

2021 WBIF – Lower St. Croix Watershed Partners Annual Report

Reporting Period: **March 31, 2021-December 31, 2021**

Grant ID: C21-4732 | Grant Expiration: December 31, 2023

Due to BWSR by February 1, 2022

eLINK Actual Results

This section contains the text to be pasted into the eLINK “Actual Results” reporting boxes for each work plan activity. The sections following this one will not be pasted directly into eLINK, but this document can be saved and uploaded to eLINK attachments.

For each activity, report the following:

- **Description of work:** *Provide a narrative of work that occurred under this activity during the reporting period. This should align with what was billed under the financial section.*
- **Outputs achieved:** *List what was produced or done by the organization. Outputs help tell the story of how the organization works toward outcomes. Examples may include number of landowners contacted, number of outreach materials produced, number of BMPs implemented. See Attachments A and B to the Detail Work Plan Text for a list of outputs for Activity 1 Basin Ag Outreach Program and Activity 3 Shared Services Educator, respectively.*
- **Outcomes achieved [if applicable]:** *Generally put, outcomes are the level of performance or achievement that occurred. Outcomes differ from outputs in that they are what is ultimately desired, rather than an interim step. For example, number of best management practices installed is an output, while nutrient load reduction at a target waterbody is the outcome. The two main outcomes to be reported are total phosphorus and total suspended solids loads reduced at target waterbodies. Priority target waterbodies and associated phosphorus reduction goals are listed in tables 5-2 and 5-3 of the LSC CWMP. Reporting tables based on tables 5-2 and 5-3 are included in this reporting template. Measurable outcomes will be reported for implementation activities (i.e., activities where on-the-ground project implementation occurs). For all other activities, only outputs will be reported.*

Activity 1: Basin Ag Outreach Program

Actual Results – December 31, 2021 Update:

- **Description of work:** The A1 subcommittee compared options for hiring the Agronomy Outreach Specialist including internal hire and contracting through University of MN Extension, ultimately deciding on the latter due to benefits of a partnership with UMNE. The A1 subcommittee worked closely with UMNE to post the job opening, review applications, interview candidates, and ultimately hired the number one candidate from the interview process. Projected start date is sometime in February 2022.
- **Outputs achieved:** Hired Agronomy Outreach Specialist in partnership with University of MN Extension (official announcement sent out January 2022).

Activity 2: Structural Ag BMP Implementation

Actual Results -- December 31, 2021 Update:

- Description of work: The A2/4/5 subcommittee (note that this subcommittee encompasses multiple grant activities from structural urban/ag to nonstructural urban/ag) met several times over the course of the period to review potential projects.
- Outputs achieved: The A2/4/5 subcommittee approved two projects for WBIF funding: McQuade Ravine Stabilization (South Washington Watershed District) and Hinze Cattle Exclusion (Pine SWCD).
- Outcomes achieved: Implemented two projects using WBIF funds: McQuade Ravine Stabilization (251 lb/yr phosphorus reduction, 295 tons/yr TSS reduction to St. Croix River) and Hinze Cattle Exclusion (3.48 lb/yr phosphorus reduction, 1.89 tons/yr TSS to Rock Lake).

Activity 3: Shared Services Educator

Actual Results -- December 31, 2021 Update:

- Description of work: The A3 subcommittee completed the position description and announcement, reviewed applications, interviewed applicants, and ultimately hired Barbara Heitkamp as the LSC Shared Services Educator. Since then, Barbara has worked closely with EMWREP Coordinator, Angie Hong, as well as other partners throughout the basin to provide education services including: project tours, community events, workshops, newsletters, social media, and public engagement.
- Outputs achieved:
 - Virtual project tour, 10 new videos, 80+ social media posts, one cover crop flyer, three lake association events, two soil health field days, three visits with landowners, one public officials tour, two presentations for lake groups, two quarterly emails for Lower St. Croix partners, one e-newsletter to lake associations, a successful nomination for AMC-BWSR Conservation Award
 - Refer to WBIF Work Plan Attachment B – Shared Services Educator Details & Milestones

Activity 4: Non-Structural Ag/Urban Implementation

Actual Results -- December 31, 2021 Update:

- Description of work:

The A2/4/5 subcommittee focused on working with the A8 subcommittee to establish protocols for enhanced street sweeping studies (a highly cost-effective non-structural urban BMP). See Activity 8. Once protocols are complete, partners will complete enhanced street sweeping studies for priority communities. Only communities with enhanced street sweeping studies in alignment with protocols will be eligible for street sweeping incentive payments through this grant activity.
- Outputs achieved: Protocols to be completed in early 2022.
- Outcomes achieved: No projects implemented yet.

Activity 5: Structural Urban BMP Implementation

Actual Results -- December 31, 2021 Update:

- Description of work: The A2/4/5 subcommittee did not have any structural urban BMPs proposed by partners during this period. Outcomes of the A8 subcommittee's work on Subcatchment Prioritization will bring the LSC Partnership closer to targeting cost-effective urban practices to work toward achieving goals set forth in the CWMP.
- Outputs achieved: See Activity 8.
- Outcomes achieved: No projects implemented yet.

Activity 6: Wetland Restoration Implementation

Actual Results -- December 31, 2021 Update:

- Description of work: The A6 subcommittee established the Wetland Restoration Scoring Matrix for inclusion in the Project Request Packet (see Activity 10). The subcommittee did not receive any applications for projects in 2021.
- Outputs achieved: Completed Wetland Restoration Scoring Matrix.
- Outcomes achieved: No projects implemented yet.

