

**Measures Table** (excerpt from May 2011 Clean Water Tracking Framework report)

Proposed measures for 2012 Clean Water Performance Report

Performance Measure	Coordinating Agency	Estimated Date to Begin Reporting
<b>Category: Environmental and Drinking Water Outcome Measures (EDWOM)</b>		
EDWOM 1: Rate of impairment/unimpairment of surface water statewide and by watershed	Minnesota Pollution Control Agency	Fall 2011
EDWOM 2: Changes over time in key water quality parameters for lakes, streams, and wetlands	Minnesota Pollution Control Agency with support from Department of Natural Resources and Minnesota Department of Agriculture	Fall 2011
EDWOM 3: Changes over time in pesticides, nitrates and other key water quality parameters in groundwater	Minnesota Department of Agriculture with support from the Minnesota Pollution Control Agency	2011-12
EDWOM 4: Changes over time in raw water quality from community water supplies	Minnesota Department of Health	2013-14
EDWOM 5: Changes over time in aquifer levels	Minnesota Department of Natural Resources	Fall 2011
EDWOM 6: Changes over time in the age of groundwater	Minnesota Department of Health Minnesota Department of Natural Resources	Fall 2011
EDWOM 7: Changes over time in agricultural nitrogen use efficiency	Minnesota Department of Agriculture	2012
EDWOM 8: Number of previous impairments now meeting water quality standards due to management actions	Minnesota Pollution Control Agency	Fall 2011
EDWOM 9a: Number of BMPs Implemented with Clean Water funding and Estimated Pollutant Load Reductions	Board of Water and Soil Resources with support from Minnesota Department of Agriculture	Fall 2011
EDWOM 9b: Number of point source municipal infrastructure projects implemented with Clean Water funding and estimated pollutant load reductions	Public Facilities Authority Minnesota Pollution Control Agency Metropolitan Council	Fall 2011
EDWOM 10: Amount of municipal and industrial wastewater pollution reductions achieved to meet TMDL requirements	Minnesota Pollution Control Agency	Fall 2011
EDWOM 11: Changes over time in municipal wastewater phosphorus discharges	Minnesota Pollution Control Agency	Fall 2011
EDWOM 12: Nitrate levels in newly constructed wells	Minnesota Department of Health	Fall 2011

Performance Measure	Coordinating Agency	Estimated Date to Begin Reporting
<b>Category: Partnership and Leveraging Measures (PLM)</b>		
PLM 1: Number of public and community water supply systems assisted with and involved in developing and implementing source water protection plans	Minnesota Department of Health	Fall 2011
PLM 2: Percent of intensive watershed monitoring performed by local partners	Minnesota Pollution Control Agency	Fall 2011
PLM 3: Number of sites monitored by citizen volunteers through the Citizen Lake and Stream Monitoring Programs	Minnesota Pollution Control Agency	Fall 2011
PLM 5: Number of local government partners participating in Clean Water funded nitrate monitoring and reduction activities	Minnesota Department of Agriculture	Fall 2011
<b>Category: Organizational Performance Measures (OPM)</b>		
OPM 1: Percent of state's major watersheds intensively monitored through the watershed approach	Minnesota Pollution Control Agency	Fall 2011
OPM 2: Percent of major watersheds with stream flow monitoring	Department of Natural Resources	Fall 2011
OPM 3: Cumulative number of waterbodies sampled annually for fish contaminant concentrations	Department of Natural Resources	Fall 2011
OPM 4: Cumulative number of lake biological assessments completed	Department of Natural Resources	Fall 2011
OPM 5: Number of counties completing a county geologic atlas for groundwater sustainability	Department of Natural Resources	Fall 2011
OPM 6: Percent of groundwater monitoring well networks installed and monitored	Minnesota Pollution Control Agency	Fall 2011
OPM 7: Percentage of watershed restoration and protection strategies that are in-progress/completed	Minnesota Pollution Control Agency	Fall 2011
OPM 8: Number of MDH grants awarded for source water protection	Minnesota Department of Health	Fall 2011
OPM 9: Number of new health-based guidance values for contaminants of emerging concern	Minnesota Department of Health	Fall 2011
OPM 10: Number of unused groundwater wells sealed	Minnesota Department of Health	Fall 2011
OPM 11: Percent of groundwater wells constructed in compliance with well code	Minnesota Department of Health	Fall 2011
OPM 12: Percent of research projects meeting research efficiency goals	Minnesota Department of Agriculture	2013
OPM 13: Percent of minor watersheds with targeted areas mapped	All agencies	2013
OPM 14: Percent of targeted areas addressed with Clean Water Funds	All agencies	2013

