

# 2010 MINNESOTA WATER PLAN:

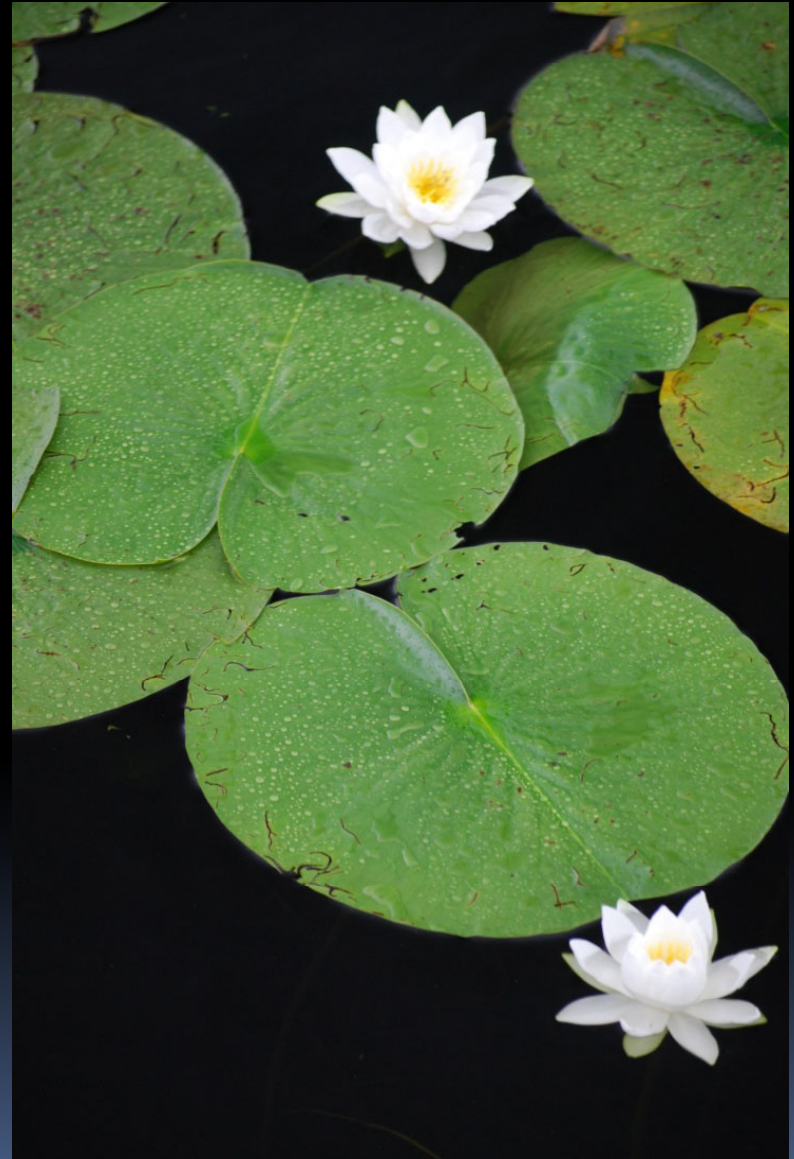
## WORKING TOGETHER TO ENSURE CLEAN WATER AND HEALTHY ECOSYSTEMS FOR FUTURE GENERATIONS

May 4, 2011  
Princesa VanBuren Hansen  
Environmental Quality Board



# Overview

- EQB & background
- State water plan
- Example applications
- Next steps



# Environmental Quality Board

5 citizen members

9 Commissioners

Governor's representative



Administration

Agriculture

Commerce

Employment & Economic  
Development

Health

Natural Resources

Pollution Control

Transportation

Water & Soil Resources



# EQB Mission

The Board's mission is to ...

- Investigate environmental issues that cut across agency interests
- Coordinate state plans and policy
- Ensure compliance with state environmental policy
- Engage Minnesotans





# Recent Water Sustainability Efforts

- 2007 – Use of Minnesota's Renewable Water Resources: Moving Toward Sustainability
- 2008 – Managing for Water Sustainability: A Report of the EQB Water Availability Project



## Use of Minnesota's Renewable Water Resources *Moving Toward Sustainability*



A report of the  
and Dep

## *Managing for Water Sustainability*

Report of the  
EQB Water Availability Project

Environmental Quality Board  
December 2008

# EQB Water Plan Statute & History

- EQB charge
- Rich history
- Working together
- Responsible to future generations



