

A photograph of the Minneapolis skyline across a river, with a bridge in the foreground. The skyline includes several prominent skyscrapers, including the IDS Center. The river is in the foreground, and a bridge with multiple arches spans across it. The sky is overcast.

# Minnesota's Impaired Waters Program

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A program to fix Minnesota's  
damaged lakes and streams



# Minnesota Impaired Waters Program

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- Nothing completely new
- Logical
- Extensive and expensive
- Necessary, or something like it, to get the job done

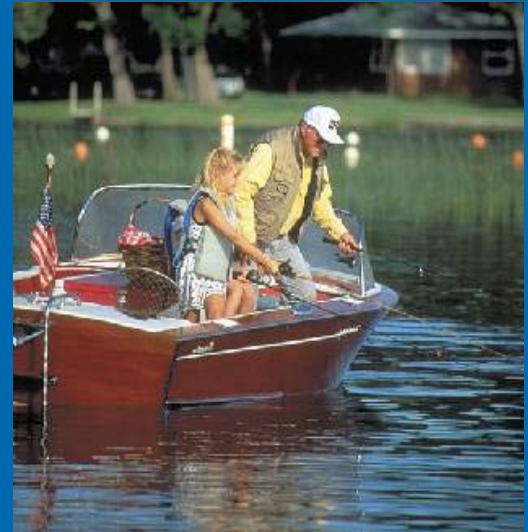
# Impaired = What?

# Impaired =


Lakes and streams that do not support their **designated uses** due to pollution.

# Designated uses:

- Drinking
- Aquatic life →
- Aquatic recreation →
- Agricultural irrigation
- Industrial use
- Limited use



