Minnesota's Clean Water Fund and Water Conservation

MINNESOTA CLEAN WATER COUNCIL

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CLEAN WATER LAND & LEGACY AMENDMENT

MINNESOTA
CLEAN WATER COUNCIL

- Created in 2006 to "advise on the administration and implementation of" the **Clean Water Legacy Act**, and "foster coordination and cooperation" among agencies and others.
- Every two years, recommends how to spend the **Clean Water Fund**

CLEAN WATER LAND & LEGACY AMENDMENT

Voting members (17)

- Counties (2) (Metro, Greater MN)
- Townships (1)
- Municipalities (2)
- Farm organizations (2)
- Environmental organizations (2)
- Tribal government (1)
- Business (2)
- Fishing organizations (1)
- Hunting organizations (1)
- Lakes/Streams nonprofits (1)
- Watershed districts (1)
- Soil & Water Conservation Districts (1)

Plus 6 agencies + U of M + 4 legislators (non-voting)

Clean Water, Land, and Legacy Amendment

- Adopted 2008
- ~$1.4 billion raised since 2009 for clean water
- Drinking Water Requirement

  "**at least five percent of the clean water fund must be spent only to protect drinking water sources**" –MN Constitution, Article XI, Sec. 15
- We are at ~20 percent
- Runs out in 2034

CLEAN WATER LAND & LEGACY AMENDMENT

The Problem We Are Trying to Solve

- More than 85% of the state's water "impairments" are due to non-point sources
- Non-point pollution is the accumulation of many small sources

Examples

- Sediment
- Nitrogen
- Phosphorus
- E. coli
- Chloride
- Coliform

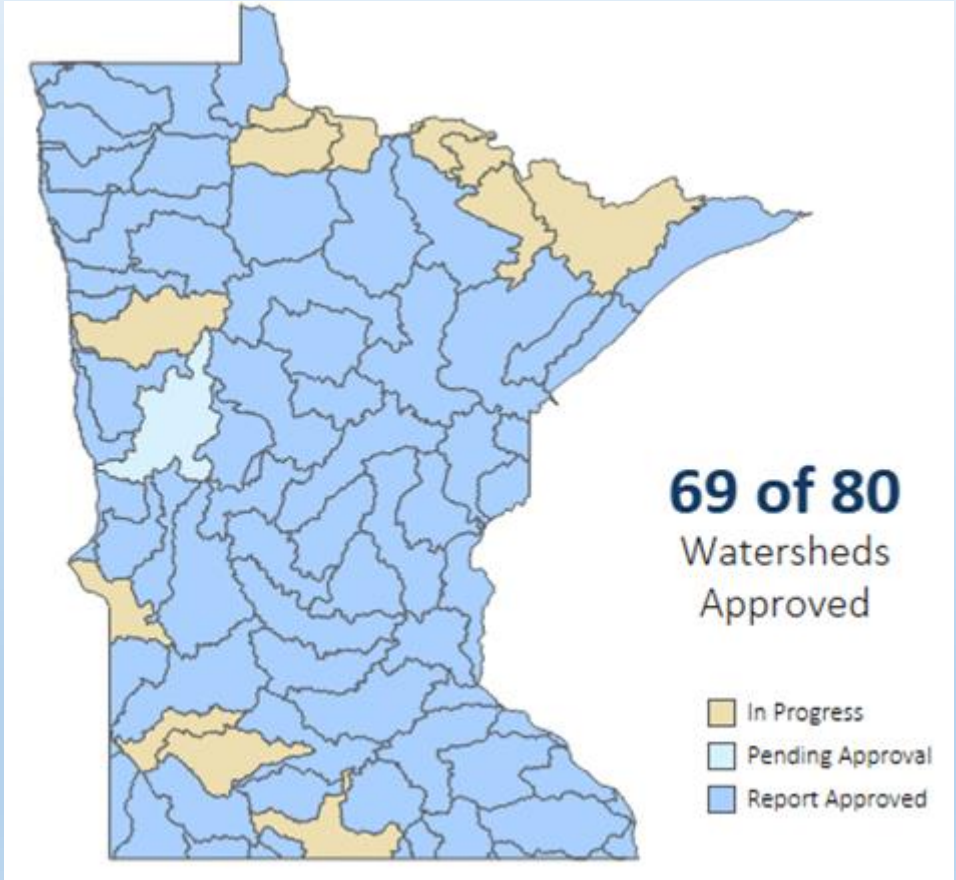
How Do We Clean Up Water?

