	Some decline	Bur oak	Rare as bearing tree
Red pine	Some decline	Elm	Rare as bearing tree
White cedar	Some decline	Sugar maple	Rare as bearing tree
Black spruce	Some decline	Basswood	Rare as bearing tree
Paper birch	Some increase	Balm-of-Gilead	Rare as bearing tree
Balsam fir	Some increase	Black ash	Rare as bearing tree



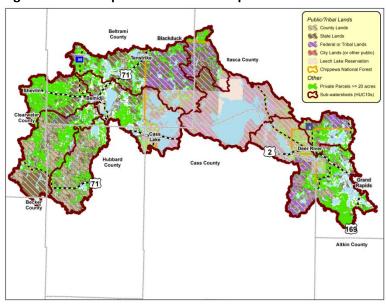
Source: DNR Division of Forestry, Resource Assessment.

Note: Results are summarized from Land Type Association (LTA)-level data that only includes LTAs that intersect with the Mississippi Headwaters Major Watershed.

Land Ownership

Land ownership in the Mississippi Headwaters Major Watershed is split between many different public and private entities, but for the most part it is a public landscape with 61% of the area under federal, state, or county management. In general, public ownership is highest in the center of the watershed where the Chippewa National Forest has large holdings, particularly in the Lake Winnibigoshish and Third River Subwatersheds. State lands are mostly in the center and western half of the watershed in the form of school trust lands, state forests, wildlife management areas, and state parks. Lastly, county land departments manage the tax-forfeited

Fig 7. Private and public land ownership.



lands, of which there is a large amount in the Schoolcraft River and Headwaters – Mississippi River Subwatersheds.

Private land is unevenly distributed across the landscape, often in blocks and pockets between public lands. Most of the private land occurs in the western third of the watershed and is especially high in the Little Mississippi River Subwatershed, which is 73% privately owned. There is also a sizeable density of private parcels in the southeast portion of the watershed, particularly around Pokegama Lake in the Pokegama Lake – Mississippi Subwatershed. However, much of this private land on the western side of this subwatershed has conservation easements in place (Blandin) and is therefore already protected.

Social and Economic Context

Census data from 2010 estimates that the population of all minor civil divisions in the Mississippi Headwaters Major Watershed is 72,539, or 1.4% of Minnesota's population. The two major regional centers are Bemidji and Grand Rapids, which hold 33% of the estimated population in the watershed.

Despite its relatively low population, the Mississippi Headwaters Major Watershed provides outsized social and economic services. The Headwaters is a popular recreation destination in the heart of Minnesota's lake country, and tourists come from across the nation to visit its 1000+ lakes and 885 miles of streams. The most famous of these are Lake Winnibigoshish, Cass Lake, and of course the Mississippi River. The Headwaters is also unique in that it receives input only from precipitation, which is first filtered by the forests and wetlands, and then goes on to supply drinking water for major population centers in the rest of the state. In fact, in the Forests, Water, and People study by the Forest Service, the Mississippi Headwaters Major Watershed was ranked as the fourth most important major watershed in all of Minnesota for providing drinking water.

high quality drinking water, the forests and wetlands in the Mississippi Headwaters must be protected. In general, forests and wetlands export much less phosphorous - which is a key determinant of water quality than development or agriculture (Fig 8). Furthermore, natural cover greatly promotes infiltration and reduces runoff of sediment and potentially pollution-laden runoff (Fig 9).

In order to continue producing Fig 8. Annual phosphorous exports by land use.

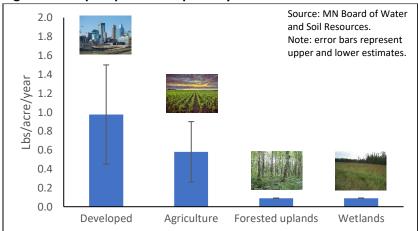
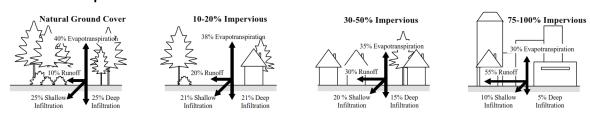


Fig 9. Effects of imperviousness on runoff and infiltration.



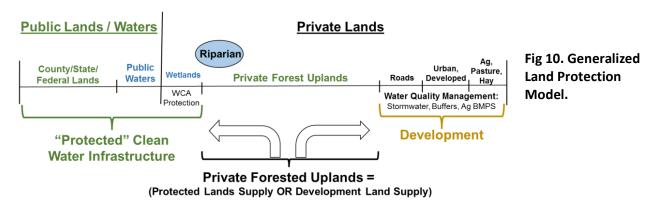
Source: Adapted from Arnold and Gibbons, 1996.

Risk/Quality Assessment

"Priority is at the intersection of risk and quality"
- Pete Jacobson, MNDNR Fisheries

What is Protection?

One of the most important concepts in landscape stewardship is that of 'protection'. In the context of this plan, the parts of a landscape that are protected are those areas that are not likely to be converted from an intact natural ecosystem (e.g. forest, wetland, lakes, etc.) to an open or disturbed state (e.g. agriculture, development, or mining). Protected land is commonly defined as public lands (local, state, federal), public waters (lands & streams), wetlands on private lands, and perpetual conservation easements on private lands. The *Generalized Land Protection Model*, shown below, illustrates the details of what in the landscape is protected and what is at risk.



What is Priority?

The view that protection efforts should focus on areas that have high quality habitat but are at risk of being lost is one of the guiding principles of landscape stewardship in Minnesota. Generally, the greatest risk occurs on private lands because they are usually unprotected and that is where conversion of natural ecosystems to agriculture and development is the most likely to occur. Other potential indicators of risk include lake water quality trends, lake phosphorous sensitivity, point source pollution, land disturbance, slope, and road development. Conversely, measures of quality include prioritized lakes (e.g. wild rice, tullibee, trout), lakes of biodiversity significance, forest cover, Forests for the Future score, terrestrial biodiversity ranking (Minnesota Biological Survey), Wildlife Action Network score, and others. At the first meeting of the Mississippi Headwaters LSP Planning Team, participants reviewed these indicators for each minor watershed and determined the drivers of quality and risk in each. A summary of these drivers for each subwatershed is provided in the table below.

Table 2. Drivers of quality and risk in the Mississippi Headwaters Major Watershed.

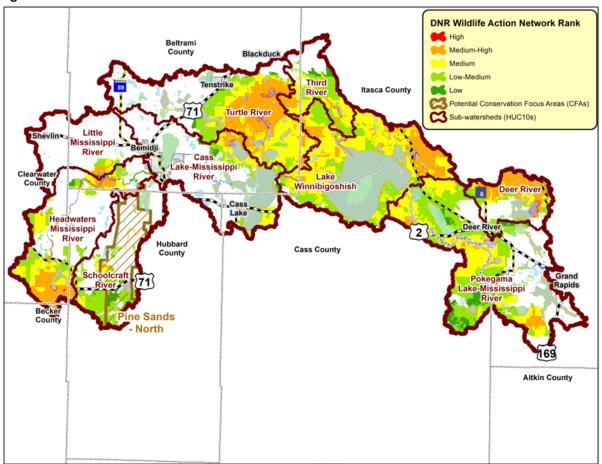
Subwatershed name	Drivers of quality	Drivers of risk
Headwaters - Miss River	Forests, lakes/streams	Development near Bemidji, some ag
Little Mississippi River	Forests, lakes/streams Agriculture	
Schoolcraft River	Forests, lakes/streams Development near Bemidji, some	
Cass Lake - Mississippi River	ppi River Forests, lakes/streams Development	
Turtle River	Forests, lakes	Development
Lake Winnibigoshish	Forests, lakes/streams	Low risk (> 75% protection)
Third River	Forests, lakes/streams	Low risk (> 75% protection)
Deer River Forests, large la		Development
Pokegama Lake - Mississippi River	e - Mississippi River Forests, lakes Development (lower part)	

Forest Conservation Opportunity Areas

The following list of existing conservation priorities in the Mississippi Headwaters Major Watershed have been identified by various state agencies and environmental organizations. As noted previously, these resources were consulted by the Mississippi Headwaters LSP Planning Team in helping to determine private forest land protection priorities. As this plan is implemented, project partners are encouraged to consult these priority efforts and seek to support their concurrent implementation. For more information on these priorities, please refer to the Appendix.

- Minnesota DNR Wildlife Action Network DNR EWR (shown below)
- Important Forest Resource Areas (IFRA) DNR PFM Program, US Forest Service.
- Forests for the Future Analysis DNR Forestry Forest Legacy Program, US Forest Service.
- Minnesota Biological Survey DNR EWR.
- Mississippi River Headwaters Watershed Restoration and Protection Strategies MPCA.
- 25-Year Lessard-Sams Outdoor Heritage Council (LSOHC) Forest Habitat Vision MFRC and MFRP.
- Zonation Model DNR and TNC.

Fig 11. MN DNR Wildlife Action Network.

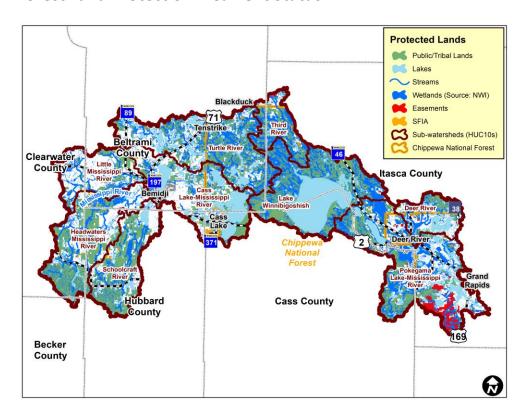


Key Observations and Conclusions

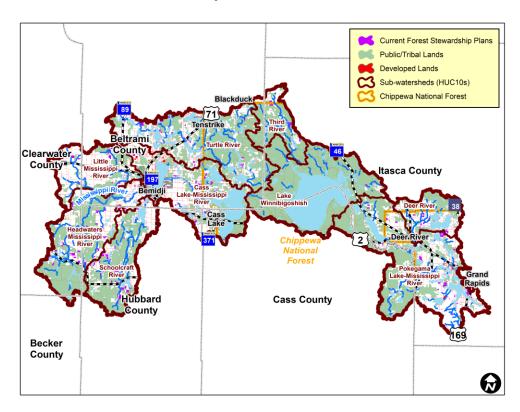
The following key observations and conclusions are based on the information gathered in the course of the planning process for this landscape stewardship plan:

- The Mississippi Headwaters Major Watershed has some of the finest freshwater lakes in the country with good water quality thanks to sandy soils, high forest cover, intact wetlands, flat slopes, and mostly natural (not channelized) streams.
- There is significant potential for loss of private forest lands and an increase in landscape disturbance adjacent to Bemidji and Grand Rapids. Both cities are growing regional centers located on opposite ends of the watershed.
- Many excellent conservation tools and programs are already in place, and PFM is the key program
 through which we can reach out to and serve private landowners. Outreach should be conducted
 through public/private partnerships with state, local government, and private forest consultants.
- Outreach efforts should be focused on parcels and properties with high RAQ scores, particularly in priority minor watersheds. This gives the best return on investment for available time and money.
- PFM is key in many minor watersheds, although some minors and lakes will be BMP orientated e.g. reducing nutrient and sediment runoff with practices such as riparian buffers.
- There are three major forest industries (Potlatch, Norboard, and Blandin) located within this
 watershed, located on the east and west sides. These industries use a mix of conifer and deciduous
 species. Forest industries like these provide key markets to utilize forest resources creating jobs and
 economic growth while supporting opportunities to increase the sustainable management of the
 forest lands.
- Forests are the best land cover for carbon. Conifers are generally better than hardwoods in sequestering carbon. Long term wood products (lumber) are better at storing carbon than short term products (paper).
- This watershed supports the move towards managing for ECS / NPC based forest management including long lived conifers while at the same time supports an array of upland and lowland deciduous species. The mix of forest industries creates opportunities to enhance the sustainable management of all forest cover types in the watershed.
- The North Central Landscape Plan approved by the Minnesota Forest Resources Council (MFRC) provides useful guidance for forest vegetation management based on native plant communities across the 10-county region including this watershed. The Council's site level guidelines provide detailed guidance for forest management activities on a site level. Combined, the landscape and site level guidance provide excellent foundations for service providers in advising private landowners on ways to sustainably manage their woodlands.
- Because of the high-quality water and forest resources and the risk of forest loss, the Mississippi Headwaters Major Watershed is possibly the best place in the lower 48 states for PFM-based water quality and lake protection efforts through the protection of working private forest lands and increased forest stewardship.

Forest Land Protection – Current Status



Private Forest Stewardship – Current Status



For more information – see the Appendix and the Service Providers Workbook (create links).

The Vision

Mission

To empower teams of service providers to work together with private landowners and land managers in the Mississippi Headwaters Major Watershed to protect and manage working forest lands to increase both the private and public benefits that forests provide.

Vision

In ten years, the Mississippi Headwaters Major Watershed will have:

- Protected Water Resources landowners and project partners that recognize together healthy
 working forests are key to protecting good water quality and quantity.
- Healthy and Sustained Forests forests in the major watershed will be healthy and managed in an ecologically appropriate manner.
- Multiple Uses of Forest Resources a full range of public and private benefits from timber to tourism will be produced by forests in the watershed.
- Collaborative Management service providers and partners will work together to achieve the goals set forth in this plan.

Major Watershed Forestry Goals

Increase Forest Land Protection Levels

- Major watershed level (HUC 8): Current level – 71%. Goal – 75%.
- Subwatershed levels (HUC 10): Current levels range from 39% to 94%. Goal – all subwatersheds 75%, except for Little Mississippi (Subwd No. 2) – 45%.
- Minor watershed levels (HUC 14):
 Protection goals recommended by the MH
 Forestry Technical Committee. See
 Appendix and the Committee Work Plan.