Performance Measure	Coordinating Agency	Estimated Date to Begin Reporting
<b>Category: Financial Measures (FM)</b>		
FM 1: Percent of funds spent on BMPs implemented in targeted areas	All agencies	2013
FM 2: Percent of total funds by category of expenditure (monitoring/assessment, TMDL development, protection and restoration, and drinking water protection)	All agencies	Fall 2011
FM 3: Total dollars spent per watershed on monitoring/assessment, planning and implementation.	All agencies	2012
FM 4: Total dollars passed through to local partners	All agencies	2012
FM 5: Total dollars leveraged by Clean Water Fund	All agencies	Fall 2011
FM 6: Average dollar per unit of pollutant reduced	Board of Water and Soil Resources	2013
<b>Category: Social Measures</b>		
[Under development.]	All agencies	
<b>Category: Stressor Measures</b>		
[Under development.]	All agencies	

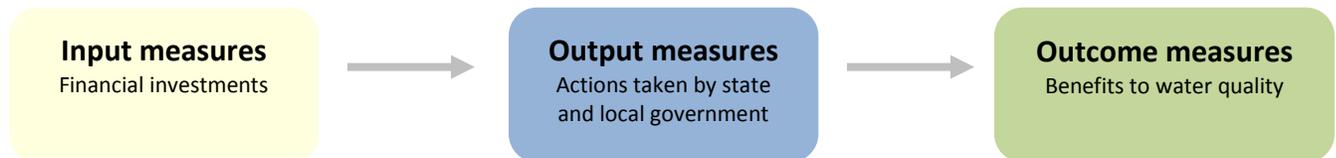
# January 2012 Clean Water Performance Report

## Proposed Measures

Minnesotans want to know if our water is getting cleaner and how Clean Water Funds are being spent. These questions and many others are being addressed by representatives from the Interagency Measures and Outcomes Team (Team) in the Clean Water Legacy Effectiveness Tracking Project.

**Minnesota's Clean Water Tracking Framework:** The Team released the report, 'Minnesota's Clean Water Tracking Framework' in May 2011. This report outlines a multi-agency approach to evaluating the impact of Clean Water Legacy dollars. The Framework clarifies connections between funds invested, actions taken and clean water outcomes achieved. The heart of the Framework is a suite of quantifiable performance measures that tell a cohesive, meaningful story about the pressures on Minnesota's water bodies, the state of Minnesota's watershed and groundwater health, and the actions of agencies and partners working to restore and protect Minnesota's waters.

The Framework contains 36 measures under four categories: Environmental and Drinking Water, Partnership and Leveraging, Organizational Performance and Financial measures. Two additional categories are in development: social and pressure/stressor measures. The Team also grouped the measures into inputs, outputs and outcomes to highlight the sequential nature of clean water initiatives over time. This grouping helps clarify the expected relationships between investments, actions, and results.



**2012 Clean Water Performance Report:** Since May, team members have considered how to report progress in a timely way, given that some of the systems for collecting and reporting data are still in development. Additionally, tangible environmental outcomes have long-term timeframes. However, eager to report progress on resources invested and activities accomplished since the first Clean Water Funds were invested, the Team used a two-step selection process for a subset of measures to be included in an initial Clean Water Performance Report.

### **Performance measures at different scales for tracking and communicating clean water results**



#### **Two-step measure selection process:**

*The first of a two-step selection process included using criteria to rank the 36 measures, including ensuring the data is readily available, the information is suited to a general audience, the measures show progress, and represents financial investment and the work of many partners.*

*The second step looked at "lenses" to evaluate the top-ranked measures, ensuring representation of inputs, outputs and outcomes and distribution of surface and groundwater measures.*

## **DRAFT Proposal for the 2012 Clean Water Performance Report:**



The Performance Report will use the selected measures to help answer two broad questions: “**How much and where is money being spent?**” and “**Is our water getting cleaner?**” The report will also provide essential context for the selected measures, and Clean Water Fund stories to illustrate progress.