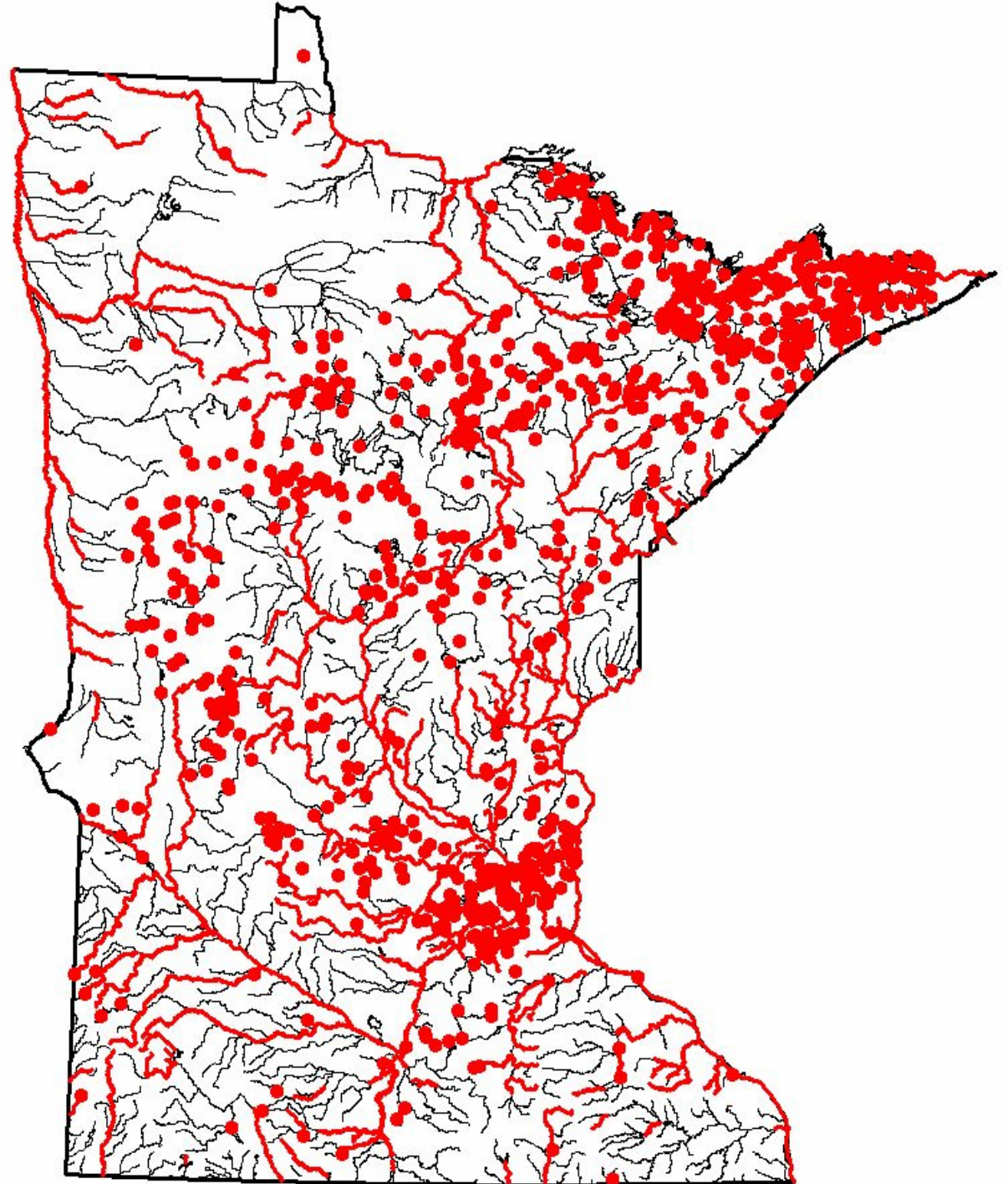
**FISHABLE &  
SWIMMABLE**

An aerial photograph of a wide river. The water is a murky, brownish-tan color, indicating high sediment levels. The river flows from the top left towards the bottom right. The banks are lined with dense green trees and vegetation. The overall scene suggests environmental degradation or agricultural runoff.

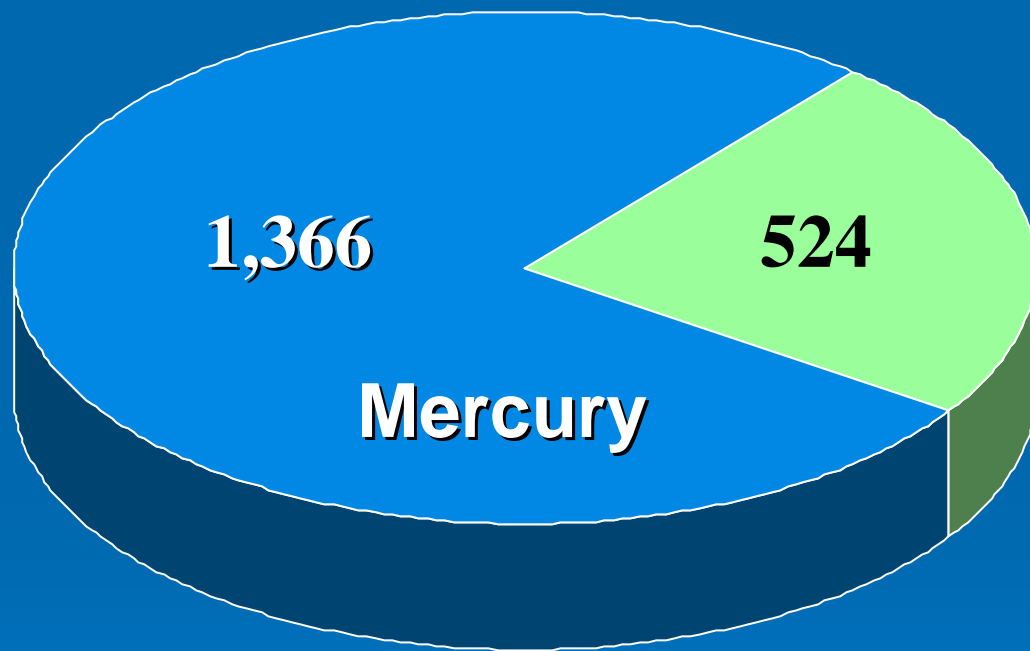
**1,494**

Lakes and stream  
“reaches” on the  
Impaired Waters List

Impaired waters are in every corner of our state.



