



LOWER ST. CROIX WATERSHED  
PARTNERSHIP



**7-24-23 Policy Committee meeting**



## 7-24-23 Policy Committee Agenda

1. Welcome and introductions
2. Approve agenda
3. Approve 4-24-23 Policy Committee minutes
4. 2022 Activities Report
5. Updates on Lower St. Croix Watershed Plan Implementation
  - WBIF Grant
    - Financial Report (FY21 & 23)
    - Ag outreach & non-structural ag program
    - Shared education program
    - Projects in-progress
  - CWF Soil Health Grant
6. Program snapshot: Minimal Impact Development Standards (MIDS)
7. Topics and format for October Policy Committee meeting
8. Adjourn

# 2022 Activities Report



# 2021 Activities Report

ANNUAL REPORTING AND PLAN OF WORK (Does not include WBIF grant)

Lower St. Croix Partnership Annual Plan of Work (based on LSC CWMP Table 5-1)

#	Activity	Priority Location	Measurable Output	Implementation Actions	From CWMP		2-year outputs and costs divided by 2				Fiscal Agent/ Responsible Party	Funding Sources	WD, WMO, SWCD, County, LID, or Multiple	2021 Yearend Progress Reporting		
					Years 1-2 Outputs	Years 1-2 Estimated Cost	Fiscal Year 1 (Jul '21-Jun '22) Outputs	Fiscal Year 1 (Jul '21-Jun '22) Estimated Cost	Fiscal Year 2 (Jul '22-Jun '23) Outputs	Fiscal Year 2 (Jul '22-Jun '23) Estimated Cost				Year 1 (2021) Description of Outputs Accomplished	Year 1 (2021) Dollars Spent	Year 1 (2021) Phosphorus Removal
<b>Part A. Implementation Actions for Agricultural Lands</b>																
1	<b>*GW Quality (Table 3-1 GW1A, 2B)</b>	Basin Wide Priority - Agricultural lands where: 1) DWSMA vulnerability is moderate, high, or very high; or 2) Pollution sensitivity to wells is high or very high; or 3) Pollution sensitivity to near surface materials is karst or high; or 4) Well testing show > 5 mg/L nitrate See Figure 5-1	Install BMPs on 2,200 acres that improve soil health and/or reduce nitrogen and pesticide pollution to groundwater		300 ac	[see Table 5-1 Impl. Actions]	150 ac		150 ac		Chicago SWCD	FY21 WBIF (Activity 4), other  Partner local funds, state/federal grants	WD CLFLWD: 30 acres of cropland conversion to perennial (34 lb/yr P reduction to Bone Lake)  Multiple CMSCWD/WCD/Land Trust: 14.0 acres cropland to prairie and savannah 19.4 lb/yr P reduction to Silver Creek. County Washington County: 18 acres cropland to prairie at St. Croix Bluffs Regional Park	\$59,000	\$5,000	34 lb/yr phosphorus
2	<b>*Rivers &amp; Streams + St. Croix River WQ (Table 3-1 R&amp;S 1A; STC 1B, C)</b>	Regionally Significant Rivers and Streams: - All streams and tributaries in Sunrise River Watershed (whole watershed regardless of direct drainage) - Direct drainage areas to St. Croix River through Rock, Rush, Goose, Lawrence, and Browns Creeks and Trout Brook and other small streams shown in Figure 5-2 See Table 5-2 for streams and total phosphorus reduction goals; see Figure 5-2	Reduce total phosphorus by 3,300 lbs/year (Install approximately 220 BMPs @ estimated 15 lbs/BMP) and reduce TSS, bacteria, and nitrogen as secondary benefit.		450 lbs TP (approx. 30 BMPs)	[see Table 5-1 Impl. Actions]	225 lbs TP (approx 15 BMPs)		225 lbs TP (approx 15 BMPs)		Chicago SWCD for WBIF projects, see specific entity for non-WBIF projects	FY21 WBIF (Activity 2, 4),  Partner local funds, state/federal grants	SWCD ISWCD: Cover Crops (N. Branch Sunrise River (140 acres)- 6.6 lbs/yr.  SWCD CSWCD: Direct Drainage 12 structural BMPs = 836 lbs/yr. Cover Crops (Sunrise River and Direct Drainage) 157 acres, 7.5 lbs/yr. SWCD WCD: buffer restoration (St. Croix direct drainage, Marine), St. Croix River shoreline stabilization = 37.4lb/yr P = 88,000 lb TSS Multiple ACD & SRWMO: Martin Lake Shores Stormwater Pond Enhancement Project 1,098lb/yr P = 456lb/yr TSS Multiple ACD & SRWMO: Arvold Martin Lakeshore stabilization 2.8lb/yr TP = 5,625lb/yr TSS Multiple ACD & SRWMO: Farden-Martin Lakeshore stabilization 0.48lb/yr TP + 600lb/yr TSS WD CLFLWD: Bone Lake Southeast/Meadowbrook Wetland Restoration (Sunrise River watershed) = 35 lb/yr