



Some Background on standards & monitoring

Federal Clean Water Act (CWA) of 1972 – framework for protecting, restoring water quality

CWA Section 303 – establishes national water quality standards and Impaired Waters (TMDL) programs

Minnesota:

Designate beneficial uses for Minnesota rivers, drainage ditches, streams, wetlands, lakes

Develop water quality criteria to protect beneficial uses



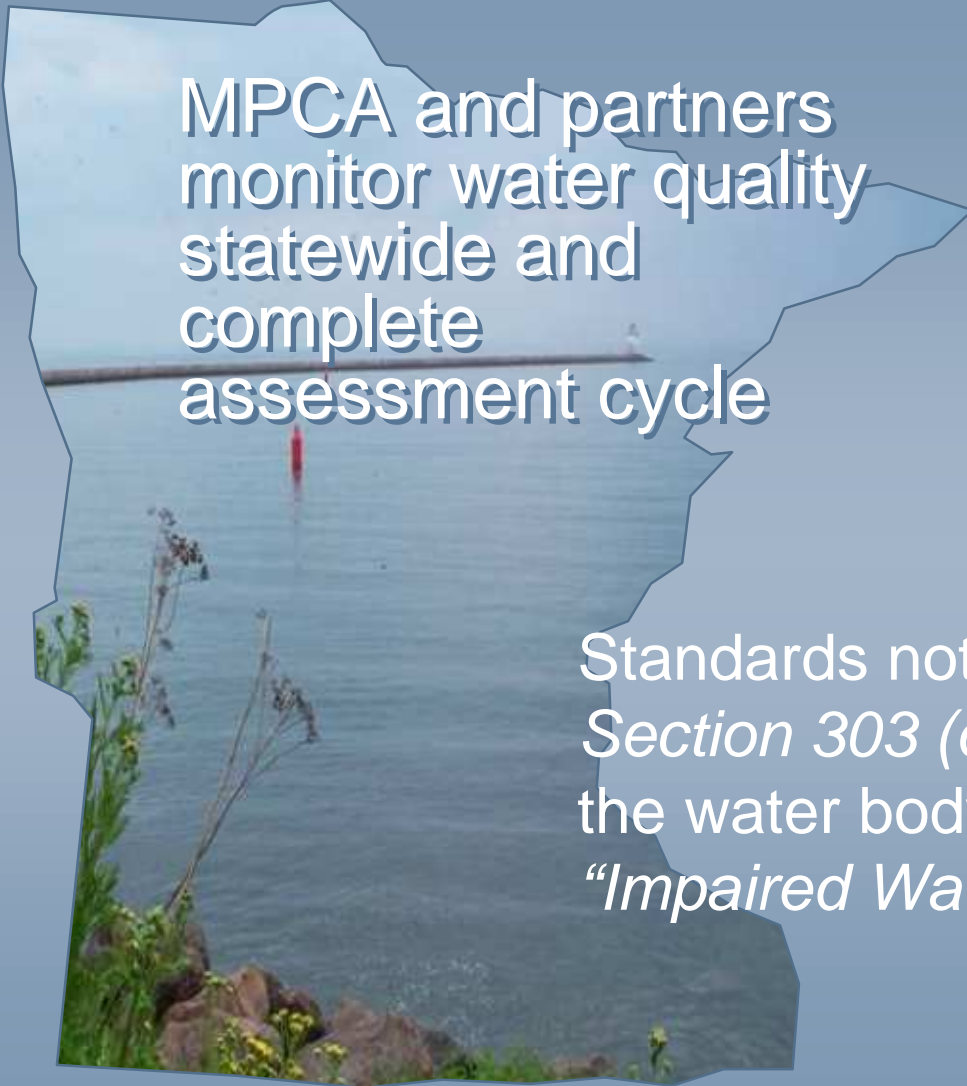
How do we determine whether standards are being met?