Promote Private Forest Stewardship

- Coordinate the work of service providers.
- Target outreach to private landowners.
- Increase number/acres of stewardship plans.
- Promote integration of NPC based forest management goals and strategies developed in the North Central Landscape Plan (MFRC).
- Increase number/acres of practice plans and implementation projects.
- Increase targeted investment of NRCS, DNR and Legacy funding based on MWA/RAQ.

Coordinated Roles to Increase Forest Land Protection and Stewardship

Increase Forest Land Protection Levels

- DNR + BWSR: administrative lead.
- SWCDs: local lead, outreach, implement.
- DNR CFM: project coordination, reporting.
- DNR FL: target larger tracts.
- NGOs: bring partner resources, advocate.
- Landowners: they choose.

Promote Private Forest Stewardship

- DNR + BWSR: administrative lead.
- DNR CFM: PFM program coordination.
- SWCDs: local lead, outreach, plans, 1W1P.
- Consulting foresters: plans, timber sales.
- Loggers/vendors: forest management.
- Landowners: Its their land.

Goal 1: Forest Land Protection

In order to draw some conclusions for management priorities and to help compare each subwatershed with the others on each given resource issue, the resulting calculations of the key assessments were placed into a table format. The table below summarizes the results of the calculations made for each subwatershed through the subwatershed assessment process.

	Handmakana		(HUC 701010103)	(HUC 701010105)	(HUC 701010104) Subwd. No 6 (HUC 701010107) Turtle River Lake Winnibigoshish				(HUC 701010106)	(HUC 701010108)	(HUC 701010109)
	Headwaters – Mississippi River	Little Mississippi River	Schoolcraft River	Cass Lake – Mississippi River	Turtle River	Lake Winnibigoshish	Third River	Deer River	Pokegame Lake – Mississippi River		
Area	148,213 ac	88,654 ac	109,631 ac	158,269 ac	188,297 ac	190,894 ac	56,811 ac	55,853 ac	232,267 ac		
Natural Factors											
Presettlement forest cover	93%	96%	92%	71%	83%	68%	96%	82%	84%		
Current forest cover	50%	24%	45%	27%	42%	30%	42%	49%	46%		
Lakes	39 lakes; 4%	20 lakes; 2%	31 lakes; 6%	62 lakes; 27%	95 lakes; 13%	54 lakes; 35%	14 lakes; 3%	44 lakes; 16%	89 lakes; 11%		
Wetlands	19%	19%	18%	12%	29%	26%	42%	27%	32%		
Forest Land Protection Assessment											
Public waters	6,320 ac; 4%	1,764 ac; 2%	7,169 ac; 7%	42,913 ac; 27%	24,033 ac; 13%	67,113 ac; 35%	1,758 ac; 3%	8,919 ac; 16%	28,278 ac; 12%		
Public lands	81,333 ac; 55%	22,111 ac; 25%	61,849 ac; 56%	42,599 ac; 27%	93,779 ac; 50%	104,154 ac; 55%	39,053 ac; 69%	20,286 ac; 36%	100,191 ac; 43%		
Private wetlands	9,698 ac; 7%	10,072 ac; 11%	5,634 ac; 5%	8,977 ac; 6%	15,392 ac; 8%	7,531 ac; 4%	4,665 ac; 8%	6,664 ac; 12%	24,598 ac; 11%		
SFIA	1,429 ac; 1%	430 ac; 0%	1,043 ac; 1%	1,967 ac; 1%	1,580 ac; 1%	59 ac; 0%	1,182 ac; 2%	363 ac; 1%	1,510 ac; 1%		
Easements	41 ac; 0%	1 ac; 0%	301 ac; 0%	307 ac; 0%	440 ac; 0%	60 ac; 0%	524 ac; 1%	276 ac; 0%	15,702 ac; 7%		
Total protected area	98,821 ac; 67%	34,377 ac; 39%	76,321 ac; 70%	96,763 ac; 61%	135,224 ac; 72%	178,917 ac; 94%	47,182 ac; 83%	36,507 ac; 65%	170,279 ac; 73%		
Forest Land Protection Cost Analysis		<u> </u>		·	·	<u> </u>					
Protection goal	75%; 12,339 ac to goal	45%; 5,517 ac to goal	75%; 5,902 ac to goal	75%; 21,939 ac to goal	75%; 5,999 ac to goal	75%; 0 ac to goal	75%; 0 ac to goal	75%; 5,383 ac to goal	75%; 3,921 ac to goal		
Potential to protect	32,848 ac; 22%	26,800 ac; 30%	21,273 ac; 19%	21,612 ac; 14%	32,637 ac; 17%	2,015 ac; 1%	6,521 ac; 11%	11,630 ac; 21%	35,993 ac; 15%		
Average land value	\$1,361/ac	\$1,274/ac	\$1,854/ac	\$2,143/ac	\$1,536/ac	\$1,864/ac	\$1,021/ac	\$1,806/ac	\$1,287/ac		
Protection cost*	\$12,835,991	\$5,595,174	\$7,012,892	\$27,970,219	\$6,556,181	\$0	\$0	\$6,318,171	\$3,992,332		
Forest Land Protection Priorities											
Quality Protection Factors											
Cisco lakes	2 lakes; 541 ac	1 lake; 214 ac	1 lake; 189 ac	1 lake; 412 ac	0 lakes; 0 ac	0 lakes; 0 ac	0 lakes; 0 ac	1 lake; 211 ac	5 lakes; 1,993 ac		
Trout lakes	1 lake; 160 ac	0 lakes; 0 ac	2 lakes; 84 ac	0 lakes; 0 ac	1 lake; 33 ac	0 lakes; 0 ac	0 lakes; 0 ac	1 lake; 14 ac	3 lakes; 6,807 ac		
Lakes of biodiversity significance	9 lakes; 2,291 ac	2 lakes; 458 ac	5 lakes; 4,200 ac	10 lakes; 35,040 ac	16 lakes; 11,047 ac	8 lakes; 60,885 ac	2 lakes; 947 ac	6 lakes; 6,017 ac	9 lakes; 14,161 ac		
(outstanding & high)											
Priority shallow lakes	6 lakes; 1,244 ac	2 lakes; 435 ac	9 lakes; 1,024 ac	11 lakes; 1,196 ac	14 lakes; 2,158 ac	9 lakes; 3,572 ac	3 lakes; 218 ac	0 lakes; 0 ac	7 lakes; 2,422 ac		
Priority wild rice lakes	4 lakes; 937 ac	4 lakes; 562 ac	0 lakes; 0 ac	8 lakes; 20,780 ac	23 lakes; 7,733 ac	2 lakes; 1,764 ac	4 lakes; 1,062 ac	3 lakes; 745 ac	8 lakes; 5,538 ac		
Trout steams	15 mi	0 mi	5 mi	0 mi	0 mi	0 mi	0 mi	0 mi	20 mi		
FFF mean composite score	97.1	80.5	97.6	89.3	97.4	96.3	101.7	85.3	93.5		
Terrestrial biodiversity (MBS)	110,106 ac; 15%	201,582 ac; 5%	94,993 ac; 5%	732,667 ac; 9%	326,776 ac; 27%	390,987 ac; 43%	58,676 ac; 18%	143,597 ac; 32%	377,941 ac; 22%		
(outstanding and high)											
Wildlife Action Network	22,426 ac; 15%	2,381 ac; 3%	2,539 ac; 2%	28,675 ac; 18%	50,892 ac; 27%	82,211 ac; 43%	6,083 ac; 11%	24,578 ac; 44%	22,502 ac; 10%		
(high & medium-high)											
Risk Management Factors											
Lake phosphorous sensitivity (highest & higher)	6 lakes; 2,080 ac	3 lakes; 503 ac	5 lakes; 3,850 ac	19 lakes; 35,428 ac	18 lakes; 11,524 ac	7 lakes; 61,982 ac	0 lakes; 0 ac	13 lakes; 7,465 ac	16 lakes; 19,371 ac		
Water quality trend (declining)	0 lakes; 0 ac	0 lakes; 0 ac	1 lake; 553 ac	1 lake; 3,887 ac	3 lakes; 2,878 ac	0 lakes; 0 ac	0 lakes; 0 ac	1 lake; 1,266 ac	0 lakes; 0 ac		
Land use disturbance	28,919 ac; 20%	38,445 ac; 43%	20,918 ac; 19%	37,134 ac; 23%	29,598 ac; 16%	12,699 ac; 7%	6,539 ac; 12%	6,640 ac; 12%	31,252 ac; 13%		

Protection Levels and Goals[†]

14



















Mississippi Headwaters Watershed Landscape Stewardship Plan

^{*}Protection cost assumes 50% conservation easement and 50% SFIA [†]Solid lines represent current level of protection, dashed line is the goal

Goal 2: Promote Private Forest Stewardship

The second major goal of this Landscape Stewardship Plan is to promote private forest stewardship and consideration of native plant communities (NPCs) in management activities. The map on the right displays the potential NPC system for private lands in the Mississippi Headwaters Major Watershed. The yellow circles indicate priorities for forest land management identified by the Mississippi Headwaters Forestry Technical Committee.

It is important to note that this map displays the potential NPC of private lands only, and it includes lands that are not currently forested. This map is a vision for all private lands, including nonforested lands, because it reflects what the private landscape can potentially be if the land is managed in accordance with its biological potential.

The tables on the right side of this page compares Public Land Survey (PLS; ca. 1846-1908 AD) and Forest Inventory and Analysis (FIA; ca. 1990 AD) growth-stage data for common NPC classes in the Mississippi Headwaters. These tables are from the Silviculture Interpretations developed by MN DNR Division of Forestry, Ecological Land Classification. Additional information on NPCs and their management can be found in the Appendix and the North Central Landscape Ecological Pathway.

The goals listed below for each subwatershed are for increased forest management through stewardship plans and acres as well as for cost share practices over the next ten years.

Fire-Dependent (FD) Mesic-Hardwood (MH) Wet Forest (WF) Sorested Rich Peatland (FRP) Beltrami Acid Peatland (AP) County Wet Meadow (WM) Open Rich Peatland (OP) Open Water Marsh (MR) **Itasca County** Winnibigoshish Hubbard **Cass County** County Other Features Sub-watersheds (HUC10s Minor Watersheds Public Lands Priority PFM Focus Areas **Aitkin County**

Growth Stage and Composition for Common Private Land NPCs

FDn33: Northern Dry-Mesic Mixed Woodland

	Forest Growth Stages in Years											
Dominant Trees	0 -	35	35	- 55	55 -	125	~ 125	> 125 Old				
	Yo	ung	Т	T1	Mat	ture	T2					
Quaking (Big-toothed) Aspen	40%	79%		II	9%	48%	- 1	7%	37%			
Jack Pine	15%	_		I	7%	_	- 1	2%	_			
Red Pine	17%	1%		1	27%	1%	H	16%	1%			
Paper Birch	16%	5%		1	19%	26%	- 1	14%	18%			
Balsam Fir	1%	7%		1	4%	11%	1	5%	15%			
White (Black) Spruce	_	1%		1	5%	1%	1	13%	1%			
White Pine	_	0%	1	1	19%	1%	11	30%	19%			
Red Maple	_	4%			1%	9%		2%	0%			
White Cedar	_	0%			2%	1%		2%	8%			
Miscellaneous	11%	3%			7%	2%		9%	1%			
Percent of Community in Growth Stage in Presettlement and Modern Landscapes	14%	30%	27%	30%	44%	39%		15%	1%			

Natural growth-stage analysis and landscape summary of historic conditions is based upon the analysis of 6,807 Public Land Survey records for section and quarter-section corners. Comparable modern conditions were summarized from 2,615 Fla subplots that were modeled to be FDn33 sites.

MHn35: Northern Mesic Hardwood Forest

	Forest Growth Stages in Years											
Dominant Trees	0 -	0 - 55			95 -	205	205 - 295		> 2	> 295		
	You	ıng	T1	T1		ture	T2		Old ²			
Paper Birch	38%	9%	П		28%	7%		II	12%	0%		
Quaking Aspen	20%	22%	П		6%	4%		ī	4%	0%		
Red Oak	10%	6%			5%	11%		ī	1%	0%		
Balsam Fir	5%	4%			3%	2%		1	1%	0%		
Basswood	6%	9%	٦		9%	19%		1	6%	0%		
White Spruce ¹	1%	1%	n		13%	0%		ı	-	0%		
Sugar Maple	11%	24%	٦		14%	32%		1	29%	50%		
White Pine	1%	0%	٦		7%	1%		1	31%	0%		
American Elm	3%	2%			2%	3%		1	0%	0%		
Red Maple	-	9%				4%			0%	0%		
Ironwood	1%	7%			1%	7%			1%	0%		
Bur Oak	1%	1%			2%	3%			0%	50%		
Miscellaneous	3%	6%			10%	7%			15%	0%		
Percent of Community in Growth Stage in Presettlement and Modern Landscapes	39%	29%	51%	52%	8%	18%	1%	1%	1%	0%		

Natural grown-stage analysis and lanuscage summary or instoric conducts a based upon the analysis of \$887 Public Land Survey records for section and quarter-section corners. Comparable modern conditions were summarized from 3,470 FIA subplots that were modeled to be MHn35 sites.

 Important historically, white spruce is no longer a significant component of MHn35 forests and is not sovered in the accounts of potential crop species.