# Final 2004 Impaired Waters List

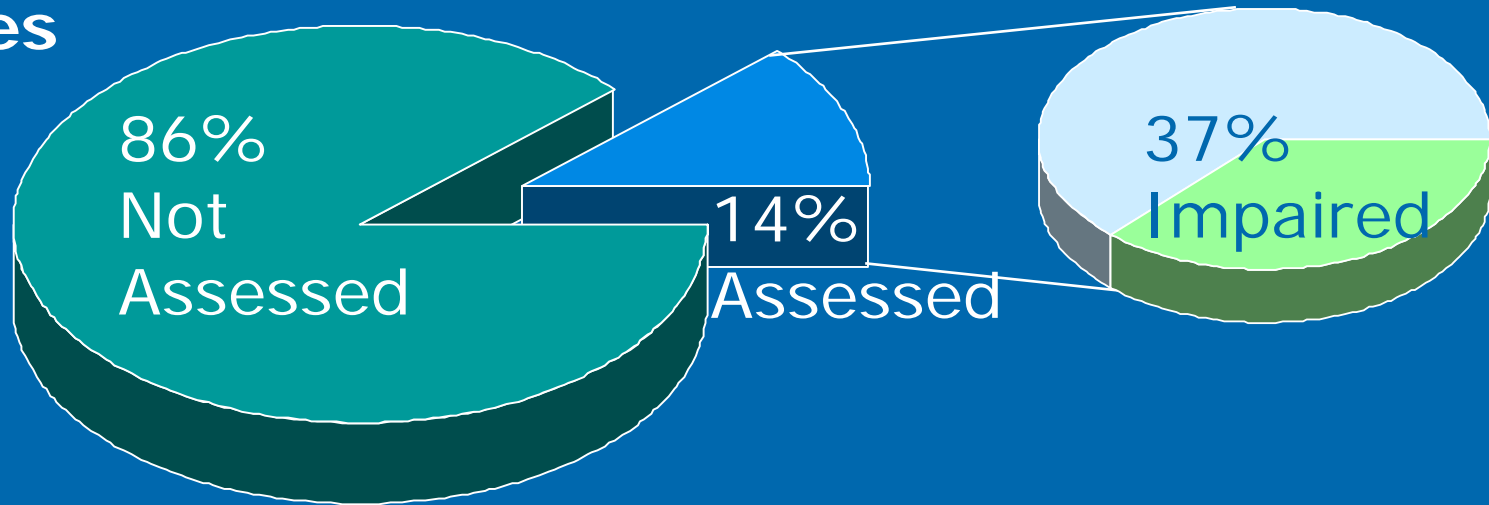


- Excess nutrients
- Fecal coliform
- Turbidity
- Ammonia
- Low dissolved oxygen

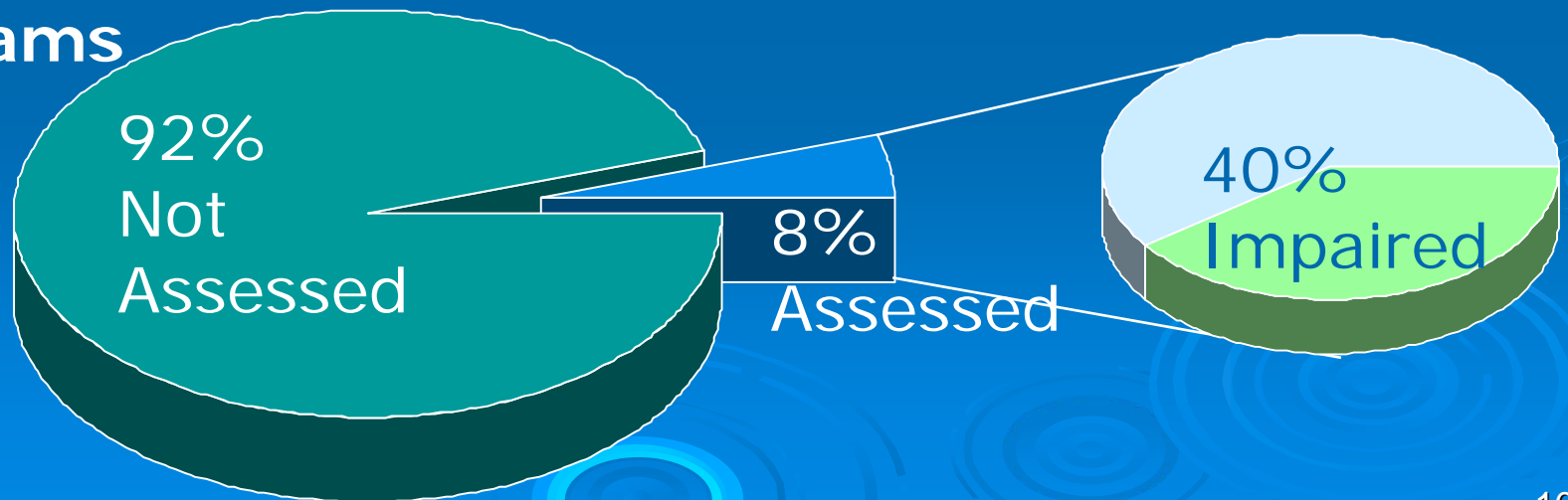
■ Conventional □ Mercury/bioaccum. Toxics

