



# Impaired Waters and TMDLs: Minnesota's Clean Water Legacy

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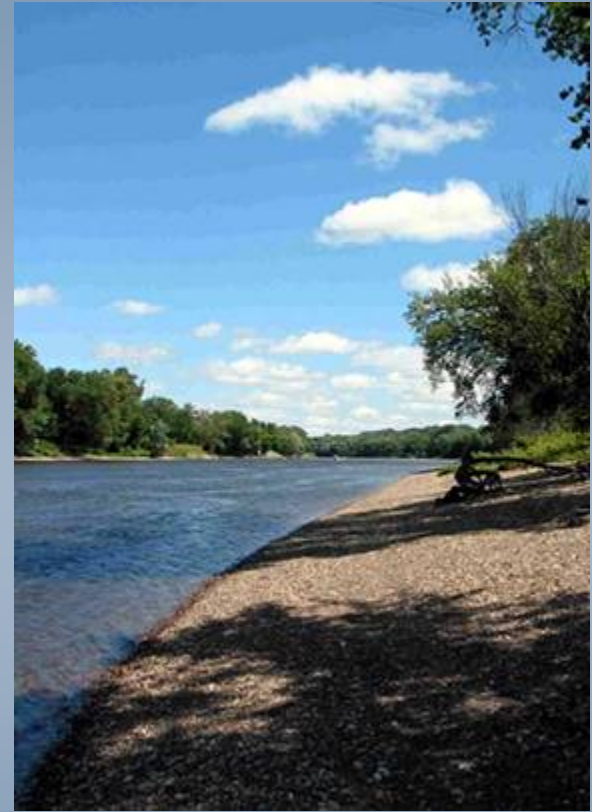
Council of Infrastructure Financing Authorities SRF Workshop

Providence, Rhode Island

October 2008

# Presentation Outline

- Background: What are impaired waters and TMDL's
- How TMDL's and some unusual political bedfellows led to Minnesota's Clean Water Legacy Act
- Role of the CWSRF
- Challenges for the Future



# 1972 Clean Water Act

Sec. 303(d) –  
States must  
identify, list and  
take actions to  
restore impaired  
waters



# Impaired waters

**Waters that do not meet water quality standards set to protect people, fish and other aquatic life, and recreation/aesthetics**

- 86% caused by non-point sources  
urban and rural runoff failing septics  
other land uses**
- 14% caused by point sources  
municipal and industrial discharges**

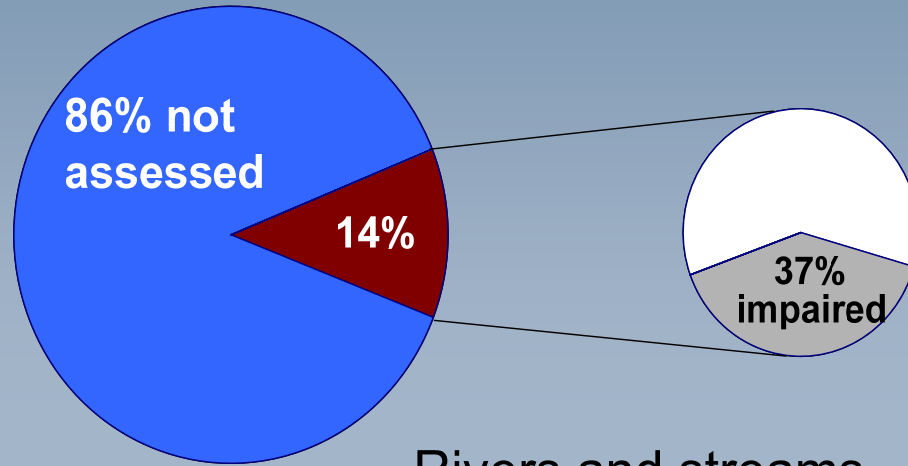
# Total Maximum Daily Load is...