# Goals of the Report

- Define a vision for the future
- Build a broad, adaptive framework
- Articulate state strategies to achieve sustainable water management
- Inform the U of M process, while ensuring coordination and efficiency



# Report Outline

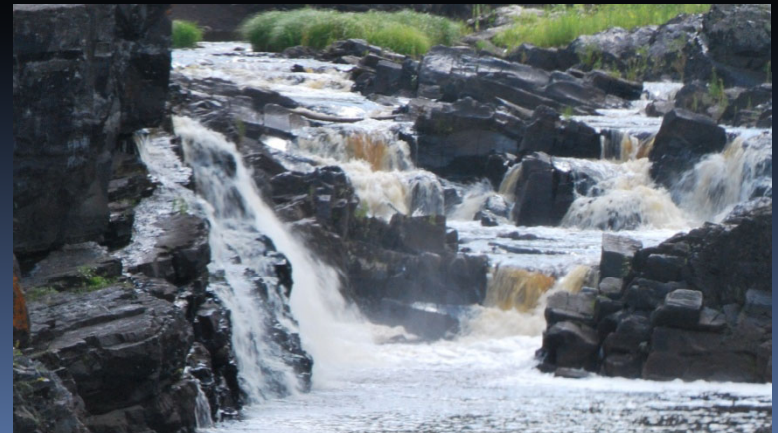
- Part 1 – Reflecting on the Past
  - State water plans of 1979, 1991 and 2000
  - Transformational milestones
- Part 2 – Evaluating the Status of Minnesota's Water Resources in the Present
  - Water monitoring, quality assessment and trends, and metropolitan planning efforts
- Part 3 – Charting a Roadmap for the Future





# Charting a Roadmap for the Future

- Strategies
  - Communicate what needs to be done
  - Advance the foundation built in recent years
- Implementation principles
  - Overarching principles
  - Define how to implement the strategies
- Water sustainability is the goal



# Strategies

- Increase protection efforts
- Promote wise and efficient use of water
- Restore and enhance local capacity
- Employ water resource management units



# Strategies

- Collect essential information
- Improve access to data
- Provide implementation tools
- Target approaches for protection & restoration
- Apply a systematic approach for emerging threats



# Implementation Principles



- Optimized coordination
- Prioritized resources
- Comprehensive land and water management
- Adaptive management
- Goals and measures
- Education and outreach
- Shared, long-term vision

