



**Lower St. Croix River  
One Watershed One Plan**

**Draft Plan Review  
March 30, 2020**



# Reviewed in January & February Policy Committee Meetings:

- Layout of Implementation Table
- Specific implementation actions, outcomes, priority locations
- Regionally significant lakes and streams + pollutant removal goals
- Annual work plan development
- Prioritization of activities for using Watershed Based Implementation Funding
- Criteria for targeting Watershed Based Implementation Funds



# Today Reviewing:

- Changes since March 2<sup>nd</sup> version of plan – not many
  - Corrected grammatical errors
  - Revised some areas for clarity or added info per comments from CLFLWD
  - Added photos, updated graphics, finalized Figure 7-1 (completed SWAs)
  - Added budget figures for high priority actions in Executive Summary
- Updated budget figures in Implementation Table (Table 5-1, Parts A-D)





# Lower St. Croix River Comprehensive Watershed Management Plan



March 30, 2020





### **Mission**

*Through the Lower St. Croix “One Watershed, One Plan” process, partners will develop a collaborative and comprehensive plan to guide the protection and restoration of priority natural resources in our region over the next ten years.*

### **Vision**

*The St. Croix River, groundwater, lakes, streams, rivers, wetlands, and upland habitat in the Lower St. Croix watershed sustain healthy ecosystems, recreation, public health, tourism, agriculture, the economy, and quality of life in our communities.*

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Appendix C:	<a href="#">Project Targeting Criteria and Scoring Matrix</a>
Appendix D:	<a href="#">Chisago County Water Plan 2020 – 2030</a>
Appendix E:	<a href="#">Isanti County Water Plan Summary Document</a>



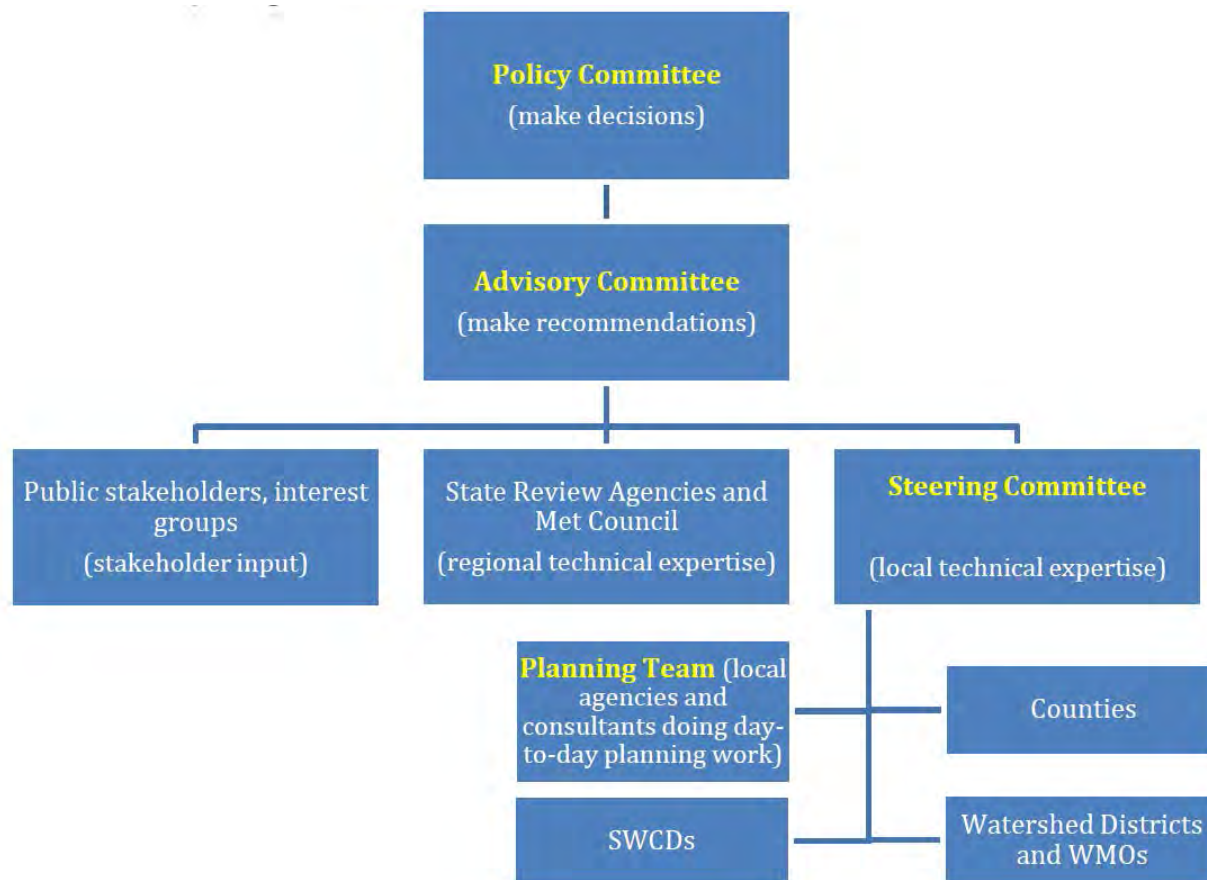
## i. Acknowledgements

This Plan was developed through a memorandum of agreement (MOA) among 15 local government units (LGUs) including counties, soil and water conservation districts, watershed management organizations, and watershed management districts. The development of this Plan was funded through a Clean Water Fund grant from the Minnesota Board of Water and Soil Resources and came together through a series of collaborative meetings among the participating entities and state and regional agencies, and with input from a variety of watershed stakeholders and the public.



