# Tuesday, August 27 AM Hearing Handouts

# Cannon River Watershed Habitat Protection and Restoration Program - Phase 14 (HA01)

This locally-led partnership works throughout the Cannon River Watershed to create additional public lands through fee-title acquisition, partnering with landowners to preserve their land for habitat and future generations. Additionally, we enhance and restore degraded habitat on protected land. In Phase 14, we propose to continue these successful and in-demand partnership activities while specifically focusing on a unique opportunity to restore a significant portion of the Little Cannon River. The Little Cannon River restoration details are highlighted below.



(Left) This plat map from the 1800s illustrates the original course of the river. In contrast, the modern topographic map (right) demonstrates the altered path of the stream.

(Left) This aerial photo from 1938, alongside the present-day version (right), illustrates a decrease in farming along the riparian zone, making it an opportune time for this restoration project.

ML24 funding supports buckthorn removal and meadow enhancement. ML25 funding is for stream restoration and floodplain reconnection to improve the habitat for native fish and mussel species (Redside Dace\*, Brook Trout, Cylindrical Papershell, and more). The Minnesota DNR considers this project a top priority due to its recreational and ecological value. An additional \$100,000 in matching funds have been secured through the Fishers and Farmers Partnership for this effort in 2025.









# Cannon River Watershed Habitat Protection and Restoration Program - Phase 14 (HA01)

Leveraging the recent OHF funded acquisition of the Little Cannon River AMA, the Phase 14 request will restore the natural channel of the Little Cannon River. This restoration will help to reduce flood impacts and sediment load in the impaired stream. Additionally, it will improve fishing access by 11,800 feet, equivalent to 2.25 miles.







Add meandering bends, riffle, and pool complexes.



Phase 14 funds will allow us to maximize the benefits of our leverage funding from Fishers & Farmers Partnership (FFP). FFP funding will:

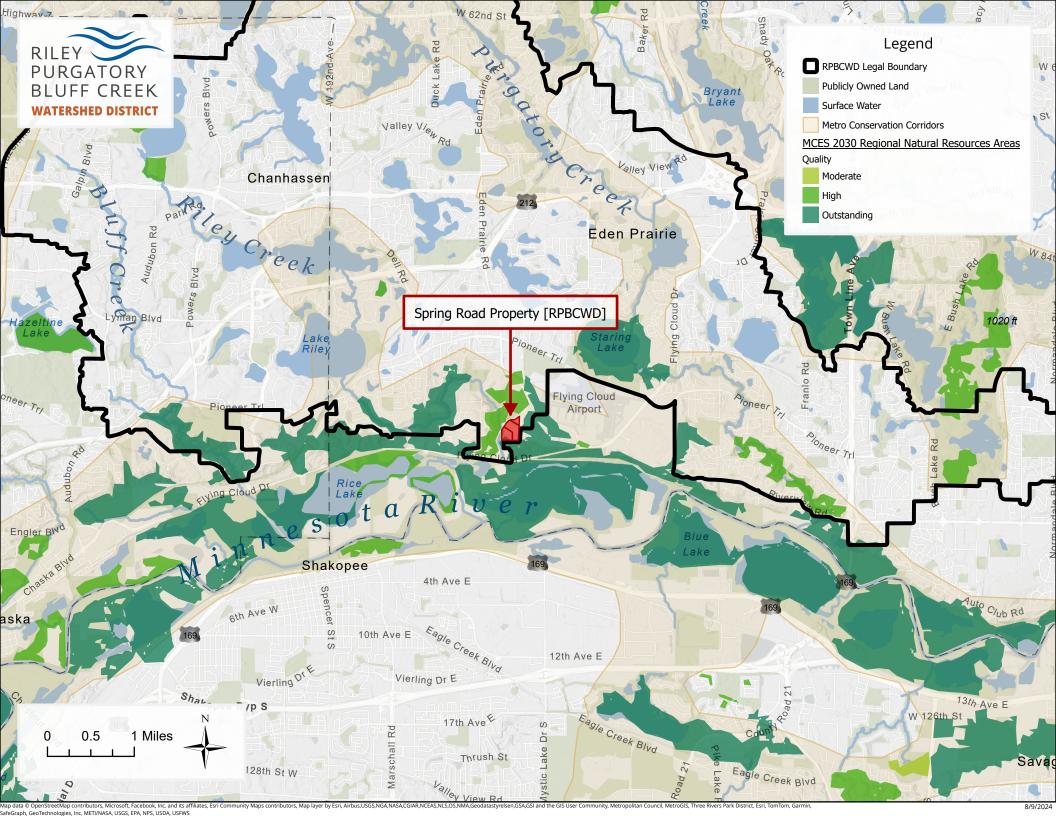
- 1. Secure the conservation easement south of the Little Cannon AMA.
- Incentivize farmers to change agricultural practices to reduce sedimentation in the river farther upstream.