P. County Washington County: 18 acres cropland to prairie at St. Croix Bluffs Regional Park = 21lb/yr TP to St. Croix River WD CMSCWD: Marine on St. Croix Town Center Stormwater Retrofits. St. Croix River: 16.7 lb/yr TP and 15,010 lb/yr TSS LID CLLID: The CLLID provides match funds to encourage environmentally sound land use practices for urban and agricultural areas to protect water quality within the Chicago Lakes Chain of Lakes Watershed WD BCWD: Brown's Creek Diversion Tributary restoration benefits Brown's Creek, McKusick Lake, and the St. Croix. Installed 22 rock vanes along 5,200 linear feet of stream. Reduced TP 52 lbs/year, TSS 48 tons/year. All funding from BCWD local levy: \$87,500 SWCD PSWCD: Partnership effort with NRCS to install WASCBs and a grassed waterway on two separate properties. EGP paid for a portion of the installation. Pine SWCD secured funding through Wild Rivers Conservancy to cover the rest. 222.48lb/yr P, 184lb/yr TSS	\$897,712		6.6 lb/yr phosphorus 843.5 lb/yr phosphorus 37.4 lb/yr phosphorus 1.09 lb/yr phosphorus 2.8 lb/yr phosphorus 0.48 lb/yr phosphorus 35 lb/yr phosphorus 21 lb/yr phosphorus 16.7 lb/yr phosphorus 52 lb/yr phosphorus 48 lb/yr phosphorus
3	<b>*Lake WQ from ag (Table 3-1 LX1A, 2A)</b>	Regionally Significant Lakes for Agricultural BMPs See Table 5-3 for lakes and total phosphorus reduction goals; see Figure 5-3 for map	Install conservation BMPs, near sensitive lakes or in direct lake catchments to reduce TP by 1,275 lbs (estimated 15 lbs/BMP) and reduce TSS, bacteria, N as secondary benefit.		150 lbs TP (approx. 300 ac and/or 10 BMPs)	[see Table 5-1 Impl. Actions]	75 lbs TP (approx 150 ac and/or 5 BMPs)		75 lbs TP (approx 150 ac and/or 5 BMPs)		Chicago SWCD for WBIF projects, see specific entity for non-WBIF projects	FY21 WBIF (Activity 2, 4),  Partner local funds,	SWCD CSWCD: Rush Lake: 1 structural BMP: 2.6 lbs/yr			2.6 lb/yr phosphorus
4	<b>GW Quantity (Table 3-1 GW2A)</b>	All agricultural irrigators: highest priority given to highest consumers. [For context: Active water use permits from MPARS database 2018: 100 agricultural irrigators; 157 Water Supply Wells; 37 Non-crop irrigators. Total = 294. 100 of those used >1MG in 2018.]	Install or retrofit smart technology on 40 irrigation systems [For context: Active water use permits from MPARS database 2018: 100 agricultural irrigators; 157 Water Supply Wells; 37 Non-crop irrigators. Total = 294. 100 of those used >1MG in 2018.]			[see Table 5-1 Impl. Actions]					SWCD/WMO/WO/CLLID	Partner local funds, state/federal grants				
5	<b>River &amp; Stream Flows (Table 3-1 R&amp;S 3A)</b>	Basin wide	Identify and map 100% of private ditches as part of developing Conservation Plans	Maps created during all applicable landowner interactions.		[see Table 5-1 Impl. Actions]	Maps created during all applicable landowner interactions		Maps created during all applicable landowner interactions		SWCD/WMO/WO/CLLID	Partner local funds, state/federal grants				
6	<b>Drainage impacts on wetlands (Table 3-1 WTL 1B)</b>	All public and private ditches	Review 100% of drainage projects for possible impacts to wetland quality	All active and proposed projects reviewed		[see Table 5-1 Impl. Actions]	All active and proposed projects reviewed		All active and proposed projects reviewed		SWCD/WMO/WO/CLLID	Partner local funds, state/federal grants	County Chicago County: As a result of the new buffer requirements, 2021 also saw a busy ditch inspection year. The Wetland Specialist continues to oversee the maintenance of County public and private ditch and drainage system for functionality and adherence to the drainage code and the WCA drainage standards.  Chicago County: 2021 saw a further increase to Wetland Conservation Act (WCA) applications, particularly in the area of wetland delineation reviews. The Wetland Specialist saw to 12 alleged wetland violations, five actual violations and resolved one restoration orders in 2021. The wetland specialist	\$27,700	\$27,700	