Forest Management Goals

Subwd 1 – Miss HW 41% private, 59% public 946 parcels >20 acres 53,779 acres > 20 acres

10 Yr PFM Goals: 103 fsps; 13,124 ac

15

28 fsps; 3,291 acres

Subwd 2 – Little Miss 73% private, 27% public 986 parcels >20 acres 59,111 acres > 20 acres 9 fsps; 1,417 acres

10 Yr PFM Goals: 41 fsps; 5,224 ac

Subwd 3 – Schoolcraft

37% private, 63% public 662 parcels >20 acres 34,897 acres > 20 acres 37 fsps; 3,902 acres

10 Yr PFM Goals: 55 fsps; 6,939 ac

Subwd 4 – Cass Lake 46% private, 54% public 1,030 parcels >20 acres

46,545 acres > 20 acres 23 fsps; 2,472 acres

10 Yr PFM Goals: 186 fsps; 23,635 ac

Subwd 5 – Turtle River

37% private, 63% public 1,261 parcels >20 acres 58,771 acres > 20 acres 13 fsps; 2,545 acres

10 Yr PFM Goals: 59 fsps; 7,524 ac

Subwd 6 – Winnie

10% private, 90% public 83 parcels >20 acres 3,522 acres > 20 acres 1 fsps; 202 acres

10 Yr PFM Goals: 0 fsps; 0 ac

Subwd 7 - Third River

28% private, 72% public 303 parcels >20 acres 13,693 acres > 20 acres 9 fsps; 1,806 acres

10 Yr PFM Goals: 0 fsps; 0 ac

Potential Native Plant Communities

by system:

Subwd 8 - Deer River

48% private, 52% public 523 parcels >20 acres 20,185 acres > 20 acres 10 fsps; 1,362 acres

10 Yr PFM Goals: 43 fsps; 5,445 ac

Subwd 9 - Pokegame

45% private, 55% public 2,167 parcels >20 acres 82,589 acres > 20 acres 28 fsps; 3,049 acres

10 Yr PFM Goals: 159 fsps; 20,161 ac

Mississippi Headwaters Watershed Landscape Stewardship Plan

Vision Summary

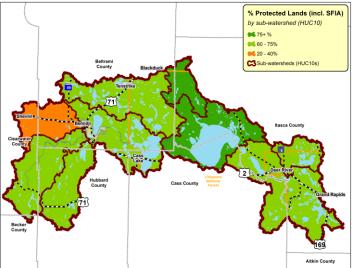
The following points summarize the major goals and conclusions of the vision for the Mississippi Headwaters Major Watershed.

- Public lands dominate the center of the Mississippi Headwaters Major Watershed, where the primary landowner is the Chippewa National Forest. These subwatersheds (Lake Winnibigoshish and Third River) have very high levels of public lands and are beyond the 75% forest protection goal as stated in Goal 1. These subwatersheds are also not priority for private forest management because few private forest acres are available. In addition to protecting the adjacent waters such as Winnibigoshish and Cass Lakes, these federal lands are also managed under a conifer favoring management regime along ECS lines. Whereas many county and state lands are kept in a youthful (less than 55 years old) forest management regime. The federal lands help balance out shorter rotation state/county management and add long rotation conifers on the watershed.
- The watershed has significantly fewer conifers than it had under natural conditions. White pine eventually came to dominate many NPC's in both the fire-dependent and mesic hardwood native plant communities, if given enough time. A majority of acres are now "managed" in a young forest condition with harvests of the pioneer species aspen every 40-60 years. This impedes recovery of the long-lived conifer cover that once dominated the watershed.
- Short-rotation forests combined with fire control, higher deer populations, and winter harvests together keep long-lived conifers, especially white pine, from recovering their place in the watershed.
- Where aspen forests previously would eventually be overtaken by pines and spruce, they now are the "new normal."
- Even northern mesic hardwood forests are projected to have 31% white pine after 295 years.
- Private forest lands can help achieve better ECS balance across the landscape if private landowners choose to manage for longer live conifers as a component in their plans. Private forest lands in combination with federal lands could help move toward ECS balance on a landscape basis.

Subwatershed Guidance

The purpose of the following nine Fig 12. Subwatershed (HUC10) protection levels. narratives provide service providers and resource managers with a detailed description of subwatershed-level conditions and recommendations.

These 'subwatershed action plans' are intended to help service providers and managers identify and prioritize specific areas in the Mississippi Headwaters Major Watershed so they can more effectively work together to implement activities that are likely to improve water quality, increase forest management, and achieve other public and private benefits.



Subwatershed No. 1 Headwaters-Mississippi River (HUC 701010102)

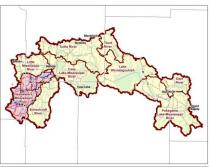
Goal 1 Forest Land Protection Guidance

- Headwaters of the headwaters to the entire Mississippi River.
- Tributary to Lake Bemidji, which is very important to City of Bemidji and Beltrami County.
- One of the most heavily forested watersheds in the region, although it has lost over 10% of its forests since 2001.
- Main risks are small lake development and outward growth of Bemidji.
- Popular forest recreation use area and home to the most popular state park in Minnesota Itasca State Park.
- High priority for forest land protection.
- Forest land protection goal is 75%, current protection is 67%.

Goal 2: Forest Vegetation Management Guidance

- The Mississippi River arises in the Itasca Moraine at the southern end of the subwatershed, flows out of the hills and dissects the till plain, then flows into an outwash plain and former lakebed near Bemidii.
- Fire-dependent forest are associated with the outwash and glacial lacustrine deposits in the central and northeastern areas while mesic hardwoods are more abundant in the hummocky moraine till deposits at the southern end of the watershed and the till plain to either side of the Mississippi River towards the middle of the subwatershed.
- The forested portions of this subwatershed is dominated by deciduous species, but management for long-lived conifers may be suitable for much of the landscape, particularly on Fire-Dependent sites.
- Promote long-lived conifers on outwash and Fire-Dependent sites, especially in close proximity to the Potlatch sawmill.
- Encourage the development of conifer regeneration strategies including summer harvest, scarification, and slash control.
- See Fire-Dependent vegetation management goals #1-4 from the 2nd Generation North Central Landscape Plan.

- Priority minor watersheds for protection are 7050, 7052, 7053, 7061, 7062, 7083, and 7084.
- Confirm list with Planning Team.



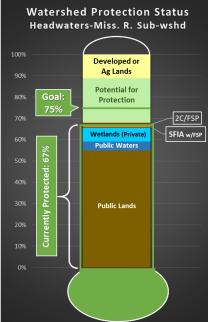


Table 3. Minor watershed info.

. a.b.c bbatcibilea iiiloi									
Minor wshd#	Acres	Current % protected	Protection goal %						
wsiiu #		protecteu	guai /0						
7048	4,531	38.9%	45%						
7049	15,185	84.3%	75%						
7050	10,603	53.2%	65%						
7051	6,594	74.7%	75%						
7052	13,042	62.3%	70%						
7053	4,592	38.2%	60%						
7054	8,363	74.8%	75%						
7055	14,893	97.2%	75%						
7056	7,328	100.0%	75%						
7057	8,759	100.0%	75%						
7061	8,325	44.6%	50%						
7062	20,892	36.0%	50%						
7064	4,354	90.5%	75%						
7083	7,135	44.7%	60%						
7084	12,853	62.1%	75%						
7130	763	91.6%	75%						

Subwatershed No. 2 Little Mississippi River (HUC 701010101)

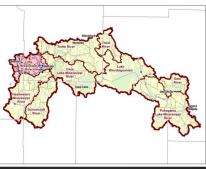
Goal 1 Forest Land Protection Guidance

- Tributary to Lake Bemidji, which is very important to City of Bemidji and Beltrami County.
- Largely stream-based subwatershed with relatively few lakes.
- Has the most land use disturbance (i.e. agriculture and development) of any subwatershed in the major watershed.
- Main risks are agriculture and outward growth of Bemidji.
- The primary focus for water quality in this subwatershed is BMPs to reduce phosphorous runoff.
- Low priority for forest land protection.
- Forest land protection goal is 45%, current protection is 39%.

Goal 2: Forest Vegetation Management Guidance

- The majority of the subwatershed is covered by outwash plain, although a portion of the Itasca Moraine is located near its center.
- Most of the upland area can potentially support fire-dependent forests, but much of the area has already been converted to agriculture.
- Large scale restoration of forest land is likely unfeasible in this subwatershed, but passive restoration of marginal agricultural lands (i.e. allowing natural succession of fields to young forest) may be possible in some instances. Encourage the regeneration of conifers in these situations.
- See Ecological goal #2 from the 2nd Generation North Central Landscape Plan.

- Priority minor watersheds for protection are 7045-7047.
- Confirm list with Planning Team.



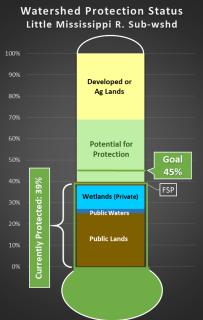


Table 4. Minor watershed info.

Minor wshd #	Acres	Current % protected	Protection goal %							
7039	3,337	9.9%	15%							
7040	7,885	19.9%	25%							
7041	6,729	28.1%	30%							
7042	5,118	27.9%	30%							
7043	12,406	19.6%	25%							
7044	4,562	31.0%	35%							
7045	7,604	53.9%	60%							
7046	4,183	23.8%	40%							
7047	7,845	38.7%	60%							
7111	20,194	52.7%	60%							
7112	8,790	61.6%	65%							

Subwatershed No. 3 Schoolcraft River (HUC 701010103)

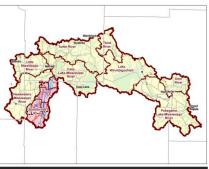
Goal 1 Forest Land Protection Guidance

- Tributary to Lake Bemidji, which is very important to City of Bemidji and Beltrami County.
- One of the most heavily forested watersheds in the region, although it has lost about 15% of its forests since 2001.
- Main risks are small lake development and outward growth of Bemidji.
- High priority for forest land protection.
- Forest land protection goal is 75%, current protection is 70%.

Goal 2: Forest Vegetation Management Guidance

- The Schoolcraft River has its headwaters in the Itasca Moraine at the southern end of the watershed, flows out of the hills and passes north through lacustrine and outwash deposits that bisect a till plain before meeting with the Mississippi River near Bemidji.
- Mesic hardwood forests in this watershed are more likely to occur moraine till and till plain in this subwatershed, whereas the outwash and lacustrine deposits generally support firedependent forests.
- The current forest cover is dominated by deciduous species, especially on sites that are predicted to be in the mesic hardwood NPC system. Some patches of conifers are present in areas of the subwatershed where the predicted NPC system is fire-dependent, although the proportion of conifers is less than would be expected in a landscape with unaltered native plant communities.
- Promote the regeneration of conifers and maintain conifers as a stand component whenever possible.

- Priority minor watersheds for protection are 7063, 7065, 7070, 7072, and 7079.
- Confirm list with Planning Team.



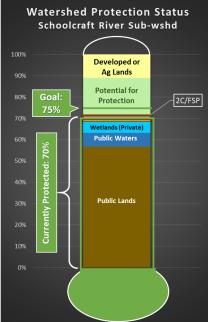


Table 5. Minor watershed info.

Minor	Acres	Current %	Protection
wshd #		Protected	goal %
7063	5,163	70.4%	75%
7065	4,410	29.5%	35%
7070	7,157	44.9%	55%
7072	5,683	39.7%	55%
7073	12,664	79.4%	75%
7074	4,283	59.0%	75%
7075	6,816	56.3%	75%
7076	15,591	87.5%	75%
7077	4,962	83.1%	75%
7078	11,868	81.5%	75%
7079	4,791	59.0%	75%
7080	7,501	72.0%	75%
7081	4,495	94.7%	75%
7082	4,284	63.3%	75%
7087	3,670	92.2%	75%
7088	3,614	63.2%	75%
7131	2,680	94.2%	75%

Subwatershed No. 4 Cass Lake-Mississippi River (HUC 701010105)

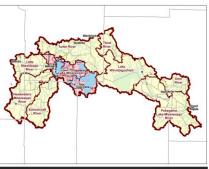
Goal 1 Forest Land Protection Guidance

- Moderately forested, but rich in water resources lakes cover 27% of the subwatershed.
- Characterized by large and regionally important lakes such as Lake Bemidji and Cass Lake.
- Home to the City of Bemidji, which known as 'The First City on the Mississippi' and one of the two major regional centers in the entire major watershed – the other being Grand Rapids.
- Home to Lake Bemidji State Park.
- Public land is concentrated on the eastern side and is mostly Chippewa National Forest. Unprotected private land is more prevalent on the subwatershed's western side.
- Risk for conversion is high around Bemidji.
- Medium priority for forest land protection. Focus efforts on large tracts to meet the subwatershed protection goal.
- Forest land protection goal is 75%, current protection is 61%.

Goal 2: Forest Vegetation Management Guidance

- Has moderate amounts of till plains, moraine till, and outwash deposits. Moraine till is more prevalent near its northern end while till plains occur more frequently near the south and eastern part.
- The majority of the upland area in this watershed has the potential to support fire-dependent forests, but much of it has been converted to agricultural land uses, particularly on the high plateau-like area to the south and east of Lake Bemidji.
- Promote long-lived conifers on outwash and Fire-Dependent sites, especially in close proximity to the Potlatch sawmill.
- Encourage the development of conifer regeneration strategies including summer harvest, scarification, and slash control.
- See Fire-Dependent vegetation management goals #1-4 from the 2nd Generation North Central Landscape Plan.

- Priority minor watersheds for protection are 7085, 7086, 7089, and 7115.
- Confirm list with Planning Team.