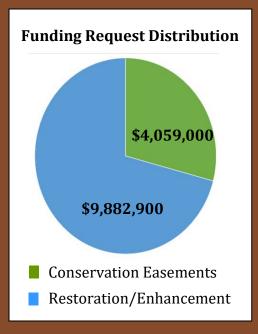






# HA 03 Anoka Sand Plain Habitat Conservation - Phase 10

- Protect 525 acres of private lands in conservation easements.
- Restore/Enhance 1,630 acres of prairie, oak savanna, wetlands, and fire-dependent woodlands and 3,500 feet of stream.
- Expand Habitat Cores and Corridors through Conservation Easements.
- Protect rare species and SGCN through conservation easements and habitat restoration/enhancement.
- Restore/enhance ASP priority habitats and increase biodiversity.



## **ASP Phase 10 Project Examples**



## Sherburne National Wildlife Refuge

- Enhance 376 acres of prairie.
- Remove non-native, invasive black locust and Siberian elm.
- Reduce woody encroachment.
- Biochar production and application.
- Enhance habitat core.
- Restore/enhance ASP priority habitats.
- Increase biodiversity.
- Enhance habitat for rare species., SGCN and pollinators.





Tubercled Rein Orchid

#### **Bethel WMA**

- Enhance 44 acres of sedge meadow and dry prairie.
- Control buckthorn and woody encroachment and invasive species.
- Conduct prescribed fires.
- Enhance habitat core.
- Restore/enhance ASP priority habitats.
- Increase biodiversity.
- Enhance habitat for rare species, SGCN and pollinators.









# Anoka Sand Plain Partnership

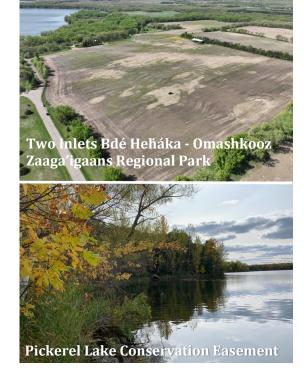
10 - Year Strategic Conservation Action Plan - summary

#### Anoka Sand Plain Partnership Priorities

- Protect, restore and enhance habitat cores and conservation corridors to minimize the impacts of new development and enhance native plant communities and wildlife resiliency.
- Sites are selected to meet Action Plan goals and based on habitat type, rare species, habitat connectivity, recreation opportunities, benefits to water, and landowner engagement.







#### OUTSTANDING ECOSYSTEMS

- Over 150,000 acres in the ASP Ecoregion are ranked Outstanding or High Biodiversity by the MCBS.
- ◆ The ASP provides habitat for 97 known or predicted Species of Greatest Conservation Need and 131 federally or state endangered, threatened, or special concern.
- ◆ The ASP contains some of the best examples of the critically imperiled oak savanna, sand dunes, and shallow wetland plant communities.
- ◆ Sandhill cranes, trumpeter swans, red-headed woodpeckers, Blanding's turtles, and wild turkey make their home in the ASP.

#### **CLOSE TO HOME RECREATION**

- ◆ Notable ASP public open space include Sherburne NWR, Carlos Avery WMA, Crane Meadows NWR, Hellen Allison Savanna SNA, Sand Dunes State Forest, and Cedar Creek Ecosystem Science Preserve.
- ◆ The Mississippi and Rum River, and the many lakes are destinations for paddling and fishing.

# QUALITY SURFACE WATER, GROUNDWATER AND DRINKING WATER

- ◆ The ASP is a primary recharge area for the aquifers of the Twin Cities Metro Area due to its infiltration rates and geologic intersection with aquifers.
- Numerous wetlands in the ASP provide flood protection, water purification, shoreline stabilization, groundwater recharge, and streamflow maintenance.

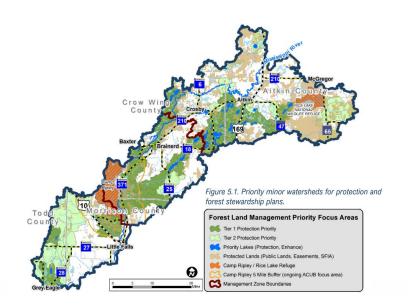




# RIM - Integrating Clean Water and Habitat — Phase III Proposal: HA 04

#### A Unique RIM Easement Program – Stacking Legacy Benefits

This program acquires easements with the potential to make the greatest impacts for habitat and clean water. Projects must be identified as priorities in local watershed management plans and address OHF's statewide priorities. This easement program offers options for habitat restoration AND habitat protection anywhere there is an approved watershed management plan.