Minnesota Pollution Control Agency

MPCA and partners monitor water quality statewide and complete assessment cycle



Standards not met?
Section 303 (d) requires placing the water body on the
“Impaired Waters List”





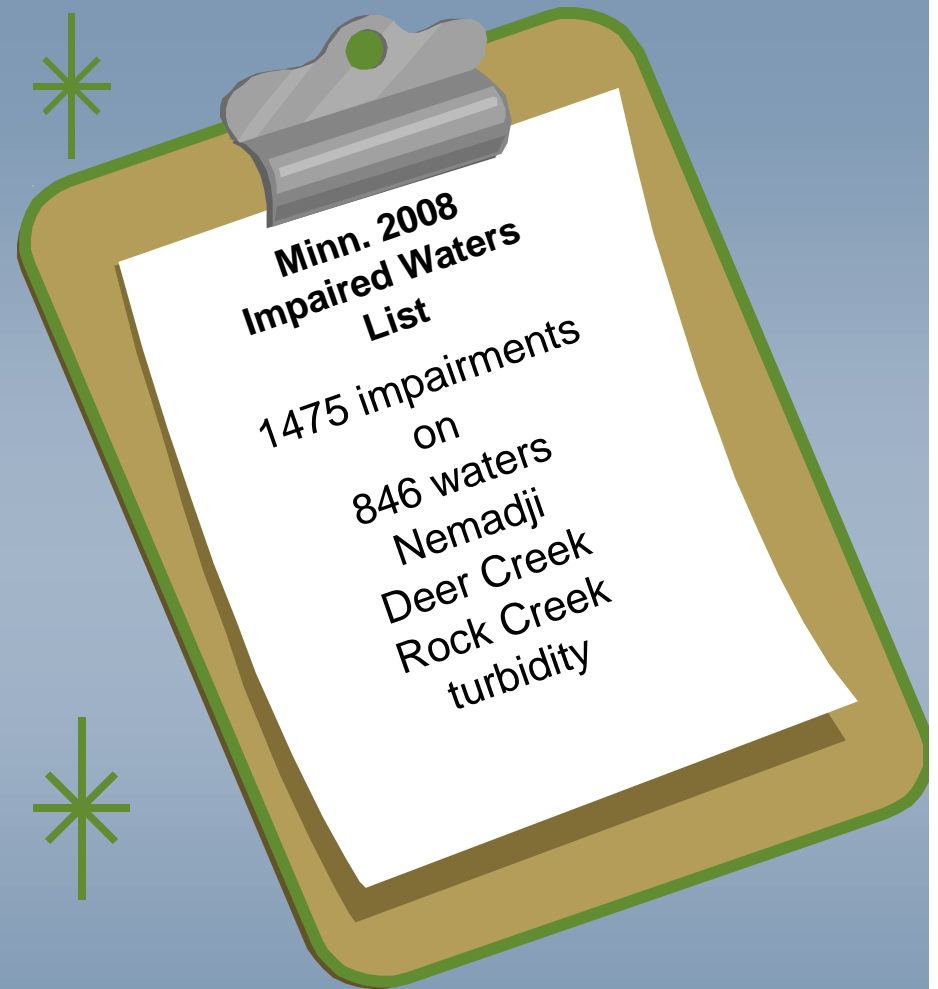
Why is the Impaired Waters List Important?

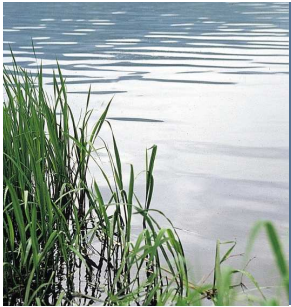
303(d) Lists:

- Inform/educate the public
- Ensure that *further study* of impaired waters occurs (the **TMDL Study**)
- Encourage action to restore water quality