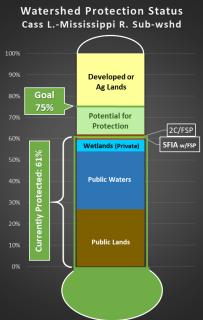


Table 6. Minor watershed info

lable 6. Wilhor Watershed into			
Minor	Acres	Current %	Protection
wshd #		protected	goal %
7071	15,735	54.2%	60%
7085	18,284	50.9%	75%
7086	5,822	22.6%	60%
7089	7,503	52.9%	75%
7090	36,090	78.9%	75%
7101	15,961	78.0%	75%
7110	13,193	38.8%	45%
7113	3,141	39.5%	40%
7114	8,744	24.1%	25%
7115	16,160	35.4%	50%
7116	6,138	57.8%	65%
7122	11,499	85.2%	60%

Subwatershed No. 5 Turtle River (HUC 701010104)

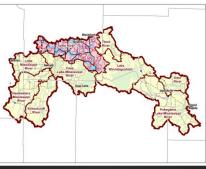
Goal 1 Forest Land Protection Guidance

- Tributary to Cass Lake, which is a premier fishing and recreation destination in north-central Minnesota.
- Loaded with lots of small lakes, many of which are lakes of biological significance, wild rice lakes, and priority shallow lakes.
- Somewhat heavily forested.
- Public land is concentrated on the eastern side and is mostly Chippewa National Forest. Unprotected private land is more prevalent on the subwatershed's western side.
- High priority for forest land protection.
- Forest land protection goal is 75%, current protection is 72%.

Goal 2: Forest Vegetation Management Guidance

- Largely covered by moraine till from the Big Stone Moraine.
- Mesic hardwoods dominate the native plant communities in this subwatershed, but Fire-Dependent forests are distributed along the southern edge of the region.
- There is less concern of depredation of tree seedlings by deer because restoring conifers is not a priority in this subwatershed.
- Increase diversity of deciduous species in mesic hardwood stands.

- Priority minor watersheds for protection are 7102, 7107, and 7108.
- Confirm list with Planning Team.



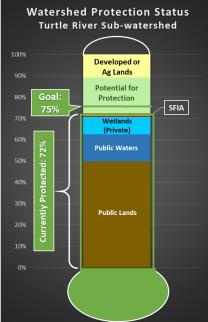


Table 7. Minor watershed info.

Minor	Acres	Current %	Protection
wshd#		protected	goal %
7036	14,261	95.4%	75%
7091	6,803	73.6%	75%
7092	5,909	69.6%	75%
7093	16,405	90.4%	75%
7094	5,603	94.1%	75%
7095	14,883	79.0%	75%
7096	6,223	77.7%	75%
7097	4,671	67.9%	75%
7098	8,798	73.8%	75%
7099	4,292	98.4%	75%
7100	2,775	98.4%	75%
7102	18,283	60.3%	75%
7103	6,976	59.2%	60%
7104	8,610	76.2%	75%
7106	15,512	51.2%	70%
7107	12,514	41.1%	75 %
7108	5,177	46.9%	75 %
7109	8,596	56.6%	75%
7117	5,125	63.6%	75%
7118	5,561	92.1%	75%
7119	4,091	70.9%	75%
7120	7,231	76.1%	75%

Subwatershed No. 6 Lake Winnibigoshish (HUC 701010107)

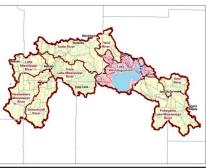
Goal 1 Forest Land Protection Guidance

- Home to Lake Winnibigoshish, which is the largest waterbody in the entire Mississippi Headwaters Major Watershed.
- Land cover is approximately 1/3 water, 1/3 upland forest, and 1/3 lowland forests and wetlands.
- This subwatershed includes both the Sand Plain Pines Project Area and the Avenue of Pines.
- Low risk because it is already heavily protected. It is a 'Vigilance'
 watershed according to the DNR Lakes Protection and
 Restoration Framework.
- Low priority for forest land protection.
- Forest land protection goal is 75%, current protection is 94% goal met!

Goal 2: Forest Vegetation Management Guidance

- Largely covered by outwash but there are patches of peat and an area of moraine till near the northern border.
- Most of the upland area is fire-dependent forest and is being managed by the Chippewa National Forest and Leech Lake Band of Ojibwe, primarily for long-lived conifers.
- This subwatershed also likely supports moderate amounts of mesic hardwoods, forested rich peatlands, and wet forest NPC systems.
- Promote the regeneration of white cedar on appropriate sites.
- See Forested Rich Peatland vegetation management goal #4 and Wet Forest vegetation management goal #4 from the 2nd Generation North Central Landscape Plan.

- Forest land protection goals are met.
- Double check with the Planning Team for other PFM priorities for this Subwatershed.



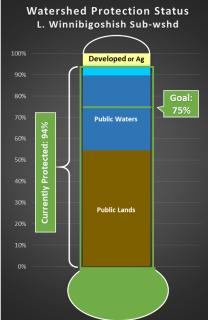


Table 8. Minor watershed info.

Table 6. Willion Water Sirea Illio.			
Minor wshd #	Acres	Current % protected	Protection goal %
7021	10,325	87.6%	75%
7022	24,176	98.0%	75%
7024	98,544	90.2%	75%
7025	11,488	76.5%	75%
7026	4,803	100.0%	75%
7034	8,256	97.6%	75%
7035	6,099	99.9%	75%
7037	8,534	99.3%	75%
7038	12,673	90.7%	75%
7129	5,996	98.7%	75%

Subwatershed No. 7 Third River (HUC 701010106)

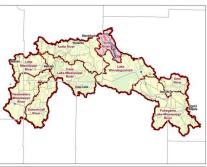
Goal 1 Forest Land Protection Guidance

- Tributary to Lake Winnibigoshish, which is one of the most famous fishing lakes in the country.
- Strongly stream-based watershed with few lakes.
- Somewhat heavily forested with abundant wetlands.
- Low risk because it is already heavily protected, mostly by public land. It is a 'Vigilance' watershed according to the DNR Lakes Protection and Restoration Framework.
- Low priority for forest land protection.
- Forest land protection goal is 75%, current protection is 83% goal met!

Goal 2: Forest Vegetation Management Guidance

- Mostly covered by moraine till deposits but there is a core area of outwash near the subwatershed's center.
- Mesic hardwood forests are abundant on the moraine till around the edges of this subwatershed, while fire-dependent forests are more common on the outwash plain in its center.
- Promote the regeneration of white cedar on appropriate sites.
- See Forested Rich Peatland vegetation management goal #4 and Wet Forest vegetation management goal #4 from the 2nd Generation North Central Landscape Plan.

- Forest land protection goals are met.
- Double check with the Planning Team for other PFM priorities for this Subwatershed.



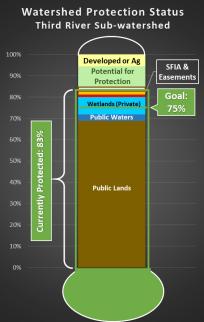


Table 9. Minor watershed info.

· abic bi iiiiiii ii ii atcibii ca iiii oi			
Minor wshd#	Acres	Current % protected	Protection goal %
7027	4,090	92.9%	75%
7028	11,729	82.2%	75%
7029	5,247	92.1%	75%
7030	12,023	74.7%	75%
7031	8,481	83.9%	75%
7032	3,969	91.0%	75%
7033	11,272	97.5%	75%

Subwatershed No. 8 Deer River (HUC 701010108)

Goal 1 Forest Land Protection Guidance

- Tributary to the Pokegama Lake Mississippi River Subwatershed.
- High concentration of lakes in its eastern half.
- Heavily forested with a good number of wetlands.
- 44% of the subwatershed area has a Wildlife Action Network score of High or Medium-High, that is higher than any other subwatershed in the Mississippi Headwaters Major Watershed.
- Much of the subwatershed's protected area is in the north end and comes from The Chippewa National forest, a few large wetland complexes, and large lakes such as Moose Lake and Deer Lake.
- Medium priority for forest land protection.
- Forest land protection goal is 75%, current protection is 73%.

Goal 2: Forest Vegetation Management Guidance

- This subwatershed is split between the Chippewa Plains ECS Subsection in its western half, and the St. Louis Moraines ECS Subsection in its eastern half. The western half has low and relatively flat terrain while the eastern half is higher in elevation with rugged topography.
- Lowland NPC systems are more likely to have developed in the portion of the subwatershed in the Chippewa Plains, while upland NPC systems are more common in the St. Louis Moraines.
- In minors #7014-7016 focus vegetation management on maintaining/restoring hydrology in lowland forests, as well as diversifying stand structure and composition.
- In minors #7010, 7013, and 7132 focus vegetation management on increasing diversity of deciduous species in mesic hardwood stands.



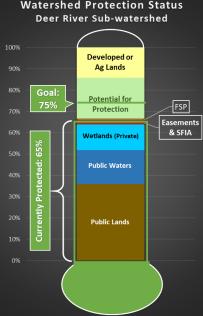


Table 10. Minor watershed info.

Minor wshd #	Acres	Current % protected	Protection goal %
7010	16,754	61.1%	75%
7013	5,599	67.7%	75%
7014	7,256	56.5%	60%
7015	5,747	55.3%	75%
7016	8,833	58.0%	75%
7132	11,664	83.3%	75%

- Priority minor watershed for protection is 7010.
- Confirm other potential PFM priorities by specific minor watersheds with Planning Team.

Subwatershed No. 9 Pokegama Lake-Mississippi River (HUC 701010109)

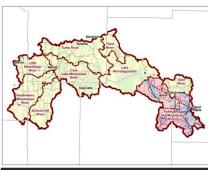
Goal 1 Forest Land Protection Guidance

- This subwatershed is the most complicated subwatershed in the Mississippi Headwaters Major Watershed. It contains both highly protected watersheds in some portions and lightly protected in other areas.
- Overall watershed is 78% protected, largely due to the Blandin conservation easements to the south and west of Pokegama Lake, but the Pokegama Lake HUC12 watershed does not currently meet the 75% protection goal.
- The tax base of the shoreland around Pokegama Lake is \$572 million. This is a major source of revenue for Itasca County and Grand Rapids.
- High biodiversity and quality factors in Pokegama Lake, e.g. wild rice, cisco, etc.
- Residential development risk around is high around Pokegama Lake.
- High priority but high cost forest protection opportunities exist on the east side of Pokegama Lake.
- Primary focus for water quality in the bottom quarter of the subwatershed will be on urban BMPs.

Goal 2: Forest Vegetation Management Guidance

- Blandin Paper is a major market for forest products in the region, and is based out of nearby Grand Rapids.
- The northeast or top part of the subwatershed is mostly covered by flat outwash deposits while the southern end is hummocky and part of the Sugar Hills Moraine.
- Mesic hardwoods are more likely to occur on the moraine till at the southern end of the watershed, whereas fire-dependent forests are more common on the outwash, and acid & forested rich peatlands forests are present on the scattered peat basins in the northwestern portion of the subwatershed.
- Encourage white cedar regeneration on the forested rich peatland and wet forest sites.

- Priority minor watersheds for protection are 7002, 7005, 7006, 7009, and 7125.
- Confirm list with Planning Team.



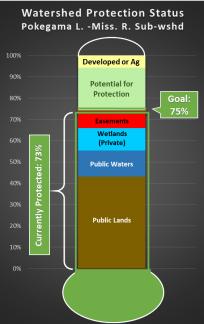


Table 11. Minor watershed info.

Minor wshd #	Acres	Current % protected	Protection goal %
7001	8,437	85.7%	75%
7002	29,520	55.0%	75%
7003	11,094	83.1%	75%
7004	6,645	82.2%	75%
7005	7,913	68.9%	75%
7006	16,343	51.9%	65%
7007	6,087	37.5%	55%
7008	34,563	73.6%	75%
7009	18,959	59.4%	65%
7017	5,089	64.1%	65%
7018	6,300	62.0%	65%
7019	15,454	81.9%	75%
7020	12,304	71.0%	75%
7023	24,666	92.9%	75%
7123	5,345	89.8%	75%
7124	4,435	87.9%	75%
7125	4,697	61.4%	70%
7126	4,215	84.3%	75%
7127	3,963	98.4%	75%
7128	6,237	98.6%	75%

Minor Watershed Methodology and RAQ Scoring

The overall Mississippi Headwaters Major Watershed has a protection goal of 75%. Each of its nine subwatersheds have their own protection goals, which range from 45% in the Little Mississippi Subwatershed to 75% in all the others. The subwatersheds have 6 to 22 minor watersheds, and each minor also has a protection goal that was determined by the Mississippi Headwaters LSP Planning Team based on their best professional judgement on what is achievable for that minor.

In order to meet these goals local service providers will need to identify and target individual parcels and landowners. To assist in this effort, a Minor Watershed Assessment (MWA) was developed for every minor watershed in the Mississippi Headwaters Major Watershed. As a part of this assessment every minor watershed has a map showing its potential for protection, parcel and landowner RAQ scores (Riparian – Adjacency – Quality), and tables of information about individual parcels and landowners. An example of one of these resources is Fig 13, which shows the RAQ scores for parcels across a group of minor watersheds in the Headwaters-Mississippi River Subwatershed. We can see on this map that the parcels with the highest RAQ scores are clustered around Gill Lake. Protecting these parcels would provide the greatest return on investment. MWA maps and tables are provided in the Appendix and Workbook (insert link).

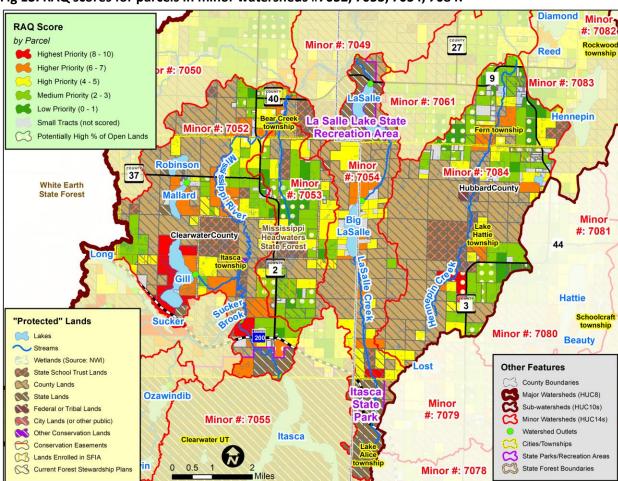


Fig 13. RAQ scores for parcels in minor watersheds #7052, 7053, 7054, 7084.