Locally developed, state approved watershed plans set measurable natural resource goals and identify locations and activities that benefit habitat, clean water, and other priorities.

The RIM-Integrating Clean Water and Habitat program complements over \$159M invested from the Clean Water Fund since FY18 for implementing watershed plans.

Map: Mississippi River-Brainerd Comprehensive Watershed Management Plan, 2023.

2024)

### Phase I and II Accomplishments to Date:

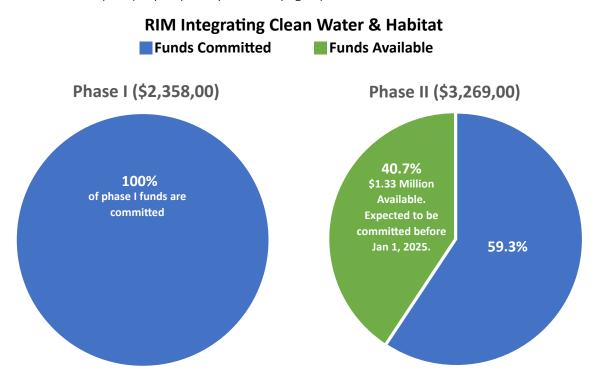
#### Over 320 additional acres anticipated. {\$1.33M available; expected to be RIM INTEGRATING CLEAN WATER & HABITAT committed by Jan 1, 2025.} 738 525 440 380 PHASE I: PHASE I: ACTUAL PHASE II: PHASE II: PROPOSED ACRES ACRES PROPOSED ACRES ACTUAL ACRES (THROUGH Q2-



#### Demand for Additional Funding Right Now

The program continues to gain momentum as watershed plans are approved and more areas become eligible for this funding. Without sufficient funding <u>right now</u>, we risk losing opportunities to permanently restore and protect high quality habitats. Phase I funds are 100% committed. Phase II funding is expected to be committed prior to January 1, 2025.

- 2024 Q2: \$1.2 Million committed for new easements.
- 2024 Q3: Anticipating \$1 million+ in easement applications for Q3-2024; including a 600-acre forest protection easement located in a "tier 1" priority area for the Mississippi River-Brainerd Watershed plan (map of priority areas on page 1).



## Project Highlights:

- Shakopee Creek restoration Kandiyohi SWCD
- Bluffland protection SE MN
- Marshall County Swift-Coulee stream restoration with adjacent easements
- Mississippi River Watershed "priority lakes" protection
- Riparian forest protection Meeker County
- Prairie restoration and habitat corridor Grant County
- Riparian forest and grassland habitat protection Pennington County
- Forested wetland protection Douglas County
- Prairie restoration with wetland protection Nobles & Murray County



Murray County – Prairie (to be restored) with wetland & stream protection adjacent to Wildlife Management Areas & shallow lakes.