The decision-making body for plan development, the Policy Committee, was comprised of one elected or appointed board member from each of the 15 LGUs signatory to the MOA. The plan content was developed primarily through input from the Advisory Committee, comprised of staff from participating entities and state and regional agencies. The Steering Committee (a subset of the Advisory Committee) and the Planning Team (a smaller subset of the Advisory Committee) provided guidance on various plan development activities or specific content at points along the process. The graphic below shows the committee relationships.

A consulting team of Keystone Waters, LLC and Freshwater provided plan writing and meeting facilitation services throughout the development of the plan.



**Committee Relationships**

## Policy Committee Members and Alternates

Chisago County	Mike Robinson/Chris DuBose	Commissioner
Isanti County	Greg Anderson/Susan Morris	Commissioner
Pine County	Steve Hallan/Joshua Mohr	Commissioner
Washington County	Fran Miron	Commissioner
Anoka SWCD	Sharon LeMay/MaryJo Truchon	Board Supervisor
Chisago SWCD	Jim Birkholz/David Tollberg	Board Supervisor
Isanti SWCD	Wayne Calander/Greg Swanson/Jerry Schaubach	Board Supervisor
Pine SWCD	Doug Odegard/Skip Thomson	Board Supervisor
Washington SWCD	Diane Blake/Robert Rosenquist	Board Supervisor
Brown's Creek WD	Craig Leiser/Kay Eckles	District Manager
Carnelian Marine St Croix WD	Wade Johnson/Kristin Tuenge	District Manager
Comfort Lake Forest Lake WD	Steve Schmaltz/Jackie Anderson	District Manager
South Washington WD	Don Pereira/Kevin Chapdelaine	District Manager
Middle St. Croix WMO	Doug Menikheim/John Fellegly/Brian Zeller	Board Member, Stillwater Council
Sunrise River WMO	Paul Enestvedt/Janet Hegland	Board Member

*Anoka County, Ramsey County, Ramsey SWCD, and Valley Branch WD were invited but chose not to participate on the Policy Committee.*

## Advisory Committee Members

Local Staff/Steering Committee		Agency Staff	
Chisago County & Chisago Lakes Lake Improvement District	Susanna Willson Witkowski & Jerry Spetzman	Board of Water & Soil Resources	Dan Fabian
Isanti County	Darrick Wotachek		Barb Peichel
Pine County	Caleb Anderson		Erin Loeffler
Washington Co.	Stephanie Souter & Maureen Hoffman	MN Department of Health	John Freitag
Anoka SWCD	Jamie Schurbon*		
Chisago SWCD	Craig Mell*	MN Department of Natural Resources	Jason Carlson
Isanti SWCD	Tiffany Determan*	MN Department of Agriculture	Jeff Berg
Pine SWCD	Kris Larson/Katie Petzel		Margaret Wagner
Washington SWCD	Jay Riggs* & Angie Hong	MN Pollution Control Agency	Eric Alms
Brown's Creek WD	Karen Kill		
Carnelian Marine St Croix WD	Jim Shaver/Mike Isensee	Metropolitan Council	Jennifer Kostrzewski
Comfort Lake Forest Lake WD	Mike Kinney*		
South Washington WD	Matt Moore*		
Middle St. Croix WMO	Mike Isensee/Matt Downing		
Sunrise River WMO	Jamie Schurbon*		

\*Planning Team Members

*Anoka County, Ramsey County, Ramsey SWCD, and Valley Branch WD were invited but chose not to participate on the Policy Committee.*

