2024 CLEAN WATER FUND REPORT CARD

Minnesotans care deeply about the state's natural resources and cultural heritage. In 2008, we voted to increase our sales tax and pass the Clean Water, Land and Legacy Amendment, providing 25 years of constitutionally dedicated funding for clean water, habitat, parks and trails, and the arts.

The following report card highlights work done using Clean Water, Land and Legacy Amendment dollars for Minnesota's many water resources. The Report Card tracks a suite of performance measures that are described in the full report that follows. It provides a qualitative assessment of how well actions are being implemented and what outcomes are being achieved.

Measures are scored according to their status as of the end of fiscal year 2023 (FY23) and for their trend over time. Scores were developed using data-informed professional judgment of agency technical staff and managers. The legend shows the symbols used to describe how measures were scored.

Action Status Legend

SYMBOL	MEANING
●	We are making good progress/ meeting the target
▲	We anticipate difficulty; it is too early to assess; or there is too much variability across regions to assess
■	Progress is slow/we are not meeting the target; or the activity or target is not commensurate with the scope of the problems

Outcome Status Legend

SYMBOL	MEANING
●	Water quality is high – we are on track to meet long-term water resource needs and citizen expectations
▲	Water quality needs improvement or it is too early to assess – it is unclear if we will meet long-term water resource needs and citizen expectations; and/or water quality varies greatly between regions
■	Water quality is under intense pressure – long-term water resource needs and/ or citizen expectations exceed current efforts to meet them

Trend Legend

SYMBOL	MEANING
↗	Improving trend
→	No change
↘	Declining trend
NEI	Not enough information to determine trend at this time

Investment Measures

	MEASURE	STATUS	TREND	DESCRIPTION
INVESTMENT	Total Clean Water Fund dollars appropriated by activity	$1.8B has been appropriated to the Clean Water Fund from FY10-25, ranging from $157M in FY10-11 to $318M in FY24-25.	FY16-17: $228M FY18-19: $212M FY20-21: $261M FY22-23: $257M FY24-25: $318M	For FY10-25, all 80 watersheds benefited from Clean Water Fund supported activities. Implementation activities comprise the largest portion of spending in watersheds statewide.
	Total Clean Water Fund dollars per watershed or statewide by activity	All watersheds in the state are benefiting from local and statewide projects.		For FY10-25, all 80 watersheds benefited from Clean Water Fund supported activities. Implementation activities comprise the largest portion of spending in watersheds statewide.
	Total Clean Water Fund dollars awarded in grants and contracts to non-state agency partners	$777M was awarded in grants and contracts to non-state agency partners in FY10-23.		About 84% of grant and contract awards are for implementation activities; 43% of total FY10-21 appropriations were awarded to non-state agency partners.
	Total dollars leveraged by Clean Water Fund	$630M was leveraged by Clean Water Funds in FY10-23, or $1.06 for every implementation dollar invested.		Required Clean Water match funds were exceeded.

Surface Water Measures

ACTION

MEASURE	STATUS	TREND	DESCRIPTION
Percent of monitoring addressing state & local needs.	▲	➡	Nearly 40% of watersheds met goals for addressing state and local needs for monitoring. Ongoing program development is aimed to ensure local needs are identified for monitoring.
Local partner participation in monitoring efforts.	●	➡	As of 2023, all programs are meeting participatory goals.
Number of nonpoint source best management practices implemented with Clean Water Funding and estimated pollutant load reductions.	■	↗	Although funding has increased and there is a continued increase in practices and projects being implemented, the total request for projects has remained significantly greater than available funds.
Number of municipal point source construction projects implemented with Clean Water Funding and estimated pollutant load reductions.	●	➡	Pace of awards is linked to permit cycles, compliance schedules, and available Clean Water Funds. Applications exceed currently available funds even after significant infusion of bond funds over the past several cycles.