Activity 7: Internal Analyses

Actual Results -- December 31, 2021 Update:

- Description of work: The A7 subcommittee established the Internal Analysis Request for Funding and Scoring Criteria for inclusion in the Project Request Packet (see Activity 10), advertised the request for partner proposals, and reviewed and gave preliminary rankings to proposed projects. Top tier lakes for internal analyses include Forest Lake, Martin and Typo Lakes and West Rush Lake. The deadline for full proposal submittal was December 15, 2021. Funding allotments will be made in early 2022.
- Outputs achieved: Completed Internal Analysis Request for Funding and Scoring Criteria, began project proposal and ranking process.

Activity 8: Targeting Analyses

Actual Results -- December 31, 2021 Update:

- Description of work: The A8 subcommittee established the Targeting Analysis Eligibility Form for inclusion in the Project Request Packet (see Activity 10). It also began work on three initiatives under the Activity 8 category:
 - Enhanced Street Sweeping Study Protocols: establish criteria for partners to perform enhanced street sweeping studies. Such studies will prioritize areas for street sweeping, estimate pollutant reductions to be achieved, and recommend optimal sweeping frequencies. Communities will need to have an approved street sweeping study in order to be eligible for street sweeping incentive payments under Activity 4.
 - Prioritization and Targeting Protocols: establish criteria for partners to perform prioritization/targeting studies for project identification. Examples of analyses used to target and prioritize projects include a subwatershed analysis (SWA), diagnostic study,

feasibility study, etc. These analyses will include spatial and desktop analysis (including historical aerial photo review), water quality modeling or monitoring for pollution reduction analysis, field evaluation, and cost benefit analysis (see CWMP page 19).

- Subcatchment Prioritization: perform a desktop analysis to fill data gaps in the LSC basin. This initiative entails conducting GIS evaluations of the Lower St. Croix Watershed to delineate and prioritize contributing subcatchments, and to identify pollutant hot spots.
- Outputs achieved: Completed Targeting Analysis Eligibility Form, began work on several targeting initiatives.

Activity 9: Technical/Engineering

Actual Results -- December 31, 2021 Update:

- Description of work: None to date.
- Outputs achieved: None to date.

Activity 10: Administration/Coordination

Actual Results -- December 31, 2021 Update:

- Description of work and outputs achieved:
 - Chisago SWCD: Performed fiscal agent duties including execution of partner sub-agreements, payment of invoices, and eLINK financial reporting. Worked with CLFLWD to establish reporting forms and invoicing templates that align with reporting requirements to ensure all activities receiving WBIF grant funds are in alignment with work plan and reporting criteria.
 - WCD: Performed hiring and payroll administration for Agronomy Outreach Specialist and Shared Services Educator.
 - WCD/EMWREP: Kept the LSC website up to date with meeting information and other updates. Coordinated/facilitated/took minutes for meetings of the Policy Committee, Steering Committee, Advisory Committee, and Planning Team. Over the course of this period, the Steering Committee approved 5 activities to receive WBIF grant funding: McQuade Ravine Stabilization, Hinze Cattle Exclusion, Enhanced Street Sweeping Study Protocols, Prioritization and Targeting Protocols, and Subcatchment Prioritization.
 - CLFLWD: Coordinated establishment of Project Request Packet including cover memo, attachments associated with each work plan activity, and informational attachments such as maps and the project request process flow chart. Worked with Chisago SWCD to establish reporting forms and invoicing templates.

Implementation Category Budget Breakdown

The following text appears on [page 16](#) of the Lower St. Croix Comprehensive Watershed Management Plan:

In general, WBIFs are expected to be allocated across program areas with a distribution similar to:

- 70% Implementation (approximately 25% shared services + 45% BMPs & restoration/protection activities)
- 25% Prioritization and Analysis
- 5% Administration

The following tables summarize how the WBIF work plan compares to the estimated percentages in the CWMP and how actual spending compares to both.

Activity #	Grant Activity	eLINK Activity Category	Grant Budget	Match Budget	Grant Spend	Match Spend	Total Spend
1	Basin Ag Outreach Program	Project Development	\$200,000	\$0	\$0	\$0	\$0
2	Structural Ag BMP Implementation	Agricultural Practices	\$160,000	\$75,000	\$97,985.31	\$82,630.84	\$180,616.15
3	Shared Services Educator	Education/Information	\$125,000	\$4,800	\$39,448.98	\$23,060.00	\$62,508.98
4	Non-Structural Ag/Urban Implementation	Non-Structural Management Practices	\$200,000	\$0	\$0	\$0	\$0
5	Structural Urban BMP Implementation	Urban Stormwater Practices	\$200,000	\$50,000	\$0	\$0	\$0
6	Wetland Restoration Implementation	Wetland Restoration/Creation	\$39,531	\$0	\$0	\$0	\$0
7	Internal Analyses	Planning and Assessment	\$50,000	\$0	\$0	\$0	\$0
8	Targeting Analyses	Planning and Assessment	\$150,000	\$0	\$3,000	\$671.61	\$3,671.61
9	Technical/Engineering	Technical/Engineering Assistance	\$40,000	\$0	\$0	\$0	\$0
10	Administration/Coordination	Administration/Coordination	\$100,000	\$0	\$24,219.27	\$712.17	\$24,931.44
TOTAL			\$1,264,531	\$129,800	\$164,653.56	\$107,074.62	\$246,796.74

Implementation Category	LSC CWMP (Page 16)	Work Plan (Grant Funds)	Actual Grant Spend	Actual Grant Spend % of Total
Implementation - BMPs/Restoration Activities*	45%	47%	\$97,985.31	59%
Implementation - Shared Services	25%	29%	\$39,448.98	24%
Prioritization & Analysis	25%	16%	\$3,0000	2%
Administration	5%	8%	\$24,219.27	15%
	100%	100%	\$164,653.56	100%

*Expenses billed to implementation (blue) line items are for implementation only and do not include staff time. Staff time for project coordination/design/oversight etc. is covered by the remaining three categories (green, orange, yellow).