- Test it & find source of problem (Monitoring, assessment & characterization)
- Make a plan to fix it (Watershed Restoration & Protection Strategies-WRAPS; One Watershed One Plan)
- Train people how to fix it or persuade landowners to act (Technical assistance)
- Set aside land where feasible (Protection strategies)
- “Restore” when necessary (Restoration and mitigation strategies)
- Measure

Precipitation & aquifer data is critical to prioritization!

What We Get: Surface Waters

- Intensive monitoring of all watersheds every ten years
- Blueprint for improvement: Watershed (and Groundwater) Restoration & Protection Strategies (WRAPS & GRAPS)
- Locally driven comprehensive watershed management plans to prioritize projects
- Money to fund the top priorities in the plans (implementation)
- Evaluation of progress



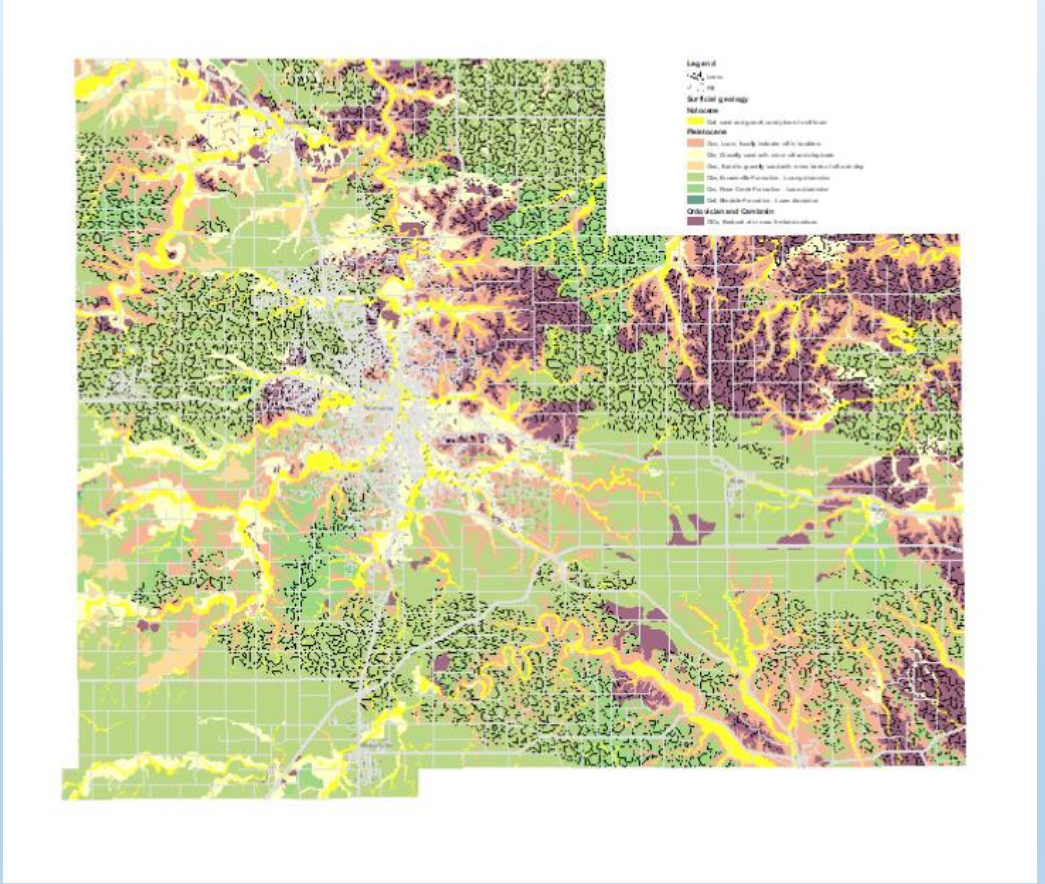
DO THESE PROJECTS → **BY YEAR** → **AND YOU GET THESE REDUCTIONS** → **AND IT WILL COST**

