

Improving Minnesota's Water Quality with the Clean Water Fund



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- Created in 2006 to “advise on the administration and implementation of” the **Clean Water Legacy Act**
 - Every two years, recommends how to spend the **Clean Water Fund**
 - “Protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation” (M.S. 114D)
- Voting members (17)**
 - Counties (2) (Metro, Greater MN)
 - Townships (1)
 - Municipalities (2)
 - Farm organizations (2)
 - Environmental organizations (2)
 - Tribal government (1)
 - Business (2)
 - Fishing organizations (1)
 - Hunting organizations (1)
 - Lakes/Streams nonprofits (1)
 - Watershed districts (1)
 - Soil & Water Conservation Districts (1)

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Problem We Are Trying to Solve

- More than 85% of the state's water "impairments" are due to non-point sources
- Non-point pollution is the accumulation of many small sources

Examples

- Sediment
- Nitrogen
- Phosphorus
 - E. coli
 - Chloride
 - Coliform



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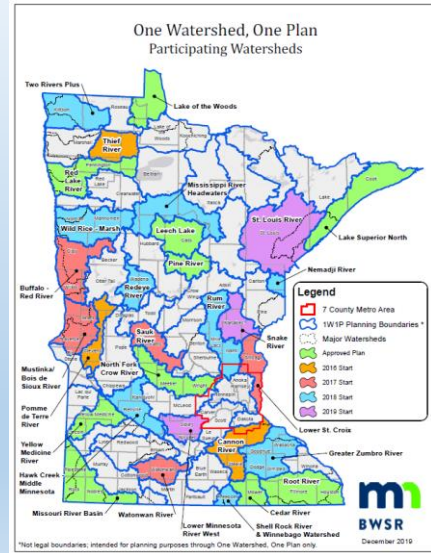
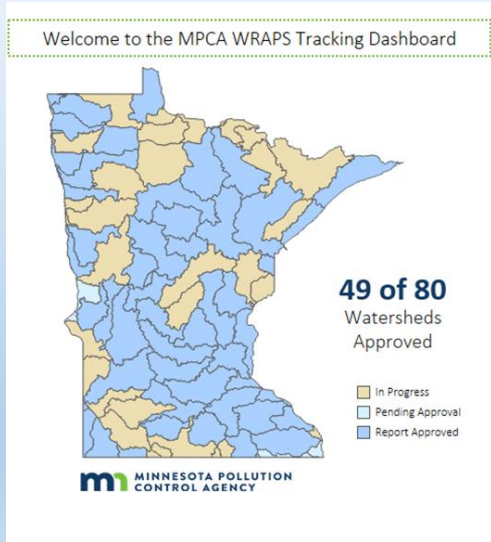
How Do We Clean Up Water?

- Test it & find source of problem
- Make a plan to fix it
- Train people how to fix it
- Persuade landowners to act
- Set aside land where feasible ("protect")
- "Restore" when necessary
- Measure



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Set Priorities Based on Science



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Drainage	Treatment Group Type & Number of BMPs	Cost	Issue	Unit	Existing Conditions	Quantitative Measurable Goal				PTMApp Scenario Reduction	5 year Load Reduction Goal	10 year Load Reduction Goal	10 yr. Progress towards Measurable Goal (%)
						Metric	Amount (%)*	Target Load Reduction	Year				
Drainage to Mississippi River	Storage (244) Filtration (78) Infiltration (3) Source Reduction (812)	\$6,437,605	Sediment	tons/yr	116,416	Annual Load (mass/yr.)	45	52,387	2025	14,488	7,244	14,488	28
			Nutrients: Total Nitrogen	lbs/yr	10,848	Annual Load (mass/yr.)	45	4,882	2040	112	56	112	2
			Nutrients: Total Phosphorus	lbs/yr	134	Annual Load (mass/yr.)	45	60	2025	12	6	12	20
			Excess Runoff: 2 Year	acre feet	71,177	2-Yr. Runoff Volume	25	17,794	2030	N/A	N/A	N/A	N/A
			Excess Runoff: 10 Year	acre feet	167,868	2-Yr. Runoff Volume	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drainage to Upper Iowa River	Storage (44) Filtration (15) Source Reduction (268)	\$1,410,038	Sediment	tons/yr	112,249	Annual Load (mass/yr.)	45	50,512	2025	27,776	13,888	27,776	55
			Nutrients: Total Nitrogen	lbs/yr	32,828	Annual Load (mass/yr.)	45	14,773	2040	3,285	1,642	3,285	22
			Nutrients: Total Phosphorus	lbs/yr	2,024	Annual Load (mass/yr.)	45	911	2025	360	180	360	40
			Excess Runoff: 2 Year	acre feet	7,781	2-Yr. Runoff Volume	25	1,945	2030	N/A	N/A	N/A	N/A
			Excess Runoff: 10 Year	acre feet	17,036	2-Yr. Runoff Volume	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Excerpt from Root River "One Watershed One Plan"