Making it Happen

The key to successfully implementing any plan is coordination. Coordination is the critical, yet far too often, <u>invisible</u> process of organizing the ongoing work to be done in landscape management. Successful implementation requires proactive and purposeful coordination. This part of the plan focuses outlines how funding and staff resources will be coordinated to implement the vision and goals in this Plan.

Coordination Strategies

This plan calls for protecting 61,000 acres of private forest land and the preparation of 82,052 acres of forest stewardship plans across the 1.2 million-acre Mississippi Headwaters Major Watershed over the next ten years. Implementing these goals will require significant collaborative efforts over this timeframe.

To be certain, these are "push" goals. But they are doable, especially given growing funding levels for protection from state Legacy funds through Clean Water and Outdoor Heritage Funds. In addition, there are growing capacity funds for private forest management that service providers are securing including funding from the US Forest Service S&PF through the LSR grants, DNR cost share and SFIA programs, and local capacity funds to soil and water conservation districts through the BWSR. These funds are foundational to supporting this dynamic private forest management paradigm.

The team of service providers working in this watershed need to pre-think through and commit to a series of coordination strategies. The following outline provides partners in the Mississippi Headwaters Major Watershed an initial pathway to greater success implementation through better coordination:

- Coordination Strategy # 1 Reconvene, Support and Sustain the Local Forestry Technical Team.
- Coordination Strategy # 2 Confirm the Project Coordinator.
- Coordination Strategy # 3 Clarify Partner Roles in Serving Private Landowners.
- Coordination Strategy # 4 Coordinate Resources for Implementation.
- Coordination Strategy # 5 Support Accomplishment Reporting.
- Coordination Strategy # 6 Recommendations to Local and State Agencies and Programs.

Pic of the Miss HW LSP Team working together on the Plan

Zach and Chad please insert

Pic of the Miss HW LSP Team working together on the Plan

Zach and Chad please insert

Coordination Strategy # 1 - Reconvene the Local Forestry Technical Team

The primary coordination strategy for this plan is to periodically convene a core group of partners – resource professionals, service providers, local and state officials, environmental groups, tribal representatives, and landowners – into a local team to oversee the coordination and implementation efforts over the next ten years. The team should meet on a regular basis to: 1) review and determine service delivery priorities and workloads, 2) collaborate on developing proposals for funding opportunities, 3) coordinate training and landowner outreach efforts, 4) support accomplishment reporting, and 5) ensure clear communications on the status of the project. The Service Provider Workbook (*create link*) provides additional guidance to support the team's coordination efforts.

Coordination Strategy # 2 - Confirm the Project Coordinator

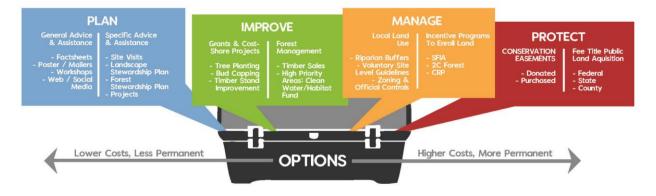
To support the ongoing coordination work by the Local Forestry Technical Team, it is essential that one person serve as the point of contact to manage the overall coordination process. This should be a paid position and could be administered by one of the three SWCDs. Seed moneys and capacity funding are available to support this position.

Coordination Strategy # 3 - Clarify Partner Roles in Serving Private Landowners

PFM Implementation Toolbox

There are four primary approaches to delivering services to private landowners. The "PFM implementation toolbox" shown below illustrates these approaches and the full suite of options available to serving private landowners. Promoting the full range of options to private landowners helps to improve the economic, ecological, and social benefits they can receive from their woodlands. As the diagram below suggests, services provided to landowners on the left tend to be less costly but are also less permanent and generally have less societal benefits. In contrast, tools further to the right involve options that are more costly (to the public) but have a greater degree of permanence and produce more recognizable benefits to society. Local forestry technical teams are encouraged to define roles and organize their implementation efforts through these four approaches and corresponding array of tools.

Private Forest Landowner Implementation Toolbox



Forestry professionals including approved Minnesota Forest Stewardship Plan writers are available to help private forest landowners obtain forest stewardship plans for their property and implement parts of the toolbox. These professionals are typically from the DNR, local SWCD and NRCS offices, forest industries, or are private consultants. An estimated 26 approved forestry professionals/plan writers have service areas in and near the Mississippi Headwaters Major Watershed. Their contact information can be found at http://www.myminnesotawoods.umn.edu/minnesota-stewardship-plan-preparers/.

Clarifying Roles, Growing Commitment

Partners and stakeholders working in the watershed are all encouraged to serve on the Forestry Technical Team. The team should include DNR Forestry, SWCDs, consulting foresters, tribal representatives, environmental organizations, industry foresters, loggers and vendors, landowners, local officials and other local groups.

The PFM implementation toolbox displays many of the choices that can be used to promote private forest stewardship. However, not all service providers in this watershed have the resources to implement all the options. In order to efficiently implement the full toolbox, partners on the forestry technical teams are encouraged to define the roles and responsibilities of each partner using the diagram below.

	#1 General advice & assistance	#2 Specific advice & assistance	#3 Grants / cost-share <u>project</u>	#4 Forest management	#5 Land use <u>controls</u>	#6 Incentive programs	#7 Conservation easements	#8 Fee title public land <u>acquisition</u>
Mission and roles								
 Primary 								
Supporting								
Programs/projects								
 Geographic areas of 								
interest								
 Topical interests 								
Staffing/equipment								
 FTE's, expertise 								
 Equipment 								
 Other resources 								

By working together to define each partners roles and responsibilities will help to ensure seamless, effective and efficient PFM service delivery. The more commitment that partners and stakeholders bring to the table in sharing resources and information increases the successful implementation of this plan. Actively participating on an ongoing basis is the core to developing and expanding partnership and stakeholder capacity to reach the shared goals and objectives of this Plan.

Moving from a paradigm of serving one landowner at a time to a landscape team approach that concurrently serves landowners and their communities will require the project coordinator and forestry technical team to encourage all partners to significantly expand the sharing of their limited resources for landscape stewardship. The sharing of resources—staff, funding, equipment, information, and knowhow—in far more robust and active ways—is fundamental to partnership capacity development.

Collaborate Outreach Efforts to Engage Landowners, Community Leaders and Local Decision Makers

To gain the support of decision makers in the community, resource managers need to provide a convincing answer to the fundamental marketing question: "What is in it for them?" Broader community support is likely to depend on being able to demonstrate that conservation programs are effectively and efficiently

addressing issues of importance in terms that residents and their decision makers easily understand. Increasing support for forest conservation that protects and enhances water quality will be based primarily on the off-site benefits that accrue to community residents, rather than on the on-site benefits that accrue to forest landowners.

Tools for Engaging Landowners Effectively (TELE) was developed by the Sustaining Family Forests Initiative (SFFI) to engage landowners effectively. The SFFI is a collaboration of government agencies, NGOs, certification systems, landowner groups, businesses, and universities organized to gain comprehensive knowledge about family forest owners (10-999 acres) in the United States. The SFFI has taken advantage of the wealth of information from the National Woodland Owner Survey database and linked this resource with demographic and behavior information to develop the TELE marketing approach to help natural resource professionals and others engage more effectively with family forest owners about their woods and woodland management. More information about the SFFI and TELE can be found at www.engaginglandowners.org and in the Appendix.

Coordination Strategy # 4 – Coordinating Resources for Implementation

Prioritizing PFM Service Delivery Through MWA and RAQ

DNR Forestry and BWSR have developed the minor watershed assessment/RAQ methodology that connects forest land cover and water quality based on research developed by MN DNR Fisheries. The process works as follows: 1) Prioritize lakes that can meet at least 3 of 5 risk and quality factors, and have less than 75% protected watersheds, 2) Target specific parcels with high scores for proximity to riparian "R", adjacency to public land "A", and habitat quality "Q" (RAQ) scores (5 or greater) and focused proactive outreach efforts to these landowners that promote increased forest management and forest land protection (SFIA, conservation easements, public land acquisitions), and 3) over time, measure progress toward 75% protection goal on watershed basis.

We periodically measure the percent of the watersheds with permanent forest protection to illustrate this transformation on graphic dial like a speedometer. We call this measurement and assessment, moving the needle towards watershed protection. Through the implementation and monitoring of this plan over time, we can document and assess forest land protection levels at the major watershed, subwatershed and minor watershed levels.

This plan is intended to help support the PTM thinking by all service providers in a collaborative manner. This intentional and measurable planning process enhances opportunities for the collaborative implementation of the plans over time. To support this effective cross boundary approach, increased coordination capacity provided by this federal grant is essential.

Linking Landscape Stewardship Plans and 1W1Ps through PTM

By coordinating forest and water resource planning and implementation through the development of this plan, we are setting the watershed/land cover context for developing the Mississippi Headwaters 1W 1P. These interconnected public planning processes promote more active and cross boundary management of not only forest resources, but water resources along with fish and wildlife. This collaborative work is helping to strengthen working relationships with agency fish and wildlife managers as well as outdoor and sportsmen groups. Through the LSP and 1W1P, MN DNR Forestry and partners are shaping approaches to working more proactively with landowners and providing them with more options to:

- Provide conservation-minded landowners with 3 protection options. Landowners Choose!
- Promote SFIA, the state's incentives program for maintaining forest lands.

- Conservation easements acquired by either Forests For the Future (FFF) or Reinvest in Minnesota (RIM) programs. FFF focusing more on larger tracts and shoreland, RIM focusing on smaller tracts and backlots.
- For landowners choosing fee title, proposals go to the county via the land commissioner for review and comment –first. Work with conservation organizations on fee title projects. Transfer land to either county or state.

The Subwatershed Action Plans, Minor Watershed Assessments and RAQ scoring (provided in the Appendix and Workbook - *Create links to Appendix and Workbook*) provide a useful evaluation of the land cover/watershed relationships and initial risk assessment. These tools provide the Local forestry Technical Team with resource management strategies at the sub-watershed and minor watershed scales in order to more effectively implement the two goals in this plan.

10-Year Investment Plan

The table below summarizes acreage goals and estimated costs for implementing Goal 1 – Increase Forest Land Protection and Goal 2 – Promote Forest Stewardship. This information should be reviewed and integrated into the Mississippi Headwaters 1W1P and used to help secure funding needed to implement the goals in this plan.

Table 12. 10-year forestry investment plan summary.

No	Subwatershed	Goal 1 – Increa Prote			mote Forest rdship
No.	name	Acres	Cost investment ^A	Acres	Cost investment ^B
1	Headwaters – Mississippi River	12,339	\$12,835,991	13,124	\$1,605,000
2	Little Mississippi River	5,517	\$5,595,174	5,224	\$1,537,500
3	Schoolcraft River	5,902	\$7,012,892	6,939	\$1,092,500
4	Cass Lake – Mississippi River	21,939	\$27,970,219	23,635	\$1,755,000
5	Turtle River	5,999	\$6,556,181	7,524	\$1,830,000
6	Lake Winnibigoshish	0	\$0	0	\$145,000
7	Third River	0	\$0	0	\$282,500
8	Deer River	5,383	\$6,318,171	5,445	\$752,500
9	Pokegame Lake – Mississippi River	3,921	\$3,992,332	20,161	\$2,125,000
	Totals	61,000	\$70,280,960	82,052	\$11,125,000

^ACost assumes 50% of area in conservation easement and 50% in SFIA for 100 years.

^BCost assumes \$2,500 of cost-share per landowner with parcels >20 acres.

Funding Sources

How will the implementation of this plan be funded? Experience has shown that landscape approaches to natural resource conservation tend to have a synergistic effect on funding. Partners that get involved in a landscape-scale project area do so because it meets some of their own resource or public relations goals. Because of this they can support efforts in the project area.

Landscape-scale, multi-partner, coordinated efforts often carry increased weight with foundations, trusts, and government agencies when it comes to applying for grants. Federal and state funding agencies as well as private foundations tend to look favorably on multi-partner project applications. There is a considerable amount of money available through grants and other programs that landscape stewardship approaches can facilitate.

The following is a list of potential resources available to the Forestry Technical Team to pursue in the project and funding development. The Team should maintain and grow this inventory to foster increased success in implementation of this Plan.

- BWSR capacity funds.
- DNR PFM Program cost share and SFIA.
- Watershed based implementation funding (WBIF).
- Clean Water Legacy funding through BWSR, MPCA and DNR.
- LSOHC big and small grants.
- LCCMR.
- US Endowment.

Private Sector Partnerships

As envisioned by the US Forest Service and state foresters, landscape stewardship projects seek to encourage and promote greater levels of private investments in ways to leverage public investments. Private woodland owners make significant investments in their own lands. These investments may not end up on the balance sheets of service provider agencies (although they sometimes do), but the investments private landowners make on their lands are no less important. The bottom line is that there will likely be more money and resources for coordination and implementation available in a more coordinated way for on-the-ground resource management work.

An untapped reservoir of funding may come from local businesses that will benefit from the results of the resource management activities taking place. For example, a local canoe outfitter may see benefit in financially aiding efforts that will result in maintenance or improvement in water quality in a local river. Family resorts, campgrounds and other businesses that benefit from clean water and healthy forests can promote and support the watershed-based landscape stewardship plans. By doing so, they can help promote opportunities for financial support at the community level through lake associations and chambers of commerce to encourage more businesses decide to project a "high quality forest and water – sustainable green" image where we can all benefit through win-win-win approaches.

Coordination Strategy # 5 - Support Accomplishment Reporting

Accomplishment reporting will be critical to evaluating the success of implementation efforts of this Plan over the next ten years. The table below provides a starting point for monitoring progress made by all partners. It should be maintained on an annual basis. The Forestry Technical Team will be responsible for organizing this information and sharing it with their local boards, DNR, and BWSR.