Drainage	Treatment Group Type & Number of BMPs	Cost	Issue	Unit	Existing Conditions	Quantitative Measurable Goal				PTMApp Scenario Reduction	5 year Load Reduction Goal	10 year Load Reduction Goal	10 yr. Progress towards Measurable Goal (%)
						Metric	Amount (%)*	Target Load Reduction	Year				
Drainage to Mississippi River	Storage (244) Filtration (78) Infiltration (3) Source Reduction (812)	$6,437,605	Sediment	tons/ yr	116,416	Annual Load (mass/yr.)	45	52,387	2025	14,488	7,244	14,488	28
			Nutrients: Total Nitrogen	lbs/yr	10,848	Annual Load (mass/yr.)	45	4,882	2040	112	56	112	2
			Nutrients: Total Phosphorus	lbs/yr	134	Annual Load (mass/yr.)	45	60	2025	12	6	12	20
			Excess Runoff: 2 Year	acre feet	71,177	2-Yr. Runoff Volume	25	17,794	2030	N/A	N/A	N/A	N/A
			Excess Runoff: 10 Year	acre feet	167,868	2-Yr. Runoff Volume	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drainage to Upper Iowa River	Storage (44) Filtration (15) Source Reduction (268)	$1,410,038	Sediment	tons/ yr	112,249	Annual Load (mass/yr.)	45	50,512	2025	27,776	13,888	27,776	55
			Nutrients: Total Nitrogen	lbs/yr	32,828	Annual Load (mass/yr.)	45	14,773	2040	3,285	1,642	3,285	22
			Nutrients: Total Phosphorus	lbs/yr	2,024	Annual Load (mass/yr.)	45	911	2025	360	180	360	40
			Excess Runoff: 2 Year	acre feet	7,781	2-Yr. Runoff Volume	25	1,945	2030	N/A	N/A	N/A	N/A
			Excess Runoff: 10 Year	acre feet	17,036	2-Yr. Runoff Volume	N/A	N/A	N/A	N/A	N/A	N/A	N/A