# 2022 Activities Report

**2022 TOTAL funding spent in priority areas in the LSC: \$2,826,689**

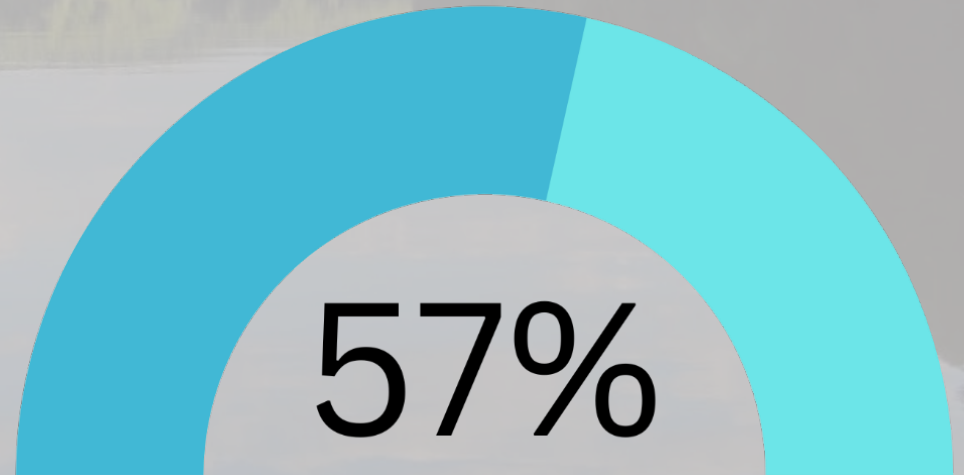
**WBIF: \$507,691    Non-WBIF Funds: \$2,319,998**

**Total amount of phosphorus reduced in priority waterbodies in 2022: 1,660.5 lbs/yr**

2021: 1,493.77 lbs/year phosphorus reduction

2022: 1,660.5 lbs/year phosphorus reduction

10-year phosphorus reduction goal: 5,503 lb/yr









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**FY21 WBIF - Lower St. Croix Watershed Partners Grant - Updated July 2023**

A	B	C	D	E	F	G	H	I
ACTIVITY	WBIF BALANCE	MATCH BALANCE	AMOUNT WBIF's ENCUMBERED (Sub-Agreements)	AMOUNT WBIF's SPENT	AMOUNT WBIF'S UNSPENT	PERCENT WBIF's ENCUMBERED	PERCENT WBIF's SPENT	AMOUNT OF MATCH FUNDS RECEIVED
A1 Basin Ag Outreach Program	\$ 200,000.00	\$ -	\$ 200,000.00	\$ 143,999.74	\$ 56,000.26	100%	72%	\$ -
A2 Structural Ag BMP Implementation	\$ 107,174.00	\$ 55,000.00	\$ 106,462.31	\$ 97,985.31	\$ 9,188.69	99%	91%	\$ 80,685.45
A3 Shared Services Educator	\$ 125,000.00	\$ 4,800.00	\$ 125,000.00	\$ 125,000.00	\$ -	100%	100%	\$ 63,353.00
A4 Non-Structural BMPs	\$ 100,000.00	\$ -	\$ 100,000.00	\$ 80,000.00	\$ 20,000.00	100%	80%	\$ -
A5 Structural Urban BMP Implementation	\$ 360,000.00	\$ 70,000.00	\$ 360,000.00	\$ -	\$ 360,000.00	100%	0%	\$ -
A6 Wetland Restoration Implementation	\$ 105,857.00	\$ -	\$ 105,857.00	\$ 105,843.07	\$ 13.93	100%	100%	\$ -
A7 Internal Analyses	\$ 16,500.00	\$ -	\$ 16,500.00	\$ 16,500.00	\$ -	100%	100%	\$ 15,852.26
A8 Targeting Analyses	\$ 150,000.00	\$ -	\$ 146,413.40	\$ 116,157.71	\$ 33,842.29	98%	77%	\$ 671.61
A9 Technical/Engineering	\$ -	\$ -	\$ -	\$ -	\$ -			\$ -
A10 Administration/Coordination	\$ 100,000.00	\$ -	\$ 104,298.29	\$ 96,371.60	\$ 3,628.40	104%	96%	\$ 712.17
<b>PROJECT BALANCE:</b>	<b>\$ 1,264,531.00</b>	<b>\$ 129,800.00</b>	<b>\$ 1,264,531.00</b>	<b>\$ 781,857.43</b>	<b>\$ 482,673.57</b>	<b>100%</b>	<b>62%</b>	<b>\$ 161,274.49</b>