# Assess Water Quality

## Lakes



## Rivers and streams

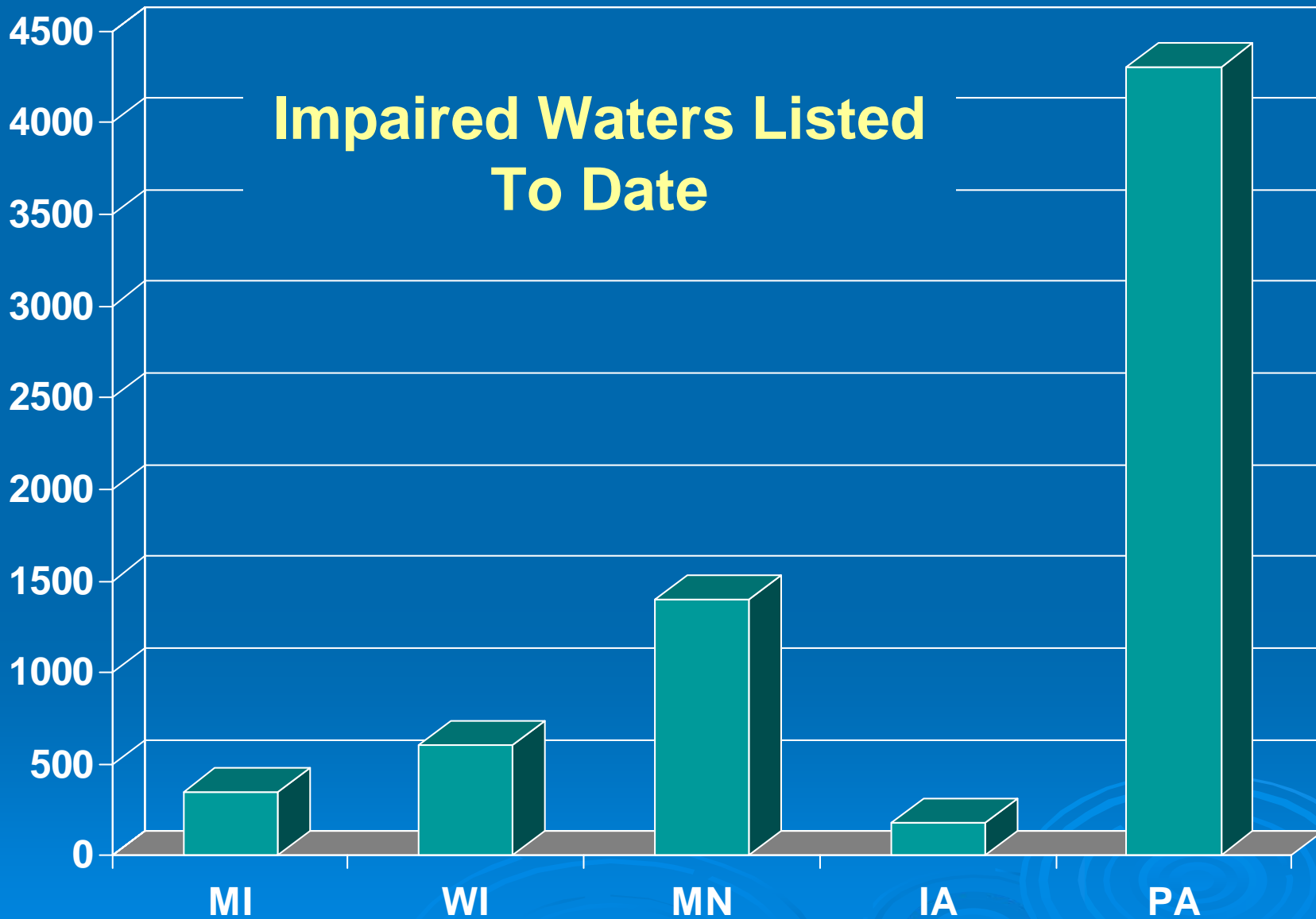


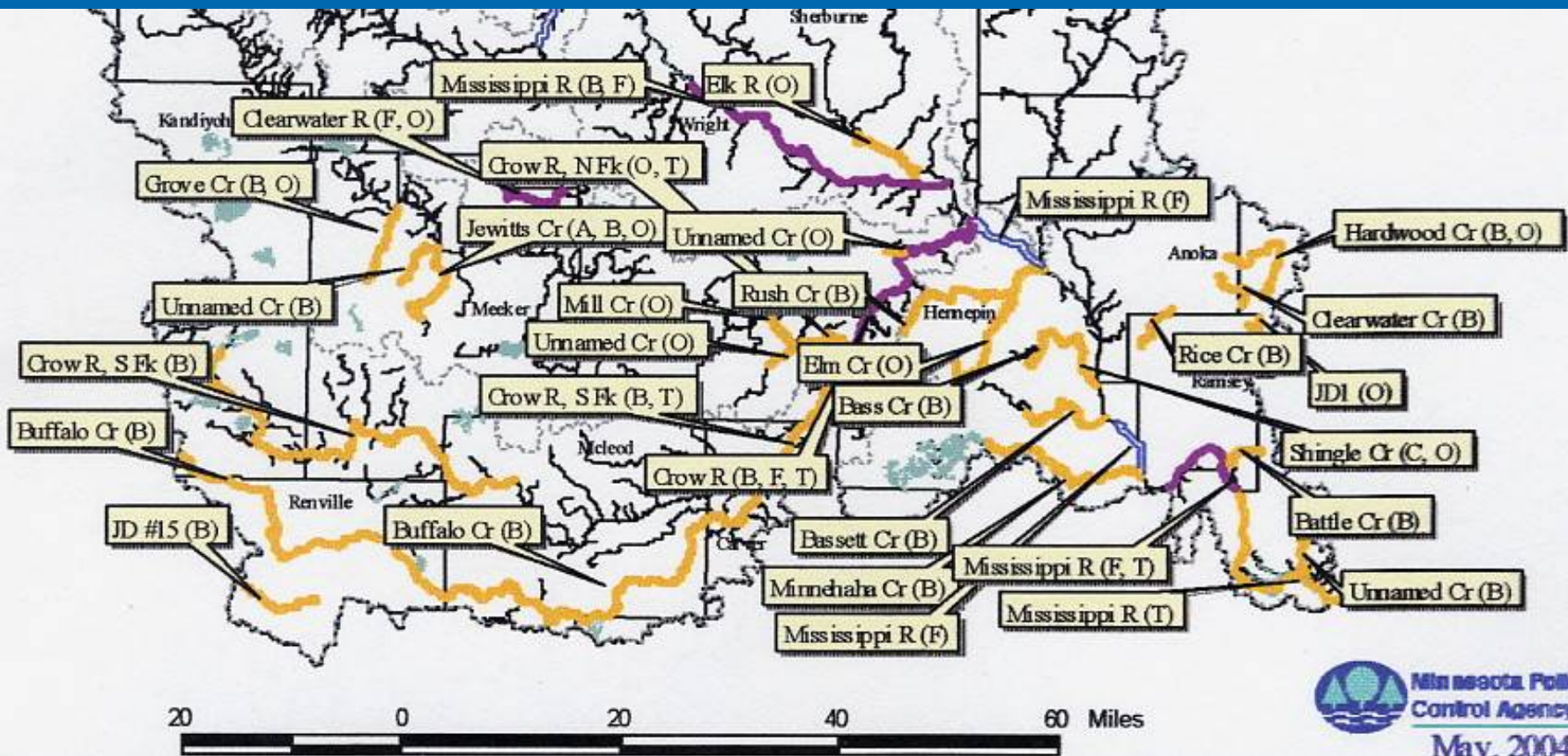
Seek and ye shall find!