Photo Credit: Murray SWCD



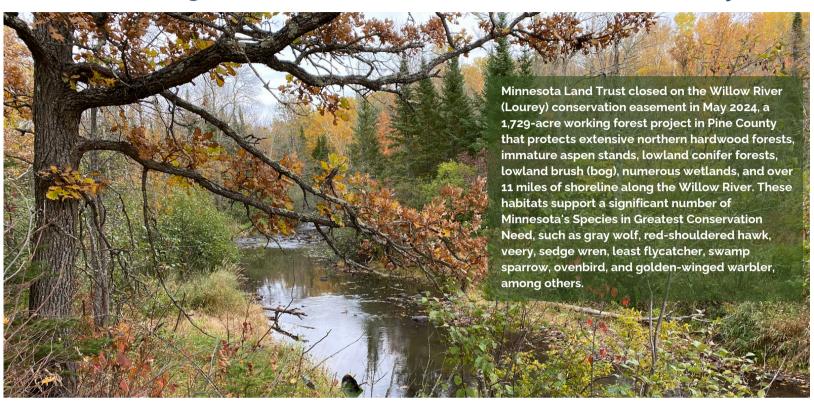




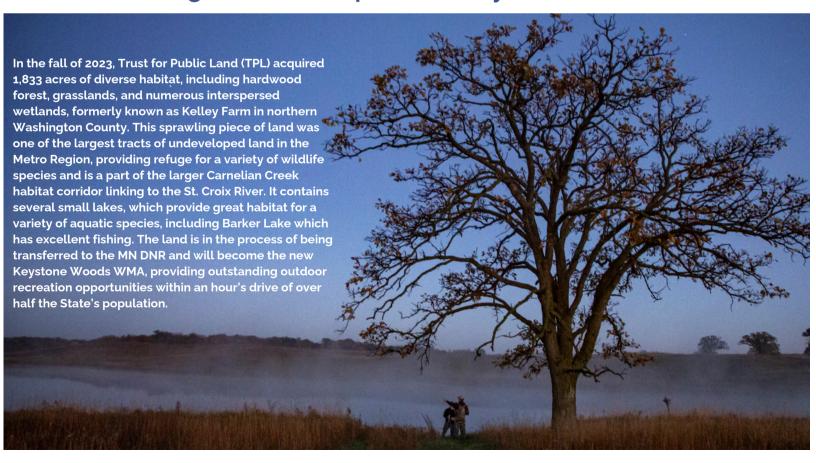
# HA05: St. Croix Watershed Habitat Protection and Restoration

Phase 6

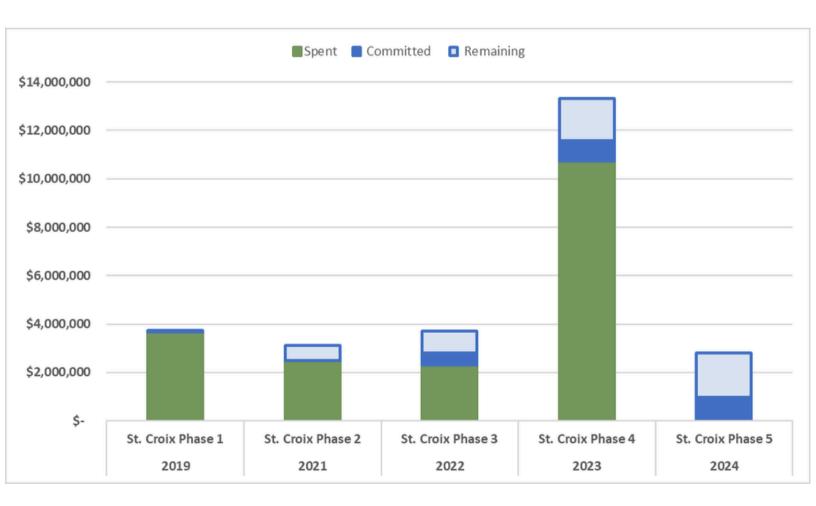
# Protection through conservation easement - Willow River (Lourey)



# Protection through fee-title acquisition - Keystone Woods



HA05: St. Croix 6														
Results to Date through 8/1/2024														
		Budg	get						Output					
		Tot	al				Prot	ection					ore/Enhan	
					Protec	tion Leverage		Acre	es Protected	i	Projects	Acres Re	estored/Enha	
Grant Phase	Award	Cnant	Committed	Remaining	Dronocod	Actual	% of Goal	Dranacad	Outcome	% of Goal		Proposed	Outcome	% of Goal
		Spent	Committed		Proposed	Actual			Outcome					
2019 St. Croix Phase 1 In Progress	\$ 3,751,000	\$ 3,671,594	\$ -	\$ 79,406	\$ 208,500	\$ 519,980	249%	725	1,725	238%	4	50	18	36%
2021 St. Croix Phase 2 In Progress	\$ 3,112,000	\$ 2,482,409	\$ -	\$ 629,591	\$ 192,500	\$ -	0%	554	1,216	220%	2	0	0	
2022 St. Croix Phase 3 In Progress	\$ 3,704,000	\$ 2,300,684	\$ 518,000	\$ 885,316	\$ 327,400	\$ -	0%	668	1,339	200%	3	0	0	
2023 St. Croix Phase 4 In Progress	\$ 13,306,000	\$ 10,742,709	\$ 828,000	\$ 1,735,291	\$ 5,260,000	\$ 321,000	6%	300	1,312	437%	7	0	0	
2024 St. Croix Phase 5 In Progress	\$ 2,806,000	\$ 56,000	\$ 906,000	\$ 1,844,000	\$ 386,000	\$ -	0%	463	822	178%	2	0	0	
2025 St. Croix Phase 6 Proposed	\$ 5,658,600	\$ -	\$ -	\$ 5,658,600	\$ 637,000	\$ -	0%	862	0	0%	0	0	0	



# **HA07: Southeast Minnesota Protection** and Restoration

Phase 13







The U.S. Fish and Wildlife Service and Minnesota Land Trust teamed up to restore bluff prairie habitat at the Brownsville Bluff (Hey) conservation easement protected through the Phase 8 appropriation. A beloved local landmark that overlooks the town of Brownsville and the Mississippi River, the prairie was encroached upon by buckthorn and cedars, choking out the ultra-diverse prairie vegetation. This project showcases the collaboration between the partners. The Land Trust completed a conservation easement with the landowner in January 2023, then collaborated with the USFWS Partners for Fish and Wildlife Program to enhance this iconic landmark. Bluff prairies provide critical habitat to prairie pollinators and grassland birds; their location on the Mississippi flyway makes this habitat a critical refuge to an outsized number of birds annually. The Land Trust and USFWS are launching a Bluff Prairie Initiative to focus restoration efforts in the region.