Grant Agreement BWSR Approved: 3/31/21

Grant Agreement Expires: 12/31/2023

Grant Total: \$1,264,531

Minimum Match Amount: \$126,454



**FY23 WBIF - Lower St. Croix Watershed Partners Grant - Updated July 2023**

A	B	C	D	E	F	G	H	I
	WBIF BALANCE	MATCH BALANCE	AMOUNT WBIF's ENCUMBERED (Sub-Agreements)	AMOUNT WBIF's SPENT	PERCENT WBIF's ENCUMBERED	PERCENT WBIF's SPENT	AMOUNT OF MATCH FUNDS RECEIVED	WBIF BALANCE REMAINING
A1 Structural Ag BMP Implementation	\$ 140,000.00	\$ 37,500.00	\$ -		0%	0%		\$ 140,000.00
A2 Structural Urban BMP Implementation	\$ 118,054.00	\$ 37,500.00	\$ 45,000.00		38%	0%		\$ 73,054.00
A3 Non-Structural Ag/Urban BMP Implementa	\$ 122,025.00	\$ -	\$ 122,025.00		100%	0%		\$ -
A4 Wetland Restoration Implementation	\$ 220,000.00	\$ 50,000.00	\$ 220,000.00	\$ 220,000.00	100%	100%	\$ 50,000.00	\$ -
A5 Agronomy Outreach Specialist	\$ 225,000.00	\$ -	\$ 225,000.00		100%	0%		\$ -
A6 Shared Services Educator	\$ 270,500.00	\$ 2,857.90	\$ 227,840.00	\$ 13,248.04	84%	5%		\$ 42,660.00
A7 Technical/Engineering	\$ 40,000.00	\$ -	\$ 10,000.00		25%	0%		\$ 30,000.00
A8 Internal Analyses	\$ 18,000.00	\$ -	\$ -		0%	0%		\$ 18,000.00
A9 Targeting Analyses	\$ 45,000.00	\$ -	\$ 12,000.00		27%	0%		\$ 33,000.00
A10 Administration/Coordination	\$ 80,000.00	\$ -	\$ 54,405.80	\$ 5,594.20	68%	7%		\$ 25,594.20
<b>PROJECT BALANCE:</b>	<b>\$ 1,278,579.00</b>	<b>\$ 127,857.90</b>	<b>\$ 916,270.80</b>	<b>\$ 238,842.24</b>	<b>72%</b>	<b>19%</b>	<b>\$ 50,000.00</b>	<b>\$ 362,308.20</b>

Minimum Match Amount: \$ 127,858.00

Grant Agreement BWSR Approved: 11/9/2022

Grant Agreement Expires: 12/31/2025



# Ag Outreach & Non-Structural Ag Program

April – July 2023

## Outreach

- Hosting **monthly ag team meetings** for LSCWP staff
- **MN Soil Health Action Framework Stakeholder** cohort member - developing a statewide framework
- Presented to **Washington Master Gardeners** and posted video on YouTube - managing soils in vegetable production
- Presented at an **emerging farmer event** - how to soil test and improve soil functions, provided binders on how to soil test, how to interpret results, nutrient recommendations, and aspects of different amendments
- Presented at **MASWCD Area IV meeting** – inner workings and success of the partnership
- Speaking monthly on **WCMP 100.9 radio**
- **Creating videos** in the field - tillage management effects on temperature, partner promotion, keeping the soil covered, example of no-till and cover crop implementation, and soil erosion
- Creating and posting on **social media**
- Working with partners **on planning and implementing 4 ag field days**
- Working with partners and put on 2 of the 3 **Evening in the Prairie** series





# Ag Outreach & Non-Structural Ag Program

April – July 2023

## Technical Assistance

- Completed **cover crop field surveys** on 22 sites
- Completed **soil health testing** on 5 sites
- Completing **site visits for practice certifications** (2,798ac)
  - Conservation Cover: 20ac 1 producer
  - Pasture and Hayland Planting: 147.7ac 4 producers
  - Conservation Tillage: 1,000ac 3 producers
  - No-Till/Strip Till: 1,630ac 14 producers
- **Conservation planning and support** – site visits, communications, tech recommendations, designs, and collaboration
- **Training staff** to increase JAA
- Reviewing **certification** and completed **project documentation**
- Updating and maintaining **project spreadsheet** – practices, extent, reductions, partners, etc
- Participated in **Washington County's LWG meeting** providing feedback and recommendations
- Providing partner staff with **technical support**