Minnesota

Land of 10,000  
Impaired Waters

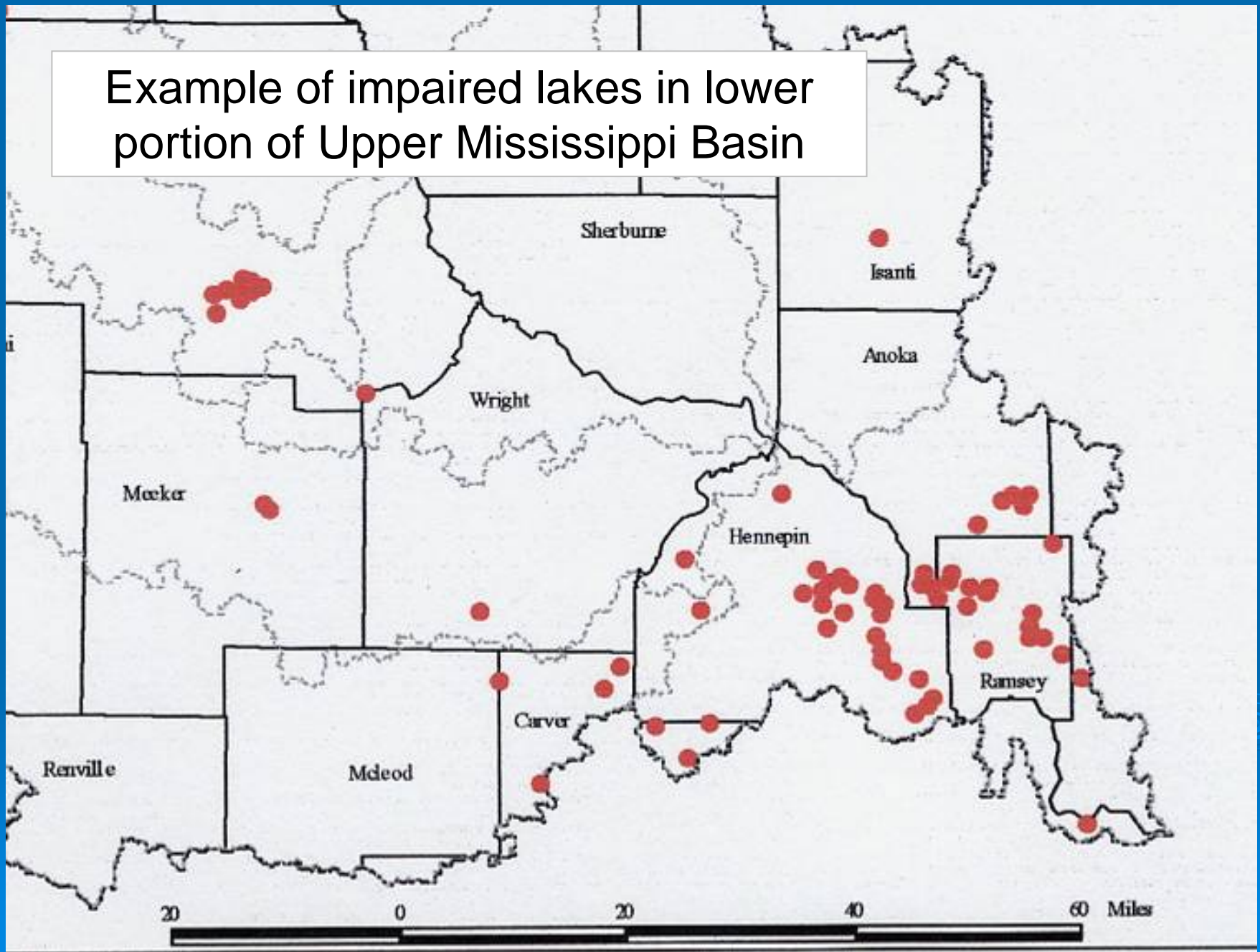
# Impaired Waters Listed To Date





Streams measured in “segments”  
