



# 2016 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 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.

The legend shows the symbols used to describe how measures were scored. Measures are scored according to their status as of the end of fiscal year 2015 (FY15) and for their trend over time. Scores were developed using data-informed professional judgment of agency technical staff and managers.

## Report Card Legend

Action Status Scores	
	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 Scores	
	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	
	Improving trend
	No change
	Declining trend





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Measure	Status	Trend	Description	
<b>Investment measures</b>				
<b>INVESTMENTS</b>	Total Clean Water Fund dollars appropriated by activity	FY10-11: \$152.2M FY12-13: \$179.4M	FY14-15: \$182.5M FY16-17: \$228.3M	Appropriation levels will vary by biennium and the strength of the economy. FY10-15 funds have been allocated, while FY16-17 allocations are in progress.
	Total Clean Water Fund dollars per watershed or statewide for 1) monitoring/assessment, 2) watershed restoration/protection strategies, 3) protection/restoration implementation activities, and 4) drinking water protection	Most watersheds in the state are benefiting from local and statewide projects.		For FY10-15, 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	\$240.1M was awarded in grants and contracts to non-state agency partners in FY10-15.		About 80% of grant and contract awards are for implementation activities; 47% of total FY10-15 appropriations were awarded to non-state agency partners.
	Total dollars leveraged by Clean Water Fund	\$154M was leveraged by Clean Water Funds in FY10-15, or 96 cents for every implementation dollar invested.		Required Clean Water match funds were met and exceeded.
<b>Surface water measures</b>				
<b>ACTION</b>	Percent of major watersheds intensively monitored through the watershed approach			Steady progress is being made at the pace set in 2008.
	Local partner participation in monitoring efforts			Since 2012, all programs have met local participation 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 three times 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 and compliance schedules; demand is growing with the improving economy and expanded eligibilities.
<b>OUTCOME</b>	Rate of impairment/unimpairment of surface water statewide and by watershed	Stream/lake swimming	Not enough information for a trend determination at this time.	Water quality varies greatly by region. Watersheds yet to be assessed will influence the statewide impairment/unimpairment rate. It is unclear whether long-term goals will be met.
		Stream aquatic life		
	Changes over time in key water quality parameters for lakes and streams	Lake clarity	Not enough information for a trend determination at this time.	Lake clarity: There are improving trends in lake water clarity in more lakes than not.
		Stream fish		Stream fish: Fish community health varies greatly by region, but statewide percents of poor vs. good fish community health are similar.
		Pesticides in streams		Pesticides in streams: Detections in streams vary greatly as a result of hydrologic and agronomic conditions; concentrations above water quality standards are rare.
		Pesticides in lakes		Pesticides in lakes: Detections in lakes vary by region; detections in lakes have been well below water quality standards.
	Number of previous impairments now meeting water quality standards due to corrective actions			Although many projects are making progress in improving water quality, more waterbodies are being listed as impaired relative to the slower rate of waterbodies being restored.
Trends of mercury in fish in Minnesota			Mercury in game fish over the last 30 years shows an improving trend despite large fluctuations during shorter periods, demonstrating the need for long-term and consistent monitoring.	
Trends of mercury emissions in Minnesota			Significant progress has been made reducing mercury emissions from power plants and is expected from the mining sector. To meet Minnesota's 2025 emissions goal, further reduction of mercury use in various products will be necessary.	