# CWF Soil Health Grant

April – July 2023

Secured a \$200,000 Clean Water Fund Grant allowing to shift WBIF23 Ag NS implementation funds to other projects, increasing the amount of funding to implement projects and provide outreach within the basin

## Planned and Implement Soil Health Practices:

- **No-till/strip till** - 1,147ac implemented, 3,44.2ac planned
- **Cover crops** - 399ac planned
- **Pasture/ hayland planting** - 127.7ac implemented
- **Conversion of cropland to perennials** - 20ac implemented, 30.5ac planned
- Approximately \$26K left to encumber while exceeding N reductions by 14,000lbs

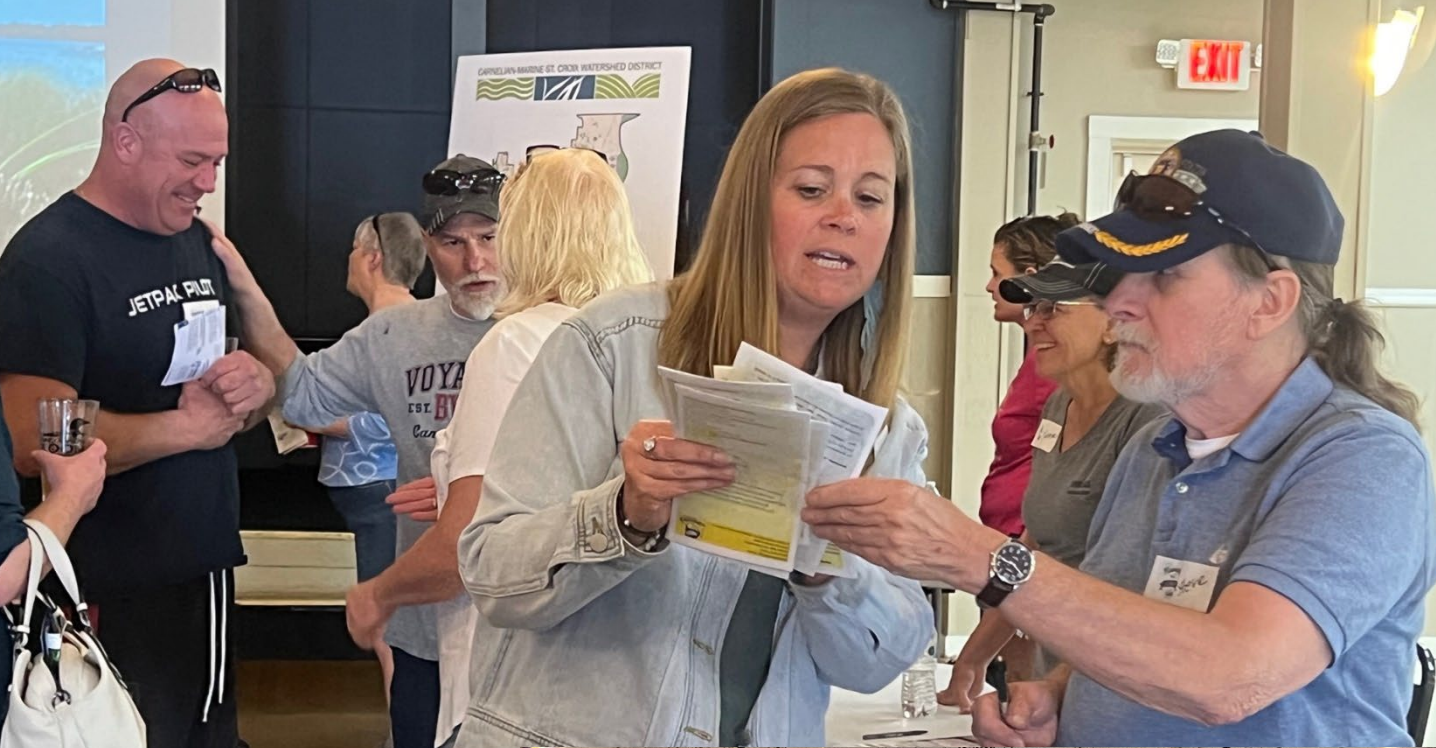


# Shared Education Program

April – July 2023







# Shoreland outreach:

- May 20<sup>th</sup> Navigate to a Cleaner Lake Showcase at the Uncommon Loon Brewery (40 attendees)
- Protect and Restore Your Shore webinars (50 attendees)
- “Vanishing shoreline” sessions at Workshops on the Water
- Buffer neighborhood show and tell events??
- MN Lakes and Rivers Advocates bringing the annual meeting to Stillwater in late April 2024
- Potential for lake association mini-conference? (will explore this winter)