of approximately 10 miles length

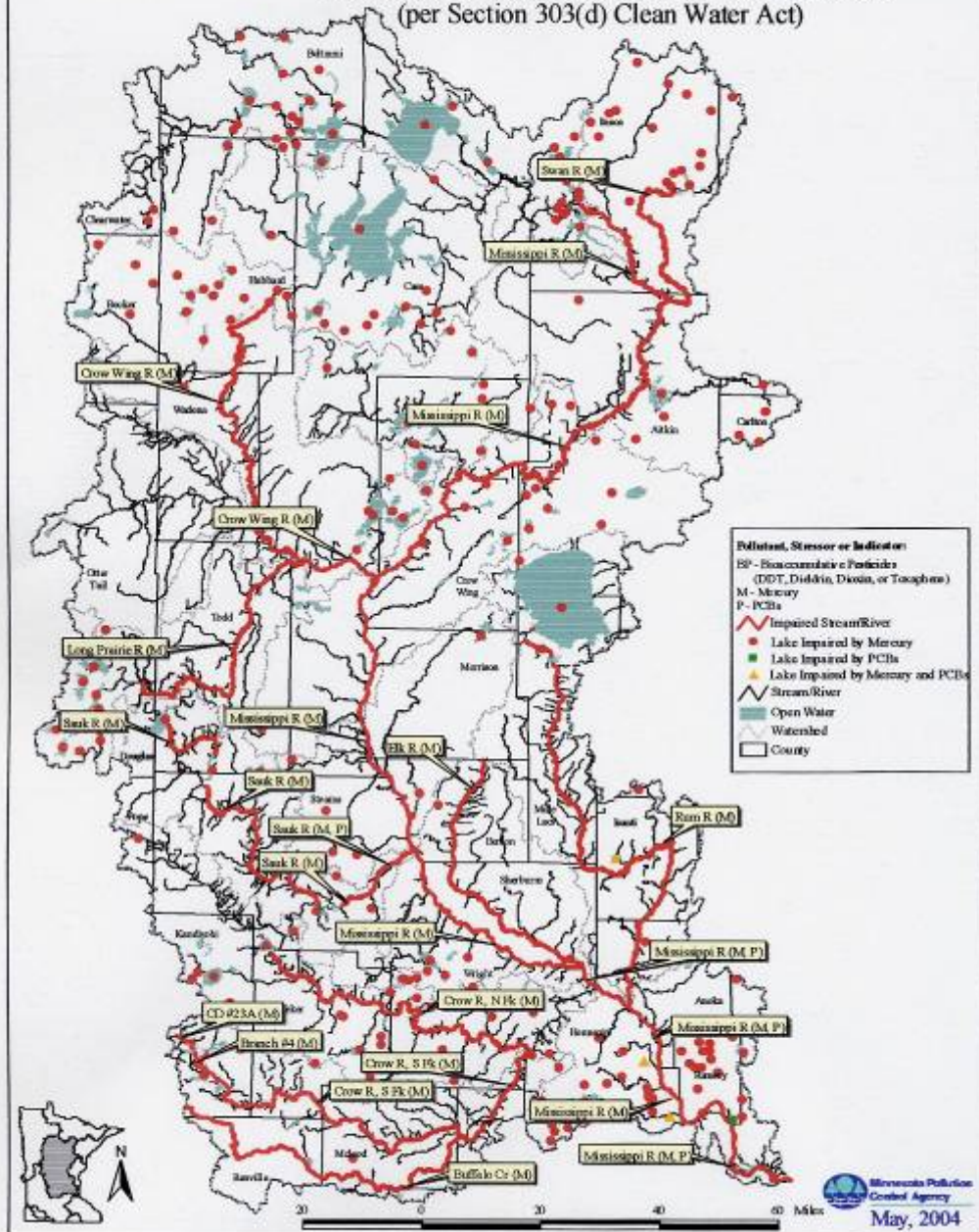
Example of impaired lakes in lower portion of Upper Mississippi Basin



