Forest/Lake Protection Update

Legislative Subcommittee on Water Policy
August 18, 2021

DEPARTMENT OF NATURAL RESOURCES

FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

BOARD OF WATER AND SOIL RESOURCES

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

Successful LSOHC Projects:

- Camp Ripley Buffer Program (ACUB): *$10 M (+ $50 M Federal)*
- Wild Rice (6+ Phases): *$9 M*
- Mississippi Headwaters Board (5 Phases): *$16+ M*
- Pine-Leech Watershed Protection: *$4 M*

Clean Water Act: 1971

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

Protection Methodologies:

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

Successful Clean Water Council Projects:

- Pine River: *$3 M*
- Crow Wing River: *$3 M*
- Rum River: *$3 M*

Forest Landscape Stewardship Plan (DNR)

WRAPS (MPCA)

One Watershed One Plan (1W1P)

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

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

1W1P Watershed Based Funding, Increased SWCD Capacity $$

Priority Lakes/Watersheds

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

Targeted Implementation to Landowners

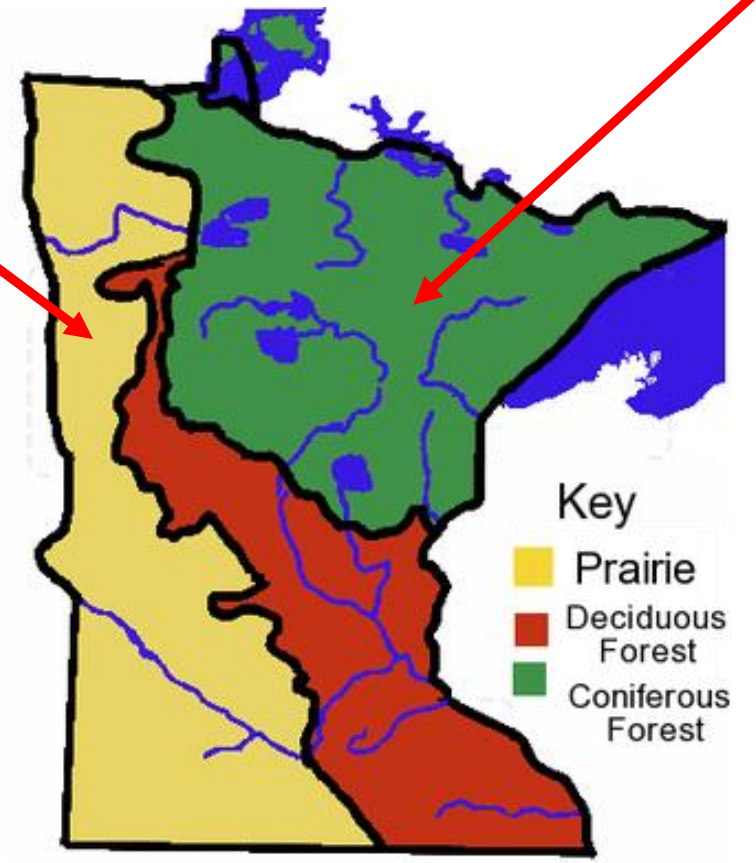
- Sell the "Toolbox", **Landowner's Choose!**

Landscape Context for Watershed Planning in MN

Restoration

- Water *Quantity* Drivers
- Streams/ Ditch Based
- Ag Based
- Lake-bed Clay Soils
- High Land Disturbance
- Little Public Land
- Watershed Districts

- **High Land Values**



Protection

- Water *Quality* Drivers
- Lake Based
- Forest Based
- Outwash/Till Soils
- Low Land Disturbance
- Lots of Public Land
- Lake Associations

- **Low Land Values = Return on Investment**

Minnesota:

Headwaters State

HUC 4 Level:
- Upper Miss Basin

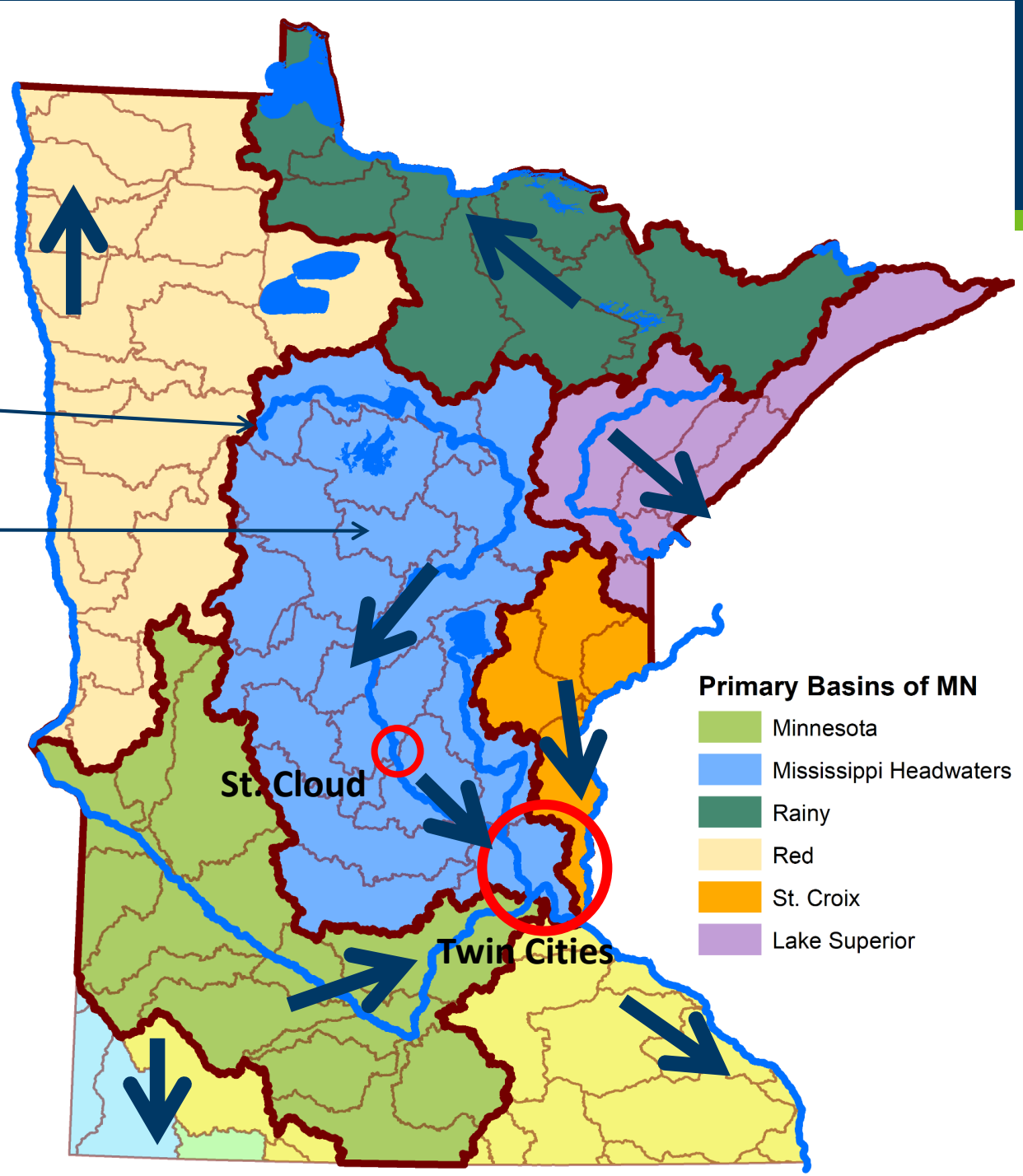
HUC 8 Level – 1W1P/LSPs:
- Major Watersheds

HUC 10 Level:
- Subwatersheds

HUC 14 Level:
- Minor watersheds

Parcel Level:
- Landowners

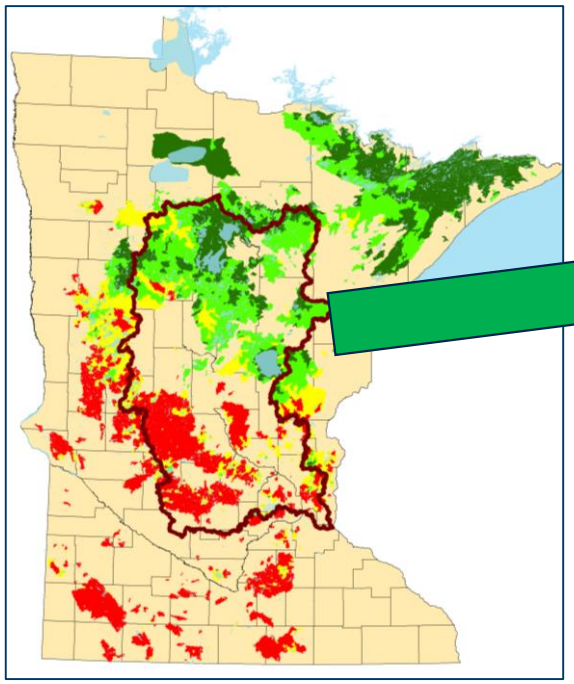
Drilling down for priorities!

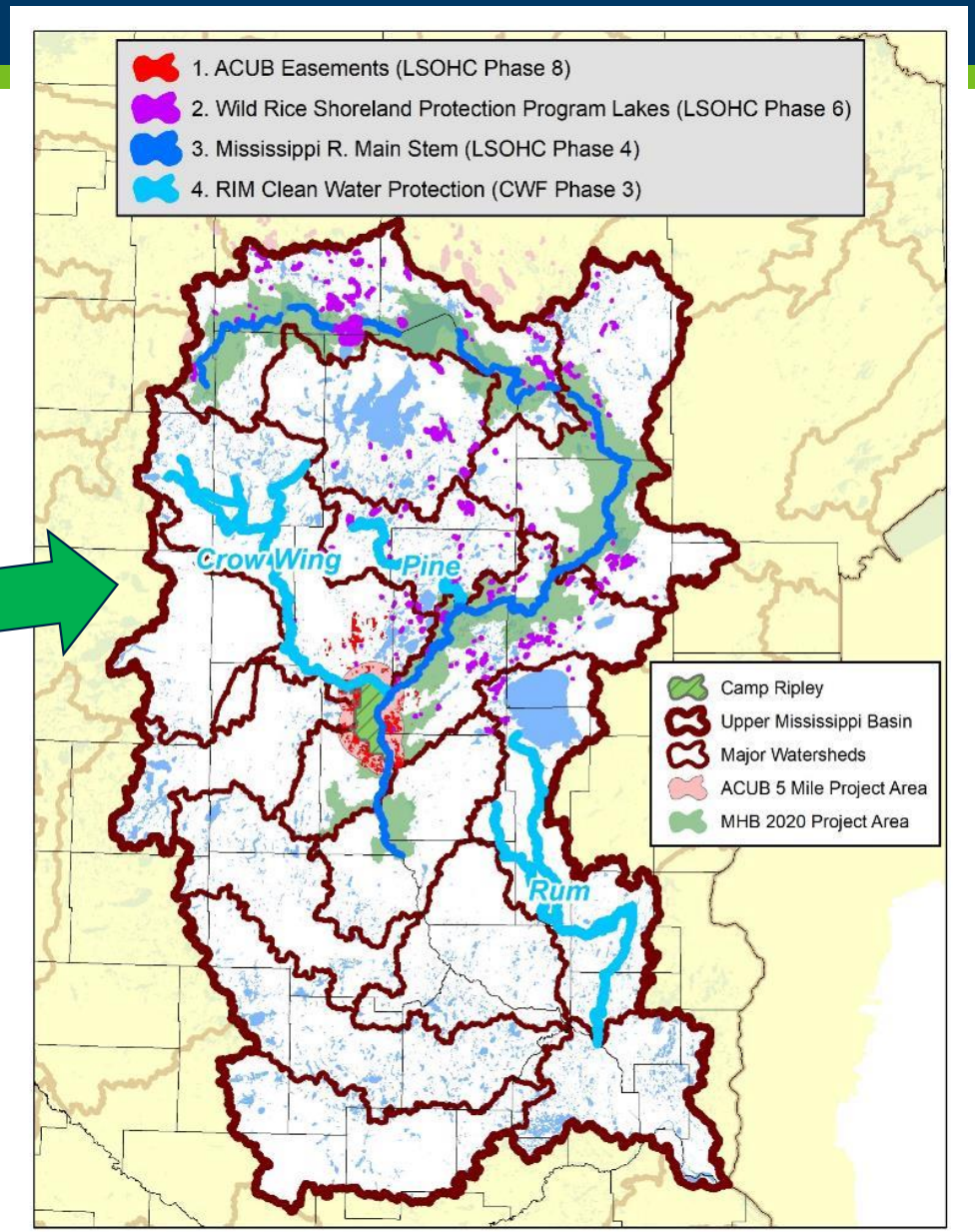


"*Water*, in all its uses and permutations, *is by far the most valuable commodity that comes from the forest land* that we manage, assist others to manage, and/or regulate."