# Local leader outreach:

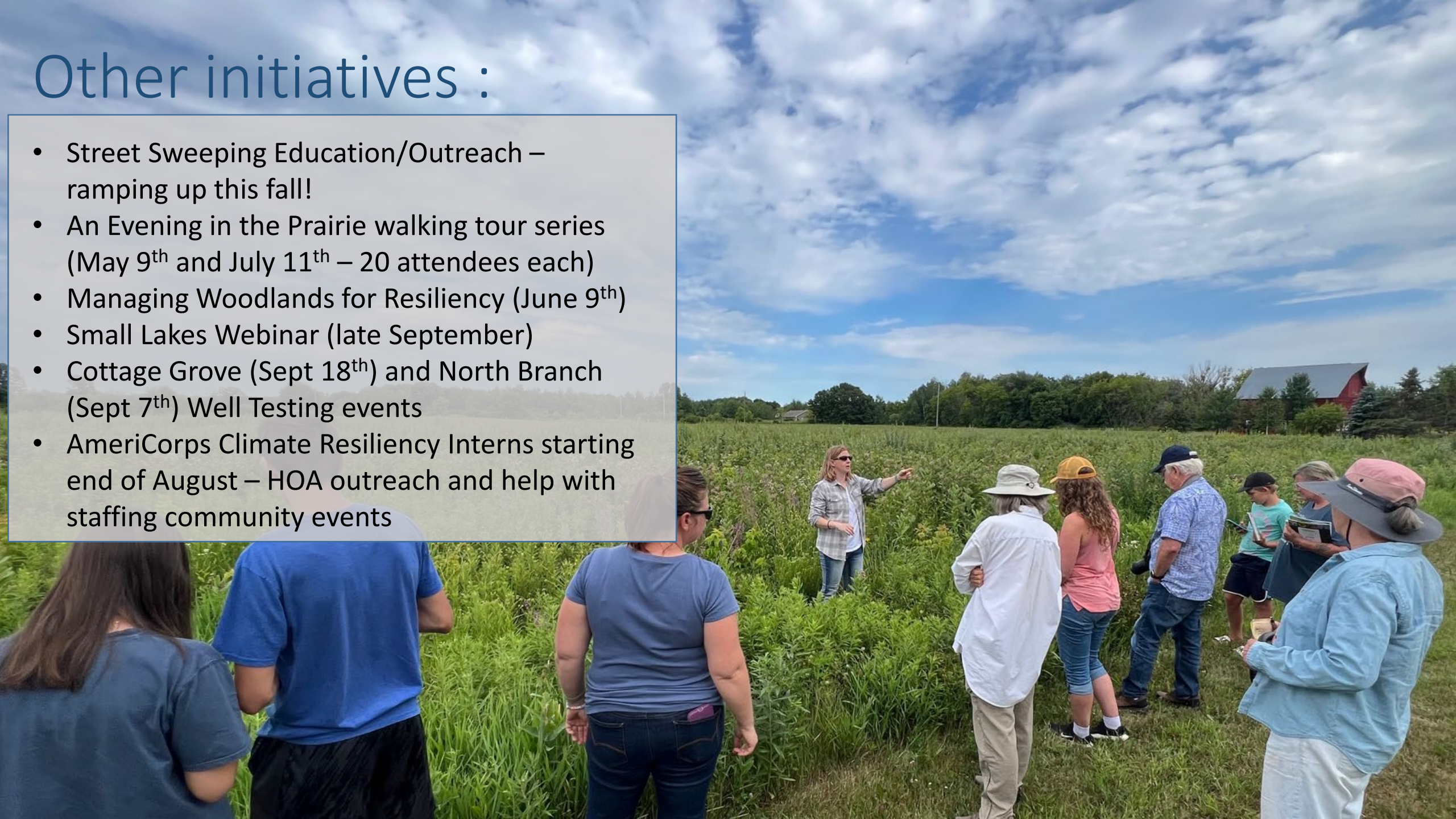
- June Smart Salting for Local Leaders (several attendees from LSC area)
- Workshops on the Water
  - Taylors Falls – roughly 100 attendees
  - Stillwater – roughly 80 attendees
- Assisting Jay Michels and Mike Isensee in assessing interest in communities to adopt Minimal Impact Development Standards
  - North Branch
  - Rush City
  - Chisago City
  - Scandia
  - Marine on St. Croix