Table 13. Annual PFM acco	mplishme	nt report	summary	<u>table - te</u>	mplate.				
	Headwaters – Mississippi River	Little Mississippi River	Schoolcraft River	Cass Lake – Mississippi River	Turtle River	Lake Winnibigoshish	Third River	Deer River	Pokegame Lake – Mississippi River
Baseline									
Total land area (acres)	148,213	88,654	109,631	158,269	188,297	190,894	56,811	55,853	232,267
Area of private ownership	60,561;	64,78;	40,613;	72,757;	70,485;	19,627;	16,000;	26,648;	103,799;
(acres; % of subwshd)	41%	73%	37%	46%	37%	10%	28%	48%	45%
Private parcels <5 acres	1,342	1,653	1,411	12,335	5,986	220	172	2,477	7,241
Private parcels 5-20 acres	685	633	635	1,627	1,260	59	110	539	1,807
Private parcels >20 acres	946	986	662	1,030	1,261	83	303	523	2,167
Forest stewardship plans (#;	28;	9;	37;	23;	13;	1;	9;	10;	28;
acres)	3,291	1,417	3,902	2,472	2,545	202	1,806	1,362	3,049
General advice & assistance									
Mailings									
Workshops									
Specific advice & assistance									
Site visits									
Forest stewardship plans									
Grants/ cost-share projects									
Forest restoration									
Forest stand improvement									
Forest management									
Timber harvests									
Biomass harvests									
Land use controls									
Riparian buffer plantings									
Site-level guideline									
compliance									
Incentive programs									
SFIA									
2C									
Conservation easements									
Public									
Private/nonprofit NGO									
Fee title public land acquisition	on								
Public land acquisitions									
Land trades/ exchanges									

Coordination Strategy # 6 - Recommendations to Local and State Agencies

Recommendations to BWSR and SWCDs for the Mississippi Headwaters 1W1P

- 1. MOUs. Complete the memorandum of understanding between DNR Forestry and BWSR on the new paradigm for PFM including landscape stewardship and comprehensive local water planning.
- 2. Reference Document. Adopt the Mississippi Headwaters Watershed Landscape Stewardship Plan by reference for addressing forest land protection and forest stewardship topics in the Mississippi Headwaters 1W1P. Attached the LSP as an appendix to the 1W1P.
- 3. Policy Integration. Incorporate the two forestry goals into the policy framework in the 1W1P.
- 4. Funding Coordination. Integrate the overall funding needs listed in the 10-Year Forestry Investment Plan Summary Table into the 1W1P Implementation Schedule.

Recommendations to Mississippi Headwaters Counties

- 1. Reference Document. Local land use officials are strongly encouraged to use this Plan as a reference document when developing their comprehensive plans to guide land use and public infrastructure decisions. They are further encouraged to adopt this landscape stewardship plan as an appendix to their plans to provide more detailed guidance on sustainable forest resource management and support more proactive and collaborative funding development.
- 2. Consider Forests in Local Land Use Decisions. Local officials are encouraged to consider the values and benefits that forests can bring to their communities. Healthy and sustainable forests promote a high quality of life for citizens and can support increased economic opportunities as well. Forests should be included in the land use decision making process.
- 3. Alternative Land Development Options. Local officials are encouraged to use forestry as a design tool to help them work more effectively with landowners and developers. There are alternative ways that land can be developed to provide for both economic growth and the protection of forest and water resources. Large lot developments are not always desirable or cost effective from the public sector or taxpayers perspectives.
- 4. Guide Growth to Existing Infrastructure. Use the maps from the minor watershed assessment / RAQ scoring and related tools to help inform local land use decisions. Guide growth and development towards existing roads and infrastructure and protection of larger blocks of working forest lands into interiors areas away from roads.

Recommendations to Mississippi Headwaters County Land Departments

- 1. Land Asset Management Programs. Continue to develop county land asset management programs that support guiding of growth and forest land protection areas. Use the maps from the minor watershed assessment / RAQ scoring and relevant PFM implementation tools for land protection to help protect working private forest lands adjacent to county forest lands.
- 2. Timber Sale Coordination. Continue to support active communications with adjacent private landowners on coordinating timbers sales and other forest management activities.
- 3. Forest Roads. Continue to support active communications with adjacent private landowners on the maintenance and improvement of forest roads and access issues.

Recommendations to state and federal programs for PFM policy changes and funding needed

- Integrate Landscape Stewardship Approaches into the PFM Program. Overall, encourage integrated service delivery between the broad range of agencies and organizations that serve private woodland owners to make delivery of their programs better coordinated, simpler and less costly in processing, and less time consuming
- 2. Base PFM Program Funding. Increase and sustain funding for the private forest management program including support for SWCDs, consulting foresters, industry foresters and loggers.
- 3. ECS / NPC. Continue to promote the Ecological Classification System (ECS) and Native Plant Community modeling (NPC) from the MFRC landscape plans as guides to developing forest vegetation and land management strategies when working with landowners and local officials.
- 4. Priority Areas Planning. Support the updating of the 25-Year LSOHC Forest Habitat Vision developed by the MFRP and MFRC and the regional landscape committees. Support the collaborative development of other conservation priority efforts that complement priorities identified in the watershed-based landscape stewardship plans.

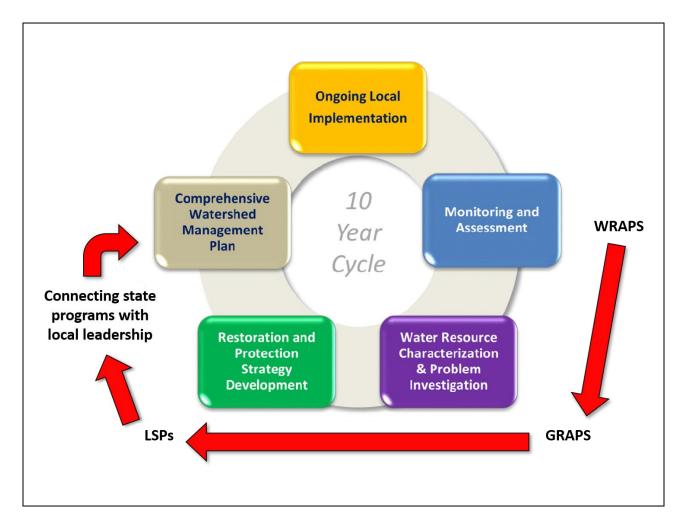
Demonstration Projects

Demonstration projects can provide valuable insights to resource professionals and landowners and serve as a starting point for the implementation of this Plan. The table below is a 10-year demonstration project list that summarizes potential projects with partners, initial priorities, and suggested timelines. While this list will need more development by the Local Forestry Technical Team, there are a lot of opportunities to build from conservation work already in progress in the watershed. The Team should periodically review and refine the 10-year project list.

Map no.	Project name and brief description	Subwd / project priority	Lead entity / support entities	Proposed timeline
	Headwaters Miss River Subwatershed			
	Little Mississippi River Subwatershed			
	Schoolcraft River Subwatershed			
	Turtle River Subwatershed			
	Cass lake – Miss River Subwatershed			
	Third River Subwatershed			
	Lake Winnibigoshish Subwatershed			
	Deer River Subwatershed			
	Pokegame Lake – Miss River Subwatershed			

Need input from LSP Planning Team on potential demonstration projects

Linking Forest & Water Planning and Implementation through LSPs and 1W1Ps



Note: The red arrow emphasizes the important connection between state water and forest resource programs with local water management. Local partners are involved -and often lead -in each stage in this framework.

Through the integration of landscape stewardship plans and 1W1Ps, conservation professionals and landowners are working together to address the following national priorities:

- Conserve Working Forest Lands
- Protect Forests from Harm.
- Enhance Public Benefits from Trees and Forests.

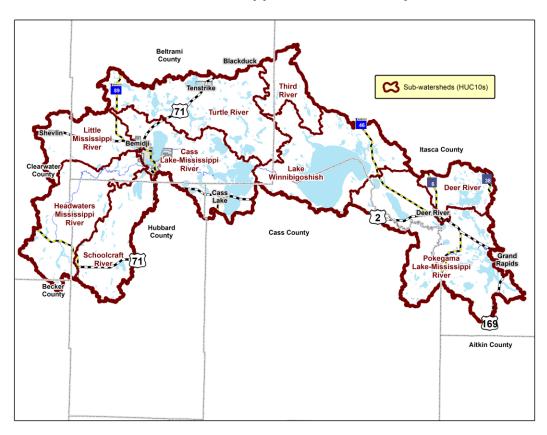
"A lake is the landscape's most beautiful and expressive feature.

It is Earth's eye;

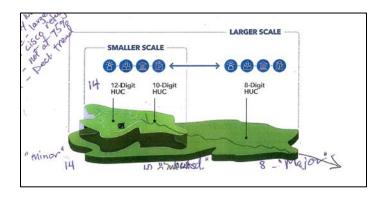
looking into which the beholder measures the depth of his own nature."

- Henry David Thoreau

Index Information – Mississippi Headwaters Major Watershed



Subwd no.	Subwatershed name	HUC no.	Acres	No. of minors
1	Headwaters Mississippi River	701010102	148,213	16
2	Little Mississippi River	701010101	88,654	11
3	Schoolcraft River	701010103	109,631	17
4	Cass Lake-Mississippi River	701010105	158,269	12
5	Turtle River	701010104	188,297	22
6	Lake Winnibigoshish	701010107	190,894	10
7	Third River	701010106	56,811	7
8	Deer River	701010108	55,852.	6
9	Pokegama Lake-Mississippi River	701010109	232,267	20
	Totals		1,228,889	121



Private Forest Landowner Implementation Toolbox

PLAN IT MANAGE IT IMPROVE IT Specific Advice General Advice **BUY IT** Local Land **Incentive Programs** & Assistance & Assistance To Enroll Land **Grants & Cost-Forest Share Projects** Management **CONSERVATION** Fee Title Public - Factsheets - Site Visits - SFIA - Riparian Buffers **EASEMENTS Land Aquisition** - Poster / Mailers - Landscape - Voluntary Site - 2C Forest - Tree Plantina - Timber Sales Stewardship Plan - Workshops Level Guidelines - CRP - Federal - Bud Capping - High Priority - Donated - Web / Social - Forest - Timber Stand Areas: Clean - Zoning & - Purchased - State Stewardship Plan Official Controls Media Water/Habitat **Improvement** - County - Projects Fund Lower Costs, Less Permanent **Higher Costs, More Permanent OPTIONS**



FORESTRY & WATER QUALITY DISCUSSION

- Lindberg Ekola and Dan Steward from BWSR presented on the connection between forest and water quality.
- Groundwater recharge is excellent in this part of the state, but is threatened by urbanization and agricultural development.
- It is essential to protect forests to ensure continued water protection; however, protection doesn't mean we can't manage the land. We want to conserve and manage working forest landscapes.
- BWSR completed a Watershed Landscape Stewardship Plan. Lindberg and Dan encouraged the committee to consider including this plan in the 1W1P as an appendix.

Mississippi Headwaters communities answering the call to protect and improve: Our waters, forests, economy, future.

PRIORITIES DISCUSSION

- Forestry: forestry areas will be prioritized by looking at locations where there has been the greatest decrease in forest cover combined with the highest GRZ (growth potential determined by the growth roads zoning model). This is being weighted by nearby lakes with highest sensitivity to phosphorous.
- Lakeshed: lakeshed areas are being prioritized by evaluating recent development areas then buffering it with the location of lakes. A Lake Cost Benefit will be used to get a priority lakeshed score, which will help further prioritize.
- Agricultural Lands: agricultural lands will be prioritized by evaluating areas over 25% disturbed; the goal is to bring it below 25%, as well as SSS (soils slope stream proximity)

HIGHLIGHTS

- Protection of forests is vital to protecting water quality.
- Knowledge distribution is key: we want to inform the public about the science and how it shows what will get most impact for public dollars the committee discussed potentially adding this as a goal to the 1W1P.
- The committee continued to discuss land stewardship as a part of the plan. The group agreed that it is important to celebrate what we have done well (known managed lands) while still seeking to improve unmanaged lands.
- The committee agreed that the current prioritization methods are sufficient.
- Next Advisory Committee Meeting: February 19th
 2020 from 9:30am 1:00pm in Bemidji

Joint Powers Collaboration vs Joint Powers Entity Brief Descriptions

Below are some bullets points to consider. Pros and Cons are hard to identify as such because it is in the eye of the beholder but below are the salient points of both as a starting point for discussion when considering the implementation of the One Watershed One Plan for the Mississippi River Headwaters Watershed.

<u>Potential</u> types of decisions that will be needed: governance, work plans, budgets, work revisions, contracts, personal, contracted services, applying for grant funding, operations.

Take away from December Policy Meeting with Jen Wolf of MCIT:

- JPC Approval need to go back to individual boards and have 100% consensus. Could reduce ability to implement projects on time.
- JPC There is risk to operate outside your coverage of MCIT.
- JPE Is an efficient way to make decisions on Budget and work plan approval and revisions.
- JPE Reduces liability to the group and fiscal agent.
- JPE Can be structured to reduce liability to members, such as not allowing entity to take on debt or require dues.

Joint Powers Collaboration

- JPC does not establish a new entity.
- Decision making authority and liability remains with the participating members (although consolidated)
- May not enter into contracts, own property itself in the name of the JPC because not a legal separate entity. Must be in the name of one of all of the members
- Members provide the funding
- Board
 - Not needed
 - If a board is established, it is strictly advisory in nature
 - Individual governmental units retain all decision-making authority including approving contracts, budgets etc.
 - All decisions must be approved by all boards of participating entities
- No employees
 - Members may assign their employees to JPC projects
 - Employee remains an employee of his or her original governmental unit
- How liability apportioned between members should be discussed

Joint Powers Entity

- JPE is a separate, free-standing public entity with independent (delegated) decision making authority that can sue and be sued
 - Liability transferred from the participating members to the JPE
 - Contracts, agreements etc. are in the entity name
 - Must comply with regulations as a freestanding government entity i.e., Open Meeting Law, Minnesota Government Data Practices Act, Records Retention
 - Entity provides the funding
- Board
 - Needed to operate
 - Must be *representative* of its members
 - Operates autonomously from the boards of the individual members
 - Individual members delegate control and authority of scope of agreement to the JPE board
- Employees
 - May or may not have employees. As a separate entity must have own payroll, personnel policies etc.