## **All Partners:**

HA07: SE 13									
Results to Date through	8/1/2024								

			Buc	get		Output												
			То	tal			Protection										ore/Enhan	ce
						Protec	ction Leverage		Acres Protected			Shoreline	otected Projec		Acres Re	estored/Enha	anced	
Grant Pha	ise	Award	Spent	Committed	Remaining	Proposed	Actual	% of Goal	Proposed	Outcome	% of Goal	Proposed	Actual	% of Goal		Proposed	Outcome	% of Goal
2009 Blufflands Prairie	Complete	\$ 500,000		\$ -	\$ 28,100	\$ -	\$ 100,000		300	548	183%	0.00	2.00		4	0	0	
2013 Root River	Complete	\$ 2,750,000	\$ 1,644,600	\$ -	\$ 1,105,400	\$ 152,000	\$ 17,000	11%	493	143	29%	0.00	0.30		3	160	456	285%
2014 SEMN 2	Complete	\$ 5,770,000	\$ 5,765,700	\$ -	\$ 4,300	\$ 2,159,300	\$ 2,294,950	106%	2,080	1,958	94%	7.00	8.67	124%	6	40	225	563%
2015 SEMN 3	Complete	\$ 2,910,000	\$ 2,910,000	\$ -	\$ -	\$ 19,800	\$ 14,200	72%	480	632	132%	0.00	3.00		3	56	715	1277%
2016 SEMN 4	Complete	\$ 5,000,000	\$ 4,991,500	\$ -	\$ 8,500	\$ 355,500	\$ 1,061,499	299%	2,240	1,886	84%	2.00	4.09	205%	9	60	41	68%
2017 SEMN 5	Complete	\$ 2,375,000	\$ 2,345,283	\$ -	\$ 29,717	\$ 247,900	\$ 687,972	278%	760	854	112%	1.50	2.91	194%	5	70	133	190%
2018 SEMN 6	Complete	\$ 2,142,000	\$ 2,095,568	\$ -	\$ 46,433	\$ 136,600	\$ 65,600	48%	730	584	80%	1.50	4.56	304%	6	154	162	105%
2019 SEMN 7	In Progress	\$ 5,741,000	\$ 5,546,274	\$ -	\$ 194,726	\$ 375,900	\$ 341,818	91%	1,990	1,532	77%	1.00	8.81	881%	9	195	3667	1881%
2020 SEMN 8	In Progress	\$ 2,704,000	\$ 2,461,107	\$ -	\$ 242,893	\$ 152,100	\$ 141,390	93%	660	432	65%	0.50	4.51	902%	4	265	1178	445%
2021 SEMN 9	In Progress	\$ 4,068,000	\$ 2,552,168	\$ 748,000	\$ 767,833	\$ 253,800	\$ 885,792	349%	1,098	1,006	92%	1.00	1.93	193%	4	753	614	82%
2022 SEMN 10	In Progress	\$ 5,313,000	\$ 718,444	\$ 1,526,456	\$ 3,068,100	\$ 252,200	\$ 501,520	199%	1,535	744	48%	2.00	0.22	11%	7	195	276	142%
2023 SEMN 11	In Progress	\$ 3,675,000	\$ 62,810	\$ 1,129,000	\$ 2,483,190	\$ 138,500	\$ -	0%	852	275	32%	0.90	0.00	0%	2	240	0	0%
2024 SEMN 12	In Progress	\$ 3,088,000	\$ 28,000	\$ 228,000	\$ 2,832,000	\$ 49,000	\$ -	0%	304	48	16%	1.50	0.00	0%	1	455	0	0%
2025 SEMN 13	Proposed	\$ 6,267,000	\$ -	\$ -	\$ 6,267,000	\$ 375,000	\$ -	0%	1,150	0	0%	0.00	0.00		0	375	0	0%

**MLT Only: Grant Funding** 



# HA08: Protecting Coldwater Fisheries on Minnesota's North Shore

MINNESOTA AND TRUST

Phase 3



Cook County, MN Flute Reed River (Alt-Anderson)

Two adjacent, fully donated conservation easements on the Flute Reed River in Cook County protected in total 194 acres of boreal forest and wetland habitats and more than 1.5 miles of shoreline in the upper reaches of this designated trout stream. This protection ensures continued delivery of clear, cold water for trout and other aquatic organisms and helps achieve local priorities identified in the Lake Superior North One Watershed One Plan.