OUTCOME

MEASURE	STATUS	TREND	DESCRIPTION
Rate of impairment/unimpairment of surface water statewide and by watershed: Stream aquatic life.	▲	NEI	Water quality varies greatly by region. In general, good water quality remains where land is intact; where considerable alteration has occurred, water quality is poor.
Rate of impairment/unimpairment of surface water statewide and by watershed: Stream swimming	▲	NEI	Water quality varies greatly by region. In general, good water quality remains where land is intact; where considerable alteration has occurred, water quality is poor.
Rate of impairment/unimpairment of surface water statewide and by watershed: Lake swimming	▲	NEI	Water quality varies greatly by region. In general, good water quality remains where land is intact; where considerable alteration has occurred, water quality is poor.
Changes over time in key water quality parameters for lakes and streams: Lake clarity	▲	NEI	Water quality varies greatly by region. There are more improving trends for lake clarity than there are declining trends. 60% of lakes with data, are either no trend or no change.
Changes over time in key water quality parameters for lakes and streams: Sediment in large rivers.	▲	NEI	Water quality varies greatly by region. Over 50% of streams have no trend detected. There are more improving trends than declining trends in total suspended solids concentrations.
Changes over time in key water quality parameters for lakes and streams: Nitrate in large rivers.	▲	NEI	Water quality varies greatly by region. Over 50% of streams have no trend detected. Concentrations of nitrate are increasing in some major rivers
Changes over time in key water quality parameters for lakes and streams: Phosphorus in large rivers.	▲	NEI	Water quality varies greatly by region. Over 50% of streams have no trend detected. There are more improving trends than declining trends in phosphorus concentrations.
Changes over time in key water quality parameters for lakes and streams: Pesticides in streams.	▲	NEI	Detections in streams vary greatly as a result of hydrologic and agronomic conditions; exceedances of pesticide water quality standards are rare. Some “surface water pesticides of concern” are showing increasing detection frequency and concentrations.
Changes over time in key water quality parameters for lakes and streams: Pesticides in lakes.	▲	➡	Monitoring has indicated stable pesticide concentrations in lakes, and nearly all detections are low relative to water quality reference values. Pesticide detection frequency and concentrations in lakes are lower compared to streams.
Changes over time in key water quality parameters for lakes and streams: Chloride in streams and rivers.	▲	↘	Concentrations are increasing in almost all metro area rivers and streams.
Number of previous impairments now meeting water quality standards due to corrective actions.	■	➡	Although funding has increased and there is a continued increase in practices and projects being implemented, the total request for projects has remained significantly greater than available funds.
Mercury in fish.	▲	➡	Mercury in game fish is not yet responding to decreases in local mercury emissions, although these reductions likely have prevented a steeper upward trend. Global emissions have increased. The time lag between emission reductions and response is likely several decades. It is too soon to see a measurable response in fish mercury levels. Long-term and consistent monitoring is necessary to track changes in fish tissue.
Mercury emissions.	▲	↗	Significant progress has been made reducing mercury emissions from power plants. Emissions from mercury use in various products saw a decrease in emissions for the 2022 emission inventory, continuing a general downward trend since 2014. Conversely, emission from the mining sector have remained relatively steady since 2017 with a notable decline in 2020 of about 150 pounds as a result of an overall production decrease across the industry due to the COVID-19 pandemic. To meet Minnesota’s 2025 emissions goal, significant reduction of mercury emission from the mining sector and further reduction of mercury use in various products will be necessary.
Municipal wastewater phosphorus discharge trend.	●	↗	Significant phosphorus load reductions have been achieved through regulatory policy, infrastructure investments, improved technology, and optimization of operations.