Measurable Outcomes/Outputs and Milestones

Acti vity #	Grant Activity	Overall Measurable Outcome/Output	Year 1 (2021) Milestones	Year 1 (2021) Actual Milestones	Year 2 (2022) Milestones	Year 2 (2022) Actual Milestones	Year 3 (2023) Actual Milestones
1	Basin Ag Outreach Program	Output: Engage agricultural landowners (of both large and small operations) with a cumulative total of at least 3,000 acres of land to implement structural and nonstructural BMPs as outlined in other Activities See Attachment A – Agronomy Outreach Specialist Details & Milestones	Agronomy outreach specialist hired	Agronomy outreach specialist finalist selected		Agronomy outreach specialist hired	
2	Structural Ag BMP Impl.	Outcome: reduce phosphorus loading to target waterbodies by 300 lb/yr		Implemented 2 BMPs to achieve 254 lb/yr phosphorus reduction and 297 tons/yr TSS	Implement 20 best management practices, or enough to achieve a 300 lb/yr phosphorus reduction		

Acti vity #	Grant Activity	Overall Measurable Outcome/Output	Year 1 (2021) Milestones	Year 1 (2021) Actual Milestones	Year 2 (2022) Milestones	Year 2 (2022) Actual Milestones	Year 3 (2023) Actual Milestones
3	Shared Services Educator	Output: 0.5 FTE See Attachment B – Education Details & Milestones	New education staff hired, develop basin-wide outreach plan for 2021-22	New education staff hired, developed basin-wide outreach plan for 2021-22	Implement basin-wide outreach plan		
4	Non-Structural Ag/Urban Impl.	Outcomes: reduce phosphorus loading to target waterbodies by 400 lb/yr		None implemented with WBIF yet	Implement 2,000 acres of non-structural best management practices, or enough to achieve a 400 lb/yr phosphorus reduction		
5	Structural Urban BMP Impl.	Outcomes: reduce phosphorus loading to target waterbodies by 200 lb/yr		None implemented with WBIF yet	Implement 20 best management practices, or enough to achieve a 200 lb/yr phosphorus reduction		

Activity #	Grant Activity	Overall Measurable Outcome/Output	Year 1 (2021) Milestones	Year 1 (2021) Actual Milestones	Year 2 (2022) Milestones	Year 2 (2022) Actual Milestones	Year 3 (2023) Actual Milestones
6	Wetland Restoration Impl.	Outcomes: reduce phosphorus loading to target waterbodies by 15 lb/yr		None implemented with WBIF yet	Wetland restoration(s) construction		
7	Internal Analyses	Outputs: Complete 2 internal loading analyses		Completed majority of process to rank and select internal analyses to be completed in 2022	Complete 2 internal loading analyses		
8	Targeting Analyses	Outputs: Complete the following analyses (See Activity 8 Description for further detail) <ul style="list-style-type: none"> • Linwood Lake Anoka County • St. Croix Direct Washington County • Desktop Analysis and Prioritized Catchments of the Sunrise River Watershed Chisago • Rock Lake Pine and St. Croix Direct Pine County • SWA protocol refinements • Enhanced street sweeping analyses for Rush City, Taylors Falls, Harris, North Branch, 		Began Enhanced Street Sweeping Study Protocols, Prioritization and Targeting Protocols, and Subcatchment Prioritization			

Acti vity #	Grant Activity	Overall Measurable Outcome/Output	Year 1 (2021) Milestones	Year 1 (2021) Actual Milestones	Year 2 (2022) Milestones	Year 2 (2022) Actual Milestones	Year 3 (2023) Actual Milestones
		Marine on St. Croix, Stillwater, Bayport, Lakeland, Lake St. Croix Beach, and Afton					
9	Technical/ Engineering			No WBIFs used on this activity yet			
10	Admin/ Coord	Complete eLINK annual reporting as required	Complete annual report	Completed annual report, established several processes for WBIF usage	Complete annual report		
Sum of outcomes:		915 lb/yr TP reduction at target waterbodies		254 lb/yr TP reduction and 297 tons/yr TSS at target waterbodies			

Pollutant Reduction Goals and Progress

Total Suspended Solids

Total Suspended Solids Reductions Proposed in this Work Plan	2-Year Proposed Reduction (tons/yr)	Reduction Achieved as of 12/31/21 (tons/yr)
Activity 2: Structural Ag BMP Implementation	N/A	297
Activity 4: Non-Structural Ag/Urban BMP Implementation		0
Activity 5: Structural Urban BMP Implementation		0
Activity 6: Wetland Restoration Implementation		0
TOTAL		297

Total suspended solids reduction goals were not established for each activity but will be reported on.