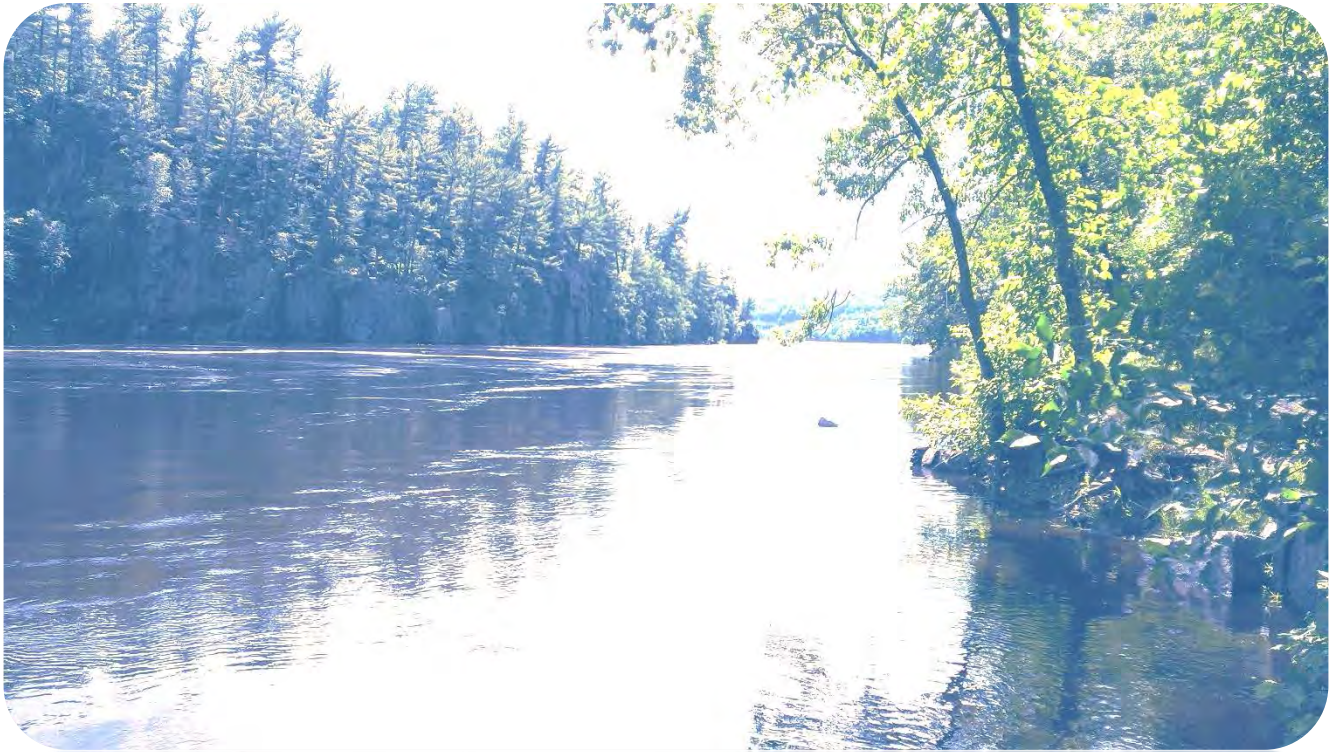


## ii. Acronyms

1W1P – One Watershed One Plan  
ACPF – Agricultural Conservation Planning Framework  
AIS – Aquatic invasive species  
AUIDs – Assessment Unit Identifications  
BWSR – (Minnesota) Board of Water and Soil Resources  
CIG – Conservation Innovation Grant  
CLLID – Chisago Lakes Lake Improvement District  
COs - Counties  
CRP – Conservation Reserve Program  
DFC – Desired Future Condition  
DO – Dissolved oxygen  
ECS – Ecological Classification System  
EMWREP – East Metro Water Resources Education Program  
EQB – Environmental Quality Board  
EQIP – Environmental Quality Incentive Program  
FWS – Fish and Wildlife Service  
GRAPS – Groundwater Restoration and Protection Strategies  
GW – Groundwater  
HUC – Hydrologic unit code  
IBI – Index of biotic integrity  
LID – Lake Improvement District  
LSC – Lower St. Croix  
LGUs – Local Government Units  
MCBS – Minnesota County Biological Survey  
MCD – Metro Conservation Districts  
MDA – Minnesota Department of Agriculture  
MDH – Minnesota Department of Health  
MDNR – Minnesota Department of Natural Resources  
MG – Million Gallons

MIDS – Minimal Impact Design Standards  
MnDNR – Minnesota Department of Natural Resources  
MOA – Memorandum of Agreement  
MPARS – MnDNR Permitting and Reporting System  
MPCA – Minnesota Pollution Control Agency  
NPS – National Park Service  
NRCS – Natural Resource Conservation Service  
PFAS – Perfluoroalkyl substances  
PFCs – Perfluorochemicals  
PFOs – Perfluorooctane sulfonate  
PRAP – Performance Review and Assistance Program  
PTMapp – Prioritize, Target, and Measure Application  
RIM – Reinvest in Minnesota  
RUSLE2 – Revised Universal Soil Loss Equation, Version 2  
SCRA – St. Croix River Association  
SSTS – Subsurface Sewage Treatment System  
SWA – Subwatershed Analysis  
SWCD – Soil and Water Conservation District  
SWMM – Storm Water Management Model  
TMDL – Total Maximum Daily Load  
TP – Total phosphorus  
TSS – Total suspended solids  
U of M – University of Minnesota  
VOCs – Volatile organic compounds  
WBIFs – Watershed Based Implementation Funds  
WD – Watershed District  
WDNR – Wisconsin Department of Natural Resources  
WMA – Wildlife Management Area  
WMO – Watershed Management Organization  
WRAPS – Watershed Restoration and Protection Strategies







## I. Executive Summary

The Lower St. Croix Comprehensive Watershed Management Plan (Plan) was developed as part of the State of Minnesota’s One Watershed One Plan (1W1P) program. The State’s vision and purpose of the 1W1P program is to align local water planning on major watershed boundaries with state strategies towards prioritized, targeted, and measurable implementation plans. The process results in a comprehensive watershed plan and offers the opportunity for groups and organizations to work together in both planning and implementation across jurisdictional boundaries. While the resulting Plan is comprehensive in that it includes improvements and protection for a variety of natural resources across a large geographic area, it also incorporates detail in its prioritization and targeting actions and outcomes for specific waterbodies.

This Plan was developed through a memorandum of agreement and collaborative partnership among 15 local governments including 4 counties, 5 soil and water conservation districts, 2 watershed management organizations, and 4 watershed districts. Together, these groups are known as the Lower St. Croix (LSC) Partners or Partnership. Note that not all local government units within the watershed boundaries chose to participate in the LSC Partnership.

### A. Mission and Vision Statements

Early in the process, the Lower St. Croix 1W1P Policy Committee adopted a mission statement to help guide the work of the plan development and a vision statement to help imagine the future condition of the watershed.