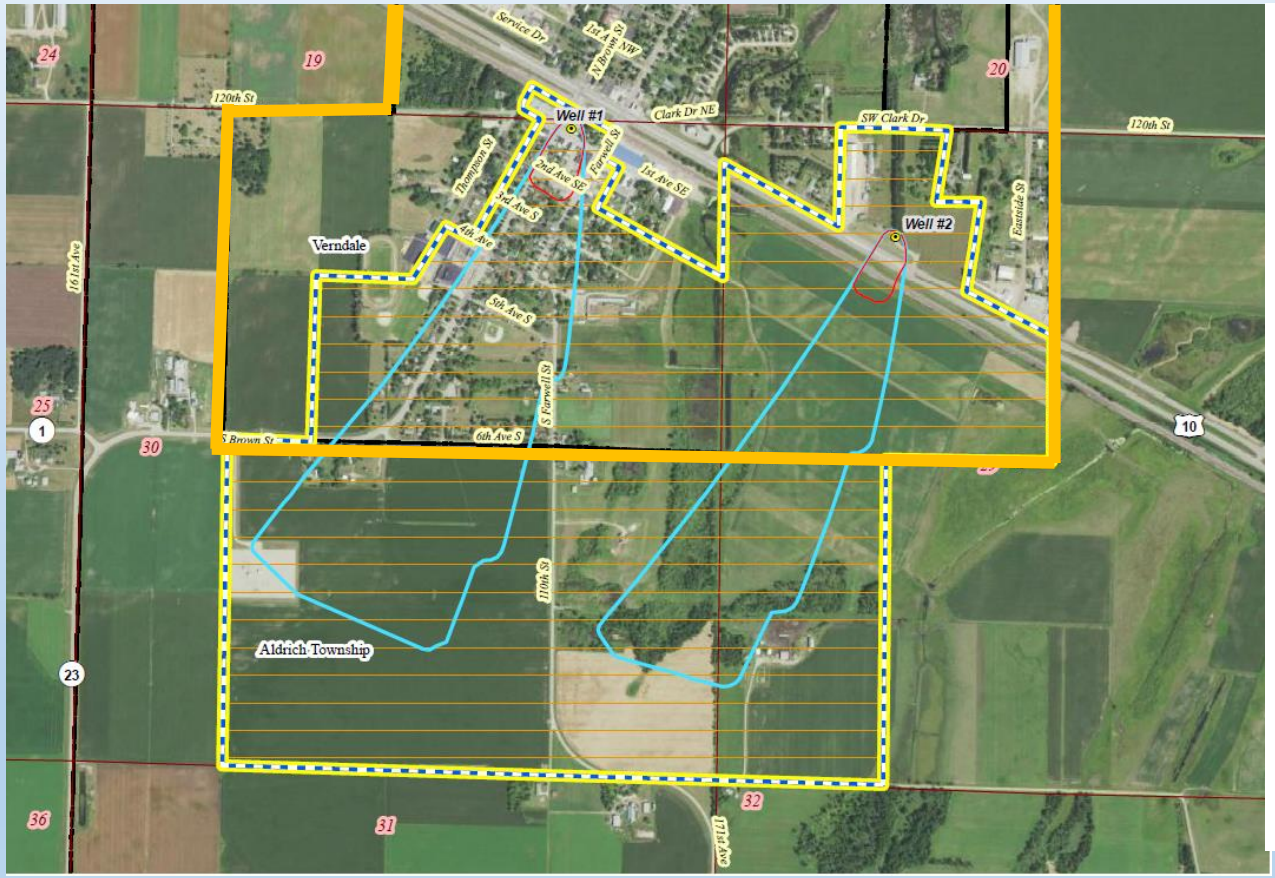
Excerpt from Root River "One Watershed One Plan"

Drinking Water

- ~20% spent on protecting drinking water sources
- Monitoring, assessment, characterization
  - MPCA: Ambient groundwater ***quality*** wells
  - MDH: ***Public*** drinking water supply wells
  - MDA: Vulnerable ***private*** well testing
  - DNR: Water ***supply*** monitoring wells
  - MN Geological Survey/DNR: County geo/groundwater ***atlases***
- Much of this funded by Clean Water Fund



Verndale (Wadena Co)
Drinking Water Supply Management Area (DWSMA)