The maximum amount  
of a specific  
pollutant that can be  
discharged to a water  
body and still meet  
water quality  
standards

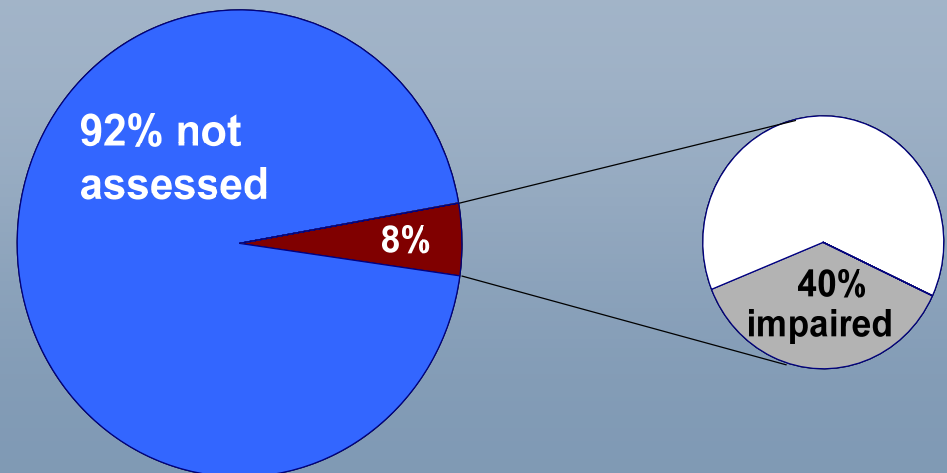


# Assess Water Quality

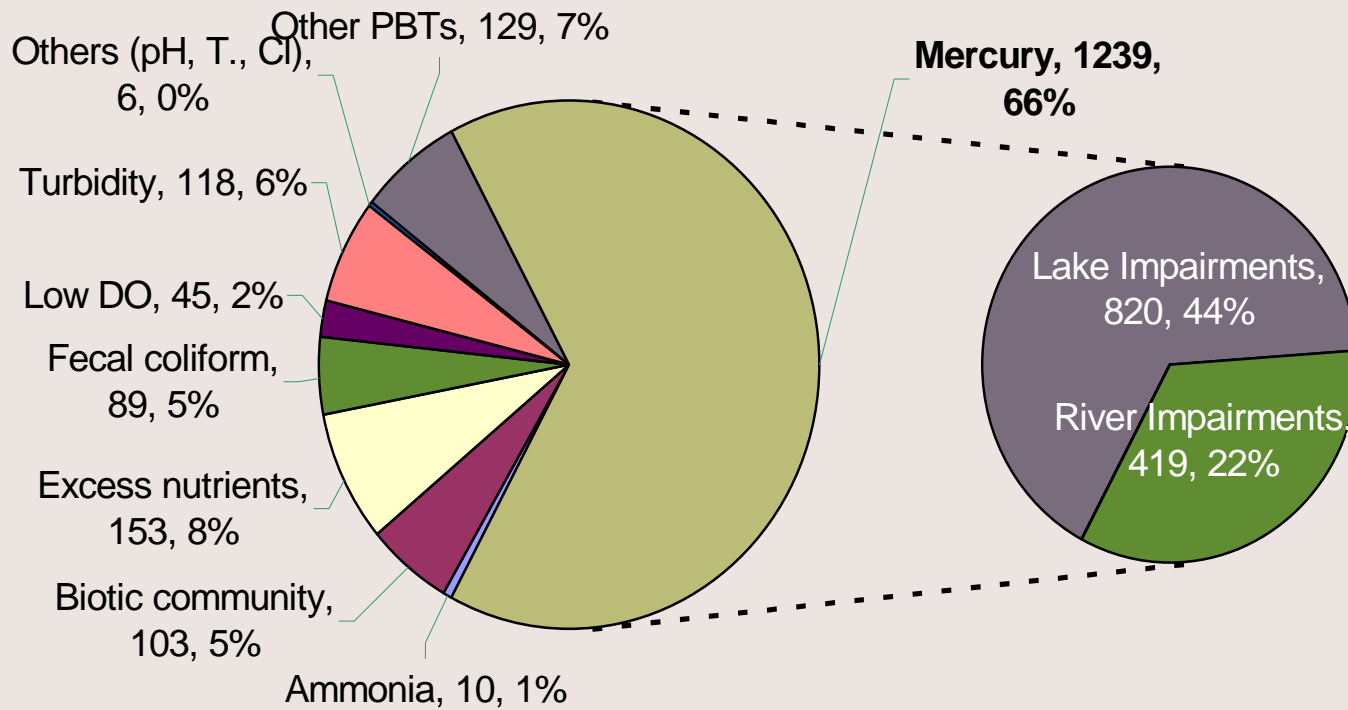
## Lakes



## Rivers and streams



# What are the Pollutants of Concern?



# Wastewater Pollutants of Concern

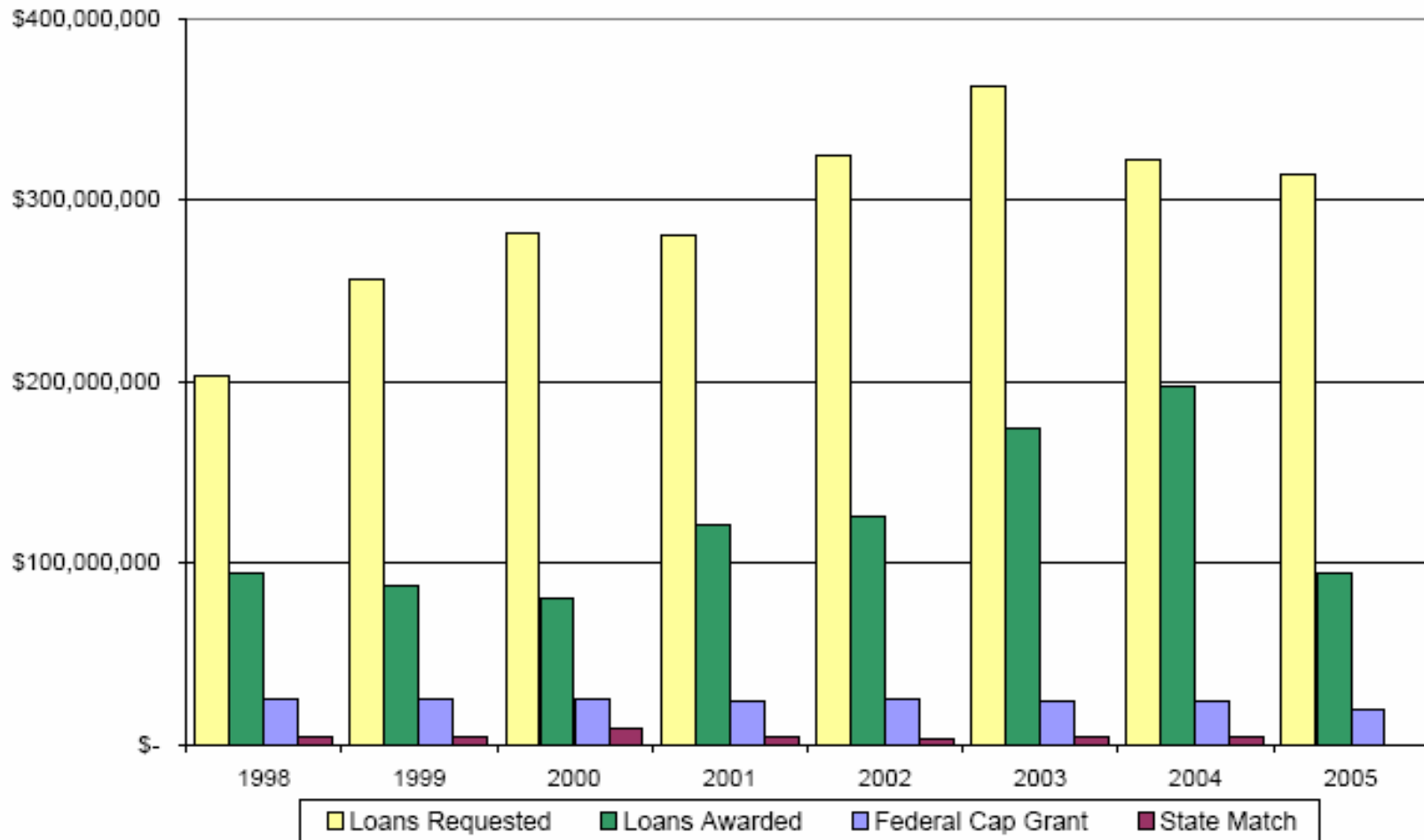
Fecal Coliform	<ul style="list-style-type: none"><li>■ Straight pipes communities</li><li>■ By-pass problems</li></ul>
Low Dissolved Oxygen	<ul style="list-style-type: none"><li>■ Phosphorus (P) treatment</li><li>■ Carbonaceous biochemical oxygen demand (CBOD)</li><li>■ Ammonia treatment</li></ul>
Turbidity	<ul style="list-style-type: none"><li>■ Total Suspended Solids (TSS)</li></ul>
Excessive Nutrients	<ul style="list-style-type: none"><li>■ Phosphorus (P) treatment</li><li>■ Nitrogen removal</li></ul>
Mercury	<ul style="list-style-type: none"><li>■ TSS</li></ul>