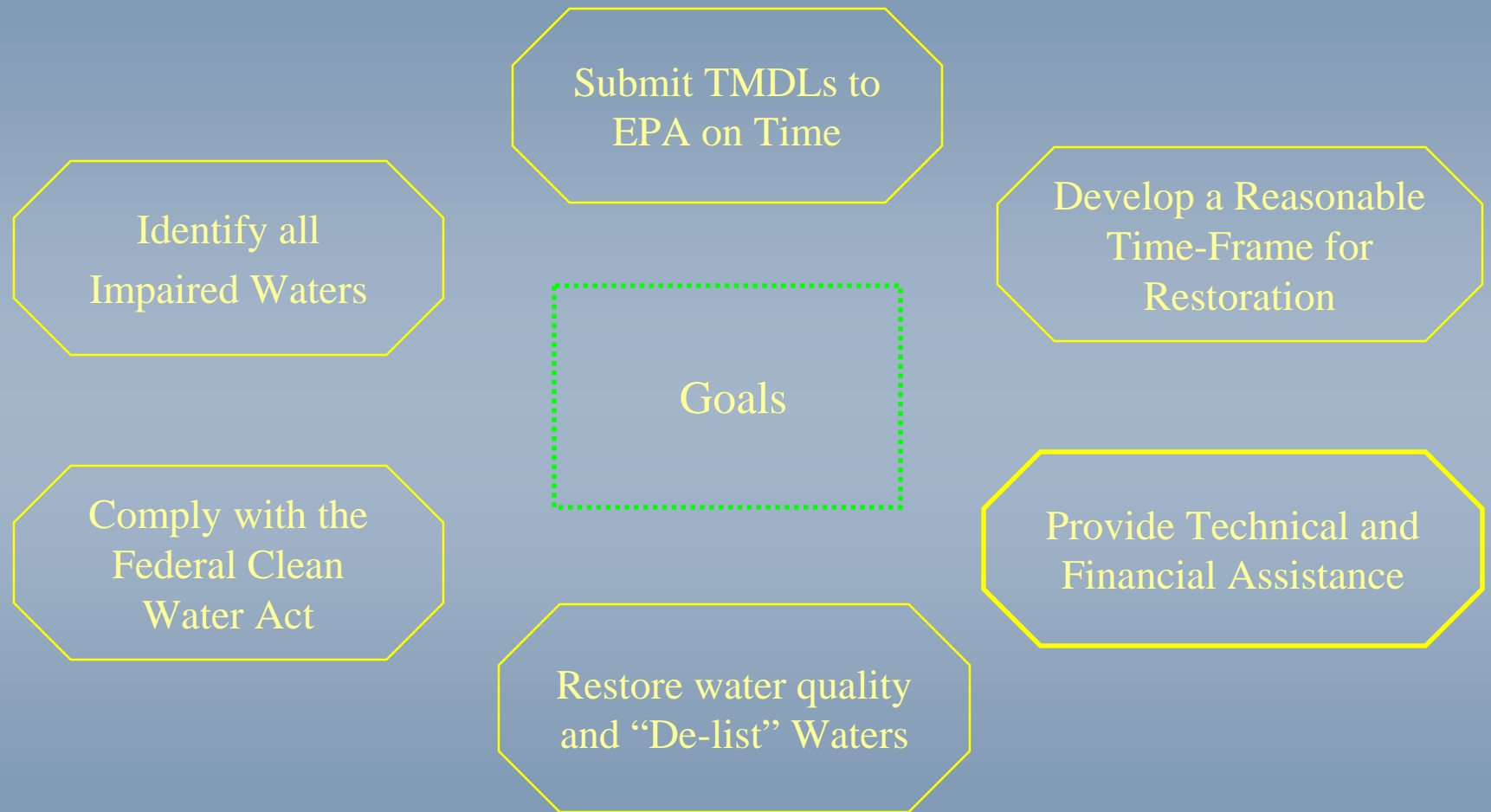
Deer Creek turbidity

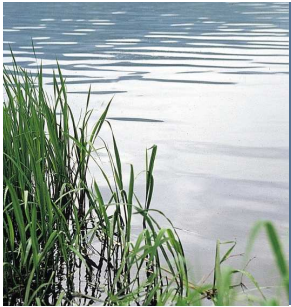




Clean Water Legacy Act

Minnesota Pollution Control Agency

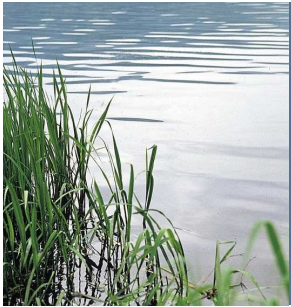




What is a Total Maximum Daily Load (TMDL)?