### **HA08: North Shore Coldwater Fisheries Phase 3**

## Results to Date through 8/1/2024



		Bud	get	Output											
		Tot	·al		Protection Restore/Enhance										
		100			Acr	es Protected	ŀ	Shoreline	(mi) Pro	tected	Projects	Acres Re	stored/Enha	anced	
						% of			% of					% of	
<b>Grant Phase</b>	Award	Spent	Committed	Remaining	Proposed	Outcome	Goal	Proposed	Actual	Goal		Proposed	Outcome	Goal	
North Shore 2020 Coldwater In Progress Fisheries	\$ 1,809,000	\$ 1,595,162	\$ -	\$ 213,838	288	427	148%	1.00	2.09	209%	5	70	115	164%	
North Shore 2022 Coldwater In Progress Fisheries 2	\$ 3,395,000	\$ 398,987	\$ 376,000	\$ 2,620,013	600	492	82%	1.40	2.64	188%	5	0	0		
North Shore 2025 Coldwater Proposed Fisheries 3	\$ 4,518,000	\$ -	\$ -	\$ 4,518,000	840	0	0%	2.00	0.00	0%	0	0	0		
Totals Across All Grants	\$ 5,204,000	\$ 1,994,150	\$ 376,000	\$ 2,833,850	888	919	104%	2.40	4.73	197%	10	70	115	164%	

# Lake County, MN Lake Superior (Lehr)

Minnesota Land Trust completed the purchase of a conservation easement near the city of Two Harbors in June 2024, protecting 61 acres of rugged North Shore forest habitat. The property includes a natural sea arch, a north-facing cliff, exposed bedrock shoreline, and a cobble beach along 2,378 feet of protected Lake Superior shoreline.



# HA09 - Metro B1g Rivers

Metro Big Rivers (MBR) Phase 15 will protect, restore and enhance 3,055 acres of wildlife habitat in the Metropolitan Urbanizing Area, with an emphasis on the Mississippi, Minnesota and St. Croix Rivers and their tributaries.

Metro Big Rivers is a proven, trusted partnership that gets results with Outdoor Heritage Funds for the LSOHC. MBR protects, connects and improves conservation lands in the metropolitan urbanizing area, expanding habitat for wildlife and Species of Greatest Conservation Need. MBR also creates and enhances opportunities for Twin Cities residents to connect with nature and wildlife near where they live.

Metro Big Rivers Phase 15 - 3,055 acres Protect 1,350 acres • Restore / Enhance 1,705 acres

Metro Big Rivers exceeds goals and leverages OHF funds. Results to-date (through Phase 13):

- 11,400 acres complete + 720 in progress = 12,120 acres
- 108% of acreage goals achieved
- OHF funds leveraged 42% with \$19.6 million of other funds to-date

#### Why invest OHF funds in the Metro Urbanizing Area:

- Protect critical habitat and improve degraded habitat along and near the migratory flyways and tributaries in the metro area
- Protect significant habitat in the metro area from development
- Benefit wildlife and Species of Greatest Conservation Need
- Improve water quality and in-stream food availability
- Ensure Twin Cities metro residents have high-quality opportunities to connect with nature near where they live
- Introduce more people to nature-based activities like hunting, fishing, wildlife observation, photography, hiking and paddling

#### Why trust and invest in Metro Big Rivers Phase 15:

- MBR achieves the LSOHC's goals in the Metropolitan Urbanizing Area.
- MBR aggressively leverages OHF funds -- \$19.6 million to-date (42% of OHF funds spent).
- By July 2025, MBR will have completed Phases 1-10, be almost done with Phase 11 and be well into Phases 12 14.
- MBR has spent \$46.2 million and committed another \$2.4 million in OHF grants to-date. We have \$8.7 million left in current grants (excluding Phase 14 that just started).

Metro Big Rivers works with with public partners and landowners committed to conservation to achieve the priorities of the LSOHC for Outdoor Heritage Funds in the Metro Urbanizing Area.

