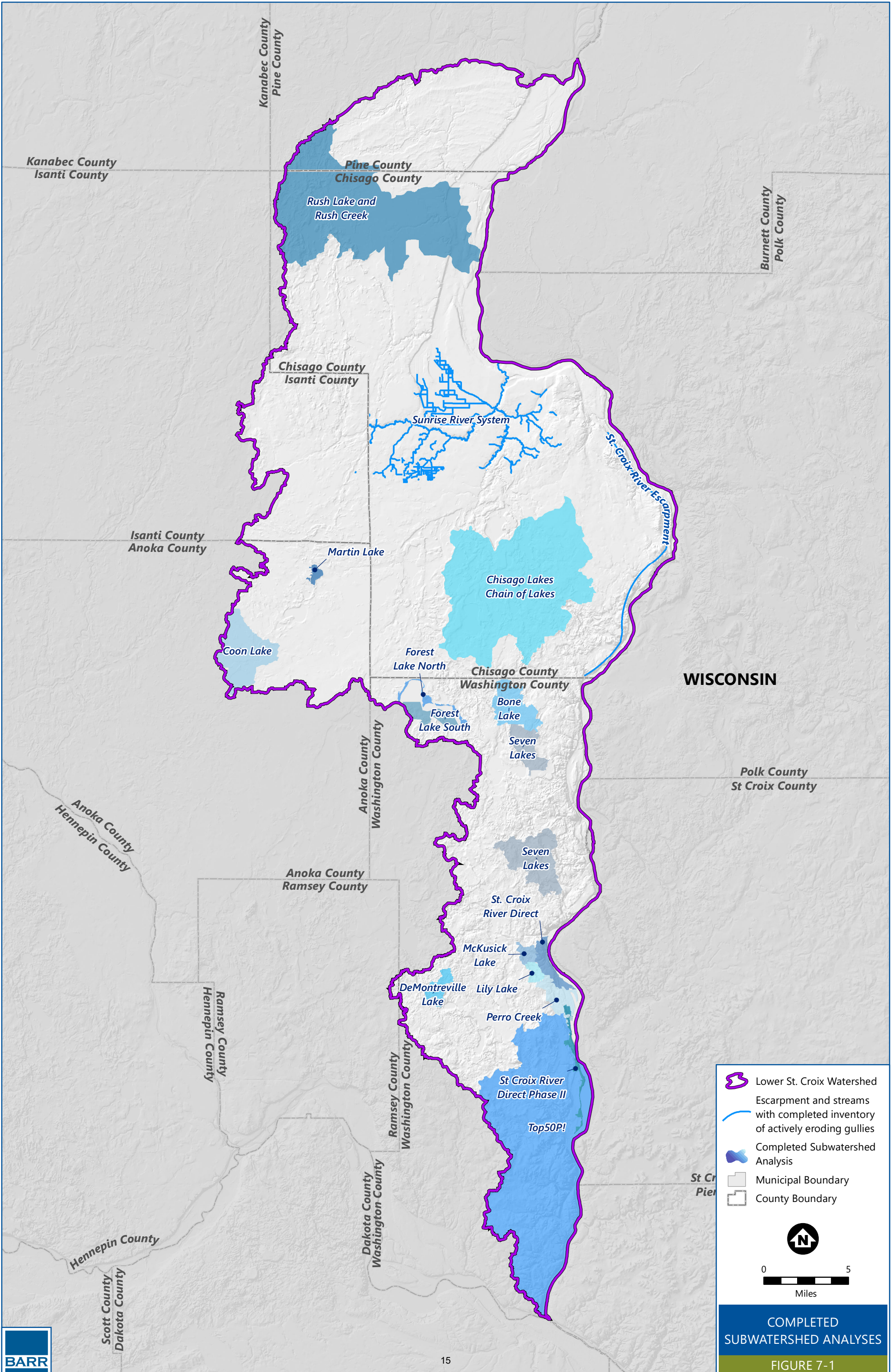
#### **Mission**

*Through the Lower St. Croix “One Watershed, One Plan” process, partners will develop a collaborative and comprehensive plan to guide the protection and restoration of priority natural resources in our region over the next ten years.*

#### **Vision**

*The St. Croix River, groundwater, lakes, streams, rivers, wetlands, and upland habitat in the Lower St. Croix watershed sustain healthy ecosystems, recreation, public health, tourism, agriculture, the economy, and quality of life in our communities.*







# Review Budget Figures in Implementation Tables

(Activity and funding only; removed locations and outputs for this review)

10-year cost - Local Funding (taxes) - Stable External Funding  
= Add't External Funding Needed

Example:      10-yr cost: \$1,000,000  
                  - Local Funds: \$500,000  
                  - Stable Ext. Funds: \$100,000  
                  = Add't Ext. Funding Need: \$400,000

“A” Activities = high priority for WBIFs

“B” Activities = secondary priority for WBIFs

“C” Activities = local priorities, no WBIFs

Funding shown by county. A = Anoka; C<sub>16</sub> = Chisago, etc.



**Table 5-1 Part A. Implementation Actions for Agricultural Lands**




Table 5-1 Part A: Implementation for Agricultural Lands		10-year Estimated Cost	10-year Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
    	<b>Implementation Actions</b>				
	<b>(A)</b> Shared Services: Hire or contract with agricultural conservationist and agronomist for basin wide assistance with agronomy, outreach, and technical assistance to agricultural producers including conservation planning & nutrient management plans. [Approx 80% of position's time will be directly working w/ ag producers in LSC Watershed to identify economical farming practices w/ WQ benefits to make them routine part of farm operations. Target is to interact w/ operators of >3,000 acres/yr. 20% of position = support of implem. of BMPs led by others.]	\$1,250,000	\$0	\$0	\$1,250,000
	<b>(A)</b> Provide cost share for installing or implementing agricultural best management practices, both structural and non-structural (e.g. soil health BMPs, feedlot improvements, buffers, swales, etc.). Projects to be chosen through targeting and prioritization process described in Section VII.B.	\$5,200,000	A \$20,000	A	\$4,335,000
			C \$200,000	C \$200,000	
		I	I \$40,000		
		P \$5,000	P		
		W \$250,000	W \$150,000		
		<b>\$475,000</b>	<b>\$390,000</b>		
<b>(C)</b> Provide conservation planning, technical assistance and education on agricultural best management practices through existing local staff and local initiatives	\$2,739,000	A	A	\$0	
		C	C \$500,000		
		I	I \$24,000		
		P \$15,000	P		
		W \$1,700,000	W \$500,000		
		<b>\$1,715,000</b>	<b>\$ 1,024,000</b>		