# Mississippi River Basin: Headwaters to St. Croix River

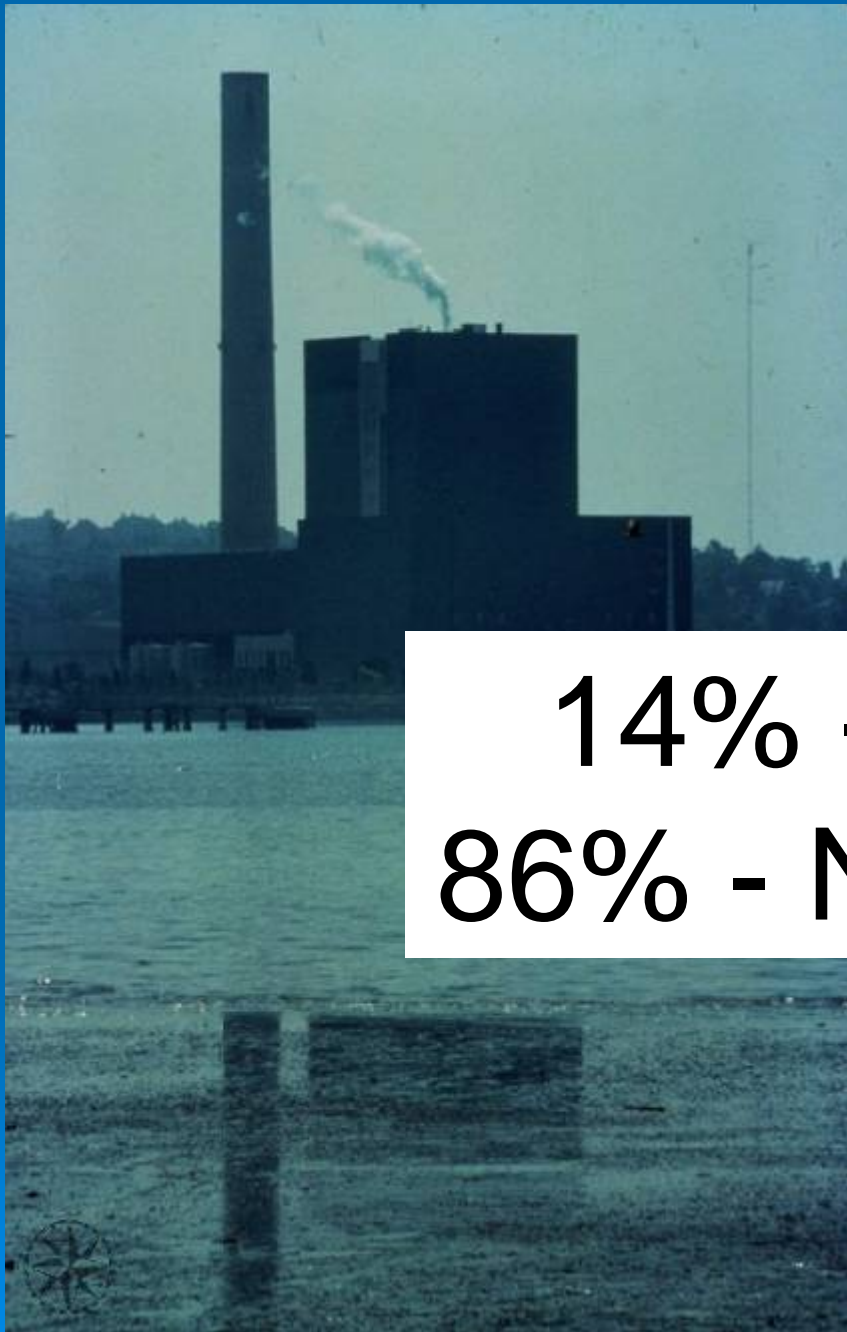
2004 Impaired Waters List: Bioaccumulative Toxics

(per Section 303(d) Clean Water Act)



# Mercury

It's everywhere,  
its everywhere!



14% - Point  
86% - Nonpoint



# Addressing Impaired Waters are a priority

- Minnesota has most water resources in lower 48 states
  - Public's top priority
- Clean Water Act mandates that all states address impaired waters
  - 22 of 42 lawsuits have been successful
- Affects growth and health of communities and the economy

# Affects growth and health of communities, economy

- Clean Water Act prohibits new or expanded discharges to impaired waters
- 546 of 1,405 state permitted wastewater treatment plants discharge to impaired waters
- Lakeshore properties values rise or fall based on water clarity



# The Fix:

Total  
Maximum  
Daily  
Load

**TMDL**

# What's a TMDL?

Total Maximum Daily Load is:

- A process and a numerical goal
- Amount of a given pollutant that a body of water can tolerate and still meet designated uses
- Allocations (limits) set for all contributing sources plus future growth