# Growing Pressure For WW Funding Even Without TMDLs

- Prior to 1998, CWSRF had been able to meet all funding requests
- In late 1990's, wastewater needs started to grow significantly
  - Need to replace aging facilities
  - Expand/upgrade for economic and pop growth
  - More stringent regulation of septic systems
- By 2002, annual IUP requests exceeded \$300 million
  - More than four times the sustainable long-term lending capacity
  - PFA increased CWSRF leveraging to try to keep pace with high priority needs

## Clean Water Revolving Fund Wastewater Loans Requested And Awarded Compared To Federal And State Funds (FY 1998-2005)

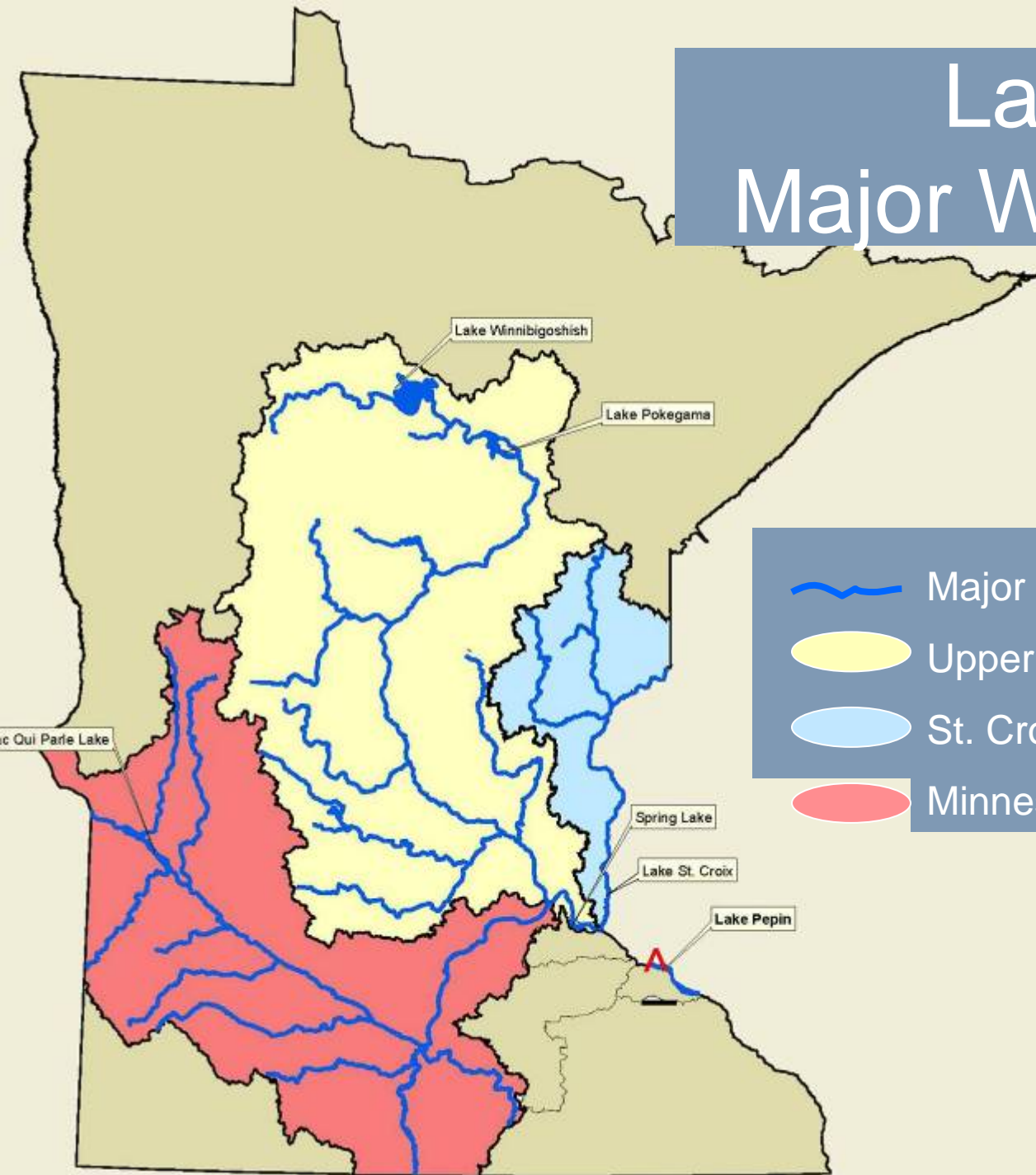




# TMDL Fine Print

- Federal Regulation: 40 CFR 122.4(i):
  - No permit may be issued to a new source or new discharger if the discharge will cause or contribute to a water quality standard violation.
- Lake Pepin is part of Mississippi River south of Twin Cities
  - Impaired for Turbidity and Excess Nutrients
  - 3 major watersheds feed into Lake Pepin

# Lake Pepin's Major Watersheds



-  Major Rivers
-  Upper Mississippi River Basin
-  St. Croix River Basin
-  Minnesota River Basin

ic Qui Parle Lake

Lake Winnibigoshish

Lake Pokegama

Spring Lake

Lake St. Croix

Lake Pepin



# From Fine Print to the Front Page

- Numerous permit challenges and lawsuits by state environmental groups
- 2005 MN Court of Appeals decision reversed new permit for cities of Annandale and Maple Lake