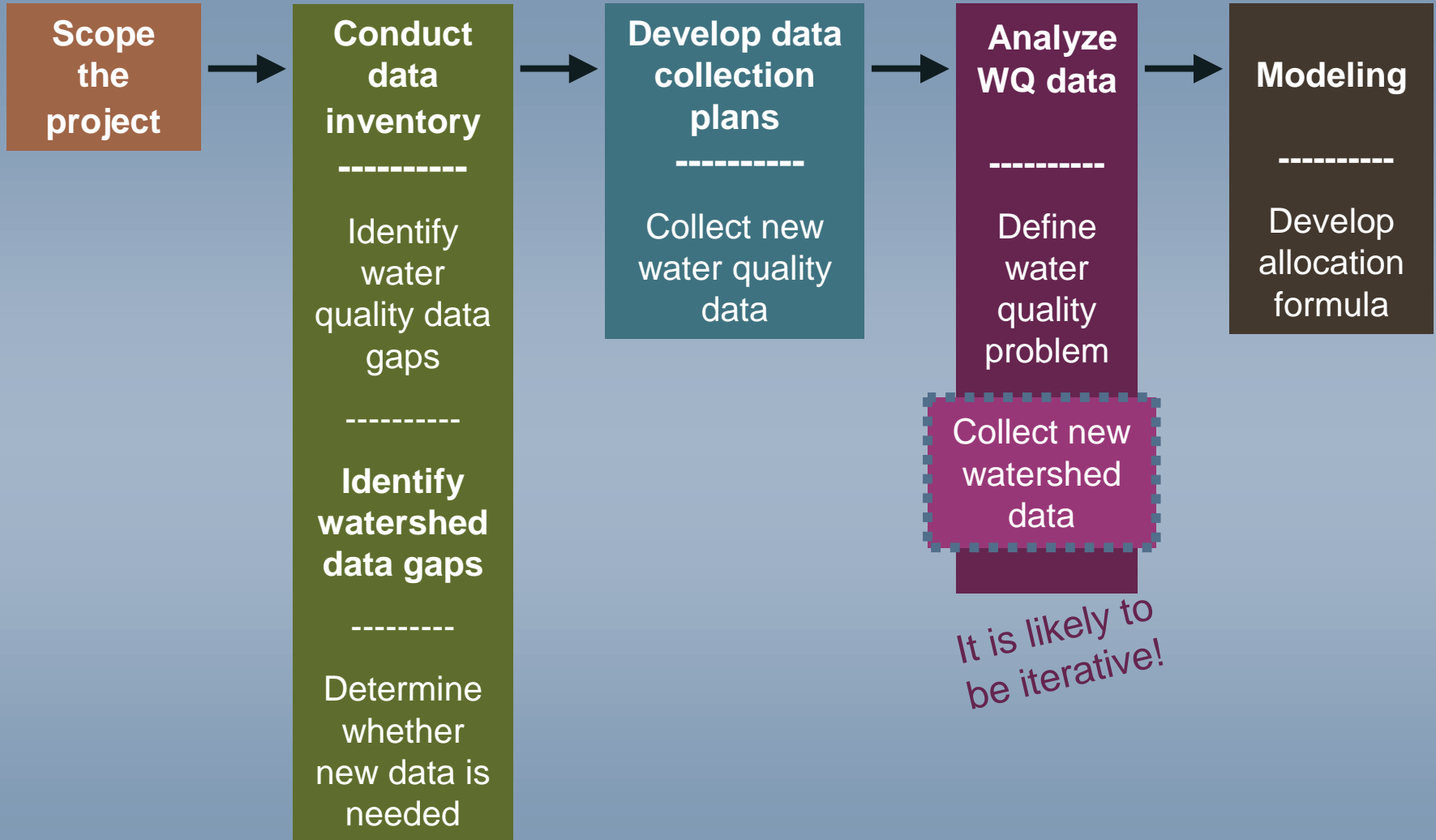
- It is a process
- It is a formula
- It is a final study or report submitted to EPA