Table 5-1 Part A: Implementation for Agricultural Lands		10-year Estimated Cost	10-year Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	<b>Implementation Actions</b>				
	(C) Contact highest agricultural groundwater consumers; provide cost share or technical assistance to install smart irrigation technologies	\$580,000	\$0	\$0	\$580,000
	<b>Implementation Actions</b>				
	(C) Incorporate policy to identify and map private ditches when developing conservation plans, providing cost share funding, or during other regulatory interactions with landowners	\$0	\$0	\$0	No additional funding needs expected
  	<b>Implementation Actions</b>				
	(C) Incorporate policy to and review 100% of drainage projects for possible impacts to wetland quality; promote Conservation Drainage Management techniques on ditch maintenance activities.	\$170,000	A	A \$50,000	\$0 (-\$244,000)
			C \$70,000	C \$70,000	
			I \$16,500	I \$7,500	
			P	P	
			W \$100,000	W \$100,000	
		<b>\$186,500</b>	<b>\$227,500</b>		
(B) Develop and implement plan for management and maintenance of ditch system including a system and	\$50,000	\$0	\$0	\$50,000	

Table 5-1 Part A: Implementation for Agricultural Lands		10-year Estimated Cost	10-year Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	protocol for establishing BMPs within easement right of ways of existing public ditches.				
	<b>(C)</b> Provide training for local staff on topics related to drainage management, wetland management, and related areas	\$5,000	\$0	\$0	\$5,000
 	<b>Implementation Actions</b>				
	<b>(B)</b> Provide education to landowners and cost share to upgrade non-conforming and non-compliant SSTS and to seal abandoned wells. Promote testing of private wells, provide test kits, host well testing clinics/screenings, promote best practices to private well owners. [Estimated \$13,500/SSTS upgrade*40 systems/2yrs]	\$2,700,000	A	A \$75,000	\$2,156,430
			C	C \$120,000	
			I \$2,700	I \$35,870	
			P \$15,000	P	
			W \$195,000	W \$100,000	
	<b>\$212,700</b>	<b>\$330,870</b>			
	<b>TOTAL "A" High Priorities for WBIF</b>	\$6,450,000	\$475,000	\$390,000	\$5,585,000*
	<b>TOTAL "B" Secondary Priorities for WBIF</b>	\$2,750,000	\$212,700	\$330,870	\$2,206,430*
	<b>TOTAL "C" Local Priorities</b>	\$3,494,000	\$1,901,500	\$1,251,500	\$341,000
	<b>TABLE A: GRAND TOTAL</b>	<b>\$12,694,000</b>	<b>\$2,589,200</b>	<b>\$1,972,370</b>	<b>\$8,132,430</b>

\*This total may not reflect the true additional external funding need given significant variation in existing local and stable external funds between counties and LSC Partners.

**Table 5-1 Part B. Implementation for Developed and Developing Lands**




Table 5-1 Part B: Implementation for Developed and Developing Lands		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	<b>Implementation Actions</b>				
	<b>(A)</b> Shared Service: Provide outreach, education and ordinance development on Minimal Impact Design Standards with local governments, developers, and others [1.0 FTE * \$120,000/yr or \$240,000/ 2 yrs] (EMWREP lays groundwork in years 1 & 2)	\$600,000	A C I P W \$300,000 <b>\$300,000</b>	A C I P W \$50,000 <b>\$50,000</b>	\$250,000
	<b>(A)</b> Shared Services Educator: Facilitate shared education and outreach program across basin to provide education; engage residents, businesses, and local officials; and promote and market programs and practices. [80% = develop, distribute and implement outreach programs that result in behavioral changes achieving water quality benefits; 10% = AIS prevention outreach and education; 10% = solicit willing landowners to install BMPs that are goals within this plan. [0.5 FTE to expand EMWREP basin wide; \$50,000/yr or \$100,000/2 yrs]	\$500,000	\$0	\$0	\$500,000
	<b>(A)</b> Provide cost share for and actively promote installing, implementing, or retrofitting best management practices and green infrastructure on developed or developing lands. Projects to be chosen through targeting and prioritization process described in Section VII.B. [44 projects/2 years/\$15,000/project; to implement lines 2, 5, 6 below)	\$3,300,000	A \$20,000 C \$200,000 I P W \$2,475,000 <b>\$2,695,000</b>	A C \$200,000 I \$40,000 P W \$150,000 <b>\$390,000</b>	\$215,000
		\$2,508,000	A \$10,000	A	\$0








Table 5-1 Part B: Implementation for Developed and Developing Lands		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	(C) Provide project reviews and technical assistance on stormwater management and urban best management practices through local staff and local initiatives including evaluating small storm volume control and large storm rate control ordinances.		C I P W \$1,998,000 <b>\$2,008,000</b>	C \$500,000 I P W <b>\$500,000</b>	
	(C) Work with State agencies and organizations to update Minimal Impact Design Standards to account for a changing climate and precipitation patterns. [Within already established positions, provide data and information; participate on committees or work groups]	\$0	\$0	\$0	No additional funding needs expected
	<b>Implementation Action</b>				
	(C) Contact highest urban/suburban groundwater consumers; provide cost share to install smart irrigation technologies	\$580,000	A C I P W \$100,000 <b>\$100,000</b>	A \$10,000 C I P W <b>\$10,000</b>	\$470,000
	<b>Implementation Action</b>				
	(C) Coordinate with State agencies and officials to identify and report hazardous waste generators	\$0	\$0	\$0	No additional funding needs expected
	<b>Implementation Action</b>				
	<b>Implementation Action</b>				