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Restoration/Implementation

“Moving dirt”

Examples:

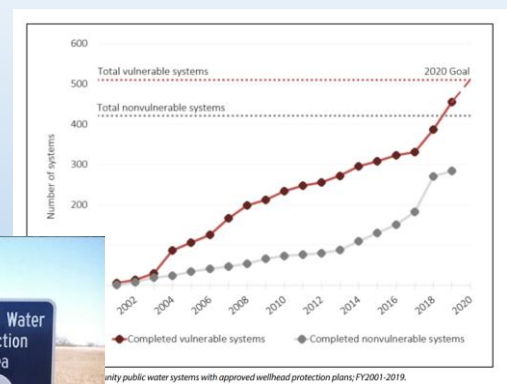
- Stream restoration
- Septic inspection + repair/replacement
- Barrier removal
- Soil health
- Agricultural BMPs



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Drinking Water (Groundwater)

- 500 vulnerable community groundwater systems; source water protection plans almost complete
- 420 non-vulnerable source water plans complete by 2025
- Protecting 400,000 acres possible
- Financial assistance for source water implementation activities to satisfy 50% of demand through 2034



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Drinking Water (Surface Water)

- Complete revised source water assessments for all 23 surface water systems by 2025;
- Complete source water intake protection planning by 2027;
- Maintain 80% compliance for septic systems (SSTS); goal of 90%

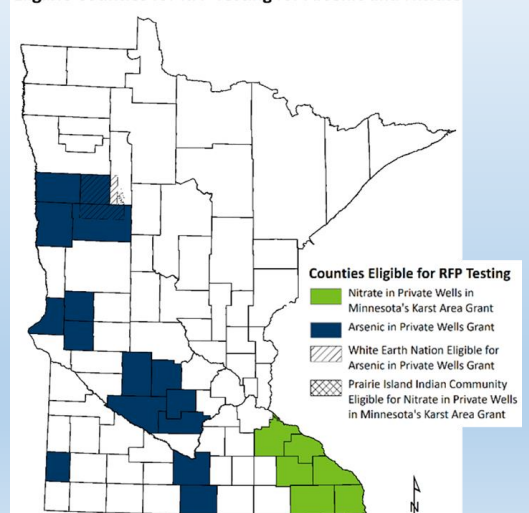


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Private Wells in Strategic Plan

- Help private well owners achieve safe limits at the tap, not just at the source
- Pilot project in FY2020-2021: arsenic & nitrate testing
- People with an income >\$100,000 are **twice as likely** to install treatment compared to people with an income <\$40,000.
- People with incomes <\$40,000 were **five times as likely** to select cost as the reason for not taking action.

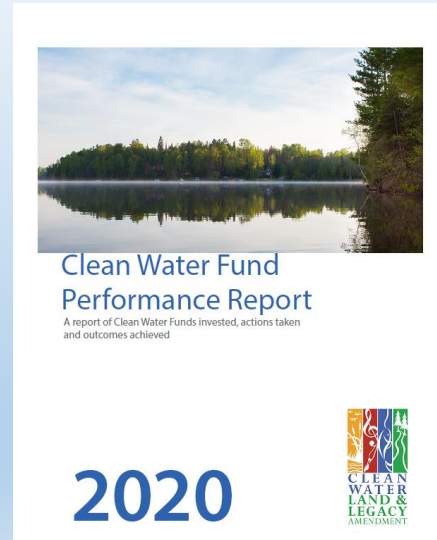
Eligible Counties for RFP Testing for Arsenic and Nitrate



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Key Results/“Fishable” & “Swimmable” Waters

- Water monitoring fish stations that are healthy: 61%
- State goal by 2034: 67%
- Lakes meeting goal for recreation activities: 64%
- State goal by 2034: 70%



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Other Indicators

- Phosphorus concentrations decreasing
- Nitrate concentrations increasing
- Chloride concentrations increasing