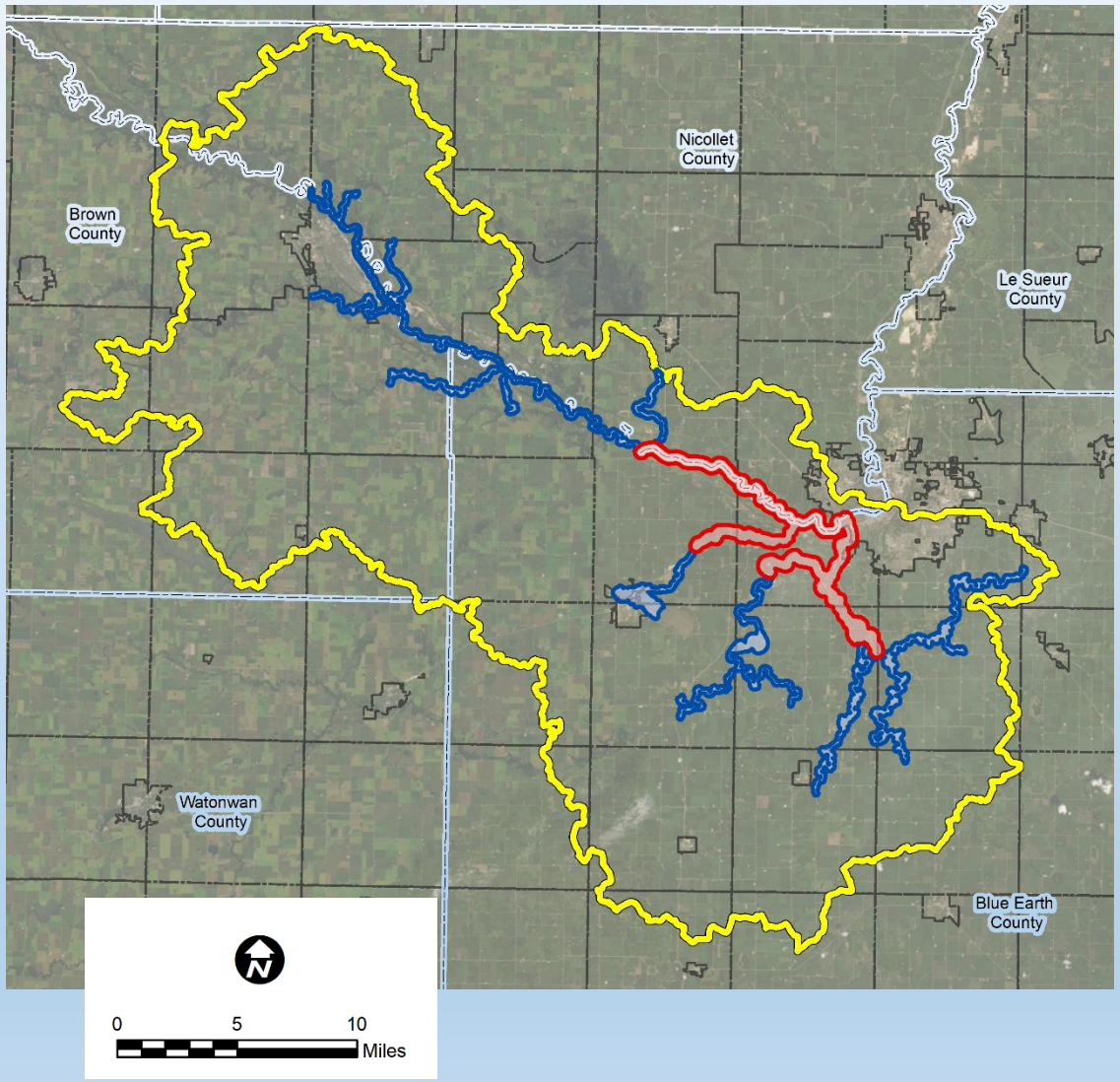
10 year time of travel

- Emergency Response Area
- Wellhead Protection Area
- DWSMA
- High Risk

Surface Water Public Water Supplies in MN

- 23 systems statewide have surface water intakes
- 17 additional systems are interconnected to and dependent upon these surface water systems for at least some of their supply
- ~25% of Minnesotans rely on surface water for their drinking water