- Immediate impact on many municipal projects
  - No new surface discharges (approx 75 facilities)
  - Existing WWTP expansions were capped at current discharge limits



# TMDLs: A Household Word? (at least around the Capitol)

- City and business interests very concerned about potential economic impacts
- Broad based coalition formed, including Chamber of Commerce, cities, agricultural groups, environmental organizations
- Major lobbying effort began in 2004 to raise awareness of the issues



# Minnesota's Clean Water Legacy

- Clean Water Legacy Act adopted in 2006
  - State framework for TMDL development and implementation
  - Clean Water Council created to advise on implementation, foster coordination and cooperation, recommend funding priorities
  - Increased funding (FY 2007-2009):
    - Assessment and TMDL studies (\$40.8M)
    - Non-point source implementation (\$29.7M)
    - Point source implementation (\$108.8M)



# Role of the Clean Water State Revolving Fund

- In 2003, Public Facilities Authority and Pollution Control Agency began a 3 year effort to redesign Project Priority List
  - Strengthen focus on environmental priorities
  - Extra points for TMDL driven projects
  - Subtract points for new discharge to impaired water
- New rules adopted in 2006
- With revamped priorities, PFA and PCA could assure Legislature that TMDL projects would be in the CWSRF fundable range whenever they were ready to proceed.