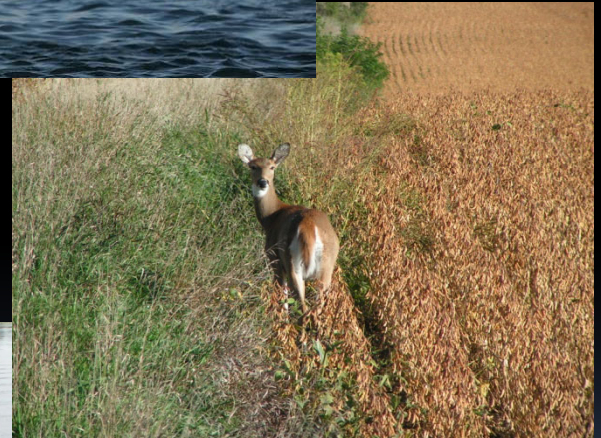




# Recognition of the Sustainable System



**Social**  
**Economic**  
**Environmental**





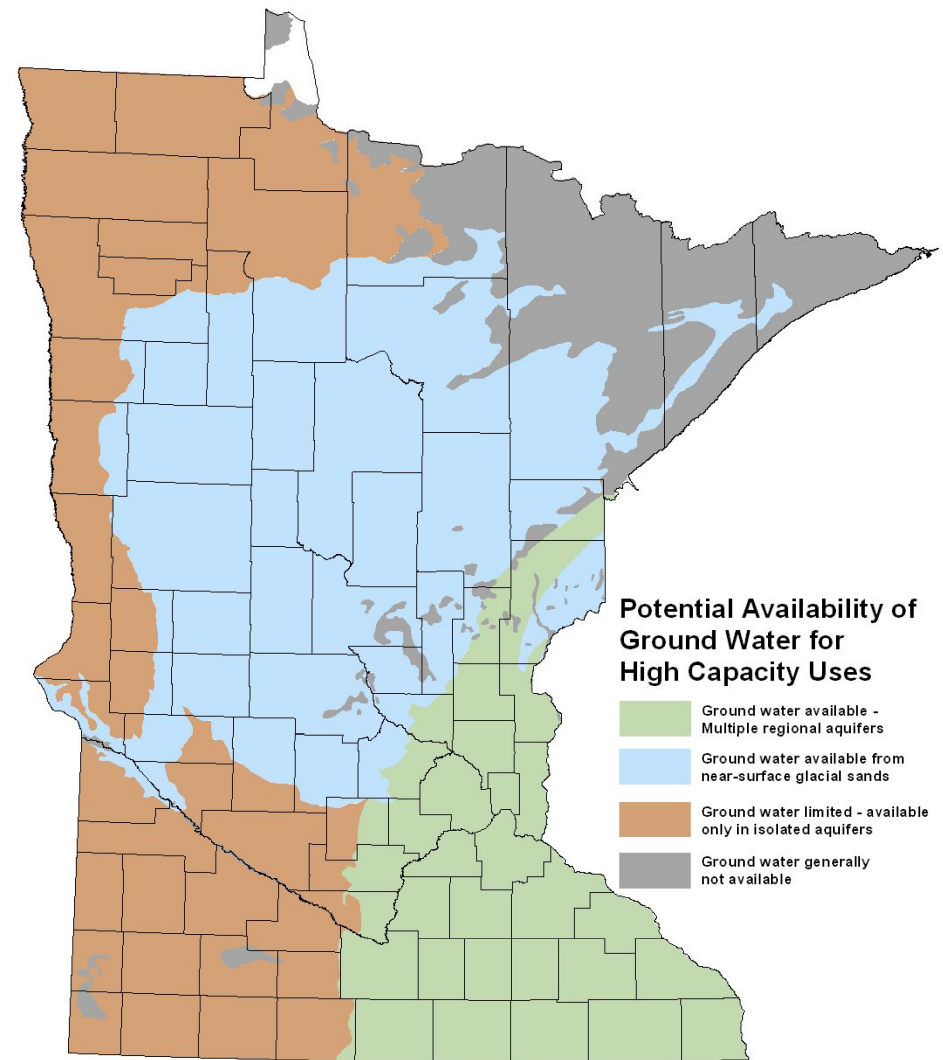
# Example Applications

- Groundwater management areas
- Contaminants of emerging concern
- Impaired waters

