

Snake River Watershed Management Board (SRWMB)

Annual Work Plan and Budget

2020 and 2021

1. Statement of Problems, Opportunities, and Existing Conditions

The Snake River watershed is an 8-digit Hydrologic Unit (HUC) located in the St. Croix River Basin. The watershed is approximately 1,006 sq. miles, or 643,534 acres, in extent and overlies four counties including Aitkin, Kanabec, Mille Lacs, and Pine. The headwaters of the Snake River are located in southeastern Aitkin County. The Snake River watershed can be broken down into 8 sub-watersheds which include: Upper Snake, Middle Snake, Knife River, Mud Creek, Groundhouse River, Pokegama Creek, Ann River, and Lower Snake River. The Snake River flows south to east to its confluence with the St. Croix River in Pine County, MN (MPCA Snake River Watershed TMDL 2013).

The issues, opportunities, and existing conditions in this work plan are based on the information found in the Snake River Watershed TMDL (MPCA, Nov. 2013) and WRAPS documents (MPCA, Aug. 2014). Below is the list of impaired waters as identified in the Snake River TMDL.

TMDL Summary Table					
EPA/MPCA Required Elements	Summary				TMDL Page #
Location	East Central Minnesota, St. Croix River Basin				
303(d) Listing Information	Water body	HUC/ Lake No.	Pollutant/ Stressor	Listing Year	P. 1-1
	Upper Mud Creek	07030004-566	Fish Bio assessment; <i>E. coli</i>	2010	
	Lower Mud Creek	07030004-567	<i>E. coli</i>	2010	
	Bear Creek	07030004-514	<i>E. coli</i>	2010	
	Knife Lake	33-0028	Excess Nutrients	2004	
	Quamba Lake	33-0015	Excess Nutrients	2004	
	Pokegama Lake	58-0142	Excess Nutrients	2004	
	Cross Lake	58-0019	Excess Nutrients	2004	

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In-depth monitoring and analysis show water quality is good in the north half of the watershed where lakes and streams need protective measures to keep them healthy. These measures include managing timber harvests and other activities to prevent erosion and other impacts than can eventually pollute the waters.

Water quality becomes progressively worse in the southern half as the landscape changes from primarily forests and wetland to pasturelands with some croplands. Lakes and streams that fail to meet standards are considered “impaired.” To restore these impaired waters to state standards, the report recommends, among other things, managing cattle access to streams and lakes to reduce levels of phosphorous (a

nutrient that can produce excessive algae growth); *E. coli*, a potentially harmful bacteria, and sediment, which reduces clarity and can harm aquatic animals (MPCA Snake TMDL 2013).

Because much of the nonpoint source strategies rely on voluntary implementation by landowners, land users and residents of the watershed it is imperative to create social capital (trust, networks and positive relationships) with those who will be needed to voluntarily implement best management practices. Thus, effective ongoing civic engagement is fully a part of the overall plan for moving forward.

In the past the SRWMB has applied for and received Clean Water Grants to assist in the implementation of projects and practices and civic engagement efforts to improve water quality and soil health in the Snake River Watershed. However, the most recent grant has expired and it is not expected that the SRWMB will receive non-county allocation funding until the receipt of One Watershed, One Plan (1W1P) implementation funding (spring 2022).

2. Goals, Objectives, and Tasks

Measurable Outcomes

1. Reduction in TSS
2. Reduction in Phosphorus
3. Number of engaged citizens

Since the publication of the Snake River Watershed TMDL in 2013 a great number of projects have been undertaken in the Snake River Watershed that have resulted in the exceedance of reduction goals.

They are as followed –

Soil–84.67 Tons/Yr.	Over by 23 Tons
Sediment – 100.63 Tons/Yr.	
Phosphorus – 16,785.15 Lbs./Yr.	Over by 16,170 lbs.

However, the goals for Best Management Practice (BMP) implementation in the watershed falls short by 5 BMPs. Prior to this work plan, 15 projects have been completed since the TMDL publication. It would be a reasonable goal to attain 5 additional BMP installations before the completion of the 1W1P.

Citizen engagement has not been tracked to the same level of accuracy as the above pollution sources, but should not be overlooked in 2020 and 2021. Tracking numbers of engaged citizens may prove useful when planning for further events. Because all projects undertaken by the SRWMB are voluntary it is imperative to create and maintain social capital with those persons who will implement them (MPCA Snake WRAPS 2014). For that reason, education, outreach, and additional coordination with the SRWMB are an important part of the budget and work plan for 2020 and 2021.