# Other initiatives :

- Street Sweeping Education/Outreach – ramping up this fall!
- An Evening in the Prairie walking tour series (May 9<sup>th</sup> and July 11<sup>th</sup> – 20 attendees each)
- Managing Woodlands for Resiliency (June 9<sup>th</sup>)
- Small Lakes Webinar (late September)
- Cottage Grove (Sept 18<sup>th</sup>) and North Branch (Sept 7<sup>th</sup>) Well Testing events
- AmeriCorps Climate Resiliency Interns starting end of August – HOA outreach and help with staffing community events





## Large projects currently underway

- **Trout Brook Stream Restoration** (South Washington Watershed District)
  - 177lb/yr phosphorus reduction to Trout Brook and St. Croix River
  - \$350,000 from FY21
- **Sunrise River Wetland** (Comfort Lake-Forest Lake Watershed District)
  - 81lb/yr phosphorus reduction to Sunrise River
  - \$300,500 (\$80,000 from FY21, \$220,000 from FY23)

**Trout Brook at Afton Alps**

**A Helping Hand for a Damaged Stream**

A cold-water stream flows through the hills of Afton Alps and Afton State Park, bringing life to a valley in the woods. Over the past 150 years, Trout Brook has weathered the rise and fall of logging, decades of farming, and several manmade changes that made way for parking lots, roads, buildings and ski slopes.

In 2019, the South Washington Watershed District worked with Great River Greening and Vail Resorts to complete a large-scale restoration project.

Designed to return Trout Brook to good health, the stream was restored from a straight channel back to its natural, curving course.

**Now a Stream of Life**

This stream is once again a cold water habitat capable of sustaining its namesake Brook Trout. It serves as a passage for trout and other fish to swim upstream and down at different times of the year when feeding, overwintering and laying eggs. But it is more than that. Native plants along its banks provide vital animals like frogs, dragonflies, bees and songbirds with their daily needs for food, nests and shelter. Larger animals like deer, fox and badgers find a narrow corridor through the ice, a

**Onward to the St. Croix River**

Trout Brook flows through Afton State Park to the St. Croix River. The restoration established a riparian floodplain and buffer, which capture sediment and excess nutrients before the stream's water reaches the St. Croix. This helps improve the river's natural function.

The St. Croix is a federally protected Wild and Scenic River, a rich habitat that hosts diverse wildlife:

- 115 species of fish, including Smallmouth Bass, Mudpuppy, Walleye, Catfish and even Sturgeon
- 320 species of birds, with 90 qualifying for greatest conservation need
- 40 species of mussels, with five on the endangered species list

WAIL RESORTS GREAT RIVER GREENING VAIL RESORTS

Partners in Restoring Trout Brook





## Urban projects currently underway

### FY21 Urban Structural

- **Big Marine Boat Launch Sediment Plume Reduction**
  - \$10,000 (Carnelian-Marine-St. Croix Watershed)
- **Oak street bioretention basins**
  - \$45,000 (Carnelian-Marine-St. Croix Watershed)
- **May Twp. stormwater retrofit engineering/tech**
  - \$10,000 (Carnelian-Marine-St. Croix Watershed)

*Total = \$65,000*

### FY23 Urban Non-Structural

- **Street sweeping plan implementation**
  - Linwood Twp. (\$3630)
  - Wyoming (\$15,000)
  - North Branch (\$15,000)
  - Afton (\$13,395)
  - MSCWMO – 8 cities combined (\$45,000)

*Total = \$92,025*





# Targeting and prioritization analyses

## IN PROGRESS

- **NEW – Goose Lake SWA** (Chisago SWCD)
  - \$12,000 (FY23)
- **Rock Lake SWA** (Pine Co)
  - \$12,541 (FY21)
- **Sunrise River Priority Drainage Areas** (Anoka Co)
  - \$27,200 (FY21)
- **Northeastern Washington Co St. Croix and Spring Streams** (Carnelian-Marine-St. Croix WD)
  - \$20,000 (FY21)

## COMPLETE

- **Updating urban and rural subwatershed prioritization (SWA) protocols**
  - \$8000 (FY21)
- **Delineation and prioritization of contributing subcatchments - Pine County and Sunrise River**
  - \$26,772 (FY21)
- **Tree canopy assessment protocol for enhanced street sweeping**
  - \$8,500 (FY21)
- **Street sweeping studies – 16 cities**
  - \$40,000 (FY21)