National Association of State Foresters

Forestland Protection Projects (2005 – present)





Accomplishments so far…

Forestland Protection Projects

1. ACUB Project:
   $60 M – Fed + LSOHC
2. Wild Rice Project:
   $9 M – LSOHC
3. Mississippi River Corridor:
   $16+ M – LSOHC
4. RIM Clean Water Projects:
   $9 M – CWC
5. Leech / Pine Watershed
   $4 M - LSOHC

What's next?

What's Next?

Priority Lakes!

Woman L.
Pokegama L.
Whitefish L.
Big Trout L.
Roosevelt L.
L. Bemidji

How we determine priority lakes?

Input → Policy → Implementation

LSP/WRAPS → 1w1p → PTM based PFM

Status: 6 of 15 1W1Ps are complete (40%)

8800: Total lakes in Upper Miss

436: Larger Lakes: 400 acres

376: Filter out: Impaired *(60)*

300: Filter out: Already 75% Protected *(76)*

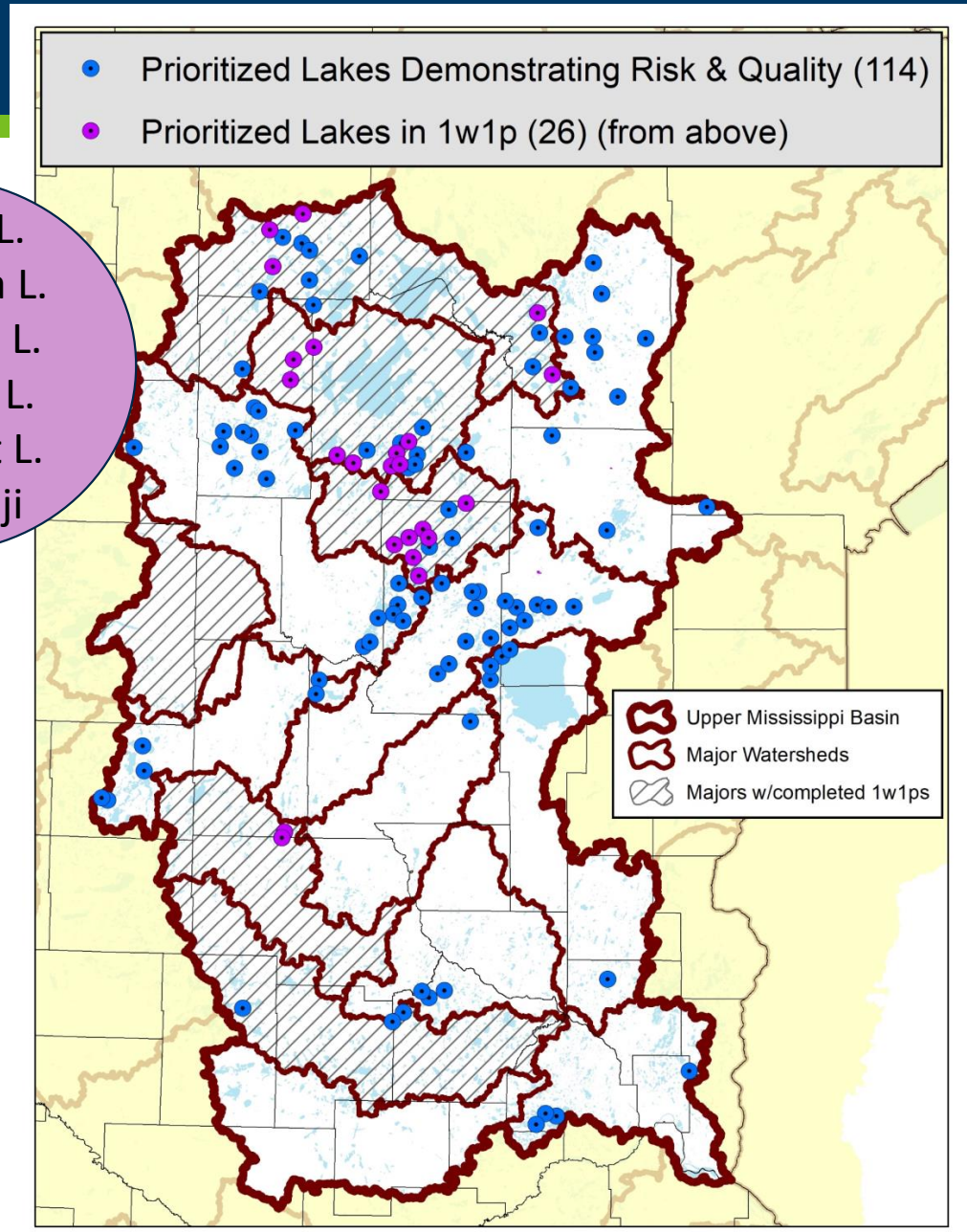
207: Filter out: Shallow/wild rice/NE Lakes *(93)*

166: Filter out: Watersheds with high disturbance *(41)*

Filter for: Risk *(Phos. Sensitivity = Higher/Highest)*

& Quality *(Lakes of Biological Sig. = High/Outstanding)*

= 114 Priority Lakes in Basin ***(26 are also priority in 1w1ps)***

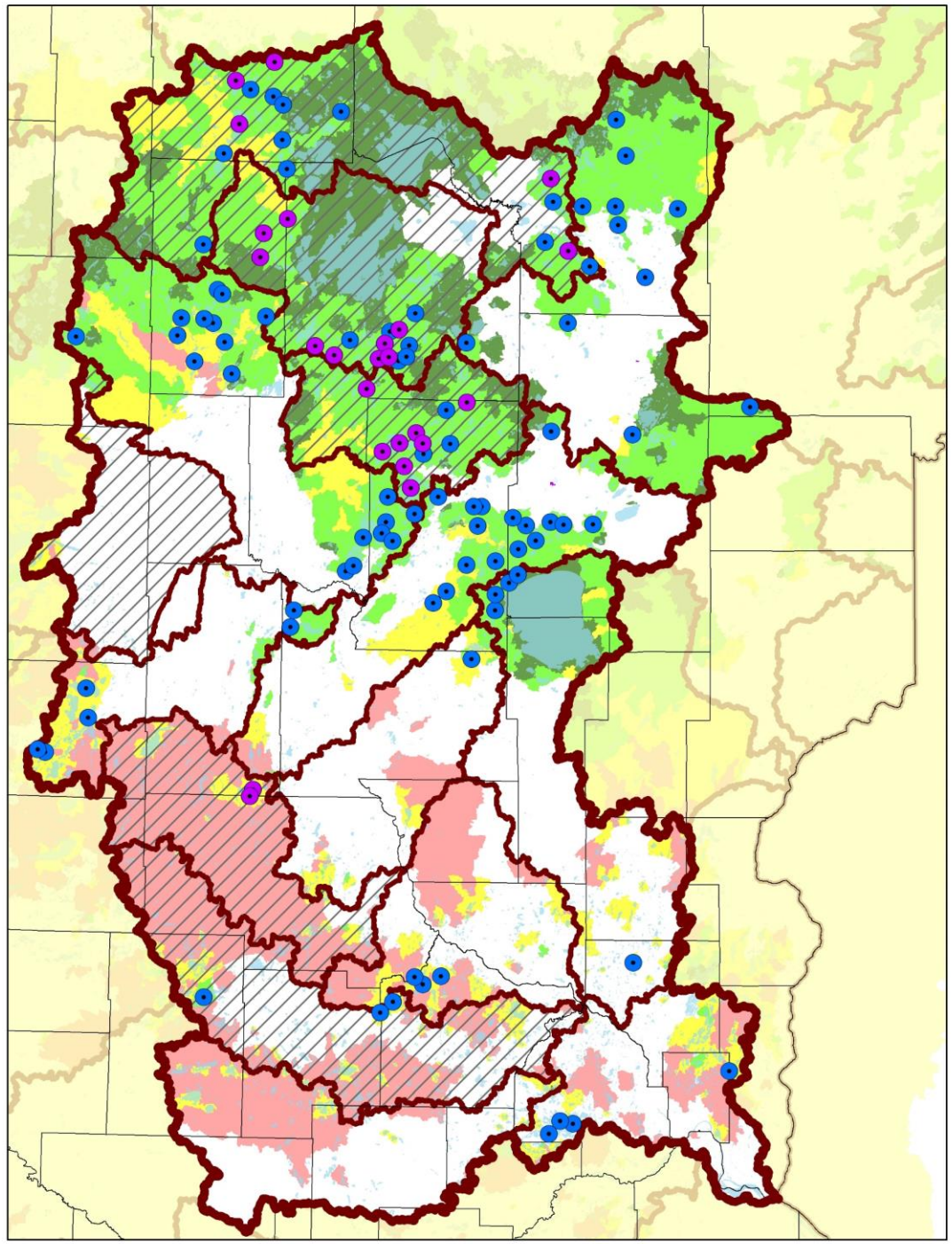


Prioritizing Lakes

- Prioritized Lakes Demonstrating Risk & Quality (114)
- Prioritized Lakes in 1w1p (26) (from above)

White areas on map are stream-based watersheds ->

- **Priority lakes align with DNR Fisheries research and local watershed plans!**
- ***Light green is the "sweet spot" where we maximize return on investment!***



Cost to Protect Priority Lakes

Acres Needed to Achieve Protection Goal for 26 Prioritized Lakes in existing 1W1Ps:

50,000 acres

Funding Sources:

50% via SFIA (general fund)

50% via Easements (LSOHC + Clean Water)

Costs:

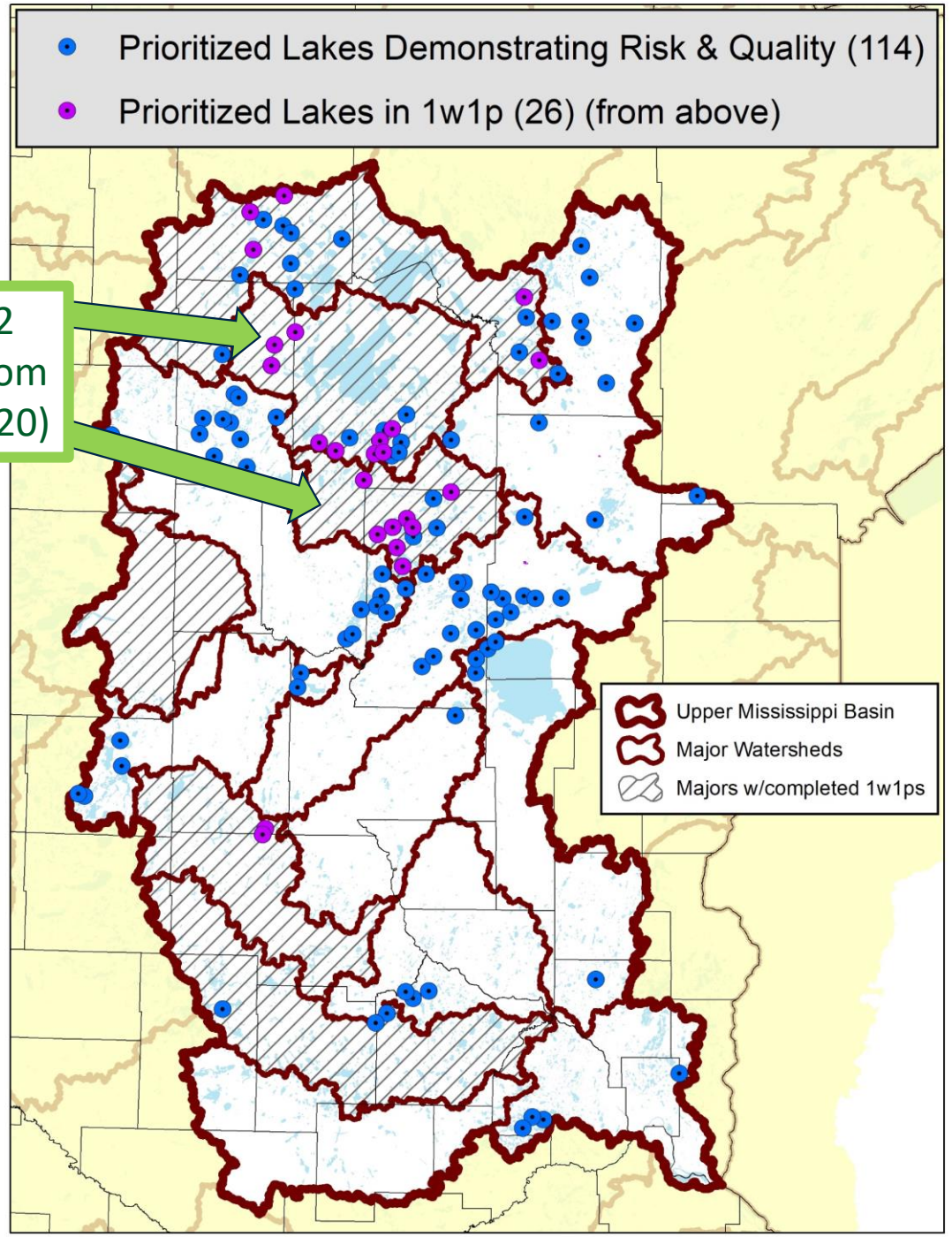
$19 M = Clean Water Fund *(12,500 acres)*

+$19 M = Lessard-Sams Outdoor Heritage Fund *(12,500 acres)*

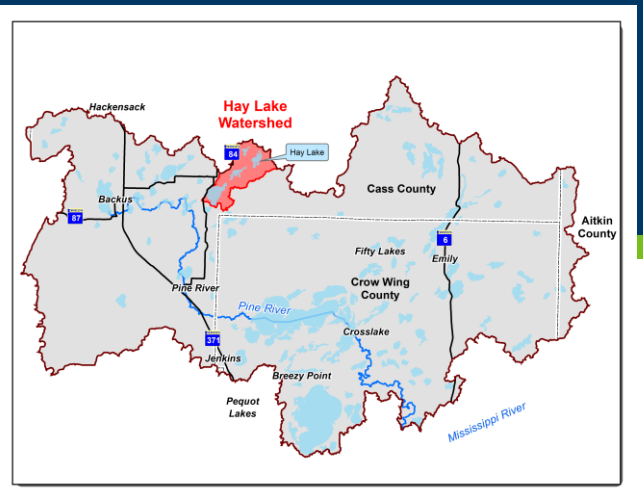
= ***$38 Million*** *= Easement cost for 25,000 acres*

+ 33 Million for SFIA (25,000 acres for 100 years)

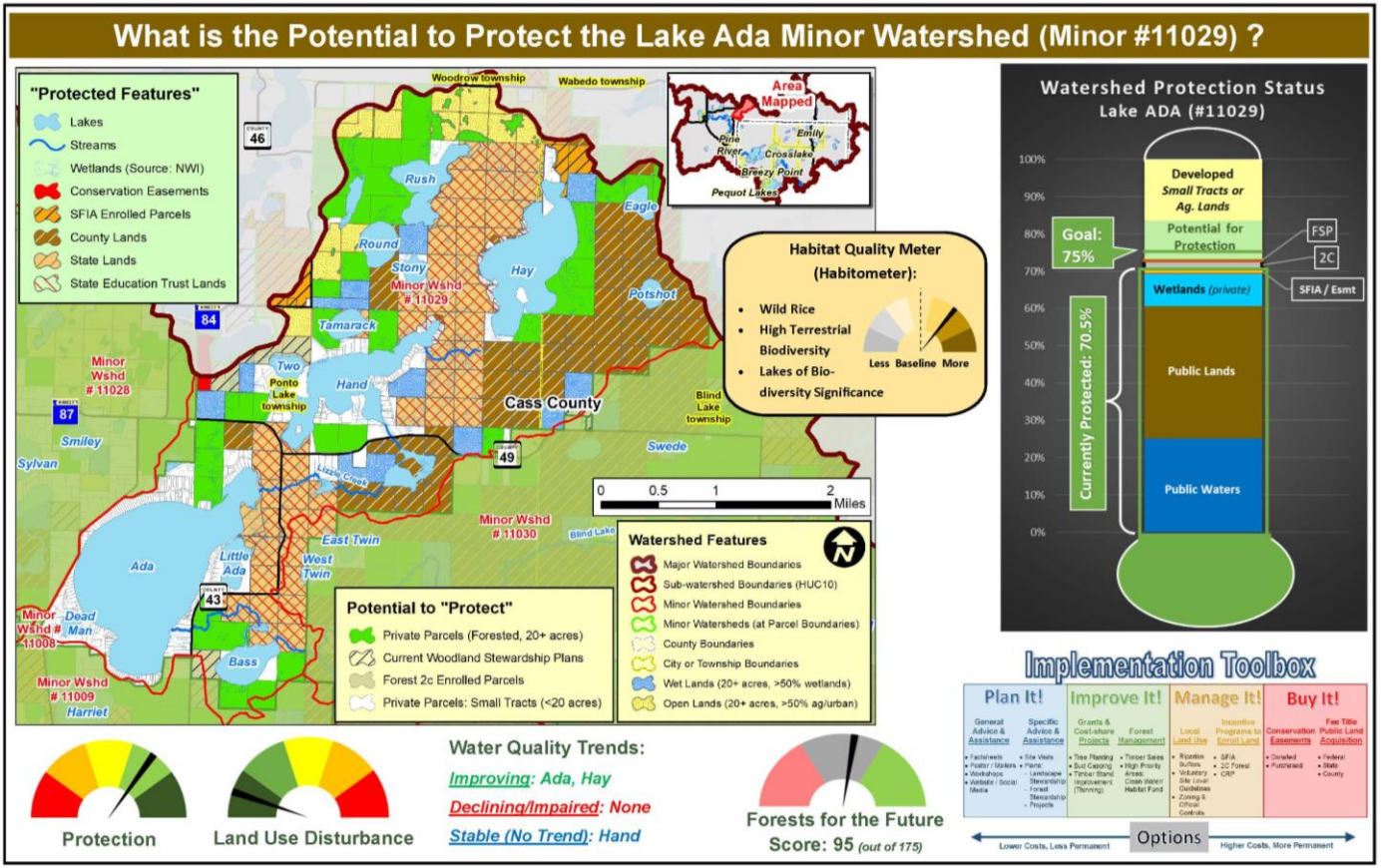
Land stays on the Tax Roles!



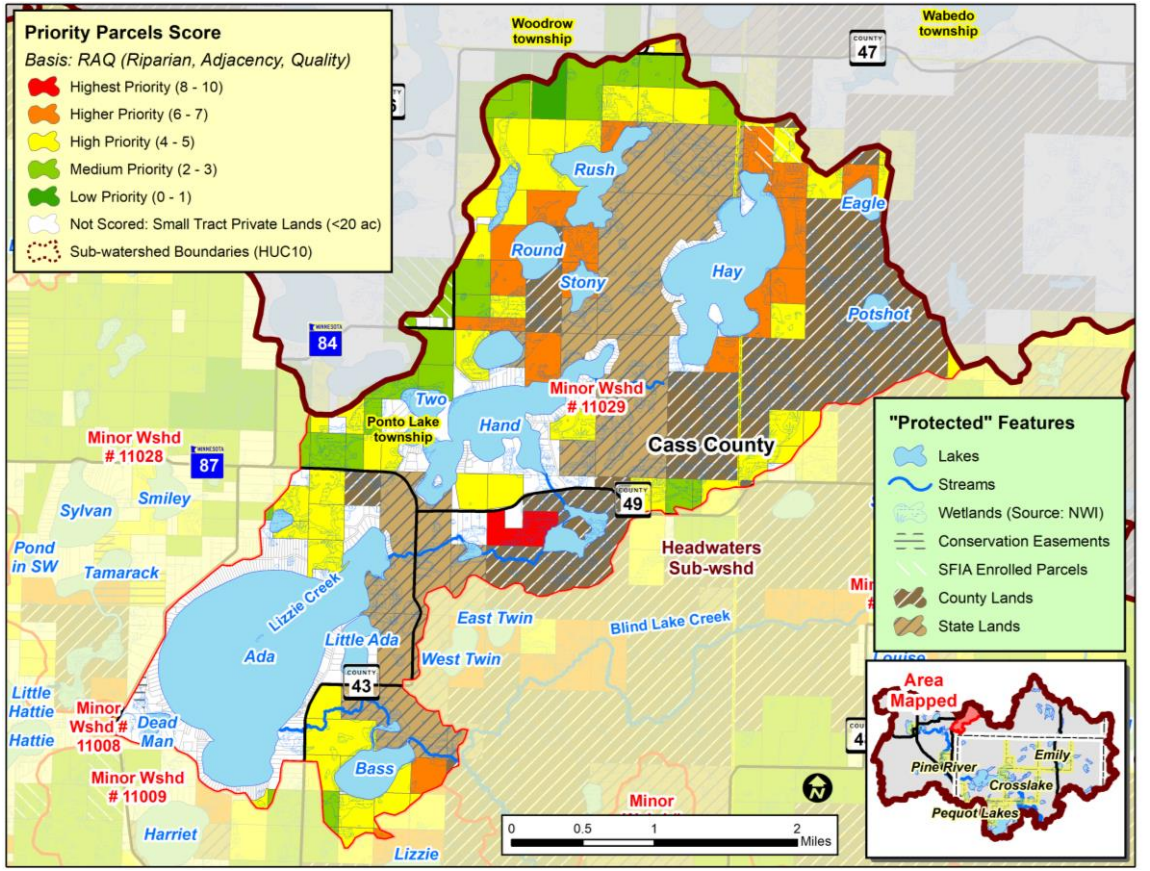
Drilling Down to the Parcel *(Pine Wshd Example)*