Table 5-1 Part B: Implementation for Developed and Developing Lands		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	(B) Identify non-conforming/non-compliant SSTS and provide education and cost share to homeowners to upgrade non-conforming and non-compliant SSTS	Activity and costs included in Table A			
	<b>Implementation Action</b>				
	(A) Provide outreach & education to lake associations and lake groups or shoreline owners to promote shoreline restoration projects. Provide cost share for shoreline habitat improvement projects [Assume average \$4,000 cost share/project]	\$400,000	A \$39,000 C \$200,000 I \$10,000 P \$5,000 W \$320,000 <b>\$574,000</b>	A C \$100,000 I \$25,000 P W \$150,000 <b>\$275,000</b>	\$0 (-\$449,000)
	<b>Implementation Action</b>				
	(B) Work with landowners and local governments to update ordinances, and promote and coordinate land acquisition, conservation easements, land protection, and wetland buffer zoning when land is developing (Both MIDs and EMWREP + local staff can help with education.)	\$0	Existing staff and proposed programs	Existing staff and proposed programs	No additional funding needs expected
	<b>TOTAL "A" High Priorities for WBIF</b>	\$4,800,000	\$3,569,000	\$715,000	\$516,000*
	<b>TOTAL "B" Secondary Priorities for WBIF</b>	\$0	\$0	\$0	\$0
	<b>TOTAL "C" Local Priorities</b>	\$3,088,000	\$2,108,000	\$510,000	\$470,000
	<b>TABLE B: GRAND TOTAL</b>	<b>\$7,888,000</b>	<b>\$5,677,000</b>	<b>\$1,225,000</b>	<b>\$986,000</b>

\*This total may not reflect the true additional external funding need given significant variation in existing local and stable external funds between counties and LSC Partners.

**Table 5-1 Part C. Implementation for Ecosystem Services**





Table 5-1 Part C: Implementation for Ecosystem Services		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed																								
	<b>Implementation Actions</b>																												
	<b>(B)</b> Perform one large stream restoration project including bank stabilization, in-channel work or improving floodplain connectivity once every two years. Determine sediment reduction per project during feasibility and design.	\$1,750,000	\$0	\$0	\$1,750,000																								
	<b>(B)</b> Perform culvert inventory: redesign and restore as road projects are completed to help manage to natural hydrologic conditions	\$100,000	\$0	\$0	\$100,000																								
	<b>(B)</b> In watersheds of trout streams promote infiltration and reduce impervious surfaces				No additional funding needs expected																								
	<b>Implementation Actions</b>																												
	<b>(A)</b> Identify wetland restoration opportunities and work with landowners (including institutions and public entities) to create or restore wetlands (including improvement of functions and values) and develop wetland banks. [Will help reach water storage goal.]	\$2,610,000	<table border="1"> <tr><td>A</td><td></td></tr> <tr><td>C</td><td>\$70,000</td></tr> <tr><td>I</td><td></td></tr> <tr><td>P</td><td></td></tr> <tr><td>W</td><td>\$500,000</td></tr> <tr><td></td><td><b>\$570,000</b></td></tr> </table>	A		C	\$70,000	I		P		W	\$500,000		<b>\$570,000</b>	<table border="1"> <tr><td>A</td><td>\$10,000</td></tr> <tr><td>C</td><td>\$70,000</td></tr> <tr><td>I</td><td>\$25,000</td></tr> <tr><td>P</td><td></td></tr> <tr><td>W</td><td>\$50,000</td></tr> <tr><td></td><td><b>\$155,000</b></td></tr> </table>	A	\$10,000	C	\$70,000	I	\$25,000	P		W	\$50,000		<b>\$155,000</b>	\$1,885,000
A																													
C	\$70,000																												
I																													
P																													
W	\$500,000																												
	<b>\$570,000</b>																												
A	\$10,000																												
C	\$70,000																												
I	\$25,000																												
P																													
W	\$50,000																												
	<b>\$155,000</b>																												








Table 5-1 Part C: Implementation for Ecosystem Services		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	(C) Incorporate policy to develop ditch maintenance evaluation panel and implement conservation drainage management practices	\$0	\$0	\$0	No additional funding needs expected
	<b>Implementation Actions</b>				
	(C) Perform AIS inspections, education/outreach, and enforcement; install signage; install decontamination stations; and develop rapid response plans and early detection programs	\$3,550,000	A	A \$100,000	\$458,600
C \$610,000			C 1,470,000		
I			I		
P			P		
W \$934,400			W		
<b>\$1,544,400</b>			<b>\$1,547,000</b>		
	(C) Work with lake groups and associations on AIS prevention outreach and education [Funds needed included with Shared Services Educator from Developed/Developing Lands Program]	\$385,000	A \$10,000	A	\$0
C \$10,000			C		
I			I \$15,000		
P			P		
W \$350,000			W		
<b>\$370,000</b>			<b>\$15,000</b>		
	(C) Partner with St. Croix River Association and MN AIS Research Center (MAISRC) to identify and implement AIS prevention measures including following MAISRC recommendations for invasive phragmites control	\$500,000	A	A \$20,000	\$392,500
C \$30,000			C		
I \$7,500			I		
P			P		
W \$50,000			W		
<b>\$87,500</b>			<b>\$20,000</b>		