**TOTAL AVAILABLE (FY21 = \$150,000) (FY23 = \$45,000)**

**TOTAL ENCUMBERED = \$146,413 from FY21, \$12,000 from FY23**



Project requests <**\$50K** need to be submitted by **8/9**

This deadline applies for the following activities:

A1 – Structural ag BMPs

A2 – Structural urban BMPs

A4 – Wetland restoration (already 100% spent)

A7 – TA and engineering

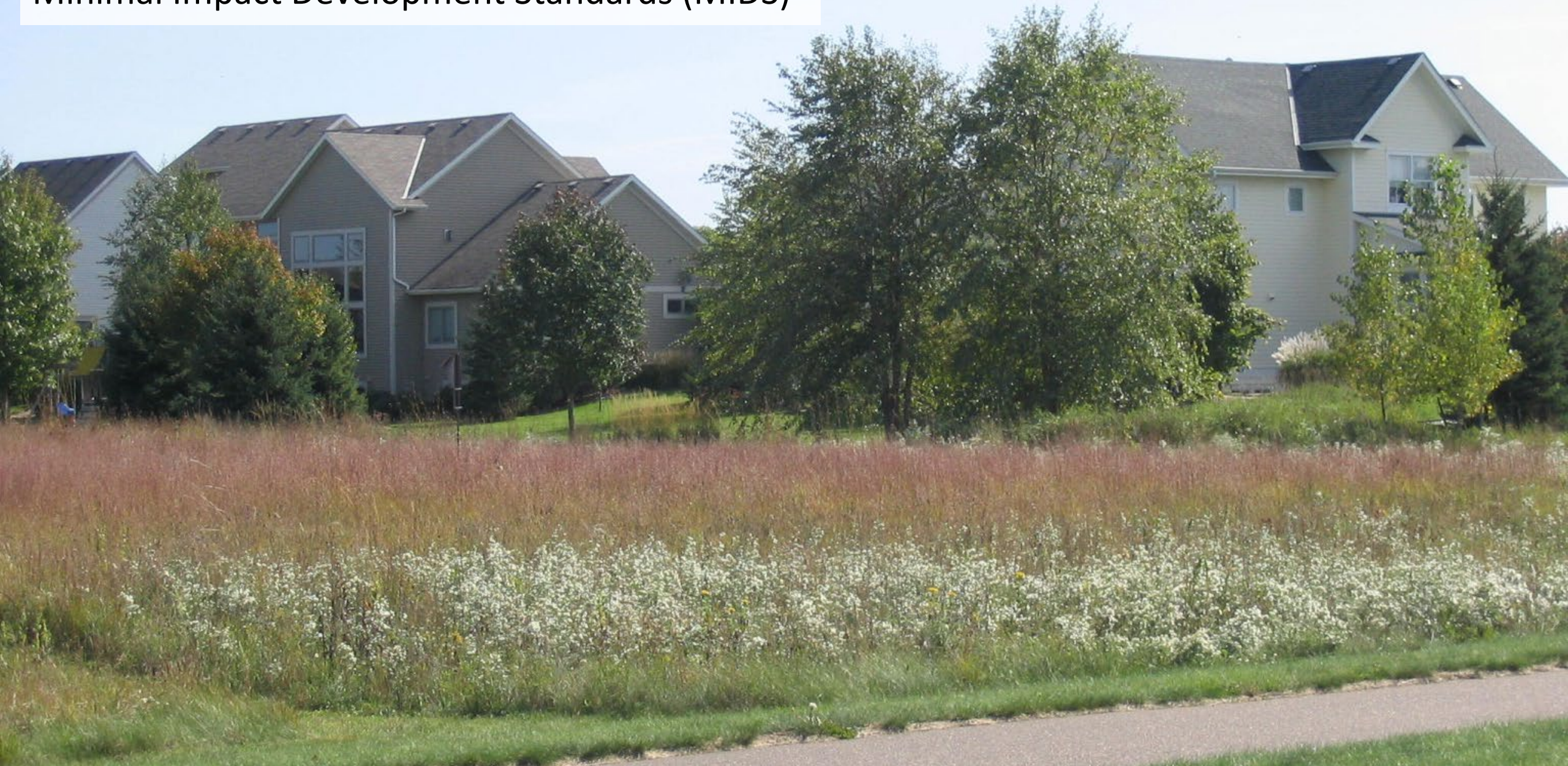
A8 – Internal analyses

A9 – Targeting and prioritization analyses



## Program Snapshot:

### Minimal Impact Development Standards (MIDS)





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