Phosphorus

Phosphorus Reduction Summary Table – Reductions by Work Plan Activity

Phosphorus Reductions Proposed in this Work Plan	2-Year Proposed Reduction (lb/yr)	Reduction Achieved as of 12/31/21 (lb/yr)
Activity 2: Structural Ag BMP Implementation	300	254
Activity 4: Non-Structural Ag/Urban BMP Implementation	400	0
Activity 5: Structural Urban BMP Implementation	200	0
Activity 6: Wetland Restoration Implementation	15	0
TOTAL	915	254

Reductions reported are those estimated at target waterbodies. See Phosphorus Reduction Goals and Progress section in the Detail Work Plan Text for more information.

Phosphorus Reduction Detail Tables – Reductions by Target Waterbody

(per Tables 5-2 and 5-3)

[fill out in Excel spreadsheets and copy results into the following tables]

LSC CWMP Table 5-2: Regionally Significant Rivers and Streams for Pollutant Reductions

Stream Name	Lake St. Croix TMDL TP Reduction Goal (lbs/yr) ¹	10-year TP Reduction Goal (lbs/yr) ²	Actual Reduction Achieved as of 12/31/21 w/ WBIFs (lbs/yr)
Sunrise River and Tributaries	18,306	2,256	
Lawrence Creek ³	1,177	118	
Browns Creek ⁴	848	85	
Trout Brook ³	1,419	142	
Small Streams Draining to St. Croix River (south of Lawrence Cr & north of Valley Br.)	6,450	645	
Rock Creek	3,512	351	
Rush Creek	2,451	245	
Goose Creek	2,980	298	
St. Croix River Direct			251
TOTAL	37,143	4,140	251

(1) Table B-7, 2012 Lake St. Croix Total Maximum Daily Load Study
(2) 10% per stream + 425 lbs for stream restoration projects in Sunrise River Watershed
(3) According to Lake St. Croix TMDL: Actual phosphorus load reduction goals in Lawrence Creek, and Trout Brook may be smaller than shown (possibly even zero) due to substantial landlocked portions resulting in smaller drainage areas than those used to calculate load reductions.
(4) Browns Creek reduction goal based on Implementation Plan for Lake St. Croix Nutrient TMDL (2013), App B.

Lake ID	Name	County	Ag BMPs Needed	Urban BMPs Needed	Protection & Sustain. Dev. Needed	Overall TP Reduction Goal lbs/yr**	10-year TP Reduction Goal lbs/yr (5%/lake)	Actual Reduction Achieved by 12/31/21 w/ WBIFs (lbs/yr)
2002600	Linwood	Anoka	X	X	X	341	17.05	
2003400	Martin	Anoka	X	X		2,973	148.65	
13004200	Birch	Chisago		X	X	N/A	N/A	
13000100	Blooms*	Chisago	X		X	N/A	N/A	
1300120	Chisago	Chisago	X	X	X	143	7.15	
13006800	Fish*	Chisago	X	X	X	8	0.40	
13008301/ 13008302	Goose (North & South)	Chisago	X	X	X	4,935	246.75	
13004102 / 13004101	Green/ Little Green	Chisago		X	X	33	1.65	
13003300	Little	Chisago	X		X	2,657	132.85	
13003201	North Center Lk	Chisago	X	X	X	1,108	55.40	
13003500	North Lindstrom	Chisago	X	X	X	59	2.95	
13006901/ 13006902	Rush (East* & West)	Chisago	X		X	6,663	333.15	
13002700	South Center	Chisago	X	X	X	1,260	63.00	
13002800	South Lindstrom	Chisago		X	X	107	5.35	

30000800	Hoffman*	Isanti			X	Protection Strategies Only		
30001200	Horseleg*	Isanti	X		X	1	0.05	
30000300	Horseshoe*	Isanti			X	Protection Strategies Only		
30000700	Lower Birch*	Isanti			X	Protection Strategies Only		
58011700	Rock	Pine	X			6,641	332.05	3.48
82004900	Big Carnelian	Washington	X	X	X	53	2.65	
82005204	Big Marine*	Washington	X	X	X	35	1.75	
82004500	Clear*	Washington			X	Protection Strategies Only		
82003400	East Boot*	Washington			X	Protection Strategies Only		
82000400	Edith	Washington		X	X	6	0.30	
82010600	Elmo	Washington		X	X	56	2.80	
82015900	Forest	Washington	X	X		72	4.00	
82010400	Jane	Washington			X	Protection Strategies Only		
82001400	Little Carnelian*	Washington		X	X	29	1.45	
82002500	Louise	Washington	X			58	2.90	
82003300	Mays*	Washington			X	Protection Strategies Only		
82002000	McKusick	Washington		X		5	0.25	
82004600	Square	Washington	X	X	X	9	0.45	
82003100	Terrapin*	Washington			X	Protection Strategies Only		
					TOTAL lbs/yr	27,252	1,363	3.48

*Groundwater Dependent Lakes
 ** TP reduction goal from TMDLs or MPCA's Lakes of Phosphorus Sensitivity Significance dataset