Table 5-1 Part C: Implementation for Ecosystem Services		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed	
	Implementation Actions					
	(C) Develop resiliency plans or responses, such as a Slow-No-Wake Ordinance or Channel and Weir Operations and Maintenance Plans, to address vulnerable properties	\$100,000	A	A	\$40,000	
			C	C		
			I	I		
			P	P		
			W	W		
		\$60,000	\$0			
	Implementation Actions					
	(A) Perform alum treatment, carp management, or other methods identified in feasibility studies to reduce internal loading	\$600,000	A	\$10,000	A	\$340,000
			C		C	
			I		I	
			P		P	
			W	\$250,000	W	
		\$260,000	\$0			
	Implementation Actions					
	(A) 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. See <a href="https://www.dnr.state.mn.us/waters/watermgmt_section/shoreland/innovative-standards.html">https://www.dnr.state.mn.us/waters/watermgmt_section/shoreland/innovative-standards.html</a> (Funding could be for consultant to get ordinance work done or E&O))	\$120,000	A		A	\$118,500
			C		C	
			I	\$1,500	I	
			P		P	
			W		W	
		\$1,500	\$0			
	Implementation Actions					






Table 5-1 Part C: Implementation for Ecosystem Services		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed																		
	(C) Work with developers/contractors and landowners to develop diverse landscape plans, multi-dimensional buffers, and living fences for developments	\$500,000	\$0	\$0	\$500,000																		
	<b>Implementation Actions</b>																						
  	(B) Promote and provide technical assistance to develop and implement Landscape Stewardship Plans (using Landscape Stewardship Planning Model) and Private Forest Management Plans (or Woodland Stewardship Plans). Coordinate or assist with negotiations, grant applications, and project management for conservation easements and acquisitions. (\$80,000/yr for staff)	\$800,000	<table border="1"> <tr><td>A</td><td></td><td>A</td></tr> <tr><td>C</td><td></td><td>C</td></tr> <tr><td>I</td><td>\$20,000</td><td>I</td></tr> <tr><td>P</td><td>\$100,000</td><td>P</td></tr> <tr><td>W</td><td>\$20,000</td><td>W \$90,000</td></tr> <tr><td></td><td><b>\$140,000</b></td><td><b>\$90,000</b></td></tr> </table>	A		A	C		C	I	\$20,000	I	P	\$100,000	P	W	\$20,000	W \$90,000		<b>\$140,000</b>	<b>\$90,000</b>		\$570,000
	A		A																				
C		C																					
I	\$20,000	I																					
P	\$100,000	P																					
W	\$20,000	W \$90,000																					
	<b>\$140,000</b>	<b>\$90,000</b>																					
(A) Provide cost share to landowners for land restoration or easement establishment or local matching funds for acquisition grant programs	\$1,000,000	<table border="1"> <tr><td>A</td><td></td><td>A</td></tr> <tr><td>C</td><td></td><td>C</td></tr> <tr><td>I</td><td></td><td>I</td></tr> <tr><td>P</td><td></td><td>P</td></tr> <tr><td>W</td><td>\$600,000</td><td>W</td></tr> <tr><td></td><td><b>\$600,000</b></td><td><b>\$0</b></td></tr> </table>	A		A	C		C	I		I	P		P	W	\$600,000	W		<b>\$600,000</b>	<b>\$0</b>		\$400,000	
A		A																					
C		C																					
I		I																					
P		P																					
W	\$600,000	W																					
	<b>\$600,000</b>	<b>\$0</b>																					
	<b>TOTAL "A" High Priorities for WBIF</b>	\$4,330,000	\$1,431,500	\$155,000	\$2,743,500*																		
	<b>TOTAL "B" Secondary Priorities for WBIF</b>	\$2,650,000	\$140,000	\$90,000	\$2,420,000*																		







Table 5-1 Part C: Implementation for Ecosystem Services		10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	<b>TOTAL "C" Local Priorities</b>	\$5,035,000	\$2,061,900	\$1,582,000	\$1,391,100
	<b>TABLE C: GRAND TOTAL</b>	<b>\$12,015,000</b>	<b>\$3,633,400</b>	<b>\$1,827,000</b>	<b>\$6,554,600</b>

\*This total may not reflect the true additional external funding need given significant variation in existing local and stable external funds between counties and LSC Partners.





**Table 5-1 Part D. Implementation for Prioritization and Analysis: Issues, Goals, Actions, Measurable Outputs, and Priority Locations**




Goals & Issues Table 3-1	Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
4 3 	Identify, appoint, and empower entity or person to lead/evaluate the water quality metrics, set reporting standards, report on goal progress.	\$250,000	\$0	\$0	\$250,000
4 4 	Work with State agencies and Metropolitan Council to study and map pollution sources (including mines), areas around chemical contamination sites, vulnerable areas, and surface water-GW interactions	\$100,000	\$0	\$0	\$100,000
4 5 	Support agencies such as DNR and Met Council in mapping recharge areas and groundwatersheds of GW dependent natural resources	\$90,000	\$0	\$0	\$90,000

Goals & Issues Table 3-1		Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
46	G W 	Build on existing GRAPS to develop groundwater plans that lay out technical framework, issues, policies and implementation actions for the protection and conservation of groundwater resources.	\$100,000	\$0	\$0	\$100,000
47	G W 	Work with MnDNR to maintain and expand observation well program	\$418,650	A	A	\$0
		C		C	\$13,000	
		I		I	\$650	
		P		P		
		W		W	\$405,000	
				<b>\$405,650</b>	<b>\$13,000</b>	
48	LK 1D 	Calculate internal loading of phosphorus on 15 lakes @ \$25,000 each)	\$375,000	A	A	\$125,000
		C		C		
		I		I		
		P		P		
		W		W	\$250,000	
				<b>\$250,000</b>	<b>\$0</b>	
49	LK 4A 	Develop monitoring plan and collect data using available means such as volunteers, Met Council's CAMP, MPCA's citizen monitoring program, MPCA's Intensive watershed monitoring program, SWCDs, counties, parks departments, lake associations, etc.  Anoka Co annual costs (5 lakes * \$2,100/lake) = \$10,500 Chisago Co annual costs (2 lakes) = \$1,200	\$ 288,600	A	A	\$284,100
		C		C		
		I		I		
		P: N/A		P		
		W: N/A		W		