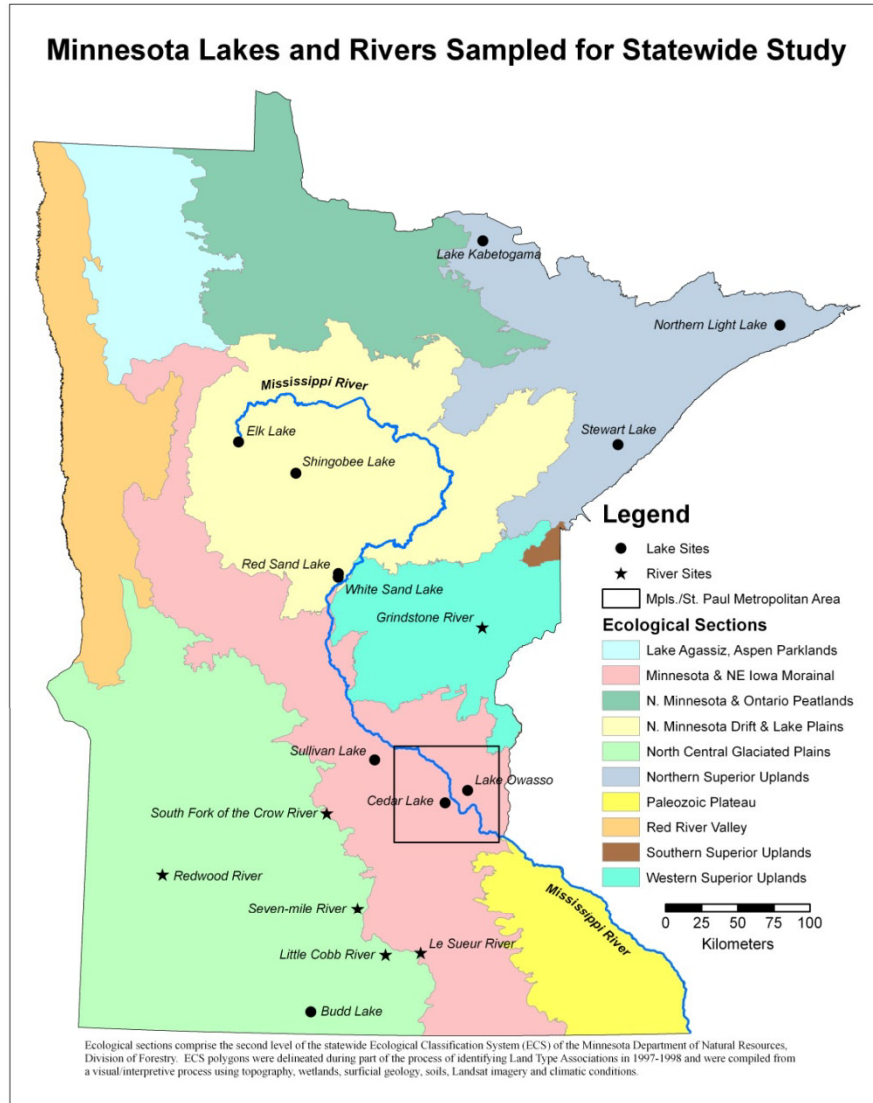


# Groundwater Management Areas

- Employ water resource management units
- Optimize coordination
- Restore & enhance local capacity
- Adaptive management



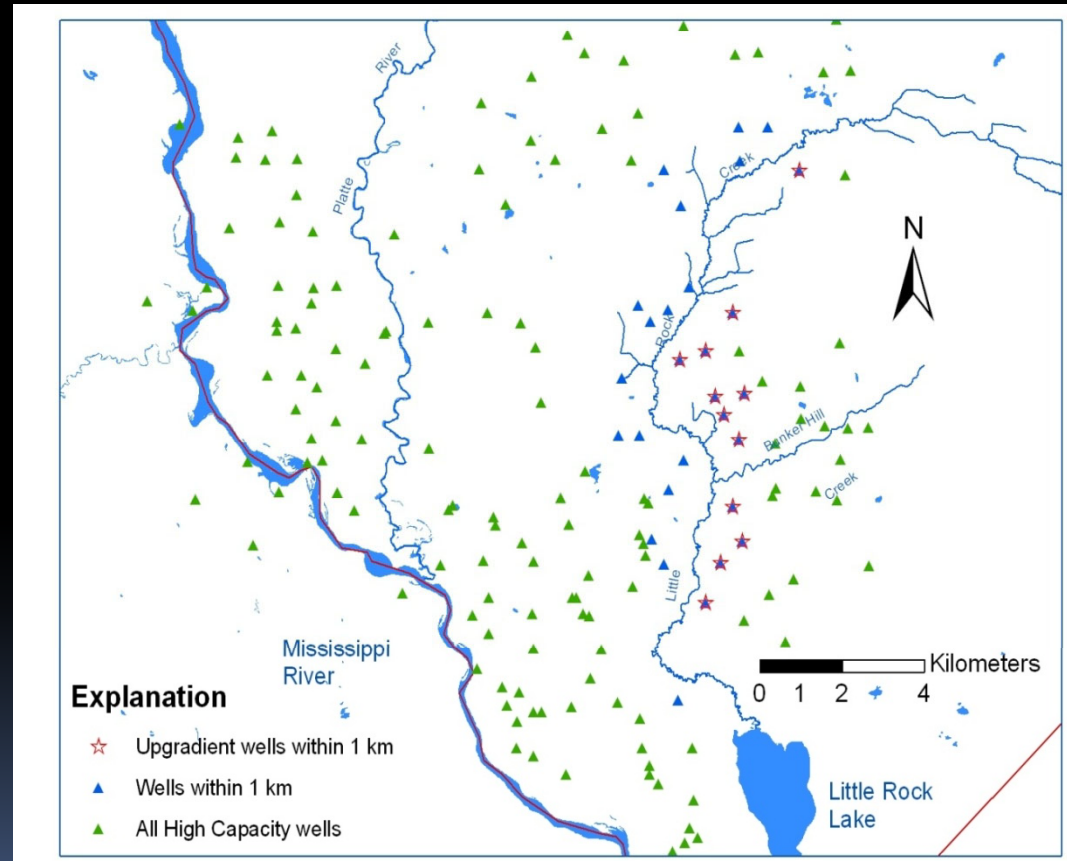
# Contaminants of Emerging Concern



- Collect essential info for water management decisions
- Improve access to environmental data
- Apply a systematic approach for emerging threats