## **Proposed measures**

### ***How much and where is money being spent?***

#### ***Input measures***

- Percent of total funds by category of expenditure (monitoring/assessment, TMDL development, protection and restoration, and drinking water protection).
- Total dollars spent per watershed or statewide on monitoring, planning, implementation, and research.
- Total dollars passed through from state agencies to external partners.
- Total dollars leveraged by Clean Water Fund.

### ***Is our water getting cleaner?***

#### ***Output Measures***

- Percent of state’s major watersheds intensively monitored through the watershed approach.
- Number of BMPs implemented with Clean Water funding and estimated pollutant load reductions.
- Number of point source municipal infrastructure projects implemented with Clean Water funding and estimated pollutant load reductions.
- Number of local government partners participating in Clean Water funded nitrate monitoring and reduction activities.
- Number of public water supply systems assisted with developing and implementing source water protection plans.
- Cumulative number of waterbodies sampled annually for fish contaminant concentrations.
- Number of new health-based guidance values for contaminants of emerging concern.

#### ***Outcome Measures***

- Rate of impairment/unimpairment of surface water statewide and by watershed.
- Changes over time in key water quality parameters for lakes, streams, and wetlands.
- Number of previous impairments now meeting water quality standards due to corrective actions.
- Changes over time in pesticides, nitrates and other key water quality parameters in groundwater.
- Changes over time in raw water quality from community water supplies.
- Nitrate levels in newly constructed wells.
- Municipal wastewater phosphorus trends.
- Measure in development: mercury levels in fish.

#### **Questions for consideration:**

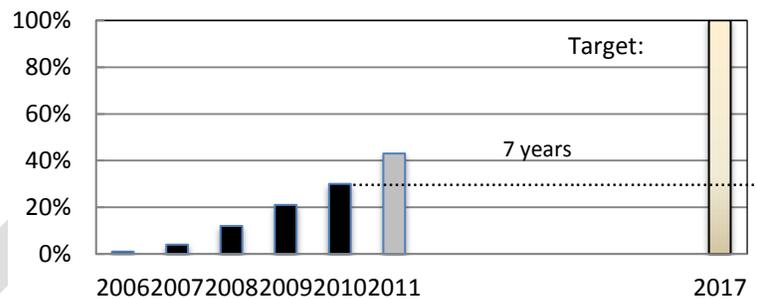
- Does the overall systematic measures approach satisfy your need for CWF outcome information?
  - Please share what you like about the proposed measures.
  - Please share what you don’t like about the measures and/or how you would recommend changing them.
- Please share feedback on the draft measure profile example.
- How do we effectively communicate this information to your membership / stakeholders?

### Measure: *Percent of state's major watersheds intensively monitored through the watershed approach*

#### Why is this measure important?

Water quality monitoring is essential for determining if our water is getting cleaner. As of 2006, only 18 percent lakes and 14 percent stream reaches in Minnesota had been monitored for water quality. This vital information is needed to determine if federal and state water quality standards set to protect public health, recreation and aquatic life were being met. Without dedicated funding, there was no systematic approach to surface water sampling activities and we lacked data about the health of most lakes and streams. Instead, monitoring tended to occur where there were known pollution problems. There was little attention focused on unpolluted lakes and streams in need of protection. An approach that would allow us to routinely sample representative lakes and stream reaches in every major watershed to assess lake and stream water quality statewide was needed.