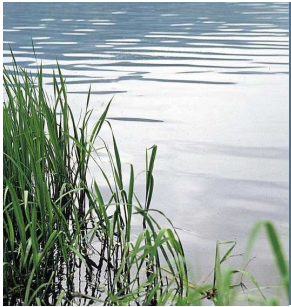




TMDL study process

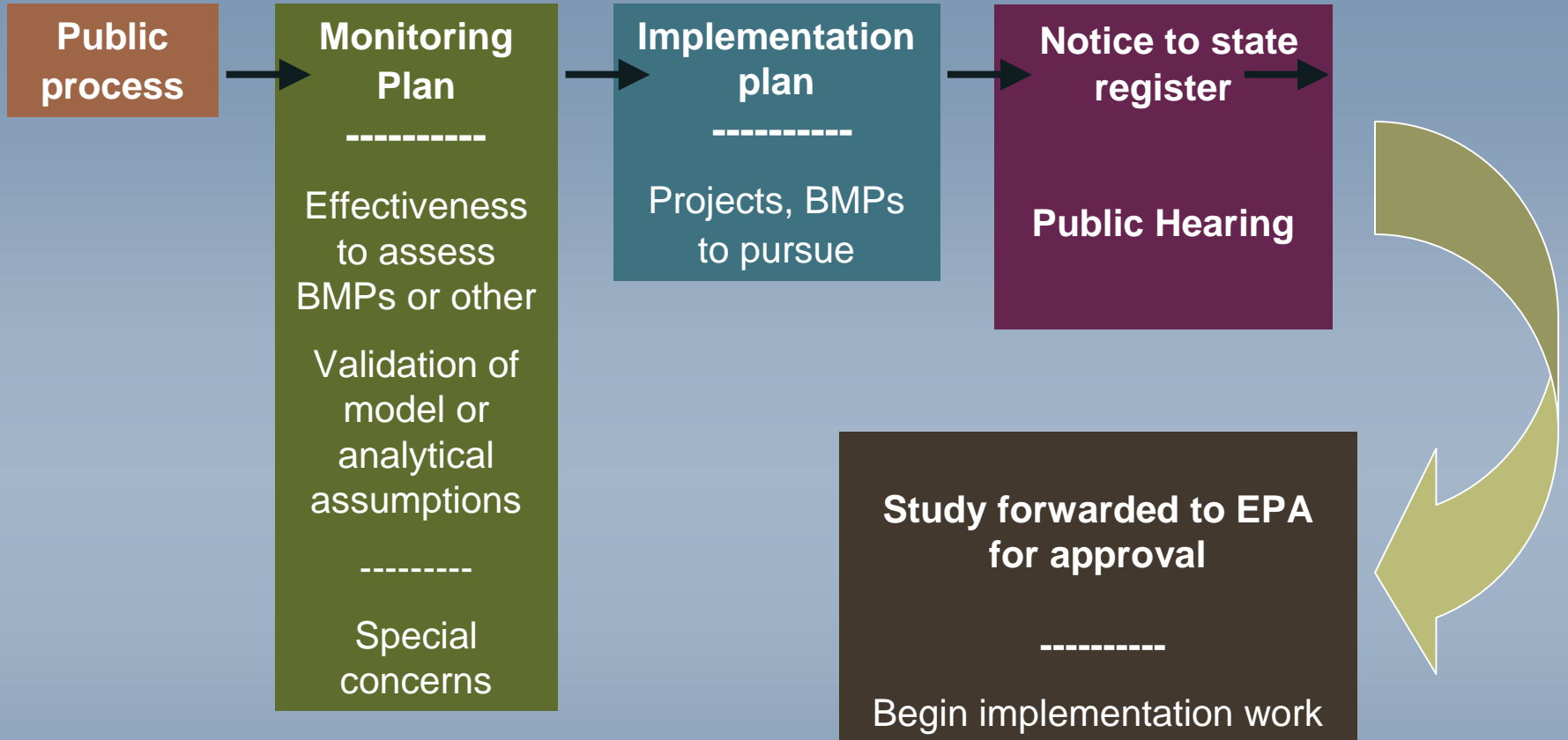
Minnesota Pollution Control Agency





TMDL study process continued

Minnesota Pollution Control Agency





TMDL – A Mathematical Formula

A TMDL Study must complete this pollution load allocation formula:

$$\text{LA(s)} + \text{WLA(s)} + \text{Margin of Safety} + \text{Reserve Capacity} = \text{Total Maximum Daily Load}$$

Where:

LA = Load allocations from nonpoint sources

WLA = Waste load allocations from point sources

Margin of Safety = to account for potential scientific error

Reserve capacity = set aside for future development



What must a TMDL Study include?