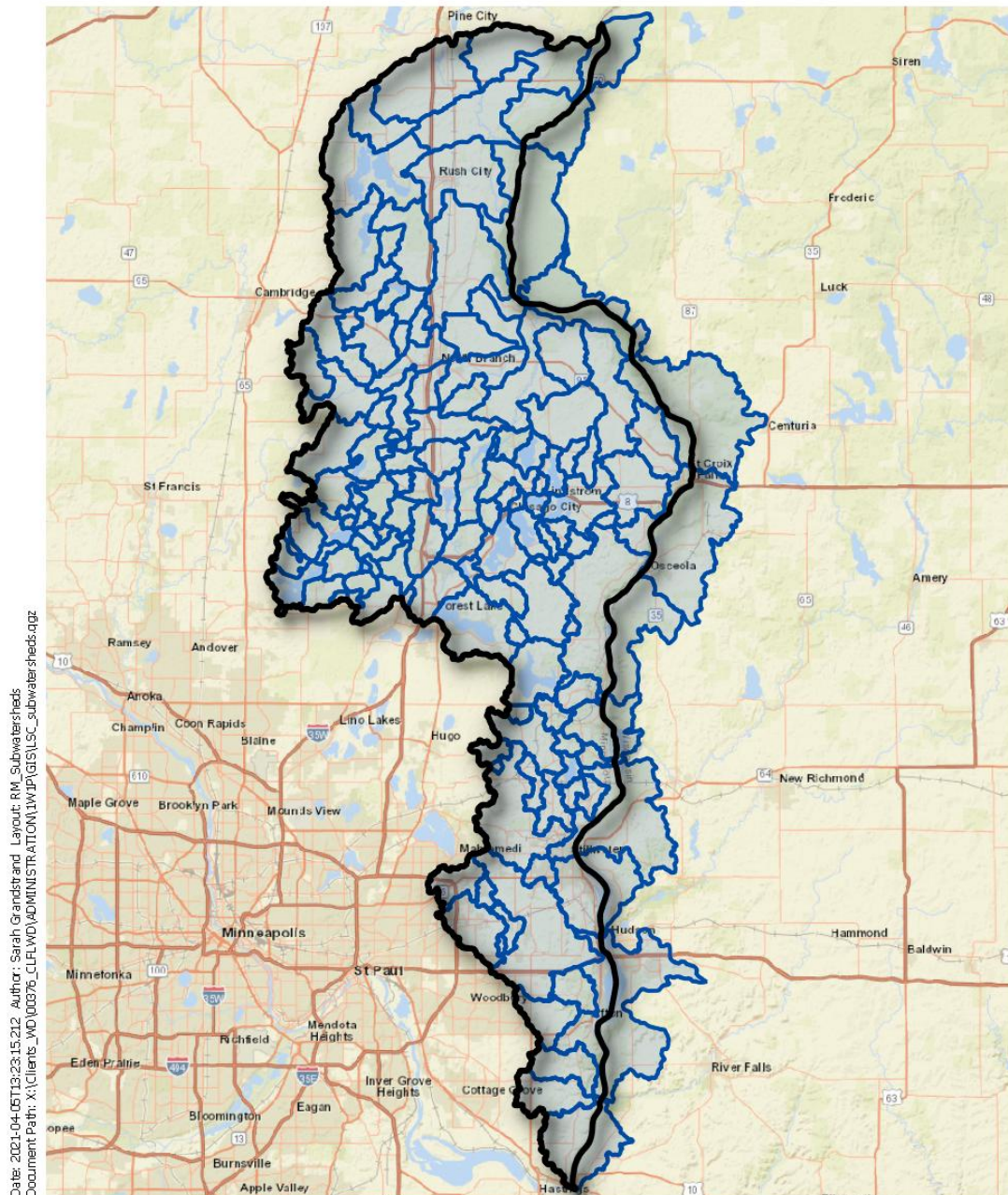
Project Cost-Benefit

Project	Project Lifetime Cost* (\$)	Phosphorus Reduction Achieved at Target Waterbody* (lb/yr)	Project Lifespan* (yrs)	Lifetime Cost-Benefit (cost per total reduction achieved over lifespan) (\$/lb)	Calculation Tool Used*	Project Status/ Comments
McQuade Ravine Stabilization (SWWD)	\$275,230	251	50	\$22	Modeled	Completed
Hinze Cattle Exclusion (Pine SWCD)	\$7,386	3.48	20	\$106	Lake Access Control Pollution Reduction Estimator	Completed

*All project details shown as reported by partners. Lifetime cost is reported by partners and must include construction and estimated O&M to achieve full lifespan.

Reporting by Subwatershed

Implementation subcommittees will prioritize projects by subwatershed. The following map shows DNR Level 08 subwatersheds within the LSC Basin. The LSC CWMP also contains several figures and tables describing priority implementation areas.



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Lower St.Croix Watershed
 Subwatersheds

Lower St.Croix Subwatersheds

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Activity 3: Basin Water Outreach Program

eLINK Activity Category: Education/Information

Grant: \$125,000

Match: \$4,800

Match Source: Parties to the LSC JPC

Lead Agency(ies): Washington Conservation District

Staff qualifications: Angie Hong, Emily Johnson, new hire

Priority areas: Basin-wide

CWMP Reference: Page 65

Activity Description: Facilitate a shared education and outreach program across the basin to provide education; engage residents, businesses, and local officials; and promote and market programs and practices. [0.5 FTE to expand EMWREP basin wide; \$50,000/yr or \$100,000/2 yrs

- WBIF funds will be combined with EMWREP local funds to create a new, full-time education and outreach position.
- The new hire will work with Angie Hong (EMWREP) and Emily Johnson (Anoka WEP) to conduct education and outreach basin-wide. Duties will be distributed so that all three staff are able to work basin-wide.
- In addition to the education objectives listed below, this program will help to build social capacity, which is an over-arching goal of the LSC CWMP.