Cumulative percent of watersheds monitored



#### What are we doing?

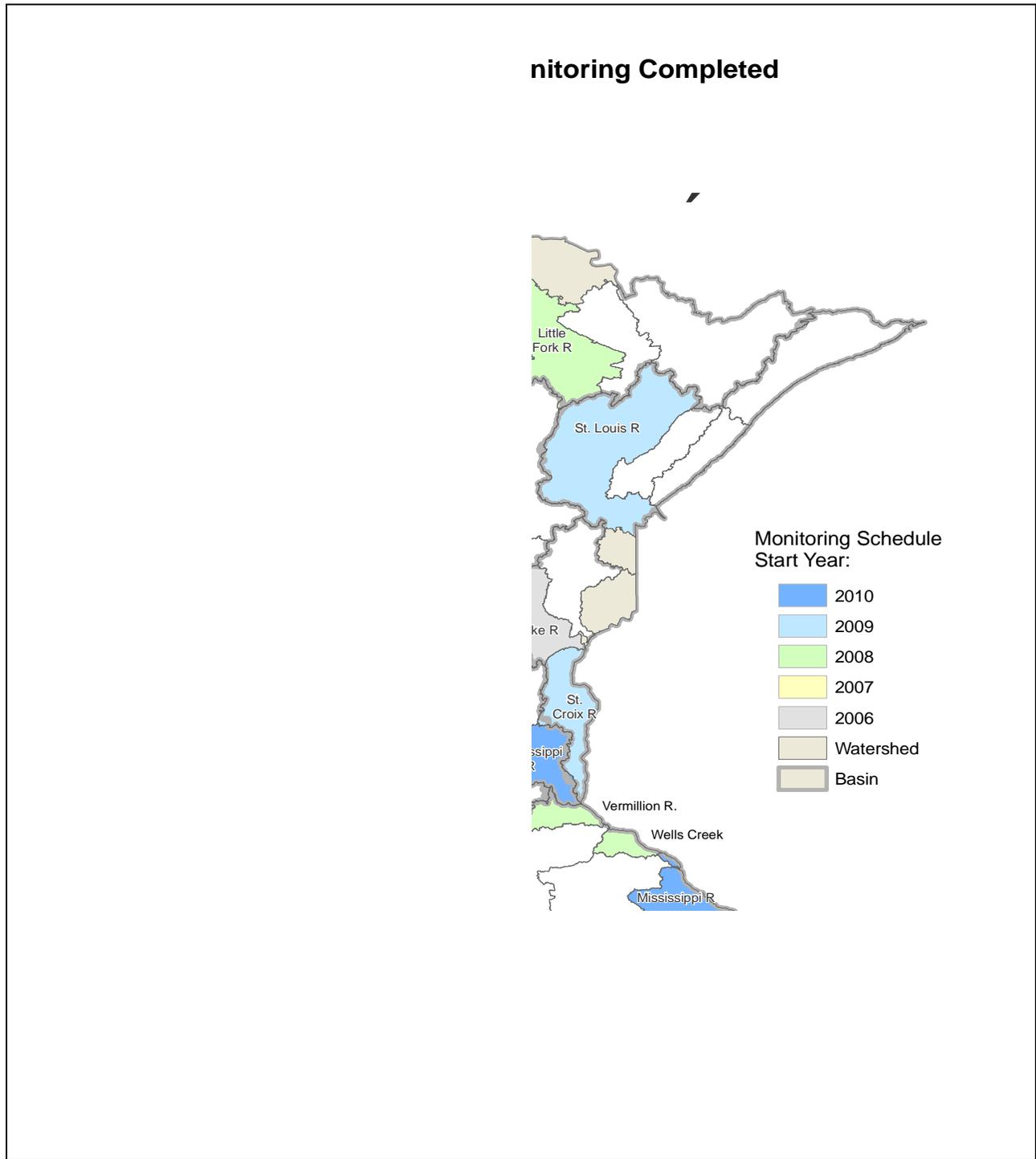
In 2007, we piloted an initiative to intensively monitor the Snake River watershed for stream chemistry and biology (fish, invertebrates and habitat). In 2008, we fully implemented the Watershed Approach to monitoring, a ten-year rotational cycle where an average of 8 of Minnesota's 81 major watersheds is intensively monitored each year for stream water chemistry and biology, and for lake chemistry. The data from these monitoring activities will allow us to determine if thresholds to protect public health, recreation and aquatic life for any number of pollutants, ranging from bacteria to nutrients, are being met. Once assessments of basic water quality have been made, the monitoring data gathered during intensive monitoring can serve as a starting point for determining the sources and magnitude of pollution for impaired (i.e., polluted) resources or as a baseline for protection measures for unimpaired resources.

#### What progress has been made?

The first 10-year cycle began in 2008 and will be completed in 2017. To date, we are fully on track with our watershed monitoring plans. Thirty percent of the major watersheds have been completely monitored so far, and we began monitoring eleven more in 2011. In 2018, we will begin a new cycle, returning to watersheds we visited ten years earlier, and re-monitoring lakes and stream sites to determine if water quality has improved, declined or remained the same.

#### Learn more:

- Find your watershed at <http://www.pca.state.mn.us/jsrid8f>
- When will the MPCA be intensively monitoring your watershed: <http://www.pca.state.mn.us/index.php...>



Percent of State's major watersheds intensively monitored through the Watershed Approach