# Metro Big Rivers Selected Accomplishments

**Friends of the Mississippi River** restored and enhanced prairie and forest habitat at the new William H. Houlton Conservation Area through MBR Phases 5, 7, 8 and 12. This 335-acre site at the confluence of the Elk River and Mississippi River was acquired by the Trust for Public Land with MBR Phases 2 and 3. FMR and volunteers removed invasive woody and herbaceous plants from the floodplain and upland forest. The former agricultural fields and degraded grasslands were restored to diverse native prairie through seeding, mowing and prescribed burns. Through evaluation of restoration techniques and how well wildlife is returning, FMR found high success in the restoration efforts. A bird survey identified the endangered Henslow's sparrow and four other Species of Greatest Conservation Need: the dickcissel, grasshopper sparrow, LeConte's sparrow and sedge wren.





Great River Greening enhanced

74 acres of oak forest through MBR Phase 8 at Carroll's Woods & Schwarz Pond Parks. Located in Dakota County adjacent to Rosemount High School, the urban park complex is a mix of oak savanna and woodland forests providing an oasis for wildlife habitat in an otherwise built-up urban environment. Enhancement activities focused heavily on addressing the infestation of invasive tree, shrub and herbaceous species. This required multiple years of activities including cutting and removing, follow-up treatments and goat grazing. The final seasons of activities also included planting native understory plugs and sowing native seed into enhanced areas. Through numerous volunteer events hosted by GRG, community members and high school students assisted with habitat restoration and learned about the ecology and importance of the site.

Minnesota Valley Trust acquired 196 acres in Carver County for the Rapids Lake and San Francisco Units of the Minnesota Valley National Wildlife Refuge with four OHF grants - MBR 5, 6, 7 & 8. These strategic acquisitions protected priority lands from residential development and created new opportunities for the public to engage in wildlife-based recreation, education and interpretation. MVT and FWS have been restoring the oak savannas and remnant prairies, as well as converting former agricultural fields to high-quality prairies and wetlands. The restoration and enhancement work was completed with MBR 7, MBR 9, Conservation Partners Legacy Grants and other non-state funds.





Minnesota Land Trust protected with conservation easement the 84-acre Sand Creek (Norris) property in Scott County in November 2022 with MBR 9.

The conservation easement permanently protects forested bluffs, a perennial stream, and wet-mesic hardwood forest within the Sand Creek watershed, a tributary of the Minnesota River. The property is near an extensive complex of public natural areas along the Lower Minnesota River, including the 5,490-acre Minnesota Valley State Recreation Area and the 14,000-acre Minnesota Valley National Wildlife Refuge.

**Trust for Public Land** acquired in fee title 1,833 acres of diverse habitat in northern Washington County to create the new Keystone Woods WMA. Acquired in 2 phases

in the fall of 2023, this acquisition utilized 7 OHF appropriations (4 MBR grants). Formerly known as Kelley Farm, this property was one of the largest tracts of undeveloped land in the Metro Region. It provides high biodiversity habitat for a variety of wildlife species. The land is in the process of being transferred to the MN DNR and will provide outstanding outdoor recreation opportunities.

TPL is leading a multi-phase restoration and enhancement process on this land, which will include prairie, wetland, woodland, and oak savanna. Work has already begun to remove woody invasive species. Over the next 5 to 7 years, approximately 1,700 acres of prairie, forests, and wetlands will be restored or enhanced, ensuring resilient, high-quality habitat for wildlife and recreational users to enjoy.



# HA12: Protecting Minnesota's Lakes of Outstanding Biological Significance











## Study: Water clarity in lakes affecting loons' success

MPR News: Kirsti Marohn Brainerd, Minn. April 13, 2024 8:00 AM https://www.mprnews.org/story/2024/04/13/study-water-clarity-in-lakes-affecting-loons-success

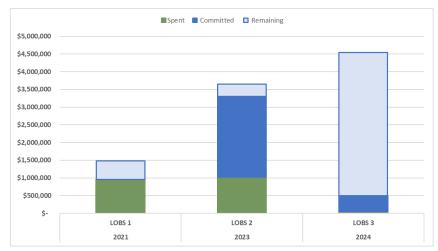


Excerpt: A new research paper says reduced water clarity of lakes in mid summer, linked to increased rainfall caused by climate change, is affecting the survival of common loons in northern Wisconsin....The researchers found a positive correlation between water clarity in the month of July and the body mass of loon chicks...."As time goes by, with climate change and warming temperatures, we can expect that loon chicks will continue to suffer".