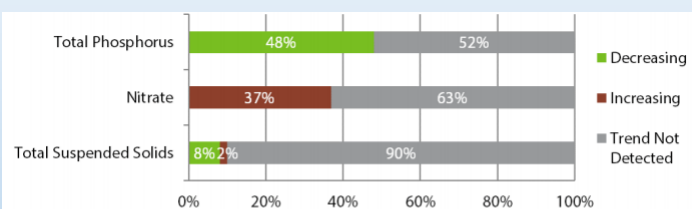


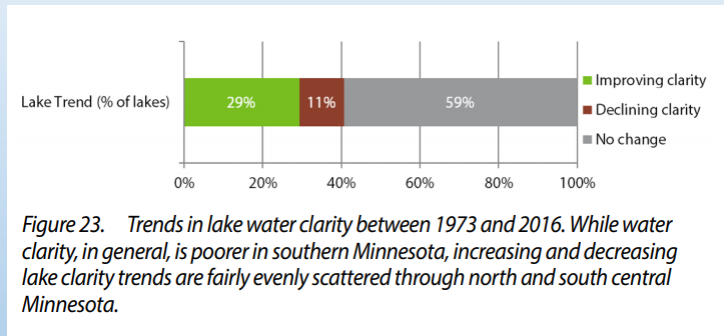
Figure 24. Where long-term (more than 20 years) streamflow and water quality data are available, phosphorus and total suspended solids concentrations in Minnesota's larger rivers are generally decreasing or staying the same, while nitrate concentrations are staying the same or increasing. Because flows have been increasing in some rivers, the total amount of phosphorus, total suspended solids, and nitrate may be increasing even when concentrations stay the same.

Source: 2020 Clean Water Fund Performance Report

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Lake Water Clarity 1973-2016

- Water clarity improving for 29% of lakes
- Clarity decreasing for 11%
- No change 59%



Source: 2020 Clean Water Fund Performance Report

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Leverage

- CWF provides consistent base funding for many projects
- Gets matched by state + feds
- We compete better for federal funds due to “shovel readiness” created by CWF
- 95 cents in leverage for every dollar of CWF

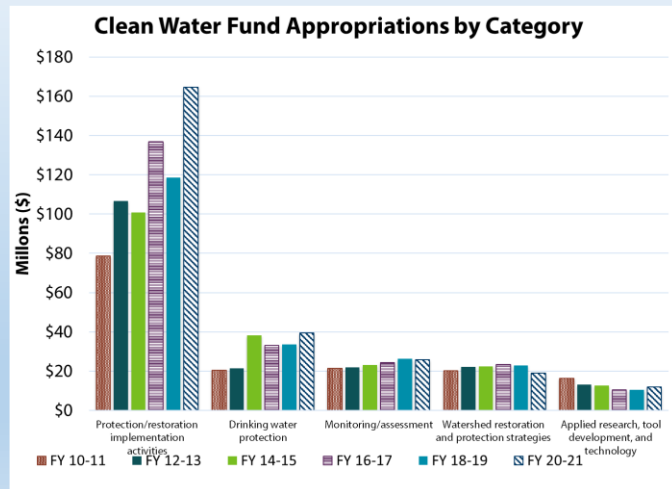
Examples

- Forever Green
- St. Louis River Area of Concern (AOC)
- MN Ag Water Quality Certification Program (MAWQCP)
- MN CREP
- AgBMP Loan program

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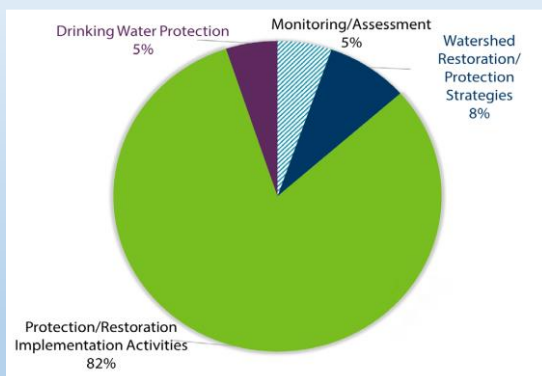
Spending Trends

- The share of the Clean Water Fund going to projects and drinking water is increasing
- Spending on planning, research, and monitoring is lower and steady
- 20% goal for drinking water (minimum) in Strategic Plan



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Half of Fund Spent Outside State Government



- 50% of CWF goes to non-agency partners
- \$491 million out of \$1.2 billion are grants/contracts
- 87% of what goes to non-agency partners (see chart) goes for projects + drinking water protection

Source: 2020 Clean Water Fund Performance Report

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Thank you!