# Impaired Waters

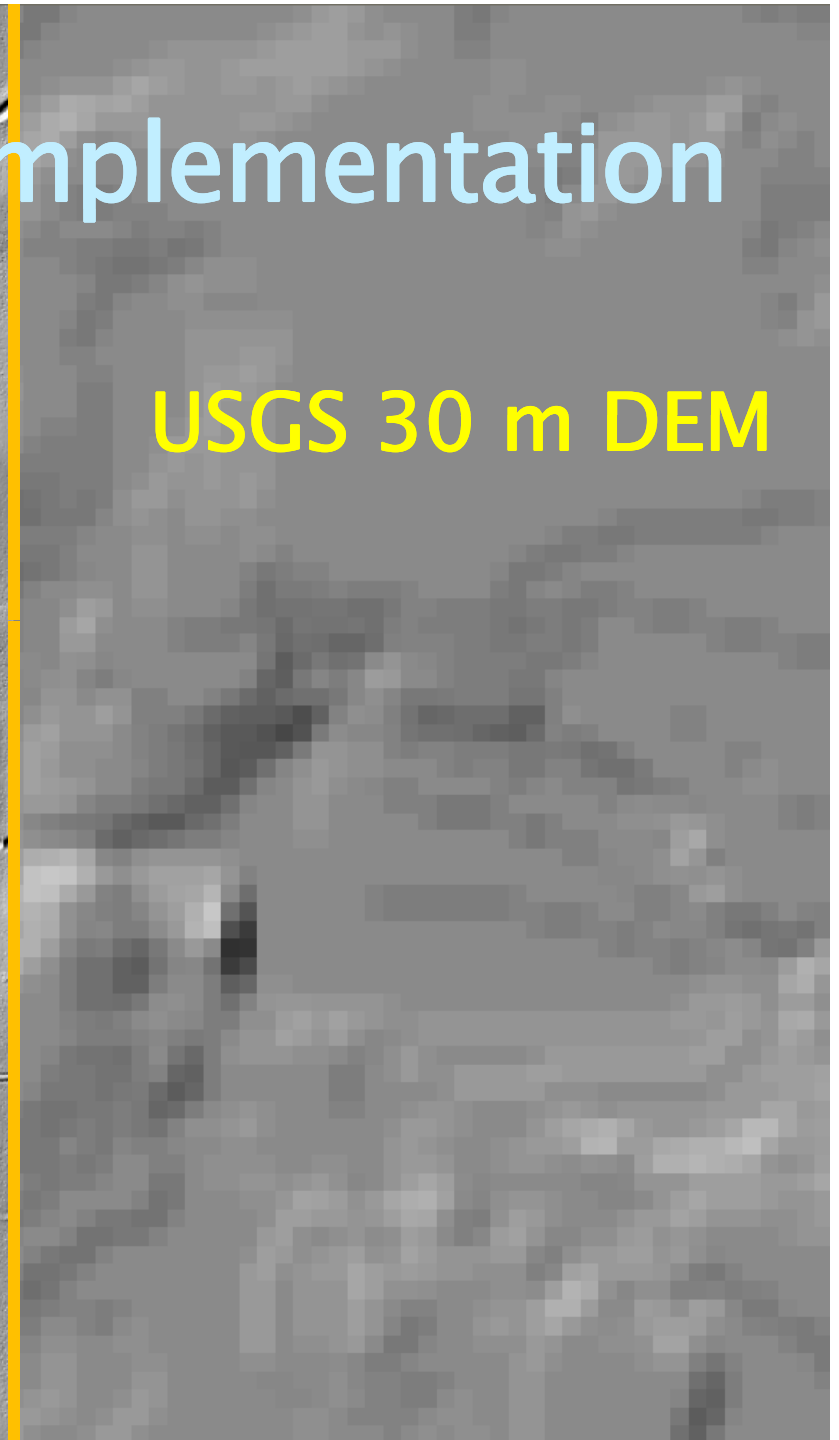
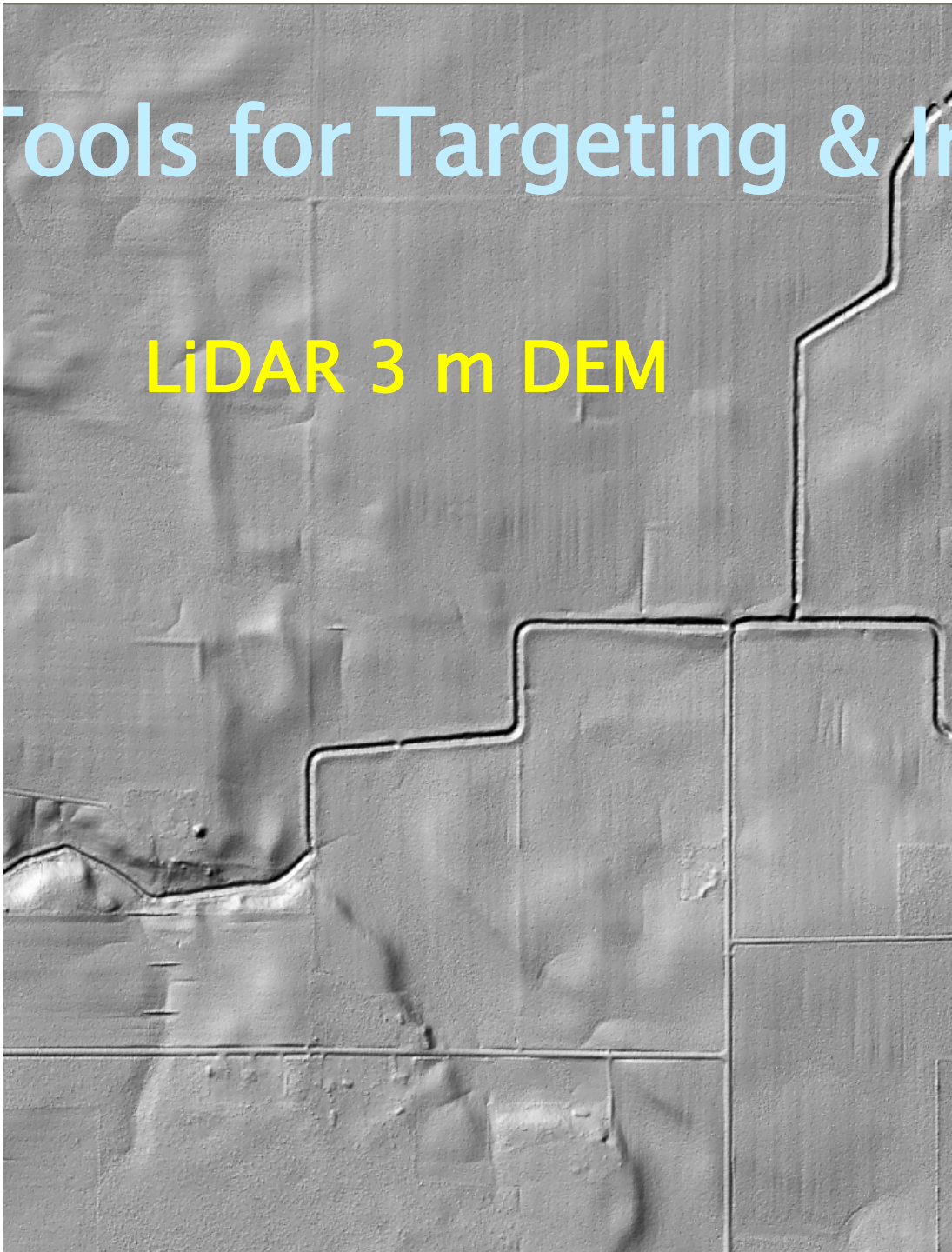
- Comprehensive land & water management
- Provide current implementation tools
- Employ a targeted approach for protection & restoration