Measurable Protection Goals:



Parcel Scoring by RAQ:

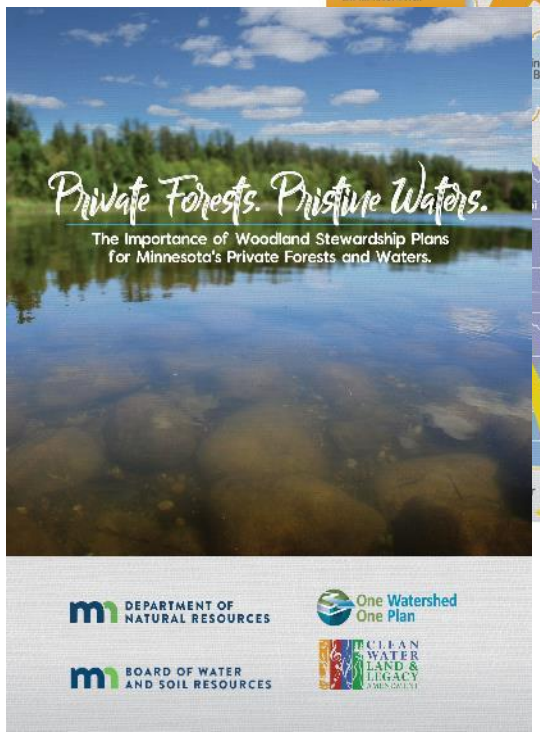


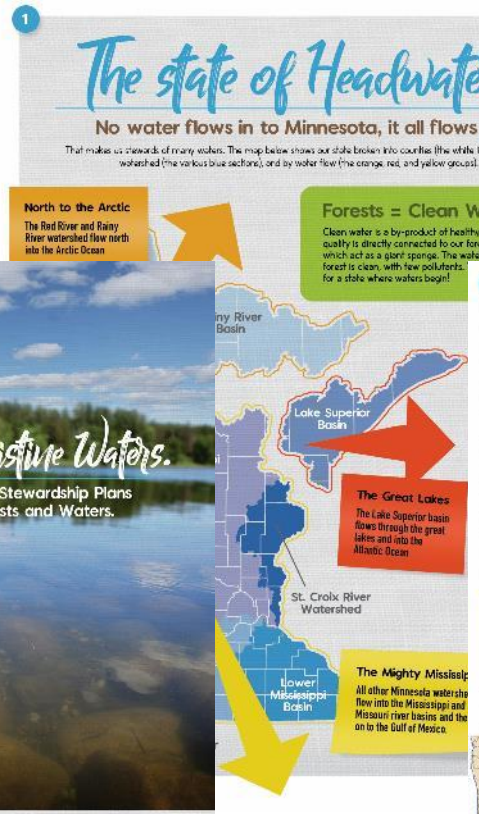
Landowner Table

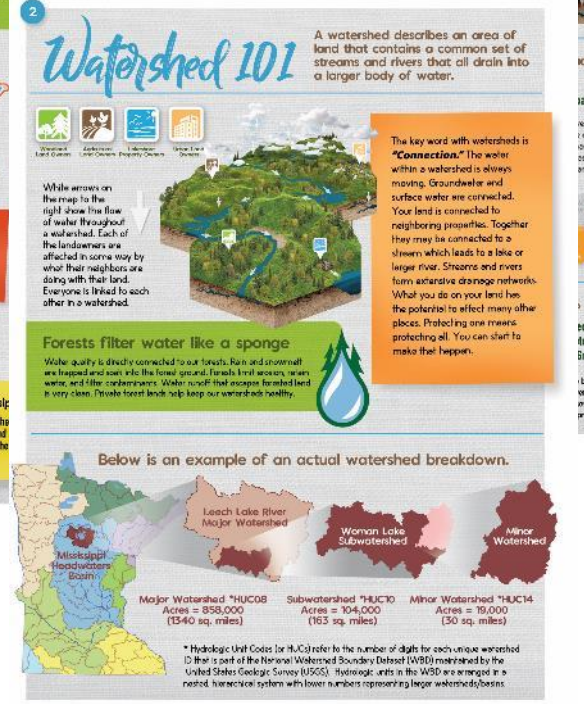
(Sorted by Highest RAQ Scores)

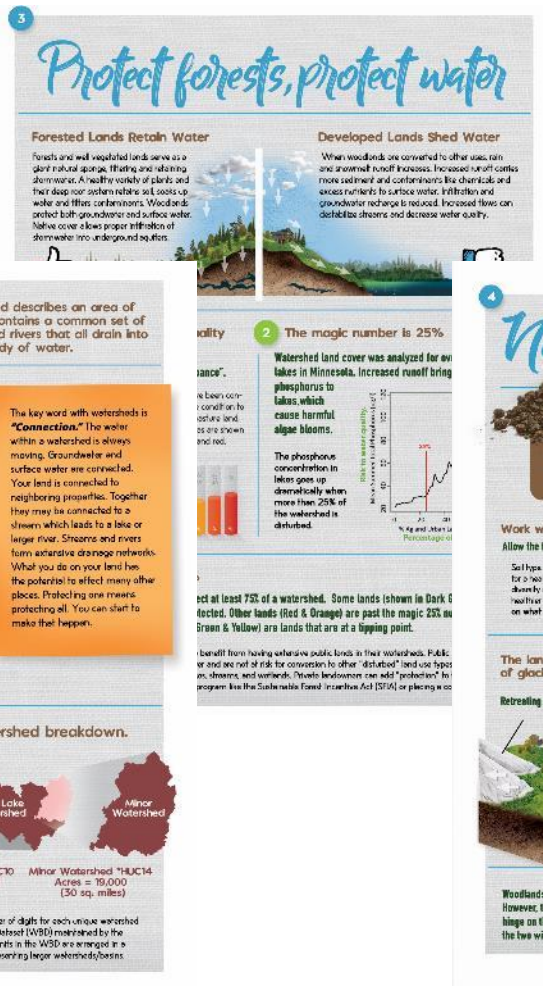
	Landowner Contact Info				Property Information								RAQ Scoring					
Acres (GIS)	Name	Address	Address2	City_State_Zip	Physical Address	Physical City	Land Value	Bldg Value	Total Value	Land Value per Acre	Cost (60% of Land Value)	Cost per Acre	RAQ: Riparian	RAQ: Adjacency	RAQ: Quality	RAQ: Total	Cost per RAQ Pt	Cost per RAQ Pt per Acre
70.1	TILBURY, DAVID L & FRALAYLA	623 COUNTY 49 NW		PINE RIVER MN 56474			$64,400	$0	$64,400	$918	$38,640	$551	3	3	3	9	$4,293	$61
41.5	SCHUCK, SCOTT & SCHUCK, JOS	4182 48TH ST SW		PINE RIVER MN 56474-7886			$61,300	$0	$61,300	$1,478	$36,780	$887	3	3	1	7	$5,254	$127
33.9	WHITNAH, V BLAIR	C/O BRANDE J WHITNAH	19 OAKGROVE	POTOSI MO 63664-2035			$309,300	$0	$309,300	$9,118	$185,580	$5,471	3	3	1	7	$26,511	$782
56.6	THEISEN, JOHN L, III & SANDRA	477 N HAND LK DR NW		BACKUS MN 56435	477 N HAND LAKE D	BACKUS	$314,200	$164,200	$478,400	$5,553	$188,520	$3,332	3	3	0	6	$31,420	$555
53.9	WHITNAH, V BLAIR	C/O BRANDE J WHITNAH	19 OAKGROVE	POTOSI MO 63664-2035			$120,500	$0	$120,500	$2,237	$72,300	$1,342	3	2	1	6	$12,050	$224
49.8	SCHUCK, SCOTT & SCHUCK, JOS	4182 48TH ST SW		PINE RIVER MN 56474-7886			$136,000	$0	$136,000	$2,729	$81,600	$1,637	3	2	1	6	$13,600	$273
40.0	FULLERTON, DAVID C; DONALD	& KAREN	31113 351ST LN	LE SUEUR MN 56058-3404			$75,600	$0	$75,600	$1,888	$45,360	$1,133	3	3	0	6	$7,560	$189
39.9	WALSTON, LARRY	2155 GALLERY CT		VICTORIA MN 55386-4522	1757 HAY LAKE DR N	PINE RIVER	$87,600	$49,200	$136,800	$2,193	$52,560	$1,316	3	3	0	6	$8,760	$219
39.9	SCHUCK, SCOTT & SCHUCK, JOS	4182 48TH ST SW		PINE RIVER MN 56474-7886			$51,800	$0	$51,800	$1,300	$31,080	$780	3	2	1	6	$5,180	$130
39.8	GARD, LEO J & JUDY	80 LAKE HATTIE DR NW		BACKUS MN 56435	1846 STATE 84 NW	BACKUS	$81,600	$20,700	$102,300	$2,051	$48,960	$1,231	3	2	1	6	$8,160	$205
39.0	KELM, SHERRY L & CHESTER E	2618 PINE CREST RD NE		LONGVILLE MN 56655			$30,600	$0	$30,600	$784	$18,360	$471	3	3	0	6	$3,060	$78
38.8	ZENNER, DANE V	451 COUNTY ROAD 47 NE		LONGVILLE MN 56655-3371			$39,200	$0	$39,200	$1,010	$23,520	$606	3	2	1	6	$3,920	$101
38.5	WHITNAH, V BLAIR	C/O BRANDE J WHITNAH	19 OAKGROVE	POTOSI MO 63664-2035			$56,500	$0	$56,500	$1,468	$33,900	$881	3	2	1	6	$5,650	$147
34.2	WHITNAH, V BLAIR	C/O BRANDE J WHITNAH	19 OAKGROVE	POTOSI MO 63664-2035			$102,900	$0	$102,900	$3,010	$61,740	$1,806	3	2	1	6	$10,290	$301
29.7	MCMENOMAN, THOMAS G & K	21990 HARROW AVE N		FOREST LAKE MN 55025			$28,000	$0	$28,000	$941	$16,800	$565	3	3	0	6	$2,800	$94
25.8	WHEELER, C TODD & LAURA K	2403 STATE HIGHWAY 84 NW		LONGVILLE MN 56655-3289			$84,500	$0	$84,500	$3,277	$50,700	$1,966	3	2	1	6	$8,450	$328
20.9	GADDES, DARIEN C & BARBARA	19134 TWIN LAKES RD NW		ELK RIVER MN 55330-1941	3 COUNTY 47 NE	LONGVILLE	$85,800			$4,098	$51,480	$2,459	3	2	1	6	$8,580	$410
19.8	CROSBY, DOUGLAS R & CHERYL	251 24TH ST NW		LONGVILLE, MN 56655			$81,400	$0	$81,400	$4,119	$48,840	$2,471	3	2	1	6	$8,140	$412
160.3	KRUCKOW, BRIAN K; STEVEN F	PO BOX 903		LAKEVILLE MN 55044	2074 STATE 84 NW	BACKUS	$377,800	$41,200	$419,000	$2,357	$226,680	$1,414	3	1	1	5	$45,336	$283
105.6	WHEELER PARTNERS	2403 STATE HIGHWAY 84 NW		LONGVILLE MN 56655-3289			$157,200	$0	$157,200	$1,488	$94,320	$893	2	3	0	5	$18,864	$179
80.3	VELARDI, KATHRYN A	PO BOX 33		PINE RIVER MN 56474	406 COUNTY 43 NW	BACKUS	$161,300	$135,900	$297,200	$2,008	$96,780	$1,205	3	2	0	5	$19,356	$241
50.1	MCMENOMAN, THOMAS G & K	21990 HARROW AVE N		FOREST LAKE MN 55025	788 N HAND LAKE D	BACKUS	$85,300	$166,200	$251,500	$1,703	$51,180	$1,022	3	2	0	5	$10,236	$204
41.6	COURNEYA, PAUL H	1388 SHADYWOOD SHORES DR NW		PINE RIVER MN 56474	1388 SHADYWOOD	PINE RIVER	$68,200	$166,700	$234,900	$1,640	$40,920	$984	2	3	0	5	$8,184	$197
40.1	DRAEGER, DAN	201 COUNTY 49 NW		PINE RIVER MN 56474	274 COUNTY 49 NW	PINE RIVER	$64,500	$44,000	$108,500	$1,607	$38,700	$964	2	3	0	5	$7,740	$193
40.1	WEAVER, MICHAEL C	1702 13TH AVE NE		KASSON MN 55944			$9,500	$0	$9,500	$237	$5,700	$142	3	2	0	5	$1,140	$28
40.0	FULLERTON, DAVID C; DONALD	& KAREN	31113 351ST LN	LE SUEUR MN 56058-3404	353 BASS LAKE DR N	BACKUS	$51,900	$10,900	$62,800	$1,296	$31,140	$778	3	2	0	5	$6,228	$156
40.0	KELM, SHERRY L & CHESTER E	2618 PINE CREST RD NE		LONGVILLE MN 56655			$47,000	$0	$47,000	$1,175	$28,200	$705	2	3	0	5	$5,640	$141
40.0	CROSBY, DOUGLAS R & CHERYL	251 24TH ST NW		LONGVILLE, MN 56655			$33,800	$0	$33,800	$845	$20,280	$507	2	2	1	5	$4,056	$101
39.8	KELM, SHERRY L & CHESTER E	2618 PINE CREST RD NE		LONGVILLE MN 56655			$39,100	$0	$39,100	$983	$23,460	$590	2	3	0	5	$4,692	$118
39.7	CROSBY, DOUGLAS R & CHERYL	251 24TH ST NW		LONGVILLE, MN 56655	251 24TH ST NW	LONGVILLE	$47,900	$293,200	$341,100	$1,207	$28,740	$724	2	2	1	5	$5,748	$145
39.6	CROSBY, DOUGLAS R & CHERYL	251 24TH ST NW		LONGVILLE, MN 56655			$49,500	$0	$49,500	$1,251	$29,700	$751	2	2	1	5	$5,940	$150
39.0	ZENNER, DANE V & GUY	451 COUNTY ROAD 47 NE		LONGVILLE MN 56655-3371			$53,800	$0	$53,800	$1,378	$32,280	$827	2	3	0	5	$6,456	$165
39.0	ZENNER, DANE V & GUY	451 COUNTY ROAD 47 NE		LONGVILLE MN 56655-3371			$48,300	$0	$48,300	$1,238	$28,980	$743	2	3	0	5	$5,796	$149