Goals & Issues Table 3-1		Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
		Isanti Co annual costs (12 lakes) = \$1,430/lake = \$17,160		<b>\$4,500</b>	<b>\$0</b>	
50	LK 4A ST C 2B, 4C	Use latest climate science to implement adaptive management	Included in existing work	\$0	\$0	\$0
51	LK 4A	Manage the channel and weir system with an approved operation and maintenance plan.	\$360,000	A C \$250,000 I P W \$110,000 <b>\$360,000</b>	A C I P W <b>\$0</b>	\$0
52	LK 4A	Participate in DNR lake level monitoring program to routinely collect lake level data	\$130,000	A \$10,000 C \$81,000 I P W \$39,000 <b>\$130,000</b>	A C I P W <b>\$0</b>	\$0
53	LK 4A	Conduct analyses to identify and prioritize water quality improvement projects within a priority subwatershed. Methods and analyses can include site or field scale subwatershed analyses, diagnostic monitoring, spatial analysis and mapping, modeling, cost benefit analyses, or	\$1,200,000	A \$10,000 C I P W 1,500,000	A \$50,000 C \$60,000 I P W	\$0 (-\$420,000)



Goals & Issues Table 3-1		Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
		other data-driven targeting activities. See Section VII.B. for further description.		<b>\$1,510,000</b>	<b>\$110,000</b>	
5 4	ST C 4B					
5 5	ST C 4A.  	Operate up to 10 new monitoring stations that lack data (quality and quantity) to evaluate progress toward achieving the TMDL and to identify priority subwatersheds. @ \$10,000/year/station	\$900,000	A C I P W \$100,000 <b>\$100,000</b>	A C I P W <b>\$0</b>	\$800,000
5 6	ST C 	Work with land use authorities along St. Croix River and MnDNR Area Hydrologists to evaluate floodplain and zoning ordinances and update where appropriate.	\$250,000	A C \$50,000 I P W <b>\$50,000</b>	A C \$50,000 I P W <b>\$50,000</b>	\$150,000
5 7	ST C 4B & UP 2A 	Identify, evaluate, and rank active gullies directly discharging into the St. Croix or its tributaries Rural SWA [LIDAR to identify gully locations; RUSLE & BWSR pollution reduction calculator to determine pollution reduction numbers]	\$250,000	A C I P W <b>\$0</b>	A C \$25,000 I P W <b>\$25,000</b>	\$225,000
5 8	ST C	Complete level 4/5 MLCCS basin wide. Expand the Washington County Natural Resource Framework and	\$640,000	\$0	\$0	\$640,000

Goals & Issues Table 3-1		Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	2B, 4C UP 1A	use their methodology in Anoka, Chisago, Isanti, and Pine Counties. (MLCCS = \$1,000/sq mi * 640 sq miles)				
5 9	1E	Implement a cooperative weed management area (including MNDOT when possible) and promote associated implementation strategies.	\$200,000	A	A 32,000	\$163,500
				C	C	
				I \$4,500	I	
				P	P	
				W	W	
			\$4,500	\$32,000		
6 0	W TL 3E	Complete soil survey as developed by NRCS, USDA & shown in Soil Survey Geographic (SSURGO) Database	To be completed by NRCS	\$0	\$0	Unknown
6 1	W TL 	Use subwatershed analyses or monitoring/modeling data to identify degraded wetlands with the potential of contributing high nutrient loads to downstream resources.	\$750,000	A	A	\$300,000
				C	C	
				I	I	
				P	P	
				W \$450,000	W	
			\$450,000	\$0		
6 2	W TL 	Use existing Restorable Wetland Prioritization Tool to focus effort	\$0	\$0	\$0	\$0
6 3	W TL 	Collect water quality data near ditch outlets of 25 ditches (estimated \$2,000 per ditch)	\$50,000	A \$4,000	A \$4,000	\$42,000
				C	C	
				I	I	
				P	P	

Goals & Issues Table 3-1		Implementation Actions	10-year Estimated Cost	10-yr Estimated Local Funds	10-year Existing Stable External Funding	Add't External Funds Needed
	& 1D			W \$4,000	W \$4,000	
6 5	W TL 3A, 3B & 3C	Increase by 5 the number of LGUs with policies requiring wetland function and value assessments with project proposals such as developments or ditch work.	\$120,000	\$0	\$0	\$120,000
6 6	W TL	Verify recently completed inventory and map % of areas of wetland loss and historic wetlands	\$60,000	\$0	\$0	\$60,000
		<b>TABLE D: GRAND TOTAL</b>	<b>\$6,532,250</b>	<b>\$3,268,650</b>	<b>\$234,000</b>	<b>\$3,029,600*</b>

\*This total may not reflect the true additional external funding need given significant variation in existing local and stable external funds between counties and LSC Partners

# Added to Executive Summary (Section I.D.)

Table 1-1. 10-year Implementation Costs for High Priority Activities

Area of Implementation	10-year Estimated Cost	10-year Estimated Local Funds	10-year Existing Stable External Funding	Additional External Funds Needed
Agricultural Lands	\$6,450,000	\$475,000	\$390,000	\$5,585,000
Developed & Developing Lands	\$4,800,000	\$3,569,000	\$715,000	\$516,000
Ecosystem Services	\$4,330,000	\$1,431,500	\$155,000	\$2,743,500
<b>TOTAL</b>	<b>\$15,580,000</b>	<b>\$5,475,500</b>	<b>\$1,260,000</b>	<b>\$8,844,500</b>

Activities involving prioritization and analysis are not included here because they were not assigned a priority level; those needs will be determined within annual work plans.





Questions or Concerns?