Drinking water and groundwater measures

ACTION

MEASURE	STATUS	TREND	DESCRIPTION
Number of community water supplies assisted with developing source water protection plans.	●	↗	On track to meet goal of protecting all vulnerable systems under Source Water Protection Plans by 2020.
Number of grants awarded for source water protection.	●	↗	Increasing funds accelerate implementation of proven strategies for source water protection.
Number of local government partners participating in groundwater nitrate-nitrogen monitoring and reduction activities.	●	↗	New partnerships continue to be established for nitrate-nitrogen monitoring and reduction activities.
Number of new health-based guidance values for contaminants of emerging concern.	●	→	Completed 1 re-evaluation and 1 full evaluation, updated water guidance for 2 CECs, established a partnership with EPA to create a contaminant screening tool, provide technical assistance to understand and use water guidance values, authored 3 scientific publications.
Number of counties completing a county geologic atlas for groundwater sustainability.	●	↗	County atlases (including the geologic & groundwater atlases) are being completed at the planned rate, and counties continue to step up to participate. With continued and consistent funding, completion of geologic atlases for all counties is expected around 2035, and completion of groundwater atlases for all counties around 2040.
Number of long-term groundwater monitoring network wells.	■	↗	Many areas of the state still lack important groundwater information. Long-term ramp up in monitoring accelerated by Clean Water Fund investments is filling gaps.
Number of unused groundwater wells sealed.	●	→	The legislative appropriation for this initiative is completed, but other Clean Water Fund programs continue to fund and promote well sealing.
Land use in Drinking Water Supply Management Areas.	●	→	There is increasing research, engagement and activity to protect vulnerable areas in DWSMAs.

OUTCOME

MEASURE	STATUS	TREND	DESCRIPTION
Changes over time in pesticides, nitrate-nitrogen, and other key water quality parameters in groundwater: Pesticides.	▲	→	Variable trends for five common pesticides indicate a mixed signal. Low levels are frequently detected in vulnerable groundwater.
Changes over time in pesticides, nitrate-nitrogen, and other key water quality parameters in groundwater: Nitrate-nitrogen statewide.	▲	NEI	Nitrate contamination is a significant concern in vulnerable groundwater areas (the southeast, Central Sands, and southwest). In some agricultural areas, drinking water supplies are not vulnerable to surficial contamination and most wells have low levels of nitrate-nitrogen.
Changes over time in pesticides, nitrate-nitrogen, and other water quality parameters in groundwater: Nitrate-nitrogen southwest region.	■	NEI	In areas where groundwater is vulnerable, nitrate levels can be high. Of the 21 vulnerable townships tested in southwest Minnesota (2013-2019), 100% of them were determined to have 10% or more of the wells over the nitrate-nitrogen 10 mg/L standard.
Changes over time in pesticides, nitrate-nitrogen, and ther key water quality parameters in groundwater: Nitrate-nitrogen Central Sands.	■	→	Trend data from the Central Sands Private Well Network shows a slight downward trend in the 90th percentile . However, township testing data show a high level of nitrate in some vulnerable areas in the Central Sands.
Changes over time in pesticides, nitrate-nitrogen, and other key water quality parameters in groundwater: Nitrate-nitrogen southeast region.	■	→	Trend data from the Southeast Minnesota Volunteer Nitrate Monitoring Network shows a slight downward trend in the median value. However, Township Testing data show a high level of nitrate in some vulnerable areas in southeast Minnesota.
Changes over time in source water quality used for community water supplies.	●	↗	Current risk management approaches for unregulated contaminants are more proactive and collaborative than the project-based approach of the past.
Nitrate concentrations in newly constructed wells.	▲	→	Since 1992, there has been a general increase in the percent of new wells that have nitrate levels above the drinking water standard.
Arsenic concentrations in newly constructed wells.	▲	→	The percentage of wells with arsenic above the drinking water standard has remained steady over the past 10 years. Evaluation of ways to reduce this percentage is ongoing and may take years before significant progress is made.
Changes over time in groundwater levels.	▲	↗	Most observation wells show no signficant change or an upward trend; many areas of the state lack important groundwater information while some areas experience declines.
Changes over time in total and per capita water use.	▲	↗	There has been a slight improvement in water efficiency in recent years, although continued tracking is needed to determine the amount of impact from annual difference in weather versus changes in management.

Social Measures and External Drivers

DRIVERS

MEASURE	STATUS	TREND	DESCRIPTION
Social Measure- Building local capacity to support and engage in water restoration and protection.	▲	NEI	State agencies are using the Social Measures Monitoring System to integrate social science into some of Clean Water Fund projects. The most evaluated project is We Are Water MN.
External drivers- Important land use, population, and climate trends.	▲	→	The external drivers identified continue to alter land-water interactions across Minnesota, impacting how Clean Water Funds need to be invested.