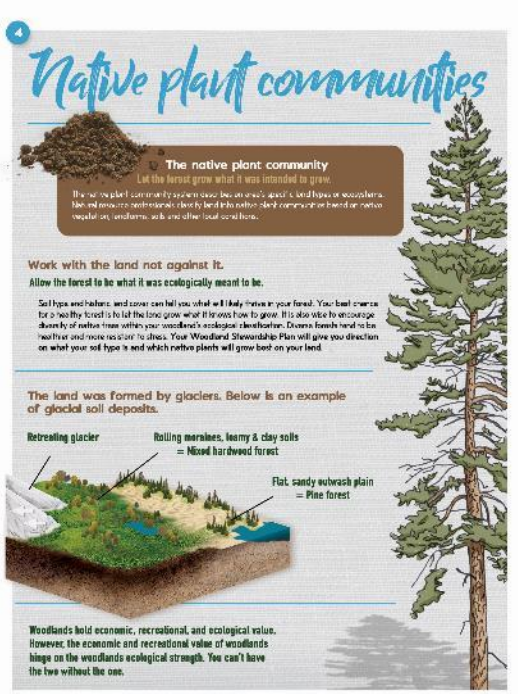
PFM Outreach by SWCDs











Helping landowners see how their woodlands connect to their watersheds…

Implementation Success Story: Crosby Area

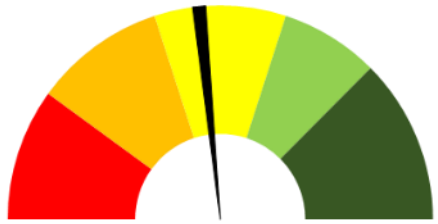
How?