# Tools for Targeting & Implementation

**LiDAR 3 m DEM**

**USGS 30 m DEM**

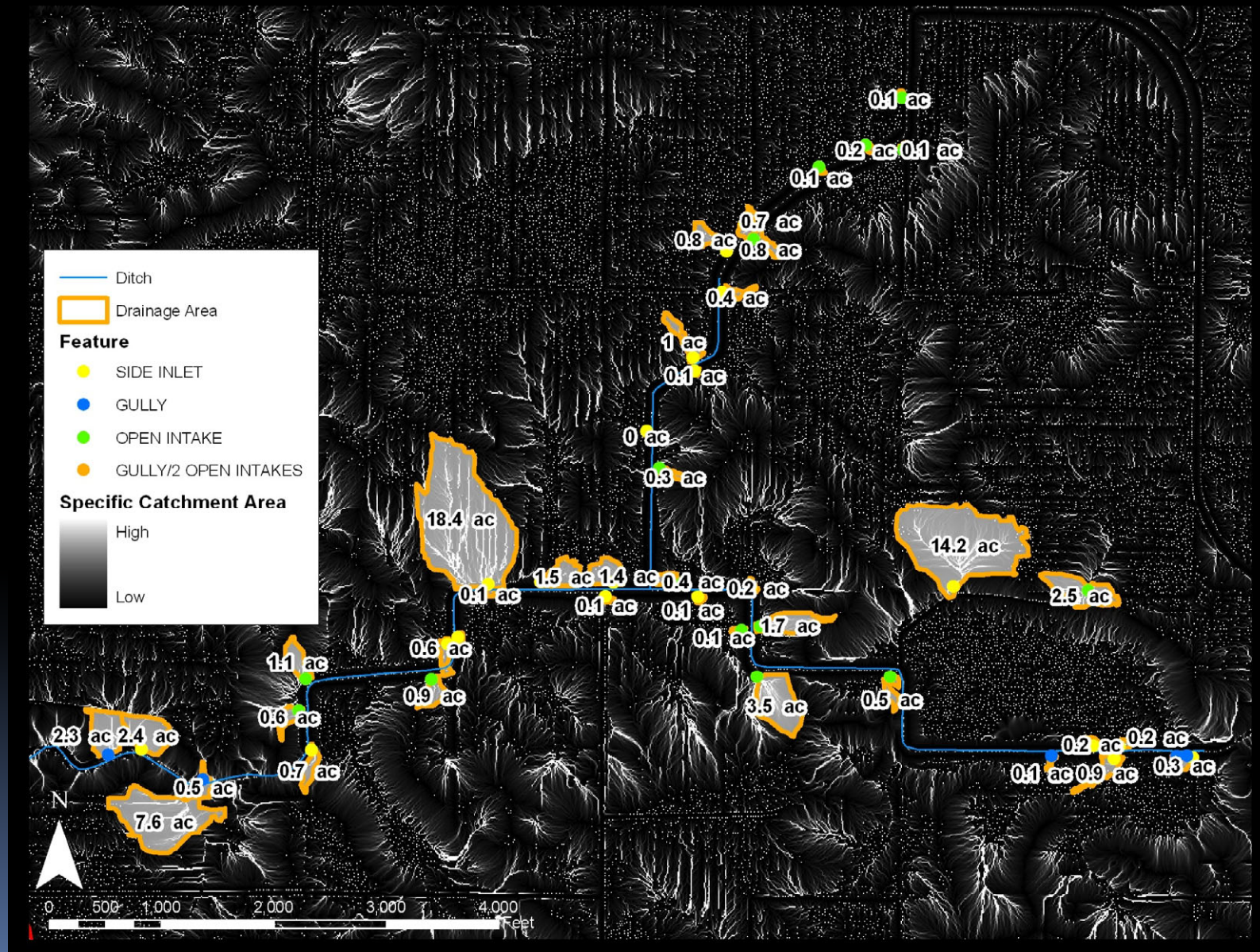




# Stream Power Index



# Precision Conservation





# Adaptive Management Applied

- Abundance – management
- GW & SW separation – single resource
- Quantity & quality independence – managed together
- Point specific decision-making – integrated, system view
- Stream reach – watershed assessment
- Quality, quantity, ecosystems, humans, society, economy and quality of life



# Strengths of the Plan

- Unifies state water activities
- Articulates consensus & commitment
- Promotes a dynamic, adaptive approach to water management



# Next Steps

- Apply the plan to state activities
- Implement CWF priorities
- Review U of M Framework
- Measure progress and adapt





# Thank You

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# Minnesota's Water Vision



Minnesota will manage its water for quantity and quality, for healthy ecosystems and citizens, and in a way that protects the resources of future generations.