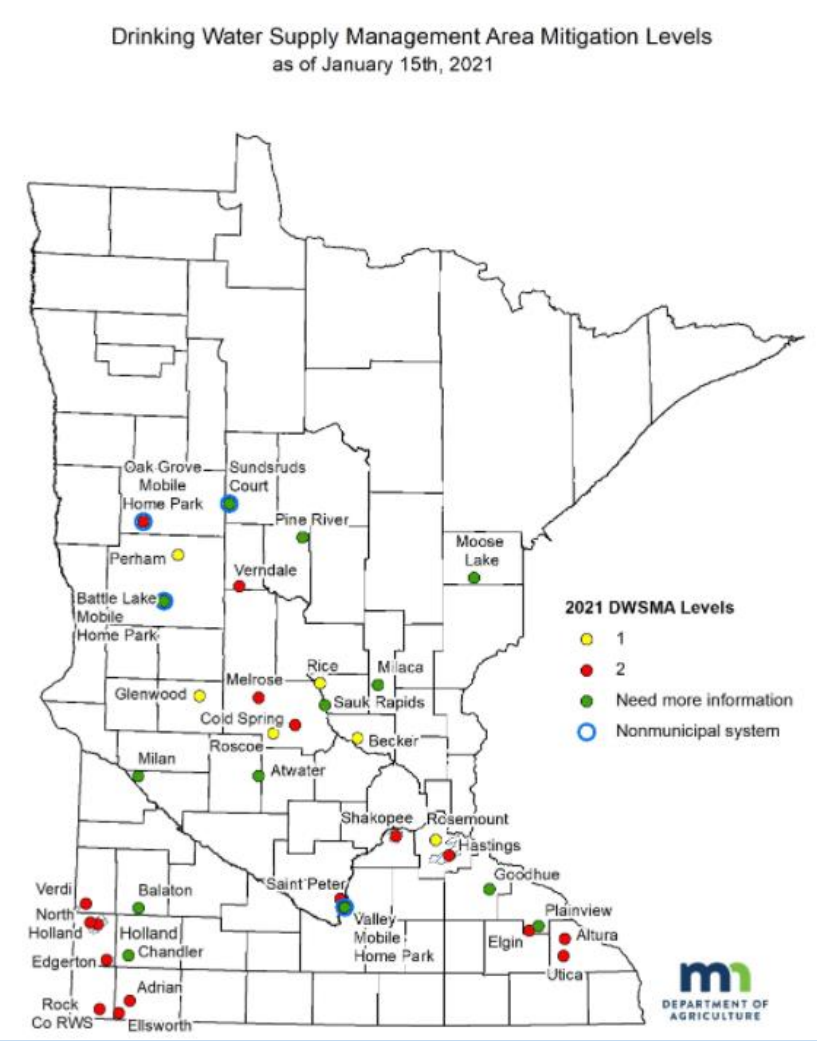
Source Water Assessment Area Example: Mankato



- Intakes at Mankato are wells engineered to collect river water through the bottom of the river
- Yellow = Drinking Water Supply Management Area – Surface Water
- Mainly used to inventory land use challenges that impact drinking water quality for the intake (i.e. non-point source pollution)
- Red – Emergency Response Area
- Blue = Spill Management Area

Rural Private Drinking Water Wells

- MDA: Achieve drinking water standard for nitrate (**Groundwater Protection Rule**)
- MDA: Support the **Nitrogen Fertilizer Management Plan** to promote vegetative cover and advanced management tools to protect vulnerable private wells.



CWF & Water Supply

Metro Goal: Reduce groundwater use by 150 million gallons/year

Met Council Efficiency Grants

- Grants for better fixtures & irrigation controllers
- Up to 30,000 gallons/year/house saved with irrigation efficiency
- Turfgrass research at U of M for low-maintenance turf

CWF & Water Supply

- Groundwater Management Areas (DNR)
  - White Bear Lake/N & E Metro
- Agricultural Irrigation Efficiency
  - U of M Extension Educator
- Allianz Field: Irrigation Reuse
- Contaminants of Emerging Concern
  - Chemical threats; Health Department
- Well Sealing
  - BWSR grants to county SWCDs

Thank you!