- *Coordination*
- *Collaboration*
- *Co-investment*

37%

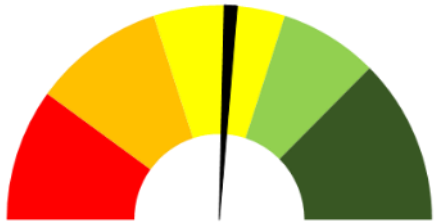
w/ Public Lands

46%



w/ 2017 Acquisition

51%



w/ 2017 Easement

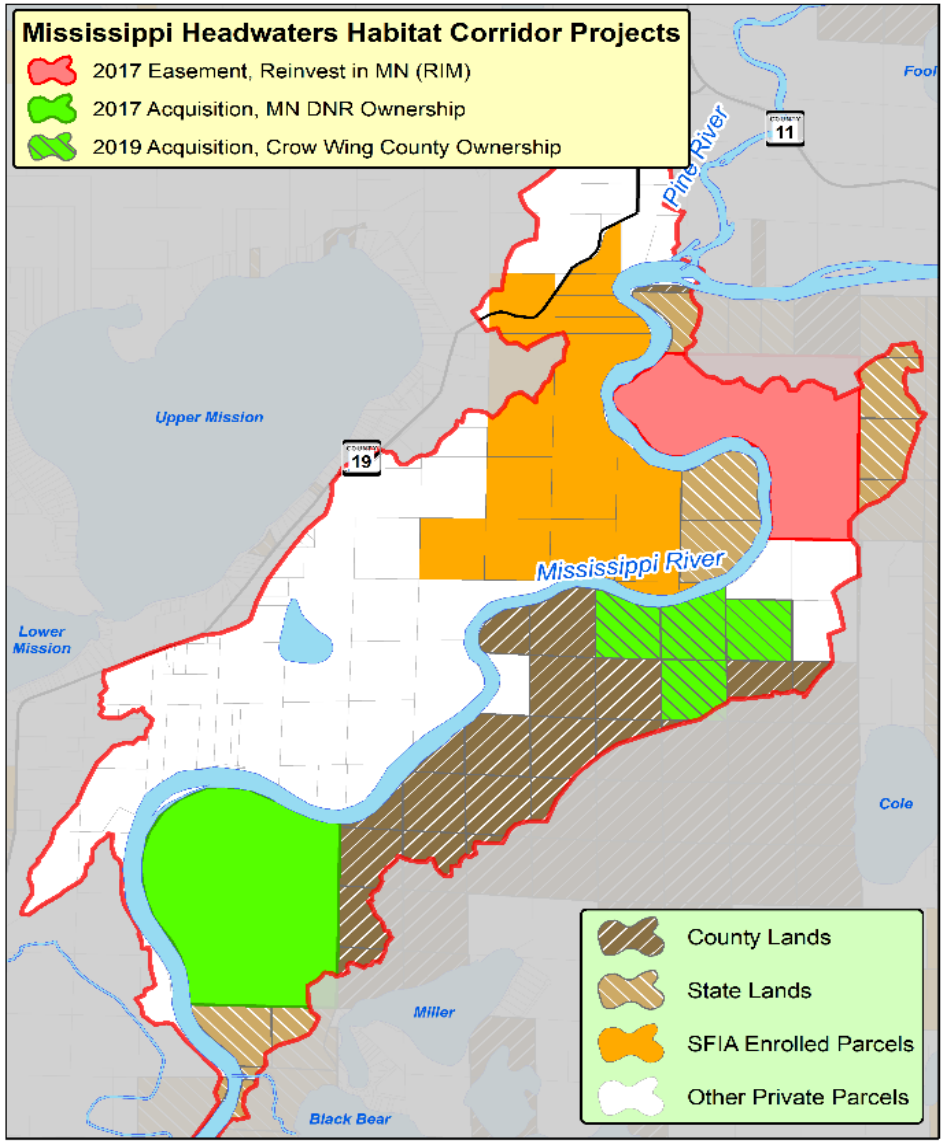
66%

w/ SFIA

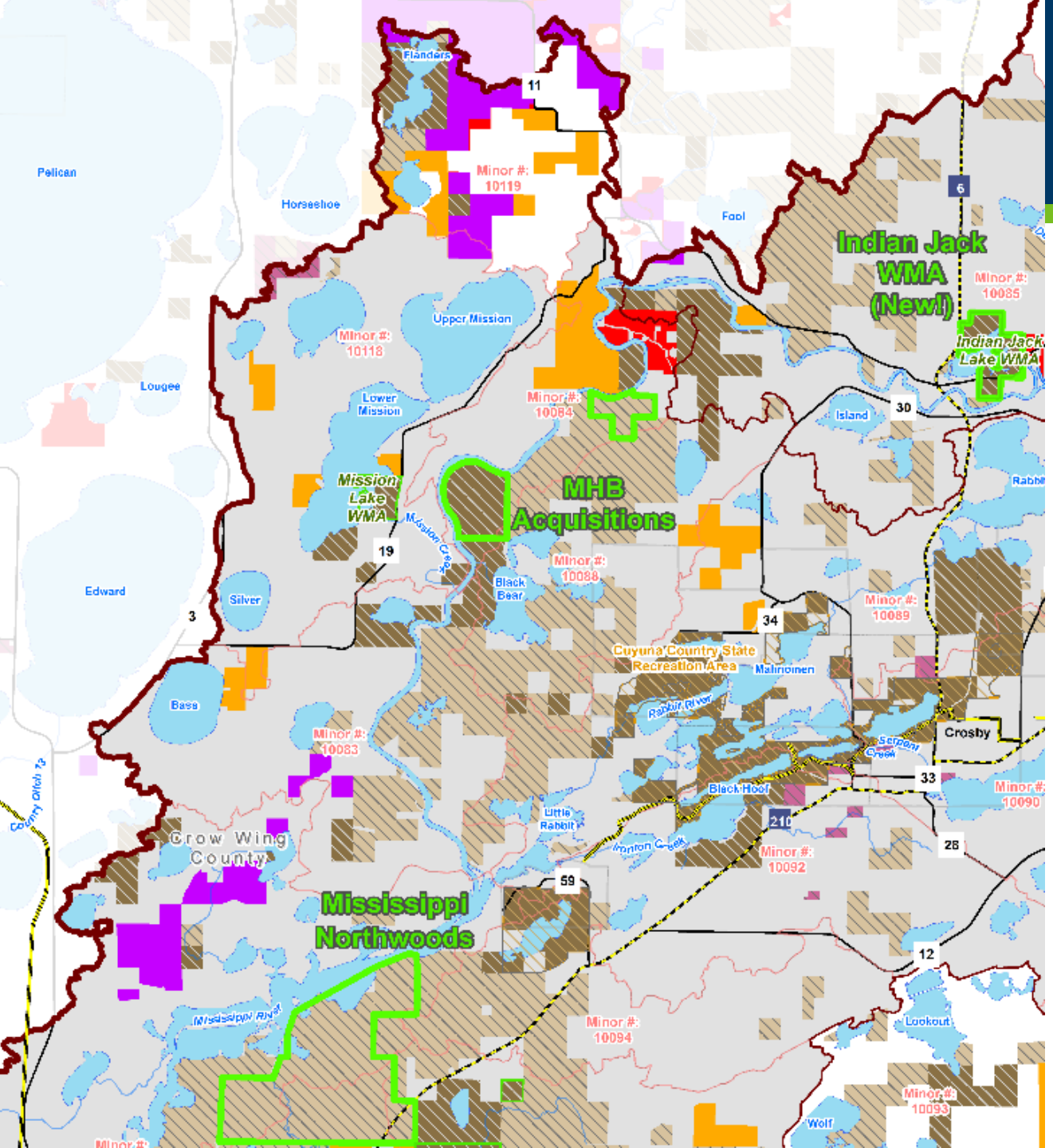
Current: 71%

w/ 2019 Acquisition

Wow! SFIA moved the needle 15 clicks!



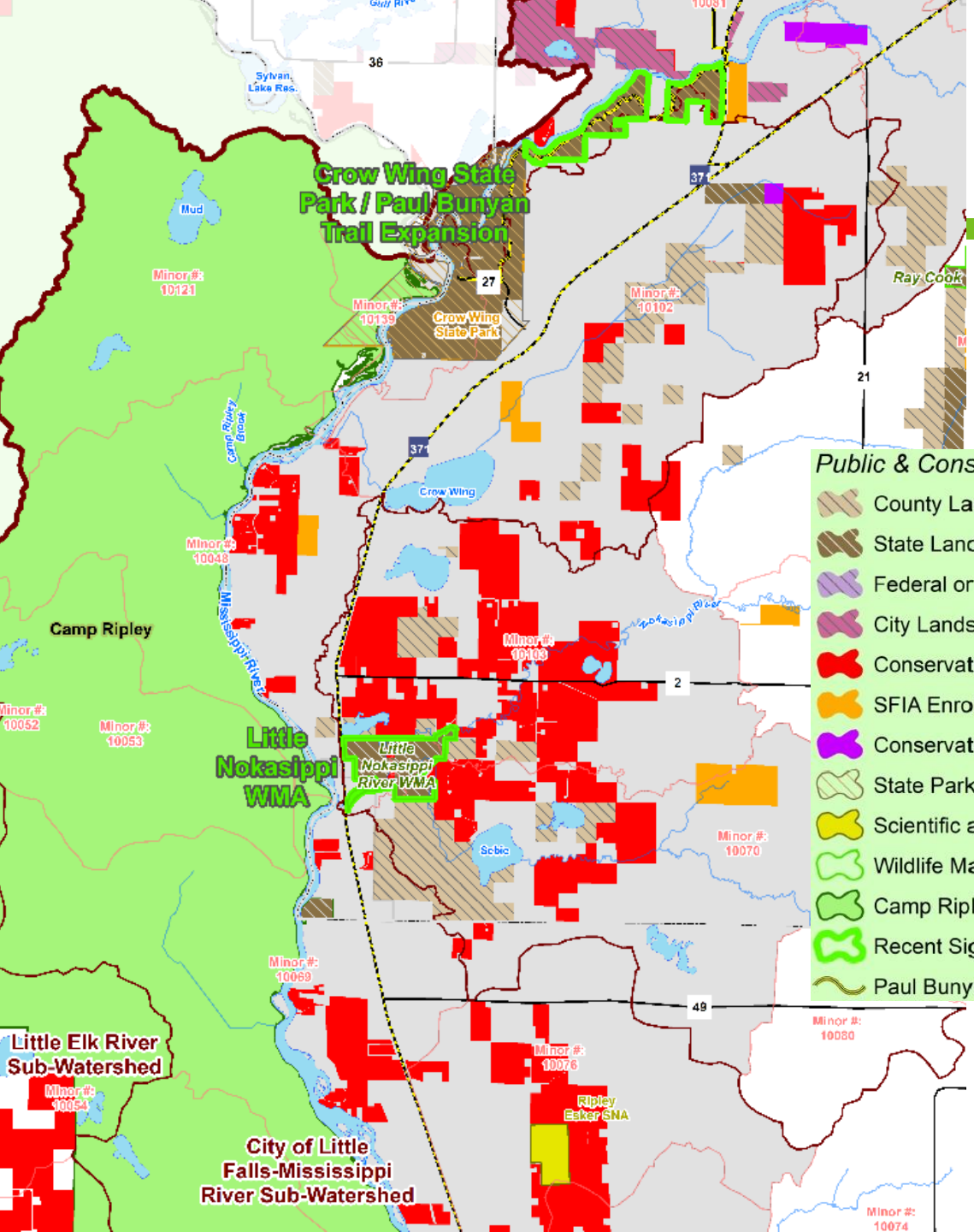
Mississippi R. *(North)* Conservation Corridor

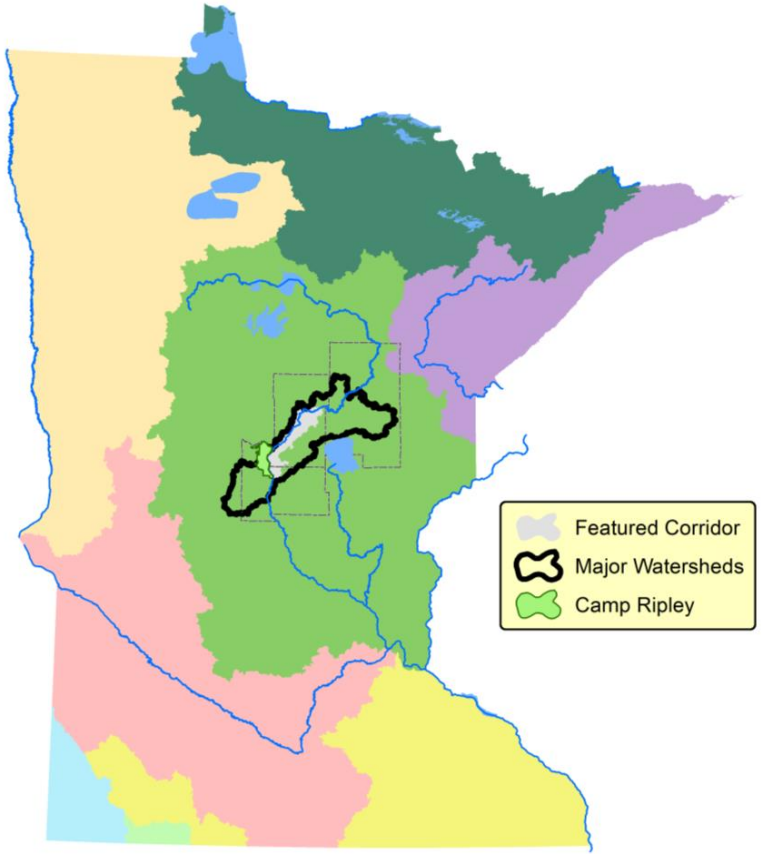


Public & Conservation Lands

- County Lands
- State Lands
- Federal or Tribal Lands
- City Lands (or other public)
- Conservation Easements
- SFIA Enrolled Lands
- Conservation Fund (formerly Potlatch) & other NGO Lands
- State Parks / Recreational Areas
- Scientific and Natural Areaa (SNAs)
- Wildlife Management Areas
- Camp Ripley
- Recent Significant Acquisitions
- Paul Bunyan Trail

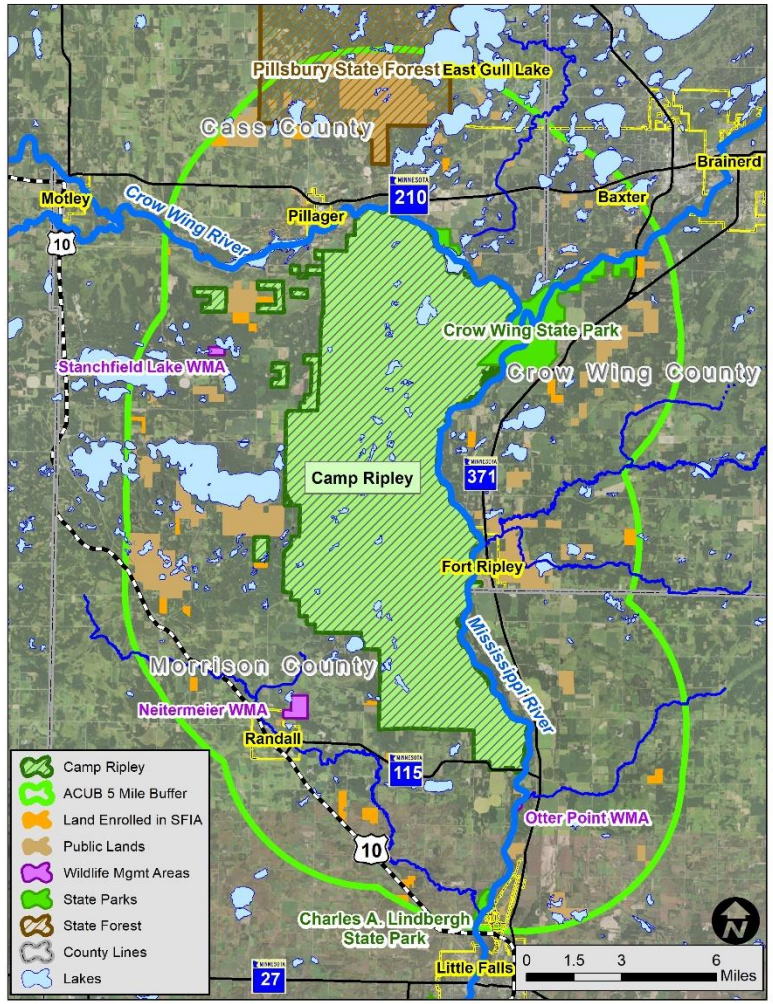
Mississippi R. *(South)* Conservation Corridor:



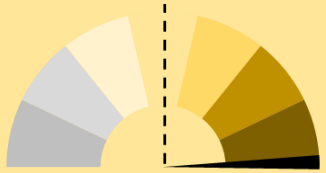


Protection Summary in ACUB 5-mile Buffer

Pre-ACUB: 34%

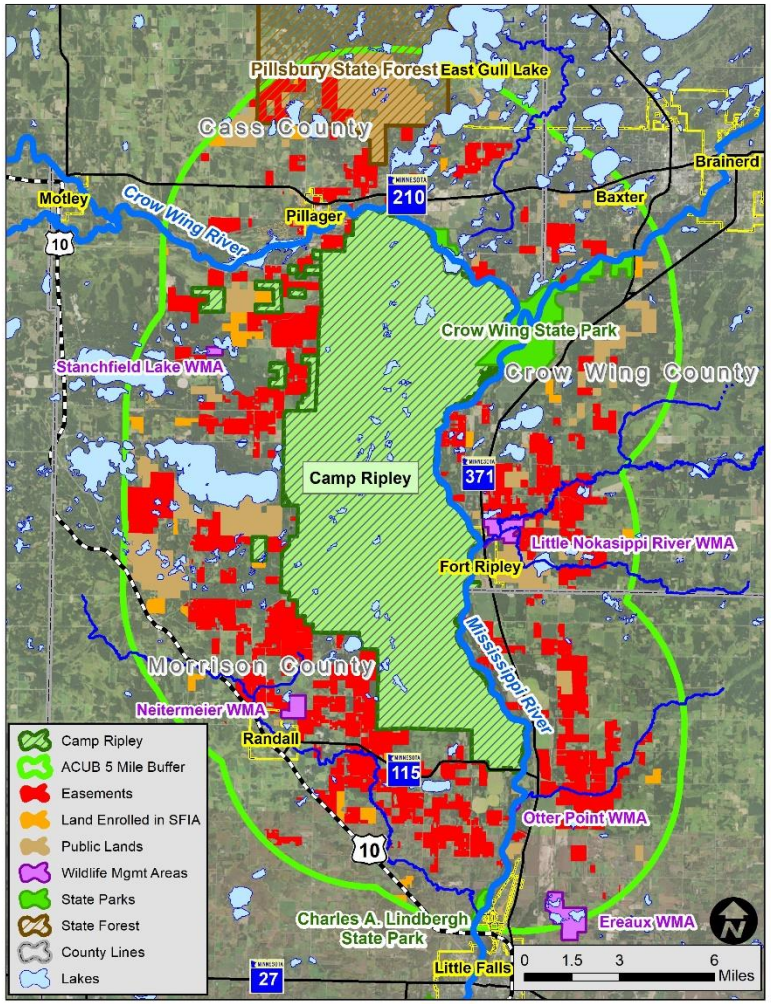


Habitat Quality Meter (Habitometer):



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

Current: 49.5%



Summary

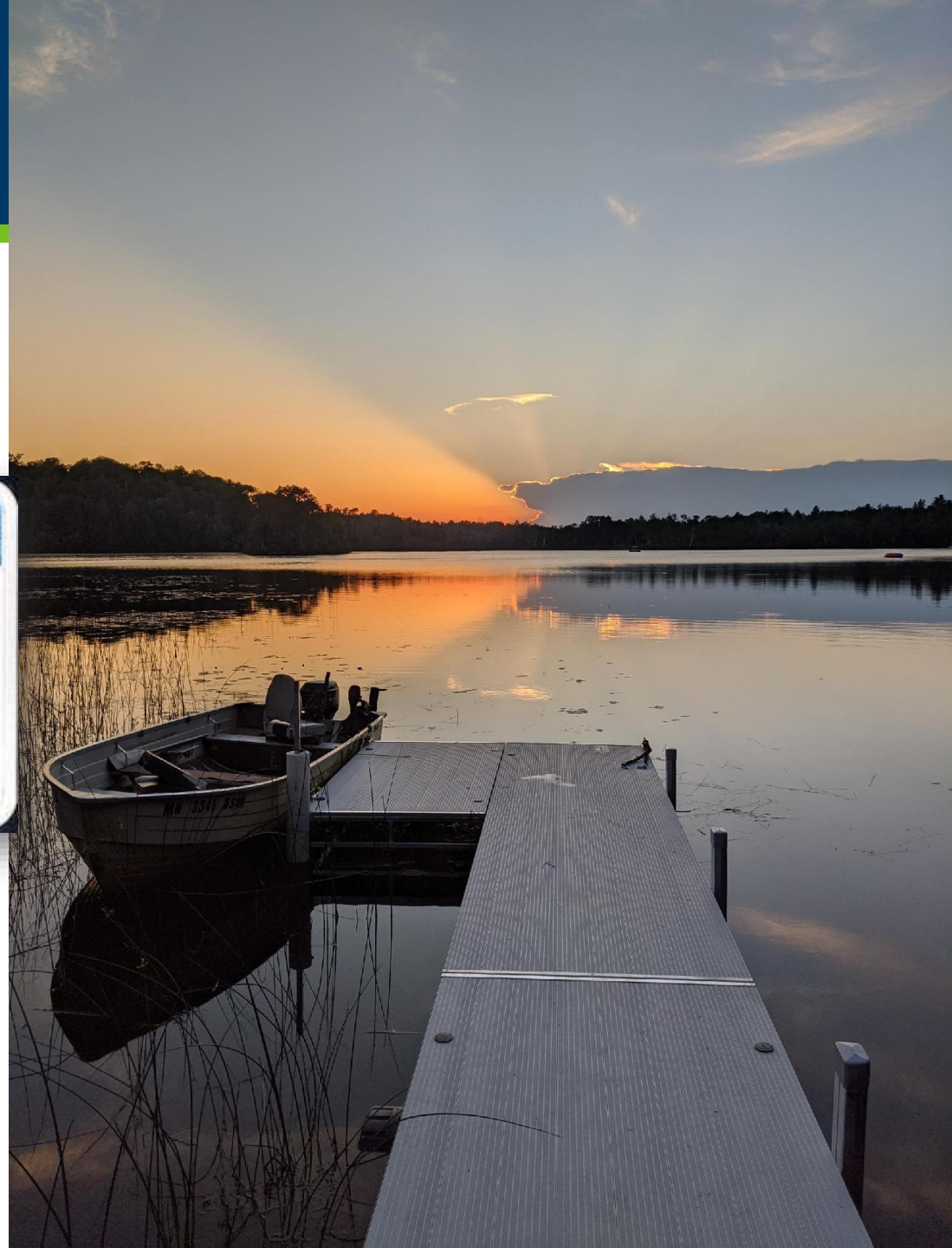
- We have developed several examples of successful implementation projects at landscape scales over the last 10 years.
- Next big step – protect the basin's premier license plate lakes. Best completed through 1W1P/LSP approach.
- Coordinate implementation over the entire basin to keep numbers of proposals to minimum while keep projects sharply defined.

Questions?

Dan Steward: Watershed/PFM Coordinator

Minnesota Board of Water & Soil Resources

218-820-1679, dan.steward@state.mn.us



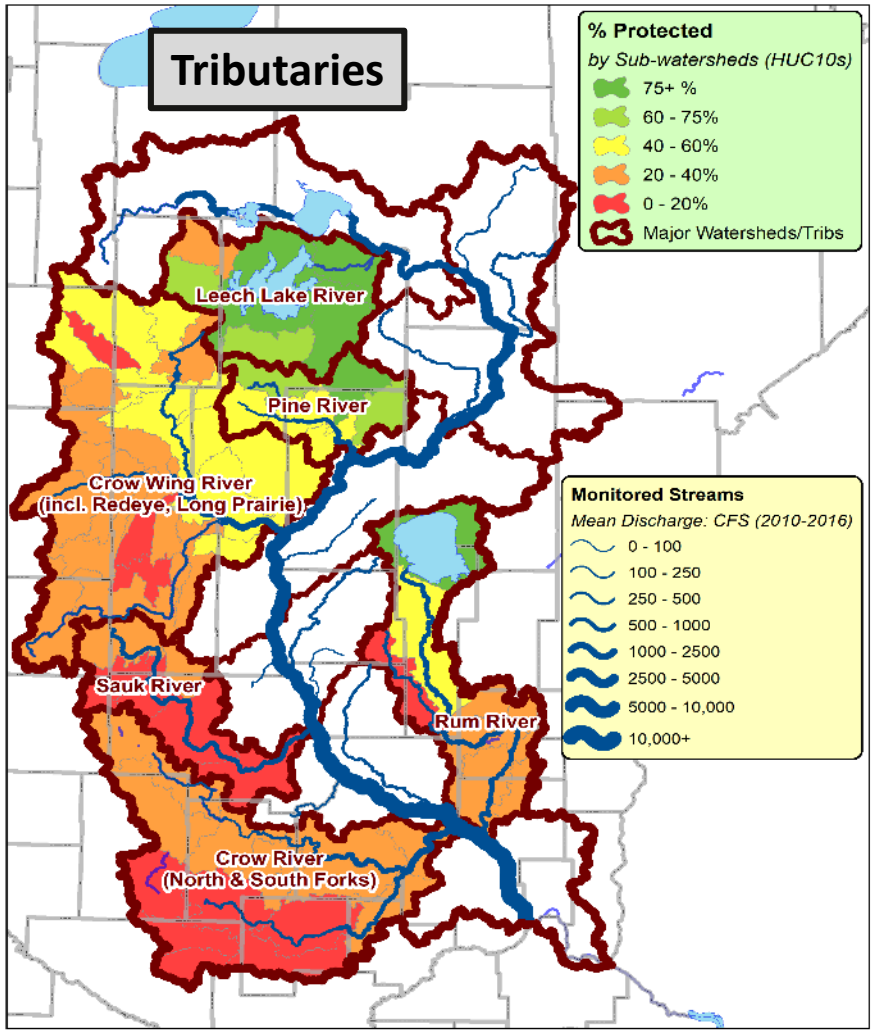
Upper Mississippi River Basin: Major Watershed Context