WBIF funded education and outreach will include:

- 90% = develop and implement outreach programs that result in behavioral changes achieving water quality benefits
- 10% = solicit willing landowners to install BMPs that are goals within this plan.

High priority and secondary priority actions that will be accomplished include (pg. 41 and 42 of CWMP):

1. Facilitate a shared education and outreach program across the basin to provide education; engage residents, businesses, and local officials; and promote and market programs and practices
2. Provide outreach, education and ordinance development on Minimal Impact Design Standards with local governments, developers, and others.
3. Work with LGUs to set shoreline "view corridors" to 25% of lot width or maximum 35' width and maximum vegetation clearing standards or adopt innovative shoreland standards to protect buffers, native ecosystems, and habitat corridors. This work will provide water quality benefits through the protection of shoreline and streambank buffers.
4. Actively promote best management practices and green infrastructure on developed or developing lands.
5. Provide outreach and education to lake associations and lake groups or shoreline owners to promote shoreline restoration projects.
6. Provide support for the agronomy outreach program in conducting outreach to agricultural producers and rural landowners.

Additional detail is provided on the following pages.

EDUCATION AND OUTREACH FOR LOCAL DECISION MAKERS

Audience: Local government staff and elected/appointed officials

Activity description: Provide local decision makers (city councils, planning commissions, watershed boards, county commissioners, etc.) with information and training needed to implement policies, programs, and practices that protect and restore water resources. This includes, but is not limited to, Minimal Impact Development Standards (MIDS), Shoreland/Buffer rules, and wetland buffer rules.

Education objectives:

- Local decision makers will understand that stormwater runoff, erosion, and illicit discharge contaminate surface and groundwater resources and, also, that there are best management practices to reduce these causes of water pollution.
- Local decision makers will understand that land use impacts water quality and that there are a variety of policies, programs and practices cities, counties, and watershed management organizations can implement to protect their water resources, including MIDS, shoreland/buffer rules, and wetland buffer rules.
- Local staff and decision makers will understand the impacts of chlorides on water quality and that there are many ways to reduce these impacts.

Program goals:

1. MIDS (see Table 5-1, Part B)
 - **2-Year:** Establish relationships, build trust, provide education, and lay groundwork for in-depth ordinance review, revision, and adoption in years 5-8.
 - **In 2021 we began conversations regarding what education strategies would help promote MIDS visibility and adoption, particularly in the northern counties that have not had previous exposure. We settled on planning a Summer 2022 public officials networking/outreach event similar to the continuing Workshop on the Water for public officials in Washington County.**
 - **Attended the Sunrise River JPWMO public officials tour on Sept. 9**
 - **YouTube video: <https://www.youtube.com/watch?v=QppLsnzv-LI>**
 - **Created a virtual tour for the Lower St. Croix Policy Committee and project partners to highlight successful conservation projects in the watershed. Included creation of 10 new videos.**
 - **10-Year:** Implement Minimal Impact Design Standards or more restrictive in 20 communities; including climate resiliency provisions or standards
2. Shoreline standards / “view corridors” (see Table 5-1, Part C)
 - **2-Year:** Establish relationships, build trust, provide education, and lay groundwork for in-depth ordinance review, revision, and adoption in years 3-6.
 - **In 2021 we began conversations with partners regarding their immediate education wants and needs regarding shoreline standards.**
 - **Developed video for Isanti SWCD highlighting natural environment lakes in Oxford Township and the need to protect them as developmental pressures increase (<https://www.youtube.com/watch?v=GxcKVkgOW90&t=6s>)**

OUTREACH SUPPORT FOR BMP IMPLEMENTATION

Audience: Urban and rural landowners, shoreland property owners

Activity description: Promote best management practices and green infrastructure on developed or developing lands. Provide outreach and education to lake associations, lake groups, and shoreline owners to promote shoreline restoration projects. Provide outreach support for existing cost-share programs and new projects funded with WBIF. Train and assist urban and rural residents to complete projects on their land that reduce runoff pollution, conserve groundwater, and increase infiltration.

This activity will build on and expand existing programs and activities offered through EMWREP and the Anoka WEP, including Blue Thumb – Planting for Clean Water.

Education objectives:

- Landowners will learn that they can help to reduce runoff pollution, conserve groundwater, and increase infiltration by installing best management practices such as habitat plantings, raingardens, and shoreline plantings; repairing erosion; and managing drainage around homes, farms, and commercial buildings.
- Landowners will develop the knowledge and skills to complete habitat and water quality improvement projects on their land, including: native plantings, raingardens, native shoreline buffers, landscape stewardship plans, and ag/rural projects.
- Landowners will be aware of and utilize BMP, cost-share and other incentive programs to complete projects.