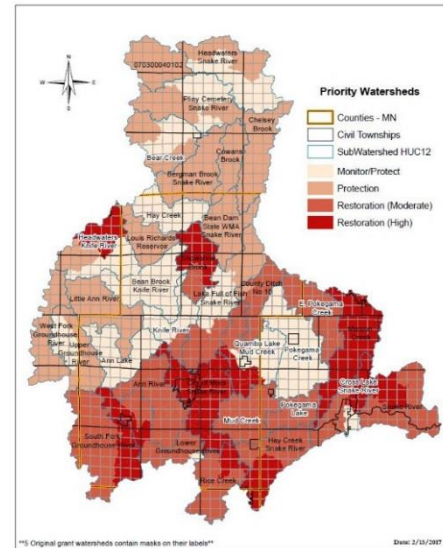
3. Proposed Budget

As of 11/15/2019, the SRWMB has a current fund balance of \$146,777.000, which will increase to \$297,327.12 upon the receipt of the annual county contributions for 2020 (\$48,498) and reimbursement for the Clean Water Grant from BWSR (\$102,052.12). In recent years, as a result of project expenses being financed by clean water grants, the SRWMB's account balances have grown. It is the intention of the SRWMB to use their funds to cover operational expenses, fund conservation projects, and to fund outreach and community education events. It is the intention of the board to draw down the account balance to a reasonable level prior to the completion of the One Watershed One Plan planning process (spring 2022). Upon the completion of the 1W1P planning process it is expected that BWSR 1W1P based implementation funding will be made available to fund watershed activities as described in the final plan. A budget as proposed below, if duplicated in 2021, would result in a balance of \$101,745.12 at the end of 2021, with an additional \$20,000 in reserves to be used in the case of receipt of a grant. At this point it is expected implementation funds tied to the 1W1P grant will be received to assist in implementing conservation projects and activities.

Snake River Board Proposed Budget		2020 Budget	2021 Budget
<small>As prepared by Pine SWCD</small>			
Anticipated Fund Balance	\$	248,829.12	\$ 165,287.12
Revenues:			
Aitkin County	\$	10,079.00	\$ 10,079.00
Kanabec County	\$	24,072.00	\$ 24,072.00
Mille Lacs County	\$	4,379.00	\$ 4,379.00
Pine County	\$	9,968.00	\$ 9,968.00
MCIT Dividend			
Expenditures:			
Fiscal Mgmt	\$	(14,000.00)	\$ (14,000.00)
Administration Time	\$	(11,000.00)	\$ (11,000.00)
MCIT Insurance	\$	(1,040.00)	\$ (1,040.00)
Audit/bi-annual (2019-2020 due 2011)	\$	(1,900.00)	\$ (1,900.00)
Advertising/Promotions	\$	-	\$ -
Dedicated to Projects (75% restoration 25% protection)	\$	(76,600.00)	\$ (76,600.00)
Education/Outreach	\$	(2,500.00)	\$ (2,500.00)
Additional Coordinatination needs for SRWMB	\$	(5,000.00)	\$ (5,000.00)
Reserve:			
Grant reserve fund (only spent in event of grant receipt)	\$	(20,000.00)	carry over \$20,000
Grand Total	\$	165,287.12	\$ 101,745.12
Balance (\$20,000 reserve not included)			
Proposed Balance end 2021	\$		165,287.12
Proposed Balance end 2022	\$		101,745.12

4. Anticipated Projects

This work plan and budget dedicates \$76,600 in 2020 and 2021 to funding cost share projects. Cost share projects in the Snake River watershed most often consist of Critical Area Plantings, Shoreline Restorations, Access Control, Grade Stabilization Structures, Manure Pit Waste Closures, Streambank Protection, Heavy use Area Protection, and Structures for Water Control; but, are not however, limited to these practices. When assessing a project for potential funding through the SRWMB consideration will be taken as to where the project is located in relation to Priority Watersheds and the potential pollution reduction numbers. A map of priority watersheds is found to the right. As a guideline, project funding is intended to be used 75% on restoration projects and 25%, however, the ratio may change based on landowner interest.



The following projects have been proposed by Kanabec SWCD, within their portion of the Snake River Watershed, and serve as an example of the work that could be possibly done within the watershed. While the total cost of projects is beyond the budget for the SRWMB at this time, these projects underscore the need to utilize SRWMB funds for projects until 1W1P implementation funds are available.

Waterbody	Protection or Restoration Practice	Conservation Practice	Project Size (sq ft)	TOTAL (Estimated) Project Cost	(Estimated) SRWMB Potential Contribution - 75%	Sediment - TSS T/yr Reduction	Soil - T/ac/yr Reduction	Phosphorus - lbs/yr Reduction
Fish Lake	Protection	580 Shoreline Protection	5084	\$9,151.20	\$6,863.40	0.87	~0.06	2.30
Knife Lake	Protection	580 Shoreline Protection	2500	\$8,850.00	\$6,637.50	0.43	~0.06	1.13
Fish Lake	Protection	580 Shoreline Protection	3325	\$5,985.00	\$4,488.75	0.57	~0.06	1.51
Ann Lake	Protection	580 Shoreline Protection	1280	\$2,304.00	\$1,728.00	0.22	~0.06	0.58
<u>Ann Lake</u>	<u>Protection</u>	<u>580 Shoreline Protection</u>	<u>5150</u>	<u>\$9,270.00</u>	<u>\$6,952.50</u>	<u>0.88</u>	<u>~0.06</u>	<u>2.33</u>
					\$26,670.15			
Snake River	Restoration	580 - Streambank Restoration & 472 - Access Control	14000 Sq Ft	\$37,943.68	\$28,457.76	103.95	~30.94	88.36
Fish Lake/Ann River	Restoration	580 - Shoreline Restoration	3670 Sq Ft	\$30,800.00	\$23,100.00	27.25	~30.94	23.16
Knife Lake	Restoration	580 - Streambank and Shoreline Restoration	2900 Sq Ft	\$35,659.00	\$26,744.25	21.53	~30.94	18.30
<u>Mud Creek</u>	<u>Restoration</u>	<u>412 - Grassed Waterway</u>	<u>5000 Sq Ft</u>	<u>\$10,906.60</u>	<u>\$8,179.95</u>	<u>33.85</u>	<u>15.84</u>	<u>33.85</u>
					<u>\$86,481.96</u>			