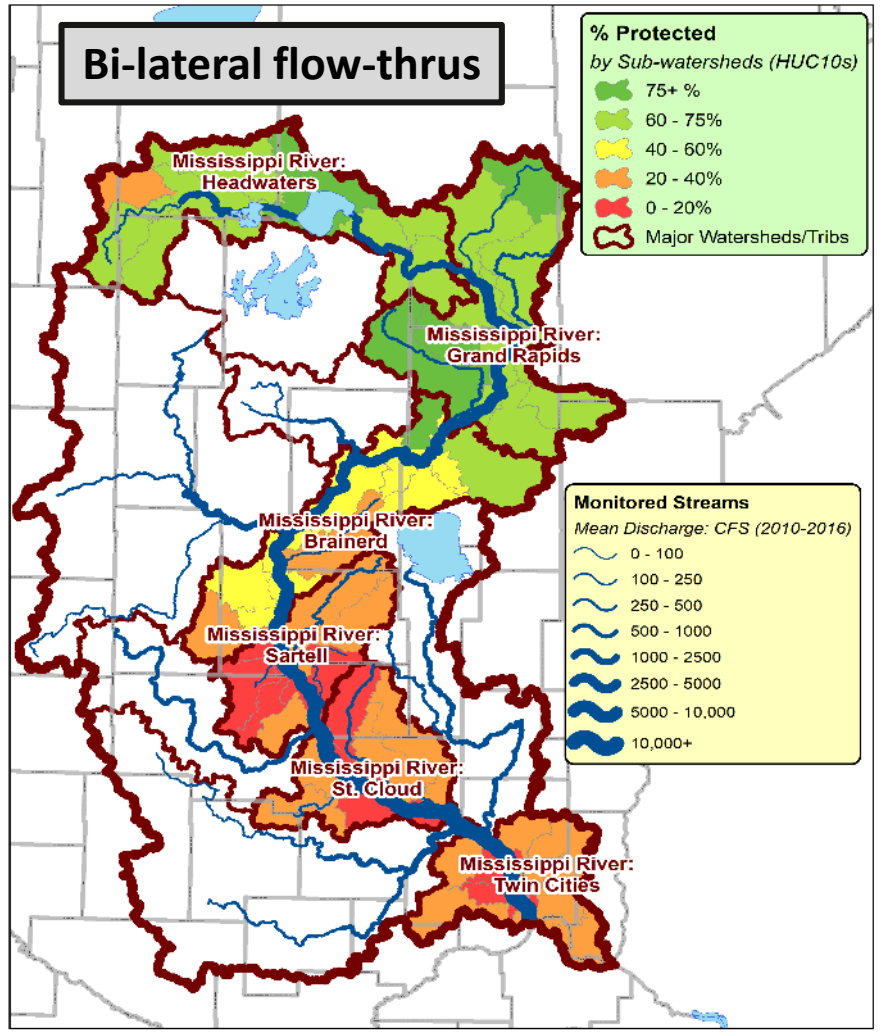
Tributary Wshds (6)

- 5 on West, 1 on East
- Crow = 2 majors
- Crow Wing = 3 majors

Bi-lateral Wshds (6)

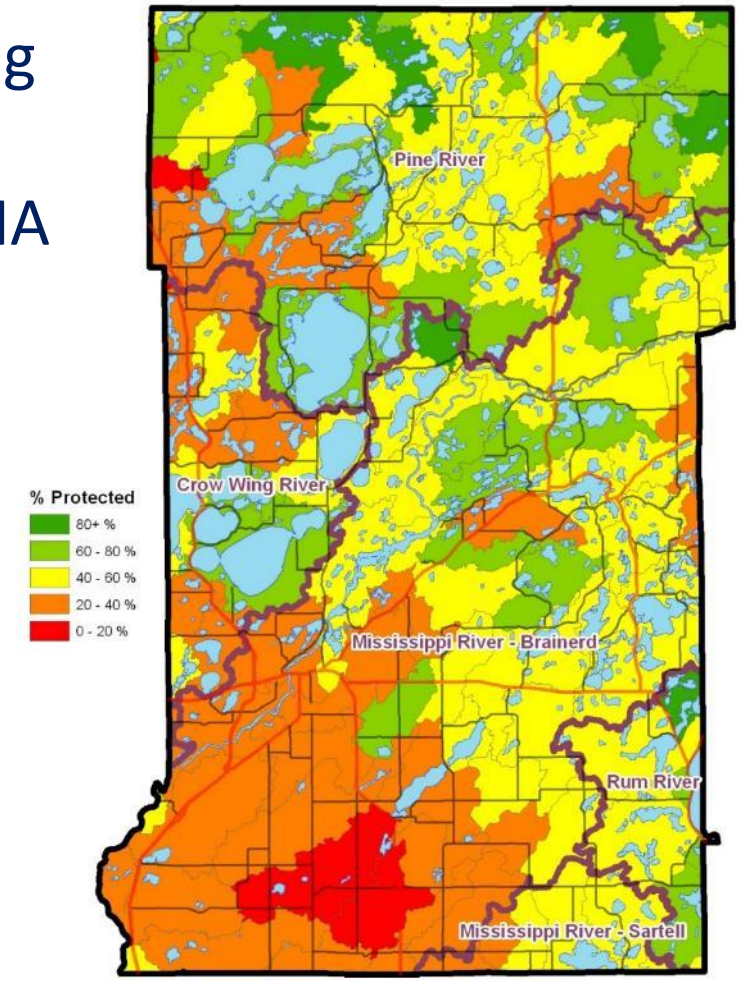
- Along Main-stem
- Flow-through wshds
- Population Centers



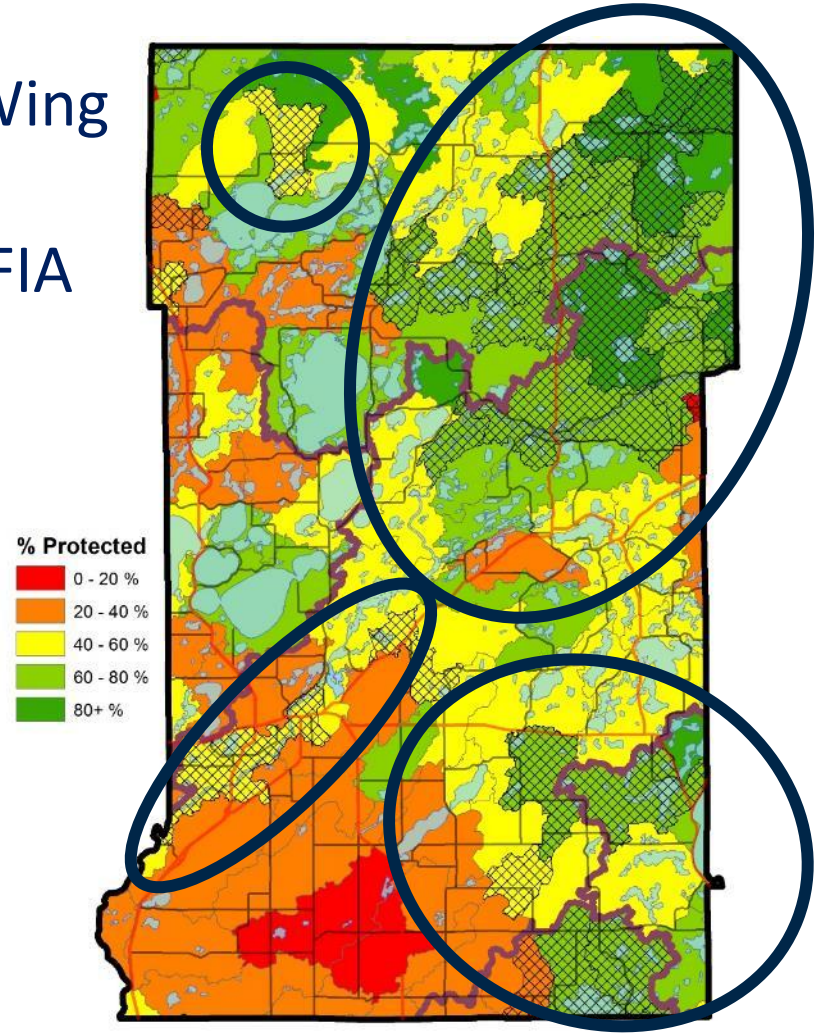


SFIA – A Key Partner in Water Resource Protection

Crow Wing County before SFIA



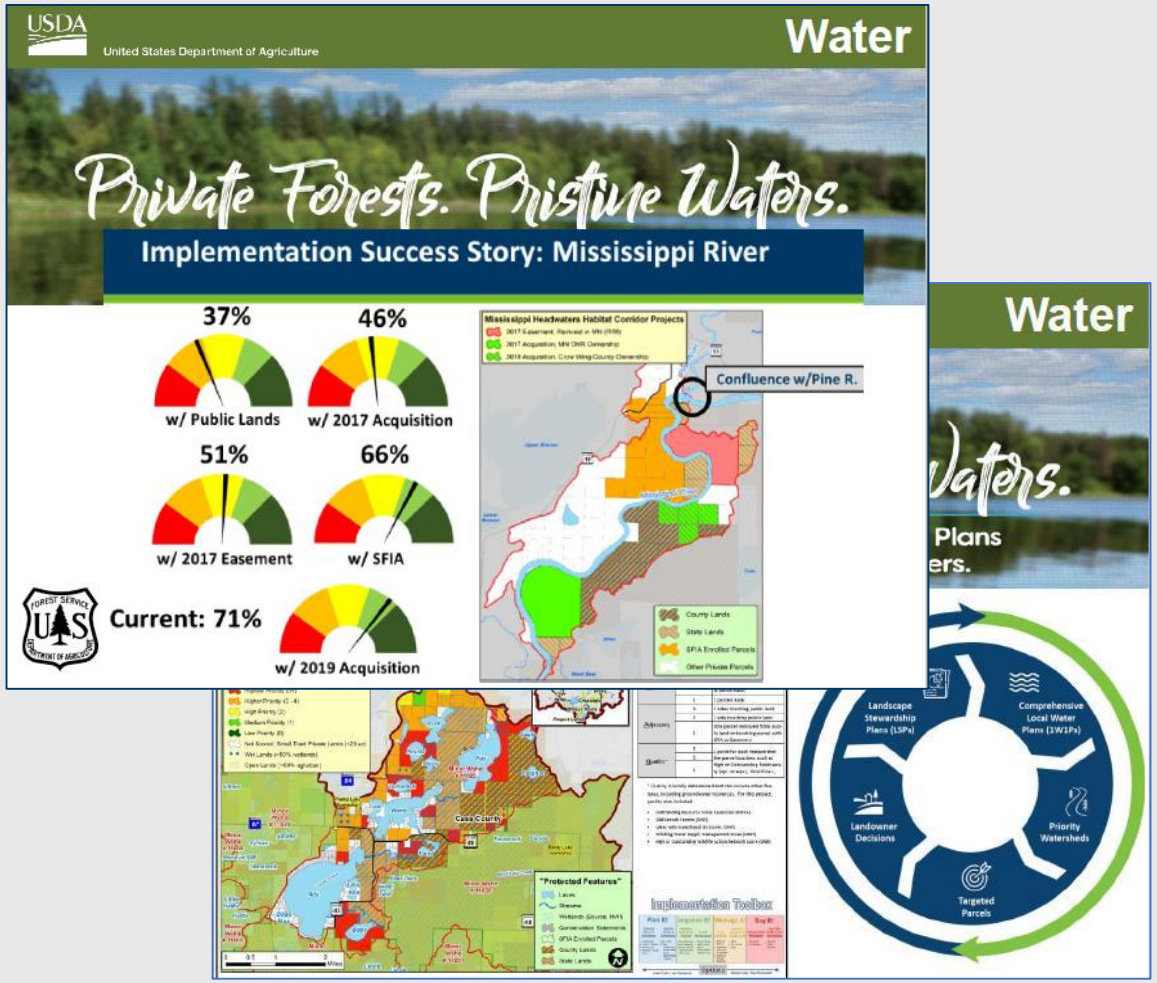
Crow Wing County after SFIA



SFIA is a state general fund program, SFIA needs your ongoing support…

US Forest Service Review – MN DNR Forestry PFM

Washington's 5-year review of US FS Programs in 20-State NE Region



PFM Partnership – A National Model

- *Out of 20 states, Minnesota was recognized as the premier example* on how the Forest Stewardship Program can achieve its conservation outcomes around of water, wildlife, wildfire resiliency and job/rural prosperity.
- Minnesota has combined traditional private forest landowner assistance with a Landscape Stewardship perspective, linking that to water quality.
- This work has resulted in a watershed-based approach to land use and water quality planning that maintains or improves water quality through strategic forest investments.