1. A ***public participation plan*** to ensure engagement, collaboration, success

2. An ***assessment of what's causing impairment***
(*may include biological, chemical, habitat, flow, etc.*)

3. A ***technical analysis*** of existing pollutant loads from point and nonpoint sources

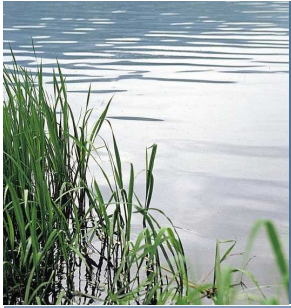


What must a TMDL Study include?

4. An ***allocation*** of acceptable pollutant loads from point and nonpoint sources

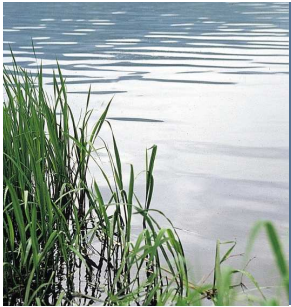
5. An ***implementation strategy***

6. A ***monitoring strategy*** to determine effectiveness of restoration activities



Q: Do TMDLs mean more regulation?

- NPDES/SDS permits --may need to have effluent limits or other requirements modified:
 - 1) Wastewater/industrial NPDES/SDS permits
 - 2) Feedlot permits (if over 1000 animal units, or over 500 animal units in sensitive areas)
 - 3) ISTS (over 10,000 gpd) permits
 - 4) Permitted municipal separate storm sewer systems (MS4s)
 - 5) Construction stormwater permits



Q: Do TMDLs mean more regulation?

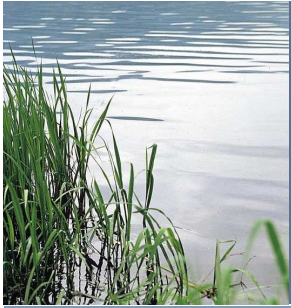
- For Nonpoint Sources –

We will continue to rely on existing authorities and financial incentives and education to address certain nonpoint sources:

- 1) Agriculture
- 2) Forestry
- 3) Development/urbanization
- 4) Shoreland development

- Local units of government have authority to develop new regulatory tools to control nonpoint sources

(Examples: construction, zoning, shoreland, soil loss, and feedlot ordinances, drainage system management)



Q: How Will We Implement TMDLs?

A:

Through collaborative efforts of public, private and non-profit organizations

With significant involvement from the public

With a long-term perspective in mind

Consistently, over a long period of time



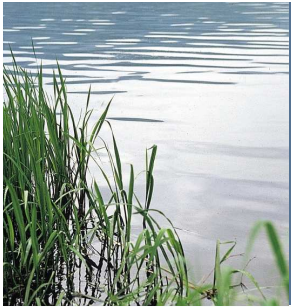
Implementation Examples

- Erosion Control on fields
- Buffers and buffer programs
- Grazing Options –rotations, exclusions
- Cover Crops & Windbreaks
- Sediment budgets
- Stormwater management –urban/rural
- Vegetative and structural BMPs
- Non structural BMPs



Benefits of Public Participation

- Collaborative Learning – TMDL, watershed science, behavior changes
- Manage controversy, legal challenges, critics
- Creates a transparent process – improves accountability, trust
- Inspiring, creative, strategizing
- Broader outreach and advocacy
- Required



Opportunities for Involvement in the TMDL Process

Minnesota Pollution Control Agency

- Water quality problem identification stage
- Water quality goal-setting
- Workplans
- Point/nonpoint allocation determination
- Open houses, public meetings
- DRAFT TMDL Study public comment period
- TMDL Implementation Plan development
- Advocacy and implementation
- Monitoring





"Public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed."

-Abraham Lincoln, 1858