How much can you handle -



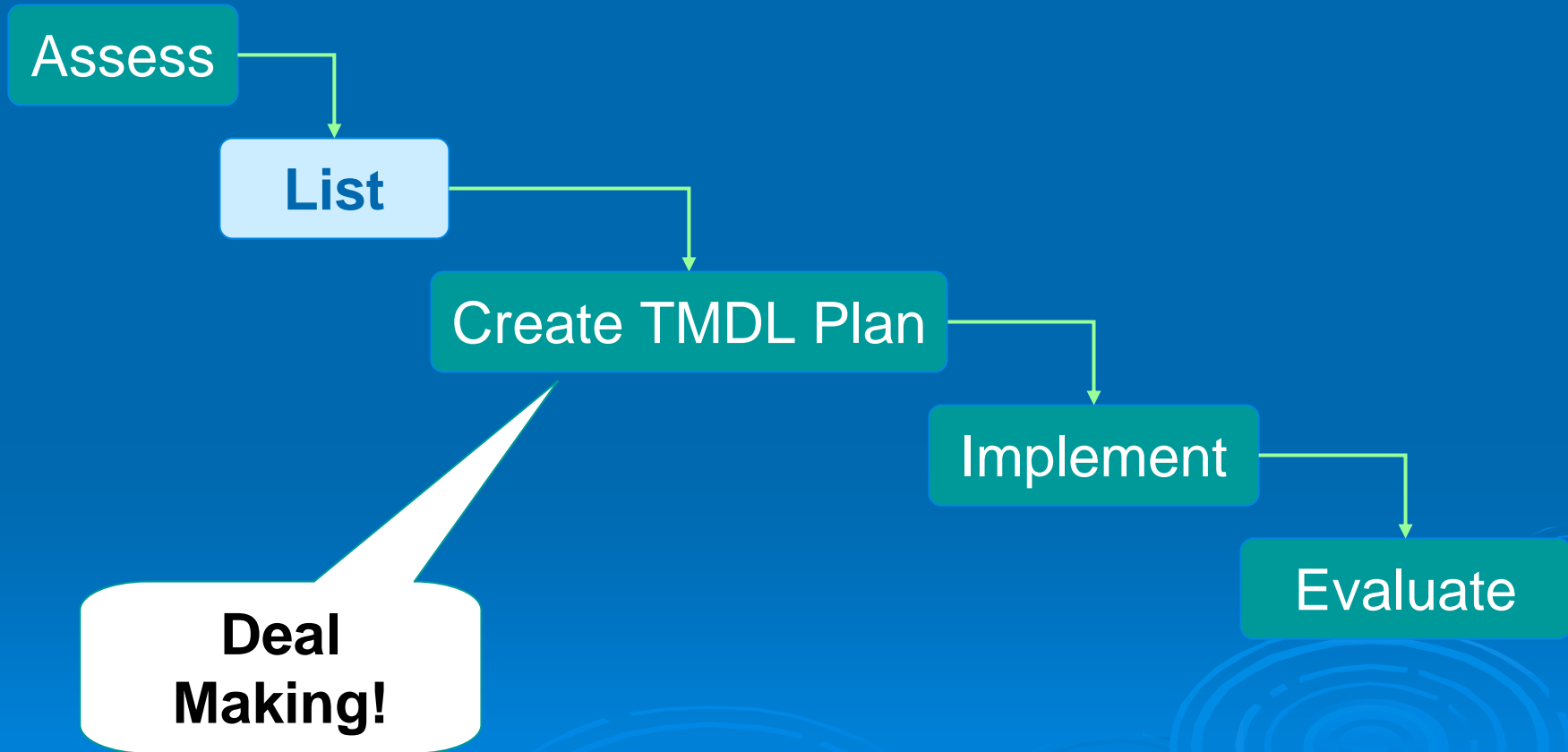
And not get sick?



Dividing the  
responsibility  
for reducing  
each pollutant  
that exceeds  
TMDL

**STAKEHOLDERS**

# The impaired waters process



# Restoration activities



## **VOLUNTARY**

Use of practices to prevent pollution

## **REGULATORY**

- Stormwater
- Feedlots
- Industries
- Municipalities

# Show us the (lack of) money

|                 | Annual Need  | Current Funding | Needed Funding |
|-----------------|--------------|-----------------|----------------|
| Water Testing   | \$8 M        | \$1 M           | \$7 M          |
| TMDL Process    | \$9 M        | \$3 M           | \$6 M          |
| Implement TMDLs | \$47 – 230 M | \$1 M           | \$45 – 229 M   |
| TOTAL           | \$63 – 248 M | \$5 M           | \$58 – 243 M   |

# One Idea for Money

Wastewater generator **fee**:

\$36 per hook-up per year

Would generate \$75 M annually

A scenic photograph of a sunset over a calm lake. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water's surface. In the foreground, dark, silhouetted driftwood is scattered across the shore. A small, stylized graphic of water splashing is visible on the right side of the image.

## For More Information

- **MPCA TMDL Homepage**  
**<http://www.pca.state.mn.us/water/tmdl>**