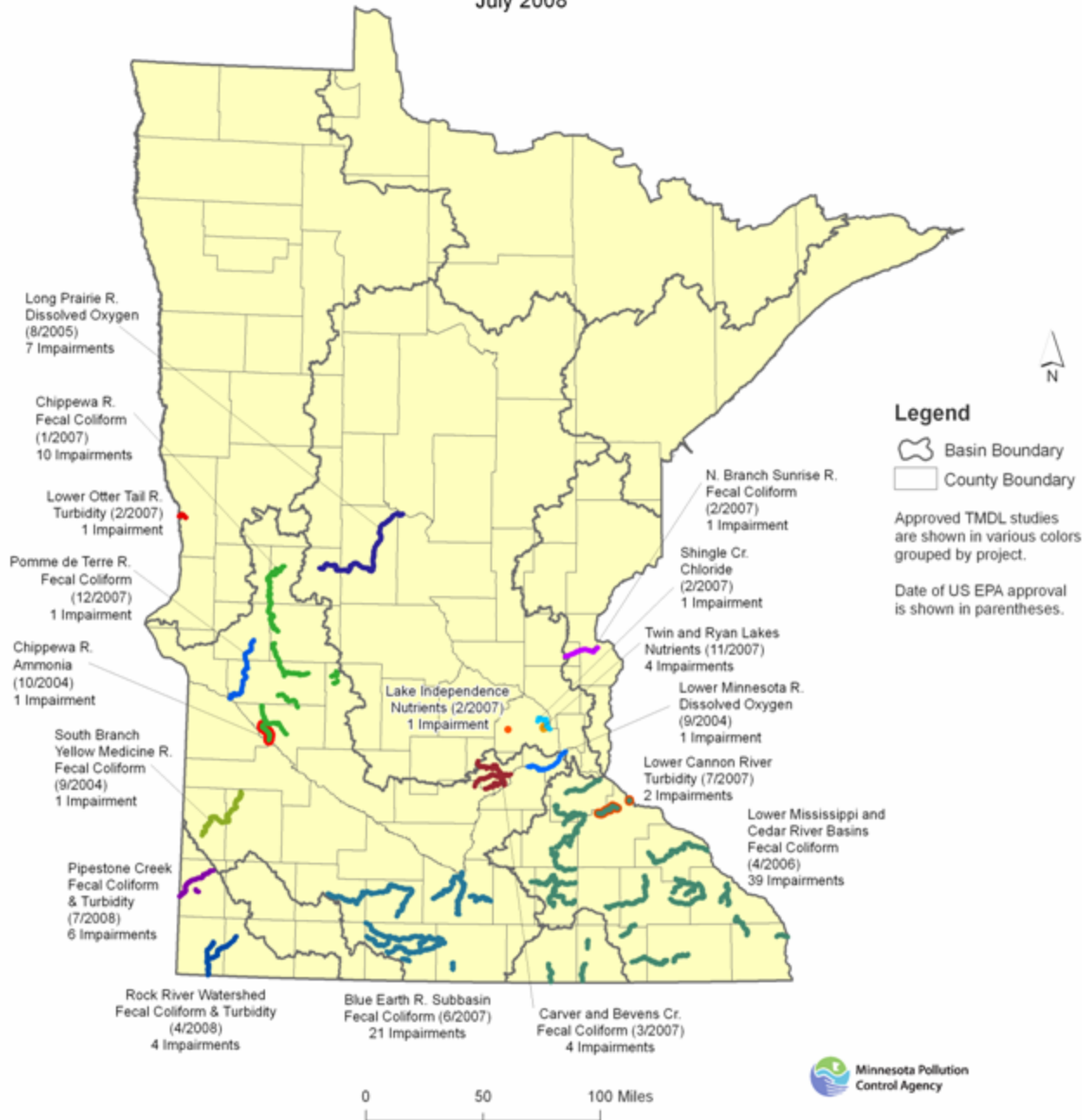


# Show Me The Money



- 1:1 state match for CWSRF - \$56.9M
  - For expected federal cap grants 2007-2010
  - Major selling points: each \$1 in state funds to the CWSRF has resulted in \$12 construction and \$3 interest savings
- WIF supplemental grants and loans - \$38M
- New Programs
  - TMDL grants - \$9M
    - Grants for up to 50% of costs to comply with TMDL
  - Small Community WW Treatment Program - \$2.9M
    - Grants and loans for very small straight pipe communities
    - Technical assistance grants for help from U of MN Extension Service