HA12:	LOBS 4																					
Results	s to Date	through	8/:	1/2024																		
					Buc	lge	t									Output						
					To	tal					Protection											
					10	lai					Protec	tio	n Leverage		Acı	es Protected		Shoreline	e (mi) Pro	tected	Project	
	Grant Pha	ise		Award	Spent		Committed		Remaining		Proposed		Actual	% of Goal	Proposed	Outcome	% of Goal	Proposed	Actual	% of Goal		
2021 L	LOBS 1	In Progress	\$	1,477,000	\$ 957,205	\$	-	\$	519,795	\$	180,000	\$	332,940	185%	216	583	270%	0.50	4.41	881%	6	
2023 L	LOBS 2	In Progress	\$	3,648,000	\$ 1,033,266	\$	2,270,000	\$	344,734	\$	408,600	\$	190,000	47%	451	776	172%	0.50	9.98	1995%	3	
2024 l	LOBS 3	In Progress	\$	4,540,000	\$ 55,526	\$	443,000	\$	4,041,474	\$	470,000	\$	-	0%	624	60	10%	1.00	1.03	103%	1	
2025 L	LOBS 4	Proposed	\$	10,161,000	\$ -	\$	-	\$	10,161,000	\$	1,000,000	\$	-	0%	1,765	0	0%	1.00	0.00	0%	0	
					Buc	lge	t								ı	Protection						
					То	tal					L	eve	erage		Acı	es Protected		Shorel	ine Prote	cted	Project	
P	Program To	tals		Award	Spent	С	ommitted	F	Remaining		Proposed		Actual	% of Goal	Proposed	Outcome	% of Goal	Proposed	Actual	% of Goal		
		Complete	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-		0	0		0.00	0.00		0	
		In Progress	\$	9,665,000	\$ 2,045,997	\$	2,713,000	\$	4,906,003	\$	1,058,600	\$	522,940	49%	1,291	1,419	110%	2.00	15.41	771%	10	
	Totals Acre	oss All Grants	\$	9,665,000	\$ 2,045,997	\$	2,713,000	\$	4,906,003	\$	1,058,600	\$	522,940	49%	1,291	1,419	110%	2.00	15.41	771%	10	

## Spent and Committed Funding by Grant



# HA13 Shakopee Creek: Headwaters Restored, Species and Land Protected Kandiyohi County, Minnesota



#### Partners:

- Landowners
- Lake Andrew Township

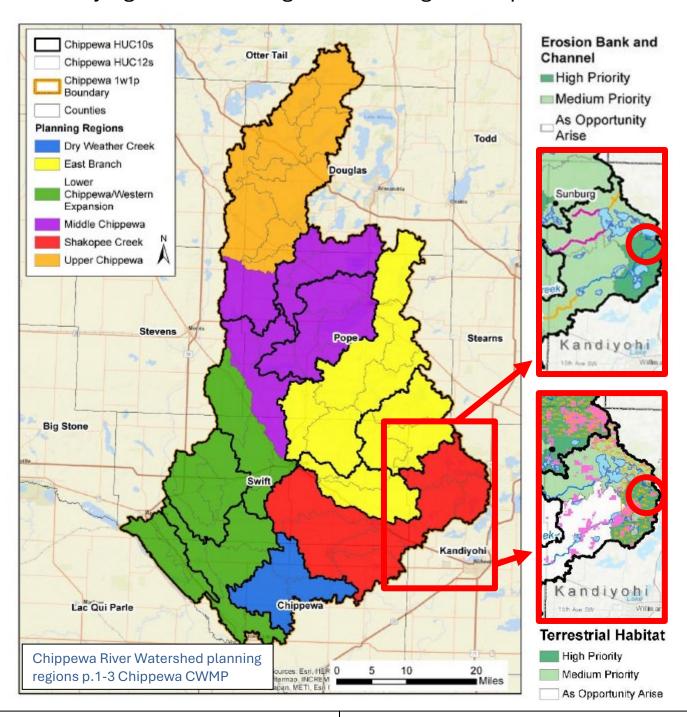








# Chippewa Comprehensive Watershed Management Plan Identifying and Prioritizing Issues + Targeted Implementation



Terrestrial Habitat: Need for protection and improvement of existing terrestrial habitat (including forested areas, prairie, and areas of perennial ground cover) and habitat connectivity to promote wildlife and species richness. Loss of stream connectivity and aquatic habitat, and aging infrastructure impacting aquatic communities. p.3-2 Chippewa CWMP

Hydrology: The combination of expanding drainage, lack of upland water storage, changes to land use patterns, and increased precipitation have resulted in increased discharge and frequency across the entire range of flows in the Chippewa River Watershed. These effects have impacts on water quality, aquatic life, and downstream flooding. p.3-2 Chippewa CWMP

**Erosion Bank and Channel (Sediment): Erosion and sloughing of streams and ditches** increases sediment and nutrient loading to surface water impacting aquatic communities and overall channel structure. p.3-2 Chippewa CWMP