# 116C.01

The legislature...finds that problems related to the environment often encompass the responsibilities of several state agencies and that solutions to these environmental problems require the interaction of these agencies. The legislature also finds that further debate concerning population, economic and technological growth should be encouraged so that the consequences and causes of alternative decisions can be better known & understood by the public and its government



Natural  
Res

Econ  
Devel

Environ  
Quality

Food &  
Fiber

**EQB**  
State water  
coordination

Energy

Land  
Use

Health

Roads  
&  
Transit



# Interagency Team

- BWSR Steve Woods
- MDA Dan Stoddard, Joe Zachmann
- MDH Randy Ellingboe, Bruce Olsen, Doug Benson
- DNR Dave Leuthe, Randall Doneen
- MPCA Shannon Lotthammer, Byron Adams
- Met Council Chris Elvrum
- DOT Nick Tiedeken, Jennie Ross
- EQB Princesa VanBuren Hansen





# EQB Water Plan Statute & History

## 103B.151 COORDINATION OF WATER RESOURCE PLANNING.

Subdivision 1. Water planning.

The Environmental Quality Board shall:

- (2) coordinate comprehensive long-range water resources planning in furtherance of the Environmental Quality Board's "Minnesota Water Plan," published in January 1991, by September 15, 2000, and each ten-year interval afterwards;



# Groundwater Policy – EQB

## 103A.204 GROUNDWATER POLICY.

- (a) The responsibility for the protection of groundwater in Minnesota is vested in a multiagency approach to management. The following is a list of agencies and the groundwater protection areas for which the agencies are primarily responsible; the list is not intended to restrict the areas of responsibility to only those specified:
  - (1) Environmental Quality Board: coordination of state groundwater protection programs;
- (b) The Environmental Quality Board shall prepare a report on policy issues related to its responsibilities listed in paragraph (a), and include these reports with the assessments in section 103A.43 and the "Minnesota Water Plan" in section 103B.151.



# Water Policy & Priorities – EQB

## 103B.151 COORDINATION OF WATER RESOURCE PLANNING.

Subdivision 1. Water planning.

The Environmental Quality Board shall:

- (1) coordinate public water resource management and regulation activities among the state agencies having jurisdiction in the area;
- (4) coordinate development of state water policy recommendations and priorities, and a recommended program for funding identified needs, including priorities for implementing the state water resources monitoring plan;



# Water Quality Assessment & Trends

## MPCA/MDA

### 103A.43 WATER ASSESSMENTS AND REPORTS

(b) The Pollution Control Agency and the Department of Agriculture shall provide a biennial assessment and analysis of water quality, groundwater degradation trends, and efforts to reduce, prevent, minimize, and eliminate degradation of water. The assessment and analysis must include an analysis of relevant monitoring data.



*Biennial Assessment of Water Quality Degradation Trends and Prevention Efforts*



# Groundwater Monitoring Report MPCA/Partner Agencies

## 103H.175 GROUNDWATER QUALITY MONITORING

In each even-numbered year, the Pollution Control Agency, in cooperation with other agencies participating in the monitoring of water resources, shall provide a draft report on the status of groundwater monitoring to the Environmental Quality Board for review and then to the house of representatives and senate committees with jurisdiction over the environment, natural resources, and agriculture as part of the report in section 103A.204.



*Groundwater Monitoring Status Report*

# Water Availability Assessment DNR

## 103A.43 WATER ASSESSMENTS AND REPORTS

(c) The Department of Natural Resources shall provide an assessment and analysis of the quantity of surface and ground water in the state and the availability of water to meet the state's needs.

*Water Availability Assessment Report*



# Master Water Supply Planning Metropolitan Council

473.1565 METROPOLITAN AREA WATER SUPPLY  
PLANNING ACTIVITIES; ADVISORY COMMITTEE.

The council must submit reports to the legislature regarding its findings, recommendations, and continuing planning activities under subdivision 1. These reports shall be included in the "Minnesota Water Plan" required in section 103B.151, and five-year interim reports may be provided as necessary.

Metropolitan Area Water Supply Planning: Report to the  
Legislature as Part of the 2010 Minnesota State  
Water Plan



# Part 1 – Transformational Milestones

- Population growth
- Increased competition for finite resources
- Climate change
- Hypoxia in the Gulf of Mexico
- Contaminants of emerging concern
- Endocrine active compounds
- Impaired waters and TMDLs
- 2006 Clean Water Legacy Act
- 2008 Clean Water Land and Legacy Amendment
- Sustainability as a goal





# Part 2 – Evaluating the Status of our Resources in the Present

- Biennial Assessment of Water Quality Degradation Trends and Prevention Efforts
- Groundwater Monitoring Status Report
- Water Availability Assessment Report
- Metropolitan Area Water Supply Planning: Report to the Legislature as Part of the 2010 Minnesota State Water Plan

