The Minnesota Water Management Framework

A high-level, multi-agency, collaborative perspective on managing Minnesota’s water resources

The passage of the Clean Water, Land, and Legacy Amendment is a game-changer for water resource management in Minnesota. Increased funding and public expectations have driven the need for more and better coordination among the state’s main water management agencies.

The MN Water Quality Framework and the companion MN Groundwater Management Framework were developed by the agencies to enhance collaboration and clarify roles in an integrated water governance structure, so that it’s clear to everyone who is responsible at each stage in the process, making it easier and more efficient for state and local partners to work together.

Goals: cleaner water via comprehensive watershed management; ensure that groundwater is protected and managed sustainably.

Building on a classic “plan - do - check” adaptive management approach, the framework uses 5 “boxes” to outline the steps Minnesota’s agencies are taking toward our goals of clean and sustainable water. The agencies aim to streamline water management by systematically and predictably delivering data, research, and analysis and empowering local action.

Ongoing Local Implementation is at the heart of the state’s overall strategy for clean water. Actions must be prioritized, targeted, and measurable in order to ensure limited resources are spent where they are needed most. The rest of the cycle supports effective implementation.

Monitoring and Assessment determines the condition of the state’s ground and surface waters and informs future implementation actions. The state’s “watershed approach” systematically assesses the condition of lakes and streams on a 10-year cycle. Groundwater monitoring and assessment is more varied in space and time.

Water Resource Characterization and Problem Investigation delves into the science to analyze and synthesize data so that key interactions, stressors, and threats are understood. In this step, watershed and groundwater models and maps are developed to help inform strategies.

Watershed Restoration and Protection Strategies (WRAPS) and Groundwater Restoration and Protection Strategies (GRAPS) include the development of strategies and high level plans, “packaged” at the 8-digit HUC scale (81 major watersheds in Minnesota). These strategies identify priorities in each major watershed and inform local planning.

The Comprehensive Watershed Management Plan is where information comes together in a local commitment for prioritized, targeted, and measurable action. Local priorities and knowledge are used to refine the broad-scale WRAPS and other assessments into locally based strategies for clean and sustainable water.
### Ongoing Implementation

- **Funding and technical assistance** for locally implemented watershed restoration and protection projects
- **Appropriations and Public Waters Permitting**
- **Shoreland and floodplain management**
- **Technical assistance for projects**
- **Funding for source water protection, contaminants of emerging concern**
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- **Technical assistance for projects**
- **Funding for source water protection, contaminants of emerging concern**
- **Well sealing cost share**
- **Loans and grants for water infrastructure projects based on priorities set by MDH and PCA**

### Monitoring and Assessment

- Monitor progress of local implementation goals
- Stream flow
- Fish and plants (lakes)
- Mercury in fish tissue
- Aquifer levels (with Met Council)
- Source water and finished drinking water
- Bacteria monitoring on Lake Superior beaches

### Watershed Characterization & Problem Investigation

- Conservation targeting tools (e.g., Environmental Benefits Index)
- BMP guidance (e.g., drainage water management)
- Stream hydrology and geomorphology (support MPCA)
- Small scale watershed modeling and groundwater level modeling
- County Geologic Atlas
- Guidance for contaminants of emerging concern
- Data analysis and modeling to support WHPA delineation and vulnerability assessments for public water supplies

### Restoration and Protection Strategy Development

- Participate on interagency watershed teams developing WRAPS (with all agencies)
- Advise on conservation actions based on holistic view of watershed health (hydrology, geomorphology, connectivity, biology, water quality)
- Source water protection planning (identification of problems, issues, and opportunities)
- Well construction management
- Guidance for infiltration in DWSMAs
- Source water protection planning (local measures and strategies)

### Comprehensive Watershed Management Plan

- Comprehensive Watershed Management Planning (One Watershed, One Plan)
- Input on local conservation actions informed by statewide plans for prairies, forests, etc.
- Water supply planning and groundwater management areas (with Met Council)

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**Ag BMP loans**

- MN Agricultural Water Quality Certification Program
- Implement Pesticide and Nitrogen Fertilizer Management Plans

**Technical assistance and demonstration projects**

- Lake, stream, river monitoring: flow, chemistry, biology
- Effluent monitoring (WWTPs)
- Impervious surface and land cover assessments

**Stakeholder agreement on broad watershed restoration and protection strategies (WRAPS)**

- WRAPS report – includes implementation table
- TMDLs to EPA

**Participate on interagency teams developing WRAPS**

- Vegetative cover

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**NPDES permit programs, SSTS compliance**

- Grants for Clean Water Partnership, Great Lakes Restoration, stormwater and wastewater treatment (PFA)

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