JOINT POWERS AGREEMENT FOR THE LAKE OF THE WOODS WATERSHED JOINT POWERS BOARD

Article 1 Enabling Authority

This Joint Powers Agreement is made by and between the political subdivisions organized and existing under the Constitution of laws of the State of Minnesota, hereafter collectively referred to as "Parties", and individually as "Party" which are signatories to this "Agreement." The Parties include:

The Counties of Lake of the Woods and Roseau (Counties) by and through their respective County Board of Commissioners, and

The Lake of the Woods and Roseau County Soil and Water Conservation Districts (SWCDs), by and through their respective Soil and Water Conservation District Board of Supervisors, and

The Warroad River Watershed District (WRWD), by and through its Board of Managers,

WHEREAS, Minnesota Statutes § 471.59 authorizes local governmental units to jointly or cooperatively exercise any power common to the contracting Parties; and

WHEREAS, the Counties of this Agreement are political subdivisions of the State of Minnesota, with authority to carry out environmental programs and land use controls, pursuant to Minnesota Statutes Chapter 375 and as otherwise provided by law; and

WHEREAS, the Soil and Water Conservation Districts of this Agreement are political subdivisions of the State of Minnesota, with statutory authority to carry out erosion control and other soil and water conservation programs, pursuant to Minnesota Statutes Chapter 103C and as otherwise provided by law; and

WHEREAS, the Watershed District of this Agreement is a political subdivision of the State of Minnesota, with statutory authority to conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources, pursuant to Minnesota Statutes Chapter 103B, 103D, 103E and as otherwise provided by law; and

WHEREAS, the Parties to this Agreement have a common interest and statutory authority to prepare, adopt, and assure implementation of a comprehensive watershed management plan in the Lake of the Woods Watershed to conserve soil and water resources through the implementation of practices, programs, and regulatory controls that effectively control or prevent erosion, sedimentation, siltation and related pollution in order to preserve natural resources, ensure continued soil productivity, protect water quality, reduce damages caused by floods, preserve wildlife, protect the tax base, and protect public lands and waters; and

WHEREAS, with matters that relate to coordination of water management authorities pursuant to Minnesota Statutes Chapters 103B, 103C, and 103D and with public drainage systems pursuant to Minnesota Statutes Chapter 103E, this Agreement does not change the rights or obligations of the public drainage system authorities; and

WHEREAS, pursuant to Minnesota Statutes Section 103B.101 Subd. 14, the Board of Water and Soil Resources (BWSR) "may adopt resolutions, policies, or orders that allow a comprehensive plan, local water management plan, or watershed management plan, developed or amended, approved and adopted, according to chapter 103B, 103C,

or 103D to serve as substitutes for one another or be replaced with a comprehensive watershed management plan," also known as the "One Watershed, One Plan"; and

WHEREAS, the Parties previously entered into a Memorandum of Agreement for the purpose of planning the One Watershed, One Plan for the Lake of the Woods Watershed, and the Parties have now formed this Agreement for the specific goal of implementing the One Watershed, One Plan for the Lake of the Woods Watershed.

WHEREAS, it is understood by all the Parties to this Agreement that the One Watershed, One Plan for the Lake of the Woods Watershed Planning Area does not replace or supplant local land use, planning, or zoning authority.

WHEREAS, it is understood by all Parties to this Agreement that the One Watershed, One Plan for the Lake of the Woods Watershed Planning Area is intended to provide a framework for consistency and cooperation on a watershed basis and to allow local governments to cooperatively work together to implement projects with the highest return on investment for improving water quality/quantity issues on a watershed basis.

NOW, THEREFORE, in consideration of the mutual promises and benefits that the Parties shall derive here from, all Parties hereby enter into this Joint Powers Agreement for the purposes herein.

NOW, THEREFORE, the Parties hereto agree as follows:

Article 2 Purpose

The Parties to this Agreement recognize that a guiding principle of One Watershed, One Plan is that One Watershed, One Plan implementation will be accomplished through formal agreements among participating local governments on how to manage and operate the watershed. The Parties to this Agreement acknowledge that the purpose of this principle is to provide assurances that decision-making spanning political boundaries is supported by an in-writing commitment from participants. The Parties' desire to establish a mechanism whereby they may jointly exercise powers common to each participating Party on the following:

- 2.1 Exercise leadership in the development of policies, programs and projects that will promote the accomplishment of the purposes found at Minnesota Statutes § 103B, including the preparation, adoption and implementation of the plan required by Minnesota Statutes § 103B.801 for the Lake of the Woods Watershed Planning Area and
- 2.2 Guide and assist the Parties in acting jointly and individually to take actions that will promote the goals listed in Minnesota Statutes §103B.801 and fulfill their responsibilities under Chapter 103B.
- 2.3 Provide other similar or related services and programs as determined by the Board.
- 2.4 Establish procedures to add qualifying Parties to this Agreement.
- 2.5 Establish a mechanism whereby additional and/or alternative programs and services may be developed for the benefit of the Parties and in furtherance of the objective of the Parties.

Article 3 Name

The Parties working together for the purpose of planning the One Watershed, One Plan for the Lake of the Woods Watershed (Attachment A), known collectively as the "Lake of the Woods Watershed Planning Group" under the Memorandum of Agreement, now establish, through this Agreement, the process for governance of the implementation of the plan as they continue to recognize the importance of partnerships to plan and implement protection and restoration efforts for the Lake of the Woods Watershed. Parties signing this Agreement will continue to be collectively referred to as the "Lake of the Woods Watershed Joint Powers Board" (hereafter, referred to as "the Board") and are partnering together in the form of this Agreement pursuant of the cooperative authority contained in Minnesota Statutes Section 471.59.

Article 4 Agreement to Participate

- 4.1 <u>Charter Members</u>: A qualifying Party within the Lake of the Woods Watershed that is responsible for water planning and resource management according to Minnesota State Statutes desiring to become a participating Party of this Agreement shall indicate its intent by adoption of a governing board resolution to join the Lake of the Woods Watershed Joint Powers Board.
- 4.2 <u>Adding Additional Parties</u>: A qualifying Party within the Lake of the Woods Watershed that is responsible for water planning and resource management according to Minnesota State Statutes desiring to become a participating Party of this Agreement shall indicate its intent by adoption of a governing board resolution to join the Lake of the Woods Watershed Joint Powers Board. An amendment of this Agreement is needed to add an additional Party.
- 4.3 <u>Compliance</u>: A Party agrees to abide by the terms and conditions of the Agreement; including but not limited to the Joint Powers Agreement, bylaws, policies and procedures adopted by the Board.

Article 5 Governance

- 5.1 <u>Governing Board</u>: A governing board shall be formed to oversee the operations of the Lake of the Woods Watershed Joint Powers Board and shall be known as the Board.
 - <u>5.1.1</u> Membership: The Board shall be comprised of up to five (5) qualifying Parties with charter membership composed of the following eligible members: one (1) County Commissioner from each qualifying County, one (1) Soil and Water Conservation District Supervisor from each qualifying SWCD, and one (1) Manager from the qualifying Watershed District. The respective individual representatives are designated by the governing board of each participating Party. If a new Party joins the Joint Powers Agreement, the Party shall appoint one of its board members to serve as a representative on the Board. Each participating Party may designate alternates to serve on the Board.

- <u>5.1.2</u> <u>Terms</u>: Each representative shall be appointed for a two-year term, with the ability of a Party to appoint a representative for successive terms. In the event that a representative was not appointed by the governing board of each respective Party or prior to expiration of the representative's term, the incumbent representative shall serve until a successor has been appointed.
- <u>5.1.3</u> <u>Vacancies</u>: If a representative resigns or is otherwise unable to complete a term on the Board because of the circumstance outlined in Minnesota Statutes §351.02 exist or if a representative fails to qualify or act as a representative, the Board will advise the appointing authority of the vacancy as soon as practicable and the vacancy will be filled according to the requirements of the respective local unit of government.
- <u>5.1.4</u> <u>Officers of the Board</u>: The Board shall elect officers from its membership. Duties and terms shall be defined in the Board bylaws.
- 5.1.5 Meetings: The Board shall comply with Minnesota Statutes Chapter 13D (Open Meeting Law).
- <u>5.1.6</u> Quorum: A quorum of the Board shall consist of a simple majority of the members.
- 5.1.7 Voting: Each representative who is present shall be entitled to one vote.

A motion or resolution shall be approved by a favorable vote of a simple majority of the members present, provide enough members are present to make a quorum.

A simple majority vote of the full Board can approve One Watershed, One Plan Implementation Work Plans.

A supermajority vote of 75 percent of all members shall be required for amendments to the One Watershed, One Plan or changes to the Board bylaws.

- <u>5.1.8</u> <u>Staff</u>: The Board shall not have authority to hire staff. Any staff providing services in conjunction with this agreement shall remain an employee of their respective Party.
- <u>5.2</u> <u>Bylaws</u>: The Board shall have the power to adopt and amend such bylaws that it may deem necessary or desirable for the conduct of its business. Such bylaws shall be consistent with this Agreement and any applicable laws or regulations. (See 5.1.7 for amending Board bylaws)
- <u>5.3</u> <u>Joint Powers Entity Agreement Amendments</u>: The Joint Powers Entity Agreement may be amended from time to time as deemed necessary. Amendments to this Agreement shall be effective only if they are by resolution and approved by all Parties.

Article 6 Duties of the Board

The Board shall have the responsibility to prepare, adopt and implement a plan for the Lake of the Woods Watershed Planning Area that meets the requirements of Minnesota Statutes § 103B.801.

Article 7 Powers of the Board

7.1 <u>General Powers</u>: The Board is hereby authorized to exercise such authority as is necessary and proper to fulfill its purposes and perform all duties described herein. Such authority shall include, but not be limited to, authority and responsibility to oversee revenues and expenditures.

7.2 Specific Powers:

7.2.1 Contracts: The Board may enter into any contract necessary or proper for the exercise of its powers or the fulfillment of its duties and enforce such contracts to the extent available in equity or at law. Additionally, the Board may enter into agreements pursuant to Minnesota Statutes § 471.59. The Board may approve any contract consistent with goals of the Board and may authorize its chair to execute these contracts.

The Board shall pay for services performed consistent with the purpose of this Agreement. No payment on any invoice for services performed by a Party, consultant, contractor, or any other person or organization providing services in connection with this Agreement shall be authorized unless approved by the Board. The Board may develop a process to expedite payment of invoices, but any such payments shall be ratified by the Board at their next meeting.

- 7.2.2 Funds: The Board may disburse funds in a manner which is consistent with the Agreement and with the method provided by law for the disbursement of funds by the Parties to this Agreement. The Board may apply for and accept gifts, grants or assistance from the United States government, the State of Minnesota, any person, association or agency for any of its purposes; enter into any agreement in connection therewith; and hold use and dispose of such gift or grant or assistance in accordance with the terms relating thereto.
 - 7.2.2.1 <u>Debts</u>: The Board may not incur debts.
 - 7.2.2.2 <u>Accountability</u>: All funds shall be accounted for according to generally accepted accounting principles.
- 7.2.3 <u>Insurance</u>: The Board shall obtain liability insurance and may obtain such other insurance it deems necessary to indemnify the Board and its members for action of the Board and its members arising out of this Agreement.
- 7.2.4 <u>Personal and Real Property</u>: The Board has no authority to purchase personal or real property. Any personal property provided to a Party through grant funds to accomplish the goals of the One Watershed, One Plan, shall be owned by that Party.
- 7.2.5 <u>Reservation of Authority</u>: All responsibility not specifically set out to be jointly exercised by the Board under this agreement are hereby reserved to the respective governing bodies of the Parties.

- 7.2.6 <u>Coordinator(s) and Fiscal Agent</u>: The Board shall appoint Lake of the Woods One Watershed, One Plan coordinator(s) and a fiscal agent. These roles are to be defined in the Board bylaws.
- 7.2.7 <u>Committees and Work Groups</u>: The Board can form committees and work groups. Such committees and groups include the Advisory Committee and the Implementation Committee. The roles of Advisory Committee and the Implementation Committee are defined in the Board bylaws.

Article 8 Indemnification and Hold Harmless

- 8.1 <u>Applicability</u>: The Board shall be considered a separate and distinct public entity to which the Parties have transferred all responsibility and control for actions taken pursuant to this Agreement. The Board shall comply with all laws and rules that govern a public entity in the State of Minnesota and shall be entitled to the protections of M.S. 466.
- 8.2 <u>Indemnification and Hold Harmless</u>: The Board shall fully defend, indemnify and hold harmless the Parties against all claims, losses, liability, suits, judgments, costs and expenses by reason of the action or inaction of the Board and/or employees and/or the agents of the Board. This Agreement to indemnify and hold harmless does not constitute a waiver by any participant of limitations on liability provided under Minnesota Statutes, Section 466.04.

To the full extent permitted by law, actions by the Parties pursuant to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of the Parties that they shall be deemed a "single governmental unit" for the purpose of liability, as set forth in Minnesota Statutes, Section 471.59, subd. 1a(a); provided further that for purposes of that statute, each Party to this Agreement expressly declines responsibility for the acts or omissions of the other Party.

The Parties of this Agreement are not liable for the acts or omissions of the other participants to this Agreement except to the extent to which they have agreed in writing to be responsible for acts or omissions of the other Parties.

Article 9 Term

This Agreement shall commence upon approval of the governing body of each Party and signature of the official with authority to bind the entity listed in Article 1.

The Agreement shall be in effect only with respect to the Parties who have approved and signed it.