Program goals:

1. Outreach support for large projects (Table 5-1, Part B)
 - 2-year: Provide outreach support to retrofit 4 existing developments with infiltration, recharge, and reuse projects:
 - i. **Outreach support for Marine on St. Croix (WA County) stormwater retrofit project that will remove between 22-27 lbs of phosphorus from Mill Stream and St. Croix River**
 1. Led macroinvertebrate scavenger hunt for grad-school kids during city's Art and Nature Camp during Summer 2021
 2. Wrote blog post about the project:
<https://eastmetrowater.org/2021/09/09/protecting-mill-stream-and-the-st-croix-river/>
 3. Developed video about project:
<https://www.youtube.com/watch?v=GF3Q5xiREZ4>
 4. Recruited volunteers for planting events on June 5, July 31, Aug 21, and Sept 11
 - ii. **Outreach support for Lily Lake Regional Infiltration Basin project which will remove 32 lbs of phosphorus from the lake and led to lake impairment de-listing**

1. **Wrote blog post about project:**
<https://eastmetrowater.org/2021/09/30/new-project-aims-to-take-lily-lake-off-the-impaired-waters-list/>
 2. **Developed video about project:**
https://www.youtube.com/watch?v=FhyjeF-kW_c
 - iii. **Developed project flyers for WBIF funded projects completed in 2021 – Hinze cattle exclusion and McQuade ravine stabilization**
2. **Outreach support for small projects (Table 5-1, Part B)**
 - **2-year:** Provide outreach support for approximately 40 BMP projects in priority locations
 - i. **Provided outreach support (postcard mailing and neighborhood meet and greet) for a proposed neighborhood prairie restoration near Afton, MN**
 - ii. **Generated 226 site visit requests in Washington County**
 - iii. **Educated 1354 local residents through webinars, in partnership with EMWREP**
 - **10-year:** Provide outreach support for approximately 200 BMP projects in priority locations
3. **Outreach to shoreland property owners (Table 5-1, Part B)**
 - **2-year:** Provide outreach support to install 20 shoreline restoration projects.
 - i. **We have established contacts with lake associations throughout the basin and are working to develop homeowner shoreline stewardship materials with LSC partners at the request of those contacts.**
 1. **Presented shoreline stewardship concepts at Fall Meeting (September 2021) for the Center Lakes Association (30 attendees)**
 2. **Attended the Comfort Lake Lake Association Annual Meeting on Thu., Oct. 7 and talked about shorelines and buffer management**
 3. **May 26 – workshop for shoreline realtors in partnership with EMWREP – 66 attendees**
 - ii. **Promoted shoreline restoration at community events, including:**
 1. **Lake Demontreville-Olson Association Event in Lake Elmo (June 22)**
 2. **Lakes Appreciation Night in Lindstrom (July 7)**
 3. **Arts in the Park in Forest Lake (July 27)**
 4. **Martin Lake Carp Fishing competition (Aug. 11)**
 - iii. **Developed relationship with Jeff Forester from MN Lakes and River Advocates to help promote his volunteer lakeshore stewardship program across the LSC watershed**
 - iv. **Delivering 4 emails to the East Metro Lakes network (160 lake association members)**
 - **10-year:** Provide outreach support to install 100 shoreline restoration projects.
4. **Outreach for Landscape Stewardship Planning (Table 5-1, Part C)**
 - **2-year:** Provide outreach support to create 4 new Landscape Stewardship Plans and 4 Woodland Stewardship Plans
 - i. **Conducted online workshop: Managing woodlands for resiliency (Oct. 20) – 55 participants (+17 on YouTube)**

- **10-year:** Provide outreach support to create 20 new Landscape Stewardship Plans and 23 Woodland Stewardship Plans
5. Provide outreach support for goals listed in the Agronomy Outreach Program (Table 5-1, Part A)
- **2-year:** Conduct outreach to 200 operators of large and small farms, with a cumulative total of at least 3000 acres.
 - i. **Developed Sept 2021 video highlighting success story of long-time collaboration between Mallery's Jerseys (2021 State Conservationist of the Year) and LSC partner Chisago SWCD:**
<https://www.youtube.com/watch?v=YrFxo6CsgSU&t=1s>
 - ii. **Developed video highlighting WBIF-funded cattle exclusion project in Pine County:** <https://www.youtube.com/watch?v=hNmSImuCV5o>
 - iii. **Attended one soil health field days and promoted Isanti SWCD Cover Crop Field Day**
 - 1. **Jon Stevens Farm Day in Pine County, Aug. 27**
 - a. **Created video about rainfall simulator:**
<https://www.youtube.com/watch?v=QegLFJwhUnw>
 - iv. **Developed a flyer to promote the use of cover crops**
 - v. **Participated in three site visits with landowners who completed agricultural conservation projects in Isanti and Pine Counties**

PUBLIC EDUCATION AND ENGAGEMENT

Audience: General Public, Lake Associations

Activity description: Educate the public about nonpoint source water pollution, groundwater conservation, aquatic invasive species, and basic watershed ecology and management. Build partnerships with state and local government, non-profit organizations, lake associations, and other community groups. Motivate the public to practice behaviors that protect water resources.

This activity will build on and expand existing programs and activities offered through EMWREP and the Anoka WEP.

Education objectives:

Residents and visitors of the Lower St. Croix watershed will learn:

- That nonpoint source water pollution comes from a variety of land uses - residential, commercial, and agricultural.
- That common pollutants impacting surface and groundwater resources in the Lower St. Croix Watershed include phosphorus, sediment, nitrates, E. coli, chloride, and mercury.
- That a watershed includes all of the land draining to a lake, stream or river, and that Watershed Districts and Watershed Management Organizations are special-purpose local units of government charged with managing the resources of a given watershed to prevent flooding and protect water quality.
- That surface and groundwater resources interact.
- That aquatic invasive species (including zebra mussels, Eurasian watermilfoil, curly leaf pondweed, and phragmites) cause ecological and economic damage.
- That the public can help to prevent nonpoint source water pollution through a variety of behaviors, including raking leaves and grass clippings out of the street, using less fertilizers and chemicals on lawns and gardens, covering bare soil during landscaping and construction, picking up pet poop, replacing failing septic systems, using less salt for winter maintenance and water softening, disposing of household waste properly, and using less electricity.
- That the public can limit the spread of AIS by practicing state rules, including cleaning, draining and inspecting all watercraft and equipment after leaving a water body.