Approved TMDLs in Minnesota  
Conventional Parameters  
July 2008



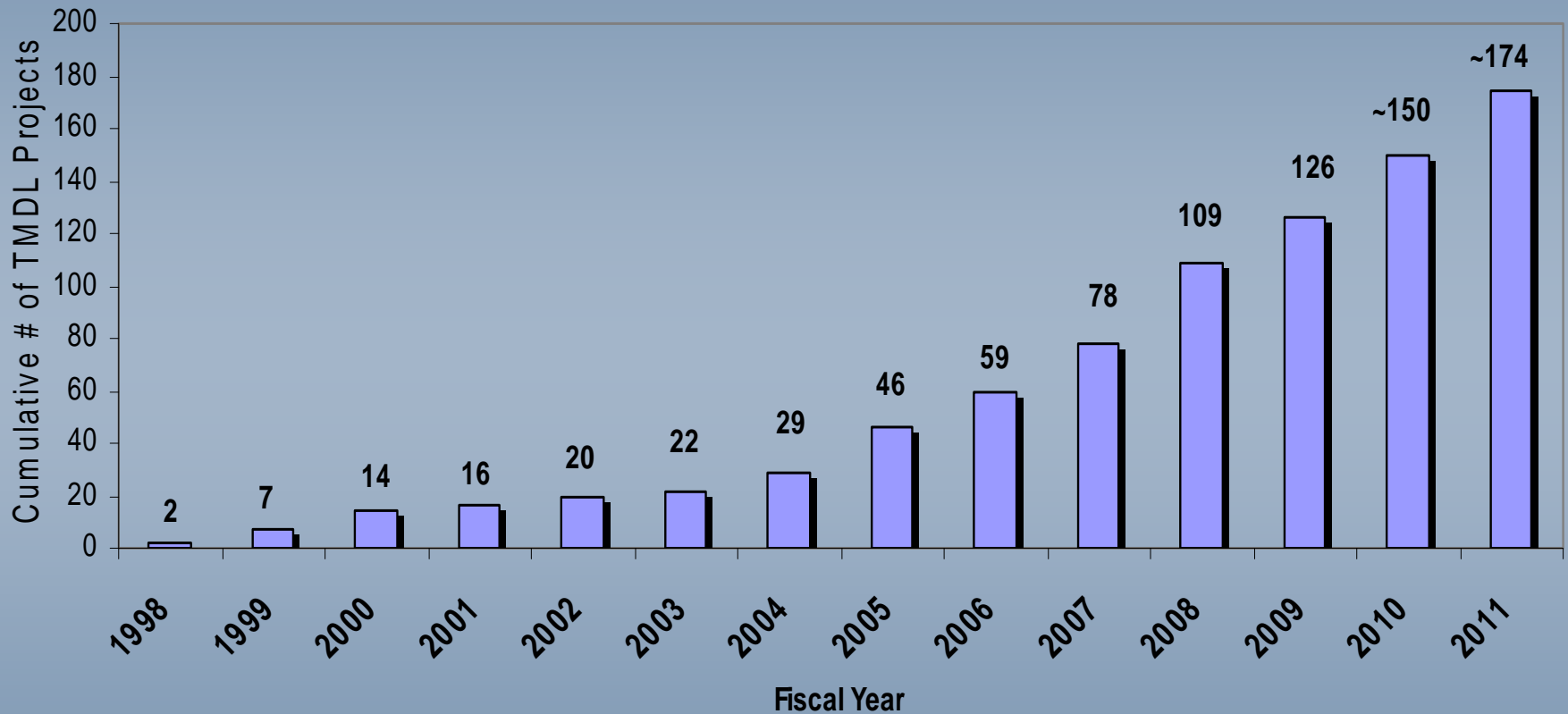
# Approved TMDL Studies

17 studies

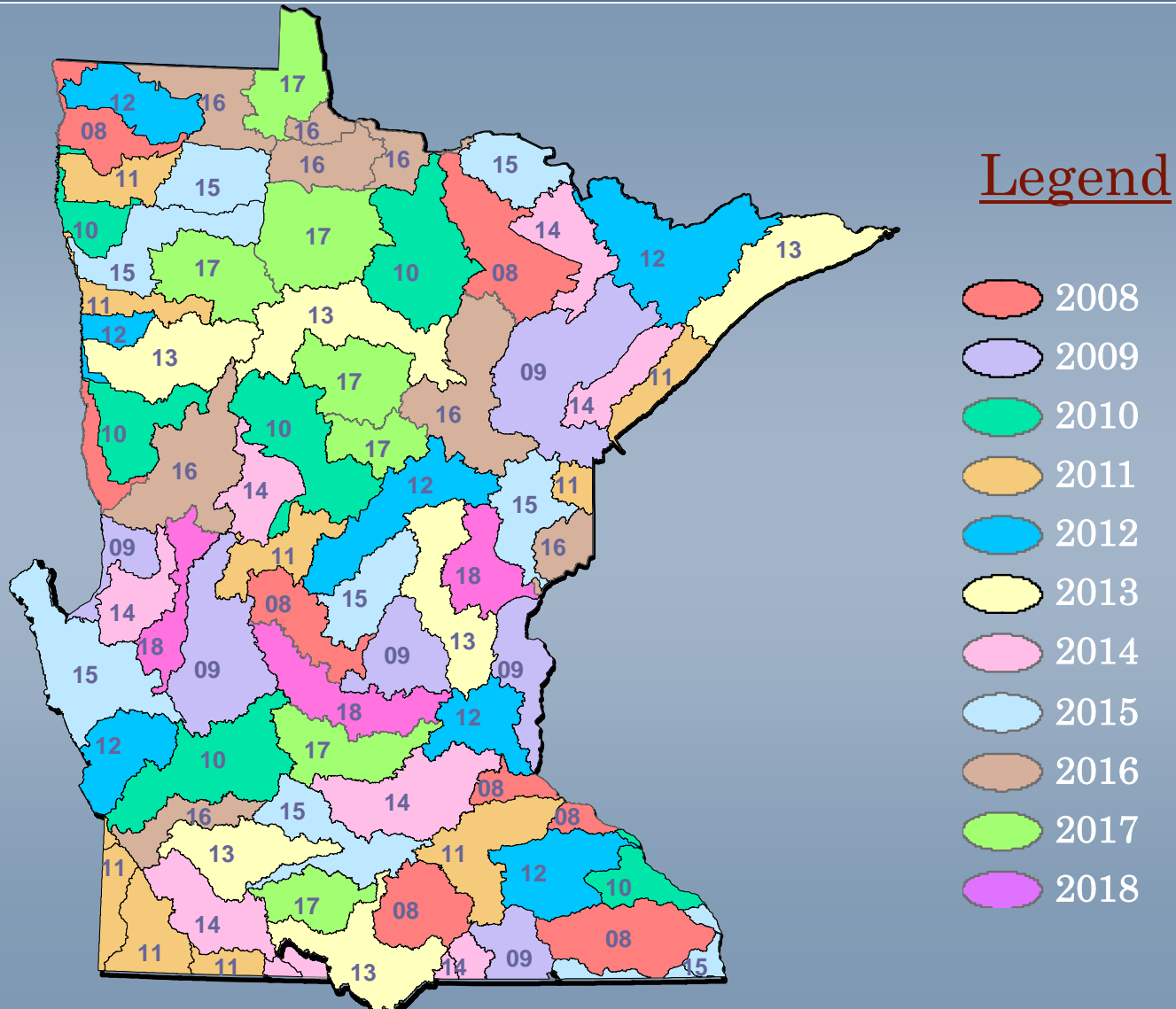
105 impairment listings

313 potential point source projects

# TMDL Studies Ramp-Up Due to CWLA Funding



# 10 Year Cycle Through the 81 Majors Watersheds





# Challenges For the Future

- Long-term stable funding source for Clean Water Legacy
  - CWL Act set broad framework but provided only short-term funding
    - Could not achieve consensus on funding mechanism
- Proposed constitutional amendment on ballot in November to raise sales tax 0.38%
  - Would generate approximately \$100 million/yr for clean water activities



# Questions?

# Thank You!

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