Article 10 Withdrawal and Termination

10.1 <u>Procedure for Parties to Leave Membership of the Agreement</u>: A Party may withdraw from the Board by indicating its intent in writing to the Board in the form of an official board resolution. Notice must be made

180 days in advance of leaving the Board. A withdrawing Party shall not be entitled to the distribution of any assets or funds. A Party that leaves the membership of the Agreement remains obligated to complying with the terms of any grants the Board has at the time of the Party's notice to leave membership and is obligated until the grant has ended. In the event of a withdrawal by any Party, this Agreement shall remain in full force and effect as to all remaining Parties.

- 10.2 <u>Termination</u>: The Parties anticipate that this Agreement will remain in full force and effect until canceled by all Parties, unless otherwise terminated in accordance with law or other provisions of this Agreement. The Parties acknowledge their respective and applicable obligations, if any, under Minnesota Statutes Section 471.59, Subd. 5 after the purpose of the Agreement has been completed.
 - 10.2.1 <u>Distribution of Assets</u>: At the time of termination, any property owned by the Joint Powers Entity and any surplus monies remaining shall be divided pro-rata in proportion to the contributions of the several contracting Parties. If no contributions have been made, the assets and surplus monies shall be divided equally among the Parties. See article 7.2.4

Article 11 Counterparts

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by the persons authorized to act for their respective Parties on the date shown below.

[Remainder of page intentionally left blank]

Partner: Lake of the Woods County

APPROVED:

BY:

Board Chair

Date

BY:

Auditor

Date

APPROVED AS TO EXECUTION

BY:

County Attorney

2 20

Date

Partner: Roseau County

APPROVED:

BY:

Board Chair Date

BY:

Martha Monrud 12-26-19
Auditor Date

APPROVED AS TO EXECUTION

BY:

County Attorney

Partner: Lake of the Woods Soil and Water Conservation District

APPROVED:

BY:

Board Chair

-12-19

Date

BY:

District Manager

Date

APPROVED AS TO EXECUTION

BY:

County Attorney

Date

Version 11/19/2019 Final

Partner: Roseau County Soil and Water Conservation District

APPROVED:

BY:

Board Chair

Date

BY:

District Manager

12-10-19

Date

APPROVED AS TO EXECUTION

BY:

County Attorney

Date

Partner: Warroad River Watershed District

APPROVED:

BY:

Poord Chair

Date

BY:

District Administrator Treasurer

Date

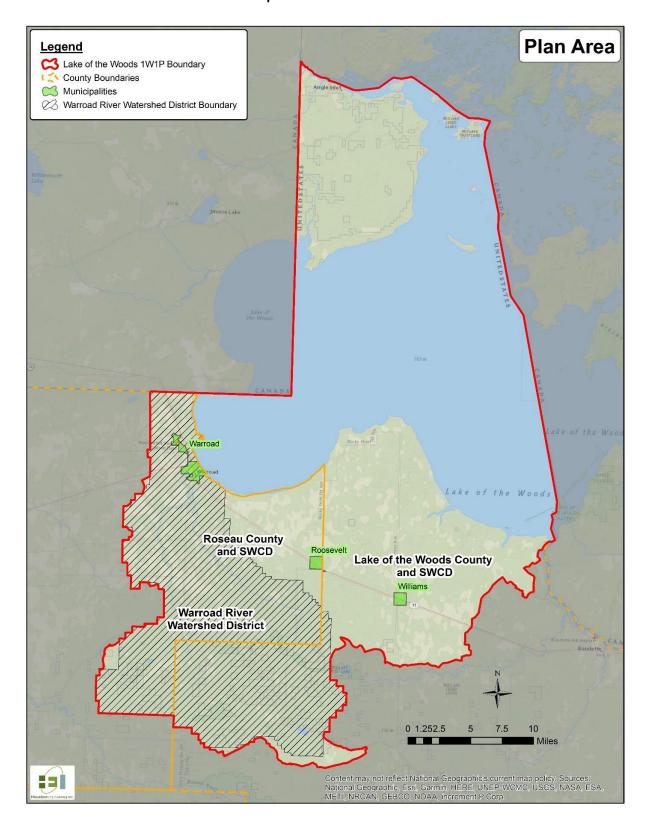
APPROVED AS TO EXECUTION

BY:

County Attorney

Data

Attachment A: Map of the Lake of the Woods Watershed



MEMORANDUM OF AGREEMENT

August 1, 2019

This agreement (Agreement) is made and entered into between:

The Counties of Cass and Hubbard (Counties), by and through their respective County Board of Commissioners, and Cass and Hubbard Soil and Water Conservation Districts (SWCDs), by and through their respective Soil and Water Conservation District Board of Supervisors.

WHEREAS, the Counties of this Agreement are political subdivisions of the State of Minnesota, with authority to carry out environmental programs and land use controls, pursuant to Minnesota Statutes Chapter 375 and as otherwise provided by law; and

WHEREAS, the Soil and Water Conservation Districts (SWCDs) of this Agreement are political subdivisions of the State of Minnesota, with statutory authority to carry out erosion control and other soil and water conservation programs, pursuant to Minnesota Statutes Chapter 103C and as otherwise provided by law; and

WHEREAS, the parties to this Agreement have a common interest and statutory authority to assure implementation of a comprehensive watershed management plan in the Leech Lake River Watershed to conserve soil and water resources through the practices, programs, and regulatory controls that effectively control or prevent erosion, sedimentation, siltation and related pollution in order to preserve natural resources, ensure continued soil productivity, protect water quality, reduce damages caused by floods, preserve wildlife, protect the tax base, and protect public lands and waters; and

WHEREAS, with matters that relate to coordination of water management authorities pursuant to Minn. Stat. Sections 103B, 103C, and 103D and with public drainage systems pursuant to Minn. Stat. 103E, this Agreement does not change the rights or obligations of the public drainage system authorities.

WHEREAS, pursuant to Minn. Stat. Section 103B.101, Subd. 14, the Board of Water and Soil Resources (BWSR) "may adopt resolutions, policies, or orders that allow a comprehensive plan, local water management plan, or watershed management plan, developed or amended, approved and adopted, according to chapter 103B, 103C, or 103D to serve as substitutes for one another or be replaced with a comprehensive watershed management plan," also known as the "One Watershed, One Plan". The parties have formed this agreement for the specific goal of implementing the Leech Lake River Comprehensive Watershed Management Plan.

NOW, THEREFORE, the parties hereto agree as follows:

1. Purpose: The parties to this Agreement recognize the importance of partnerships to plan and implement protection and restoration efforts for the Leech Lake River Comprehensive Watershed Management Plan (See Attachment A with a map of the implementation area). Parties signing this agreement will be collectively referred to as the "Leech Lake River Comprehensive Watershed Management Implementation Plan and are partnering together in a joint power – Memorandum of Agreement (MOA) under Minn. Stat. Section 471.59.

- 2. Term: This agreement is effective upon signature of all parties in consideration of the BWSR Participation Requirements for One Watershed, One Plan; and will remain in effect until canceled according to the provisions of this Agreement, unless earlier terminated by law. This agreement end date will run concurrent with the BWSR grant agreement end date of March 2029. Parties may revisit the grant agreement end date and make extensions to the term of the grant agreement if agreed upon by the Policy Committee (the structure, membership, and governing provisions of the Policy Committee are described in a later paragraph in this Agreement).
- 3. Adding Additional Parties: A qualifying party within the Leech Lake River Watershed that is responsible for water planning and resource management according to Minnesota State Statutes desiring to become a member of this agreement shall indicate its intent by adoption of a governing board resolution. The Resolution should be mailed to the existing Policy committee for consideration. The qualifying party agrees to abide by the terms and conditions of the Agreement; including but not limited to the bylaws, policies and procedures adopted by the Policy Committee.
- 4. Removal of Parties: A party desiring to leave the membership of this agreement shall indicate its intent in writing to the Policy Committee in the form of an official board resolution. Notice must be made 30 days in advance of leaving the group.

5. General Provisions:

- a. Compliance with Laws/Standards: The parties agree to abide by all Federal, State or local laws; statutes, ordinances, rules and regulations now in effect pertaining to this Agreement or to the facilities, programs and staff for which the Agreement is responsible. All parties to this agreement will be given the option to opt out within 30 days after new Federal, State or local laws; statutes, ordinances, rules and regulations are adopted.
- b. Indemnification: Each party to this Agreement shall be liable for the acts of its officers, employees or agents and the results there of to the extent authorized or limited by law and shall not be responsible for the acts of the other parties, their officers, employees or agents. The provisions of the Municipal Tort Claims Act, Minnesota Statute Chapter 466 and other applicable laws govern liability of the parties. To the full extent permitted by law, actions by the parties, their respective officers, employees and agents, pursuant to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of the parties that they shall be deemed a "single governmental unit" for the purpose of liability, as set forth in Minnesota Statutes Section 471.59, Subd. Ia(a), provided further that for purposes of that statute it is the intent of each party that this Agreement does not create any liability or exposure of one party for the acts or omissions of the other party.
- c. Records Retention: The parties agree that records created pursuant to the terms of this Agreement will be retained in a manner that meets their respective entity's records retention schedules that have been reviewed and approved by the State in accordance with Minn. Stat. §138.17. The records retention will follow the Fiscal Agent's and Day to Day Contact Agent's schedules. At the time this agreement expires, all records will be turned over to the Day to Day Contact for continued retention which will be Cass Soil and Water Conservation District.

- d. Timeliness: The parties agree to perform obligations under this Agreement in a timely manner and keep each other informed about any delays that may occur.
- e. Termination: The parties anticipate that this Agreement will remain in full force and effect through the term of the grant agreement with BWSR, unless otherwise terminated in accordance with law or other provisions of this Agreement. The parties acknowledge their respective and applicable obligations, if any, under Minn. Stat. Section 471.59, Subd. 5 after the purpose of the Agreement has been completed.
- f. Extension: The parties may extend the termination date of this Agreement for the purposes of implementation of the plan beyond the BWSR grant planning phase identified in Section 2 as agreed upon unanimously by the group.

6. Administration:

- a. Establishment of a Policy Committee and Advisory Committee for Implementation of the Leech Lake River Comprehensive Water Management Plan. The parties agree to designate one representative, who must be an elected or appointed member of the governing board, to a Policy Committee for implementation of the Leech Lake River Comprehensive Water Management Plan. The Policy Committee will meet as needed to implement and decide on the content of the work plan.
 - i. Authority of Policy Committee member: Each representative shall have one vote and shall have the authority to act on behalf of their Board in all matters, such as grant agreement(s) and amendment(s), interim report review and approval, payments under the grant, professional contracts, and voting on the recommended work plan.
 - ii. The Policy Committee member will serve as a liaison to their respective boards. The governing boards may choose alternates to serve from their boards as needed.
 - iii. An Advisory Committee as required by rule and statute will be established to provide technical support on the plan content and Implementation to the Policy Committee, including identification of priorities. The Advisory Committee will consist of the Implementation Workgroup, stakeholders, the state's main water agencies, and/or plan review agencies. The Advisory Committee will meet annually or as needed.
 - iv. An Implementation Workgroup as recommended under rule will be established consisting of local staff, local water planners, local watershed staff, and local SWCD staff for the purposes of logistical and day-to-day decision-making in the Implementation process. The Implementation Workgroup will meet as needed.
- 7. Fiscal Agent: Cass County Soil and Water Conservation District will act as the fiscal agent for the purposes of this agreement and agrees to:
 - a. Accept all fiscal responsibilities associated with the implementation of the BWSR grant $_{\tt Page~65}$

agreement for developing a watershed-based implementation plan and sign the grant agreement on behalf of the parties listed within.

- b. Perform financial transactions as part of contract implementation.
- c. Pursuant to Minn. Stat. Section 471.59, Subd. 3, provide for strict accountability of all funds and report of all receipts and disbursements and annually provide a full and complete audit report.
- d. Provide the Policy Committee and its members with such records as are necessary to describe the financial condition of the BWSR grant agreement.
- e. Responsible for fiscal records retention consistent with the agent's records retention schedule.
- f. Accept all day to day responsibilities associated with the implementation of the BWSR grant agreement for a watershed-based plan.
- g. Be the Day to Day Contact for the Leech Lake River Comprehensive Water Management Implementation Plan.
- h. Responsible for the BWSR reporting requirements (ELink).
- 8. The Hubbard County Soil and Water Conservation District agrees to provide the following services to the partnership and agrees to:
 - a. Provide a note taker for all Policy, Advisory and Workgroup meetings. Prepare and distribute those notes to the appropriate committees.
 - b. Assist the Chair of the Policy Committee with providing an agenda for upcoming meetings.
 - c. Notify all committees of upcoming meetings through email and/or phone calls.

this Agreement:

Cass County County Administrator PO Box 3000 Walker, MN 56484 Telephone: 218-547-7204

Hubbard County County Coordinator 301 Court Ave Park Rapids, MN 56470 Telephone: 218-732-2362 Cass SWCD District Manager PO Box 3000 Walker, MN 56484 Telephone: 218-547-7241

Hubbard SWCD District Manager 603 Central Ave. N Park Rapids, MN 56470 Telephone: 218-732-0121

Partner: Cass County	
Approved:	
Ву:	
By: Board Chair	Date
Ву:	
District Manager/Administrator	Date
Approved As To Form and Execution:	
_	
Ву:	
County Attorney	Date

Partner: <u>Cass County SWCD</u>	
Approved:	
By: Board Chair	Date
Ву:	
District Manager/Administrator	Date

Partner: <u>Hubbard County</u>		
Approved:		
By:Board Chair	Date	
By:		
District Manager/Coordinator	Date	
Approved As To Form and Execution:		
Ву:		
County Attorney	Date	

Partner: <u>Hubbard County SWCD</u>	
Approved:	
By: Board Chair	Date
Ву:	
District Manager/Coordinator	Date

Attachment A