Program goals:

- Deliver information to at least 90,000 people per year through articles in local newspapers.
 - **Over 50 articles published in local newspapers**
 - **Chisago Press (Circulation - 3963)**
 - **Forest Lake Lowdown (Circulation – 13,997)**
 - **Forest Lake Times (Circulation - 13,029) – column featured monthly**
 - **Hugo Citizen (Circulation – 14,500)**
 - **Scandia Country Messenger (Circulation - 1075)**
 - **St. Croix Lowdown (Circulation – 5000)**
 - **Valley Life / Stillwater Gazette (Circulation - 17,479) – column featured weekly**
 - **White Bear Press (Circulation – 19,331)**

- Deliver information to at least 30,000 people per year through online news services.
 - **Over 48 articles published on www.eastmetrowater.org blog, reaching over 8,500 people**
 - **Intermittent articles posted on St. Croix 360 (On-line: 25,647 followers)**
- Deliver information to at least 120,000 people per year through social media platforms.
 - **People reached through social media accounts in 2021:**
 - **TikTok - [@mnnature_awesome](https://www.tiktok.com/@mnnature_awesome) - 7.7 million**
 - **Facebook**
 - **Washington Conservation District ([@mnwcd](https://www.facebook.com/mnwcd)) - 67k**
 - **Chisago SWCD ([@ChisagoSWCD](https://www.facebook.com/ChisagoSWCD)) - 9,242**
 - **Pine SWCD ([@PCSWCD](https://www.facebook.com/PCSWCD)) – 1,567**
 - **Isanti SWCD – (unknown)**
 - **Instagram**
 - **Washington Conservation District: [@wcd_mn](https://www.instagram.com/wcd_mn) - 39k**
 - **Twitter –**
 - **[@angiehongwater](https://twitter.com/angiehongwater) – 18k**
 - **East Metro Water blog – www.eastmetrowater.org - 8500**
 - **YouTube**
 - **[Washington Conservation District](https://www.youtube.com/channel/UC...) – 8400**
 - **[Lower St. Croix Watershed Partnership](https://www.youtube.com/channel/UC...) (started in September 2021) - 575**
- Provide educational instruction for at least 1000 people per year through webinars and workshops.
 - **In 2021, the East Metro Water Resources Education Program held publicly available workshops via webinar on the following topics (total workshop participants – 1,354):**
 - **Pollinator habitat plantings (Jan. 18) – 95 participants**
 - **[Shorelines and buffer maintenance](#) (Feb. 25) – 92 participants (+ 303 on YouTube)**
 - **Building climate resiliency (March 10) – 30 participants**
 - **Shorelines and buffer maintenance (April 29) – 103 participants**
 - **[Raingarden design and maintenance](#) (May 11) – 53 participants (+ 51 on YouTube)**
 - **Shoreline properties for realtors (May 26) – 66 participants (not publically available)**
 - **[Healthy lawns and lawn alternatives](#) (July 7) – 13 participants (+ 12 on YouTube)**
 - **[Bee lawns & lawn alternatives](#) (Sept. 15) – 108 participants (+ 90 on YouTube)**
 - **[Creating pockets of habitat with native plants](#) (Sept. 21) – 100 participants (+70 on YouTube)**
 - **[Bird-friendly yards](#) (Oct. 5) – 25 participants**

- Managing woodlands for resiliency (Oct. 20) – 55 participants (+17 on YouTube)
 - Wetlands habitat and management (Nov. 9) – 50 participants (+21 on YouTube)
 - Following events with conversation education/outreach were held in LSC watershed section of Anoka County:
 - Ham Lake Freedom Festival (July 3) – 146 interactions
 - East Bethel Booster Day (July 17th) – 42 interactions
 - Ham Lake’s Farmer’s Market (July 21st) – 82 interactions
 - Ham Lake’s Farmer’s Market (August 4) – 66 interactions
 - Martin lake Carp Fishing Clinic (August 11th) – 30 interactions
 - YouTube video: <https://youtu.be/twAbdjLa-l>
 - Ham Lake’s Farmer’s Market (August 25) – 60 interactions
 - SRWMO Public Officials Tour (September 9th) – 14 interactions
 - Linwood Family Fun Day (September 11th) – 243 interactions
- Recruit 500 new people to adopt storm drains through the Adopt a Drain program (2 year goal).
 - 203 storm drains were adopted in 2021.
 - The East Metro Water Resources Education Program continued to promote the program through a variety of means, including:
 - Participating in Watershed Partners and financially supporting the Adopt-a-Drain program
 - Publishing articles in local newspapers and city newsletters
 - Distributing door-hangers in Forest Lake
 - Volunteer promotion in Stillwater with Sustainable Stillwater
 - Volunteer promotion in Woodbury with Water Stewards
 - Teacher promotion in Mahtomedi
 - Publishing a TikTok video on (Oct. 12)
 - 57 adoptions in the next 24hrs (compared with 8/day normally)
 - 20 new adoptions in Washington County over the next week