Measure	Status	Trend	Description	
<b>Surface water measures</b>				
Municipal wastewater phosphorus discharge trend			Significant phosphorus load reductions have been achieved through regulatory policy, infrastructure investments, and improved technology. Further reductions will continue to be challenging and expensive as small systems receive limits and tighter discharge permits.	
<b>Drinking and groundwater measures</b>				
<b>ACTION</b>	Number of community water supplies assisted with developing source water protection plans			Met target for FY14-15. On track to meet long-term target of every vulnerable community public water system engaged in source water protection by 2020.
	Number of grants awarded for source water protection			Increased 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 local partnerships continue to be established for nitrate-nitrogen monitoring and reduction activities.
	Number of new health-based guidance values for contaminants of emerging concern			Met target for FY14-15. On track to meet goal of 10 guidance values developed each biennium.
	Number of counties completing a county geologic atlas for groundwater sustainability			Significant progress has been made. Counties continue to step up to participate but substantial work remains before all counties are done.
	Number of long-term groundwater monitoring network wells in Minnesota			Many areas of the state still lack important groundwater information. Long-term monitoring accelerated by Clean Water Fund investments is filling gaps.
	Number of unused groundwater wells sealed			While Minnesota leads the nation in the number of sealed wells, continued effort is needed to address the estimated 250,000 to 500,000 unused, unsealed wells remaining.
<b>OUTCOME</b>	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 still frequently detected in vulnerable groundwater.
		Nitrate-Nitrogen statewide 	Not enough information for a trend determination at this time.	In many areas, drinking water aquifers are not vulnerable to surficial contamination. Wells may have low levels of nitrate-nitrogen. In some areas it can be a significant concern.
		Nitrate-Nitrogen Central Sands 		A significant percentage of wells from the township testing program exceed the drinking water standard for nitrate in localized sensitive areas in the Central Sands.
		Nitrate-Nitrogen southeast region 		In one county with considerable karst geology, two of 11 townships in the township testing program had more than 10% of wells exceed the drinking water standard for nitrate.
Changes over time in source water quality used for community water supplies		Not enough information for a trend determination at this time.		Identifying correlations between drinking water contaminants is a significant step in trend analysis of source water quality.
Nitrate concentrations in newly constructed wells			Although nitrate levels in less than 2% of new wells violate the drinking water standard, there has been a slight increase in recent years.	
Changes over time in groundwater levels			Most observation wells show no significant trend, but many areas of the state lack important groundwater information while some areas experienced groundwater declines.	
<b>Social measures and external drivers</b>				
<b>DRIVERS</b>	Social measures		Not enough information for a trend determination at this time.	In recent years, state agencies have developed and piloted the Social Measures Monitoring System. This work integrates social science into Clean Water Fund projects.
	External drivers			The external drivers identified continue to alter land-water interactions across Minnesota impacting how Clean Water funds need to be invested.





# 2016 Clean Water Fund Report: Highlights

In the first six years of Clean Water funding, state agencies have distributed the funds across Minnesota with major investments in all 80 watersheds. Restoration and protection spending was focused in watersheds with more significant water quality challenges.

Agencies are making solid progress in both surface water and groundwater quality. Examples include improving sewer systems and implementing activities to reduce nitrate in drinking water.

The Legacy Amendment has accelerated the implementation of practices to improve and protect Minnesota's water resources, although funding is not keeping pace with demand. In total, more than 4,600 best management and conservation practices have been installed, resulting in a reduction of about 79,000 pounds of phosphorus and 120,000 tons of sediment going to waters across the state.



Clean Water funding has ramped up efforts to collect key information statewide needed to develop restoration and protection strategies, and to target implementation dollars:

- The Minnesota Dept. of Natural Resources has completed 22 County Geologic Atlases with new or updated atlases in progress for 27 additional counties. At the current level of funding, atlases should be completed statewide in 10 to 15 years.
- The Minnesota Pollution Control Agency is on track to complete intensive water monitoring of all 80 major watersheds by 2018. Since the 2014 Performance Report, the agency has started monitoring in 19 more watersheds.
- The Minnesota Department of Agriculture began the Township Testing Program for well water in 2013 and is on track to complete the first round of nitrate testing in private wells by 2019. By 2019, the MDA will offer free nitrate testing in 250-300 townships with vulnerable groundwater.

Changes in human behavior, such as decisions on land use and product selection, are needed to change water quality for the better, as demonstrated by these measures:

- Water monitoring is showing correlations between impaired waters and agricultural land use.
- To reach the state goal for mercury reductions in order to decrease levels in fish, Minnesota will need to see further reductions of mercury in products such as fluorescent lamps and dental amalgam.
- Chloride is increasing in urban areas across the state, emphasizing the need to reduce salt in winter road and water softener treatments.

Because water quality is so dependent on human behavior, the Performance Report includes more information on social measures this year, providing a baseline for tracking social science data in meeting Minnesota's clean water goals. This section highlights four specific efforts undertaken to strengthen the capacity of Minnesota communities to take on this work.