Minnesota Lake Superior Watershed

Stream Science Symposium

John Linc Stine
Commissioner

Our Mission:
Protect and improve the environment and enhance human health

MPCA's organization

- We are 900+ employees
- Average age = 47 years
- 53% are males; 47% are females
- We are 70% scientists: Biologists, Chemists, Engineers, Hydrologists, Pollution Control Specialists, Soil Scientists
- We have offices in Detroit Lakes, Duluth, Mankato, Marshall, Rochester, St. Paul & Willmar

Our strategic plan

The **vision** and **goals** that underlie the work of our agency | **2013–2017 five-year plan**

Minnesota Pollution Control Agency

Mission Our mission is to protect and improve the environment and enhance human health.

Water

Vision: Minnesota's clean water supports aquatic ecosystems, healthy communities and a strong economy

Goal
Lake, stream, wetland, and groundwater conditions are evaluated and communicated.

- Monitor conditions of surface and groundwater and analyze data in a timely manner.
- Develop monitoring reports and provide information for decision-making.
- Communicate monitoring and assessment results.

Goal
Pollution from all Minnesota sources is reduced or prevented.

- Regulate point source discharges to protect uses and maintain consistency with major watershed strategies.
- Manage non-point source discharges to protect uses and maintain consistency with major watershed strategies.

Goal
Surface and groundwater management system is streamlined and effective.

- Continue to build a synchronized approach to water management across state agencies.
- Support local government capacity and capability to implement their role in the water management system.

Air

Vision: Minnesota's clean and clear air supports healthy communities and a strong economy

Goal
Minnesota's outdoor air is healthy for all to breathe.

- Ensure ambient air is better than air quality standards and health benchmarks, particularly for pollutants that represent key air quality indicators.
- Ensure emissions from non-point and non-permitted point sources do not create unacceptable exposures.

Goal
Minnesota reduces its contribution to regional, national and global air pollution.

- Reduce Minnesota's contribution to global mercury levels by meeting the TMDL air emission target.
- Reduce Minnesota's contribution to global GHG concentrations by meeting the GHG reduction goals in the Next Generation Energy Act of 2007.
- Reduce Minnesota's contribution to regional haze.

Land / waste

Vision: Minnesota's land supports healthy ecosystems and sustainable land uses

Goal
Solid waste is managed to conserve materials, resources and energy.

- Ensure waste is reduced, recycling and organic recovery is increased, resource recovery capacity is maintained, and landfilling is reduced.

Goal
Land is managed to prevent, minimize, or reduce the release of contaminants.

- Regulate aboveground and underground storage tank systems and solid and hazardous waste management facilities to ensure all federal program commitments are met.

Goal
Contaminated sites are managed to reduce risks to human health and the environment and allow continued use or reuse.

- Manage risks at remediation sites.
- Prepare sites for continued use or re-use.
- Address sites in a timely and efficient manner.
- Maintain agency preparedness procedures to ensure that environmental and health risks are mitigated in major incidents and disasters; acute risks are managed within hours or days.

Water quality in Minnesota

- Legislation
- Benchmarks
- Status and progress

Legislation

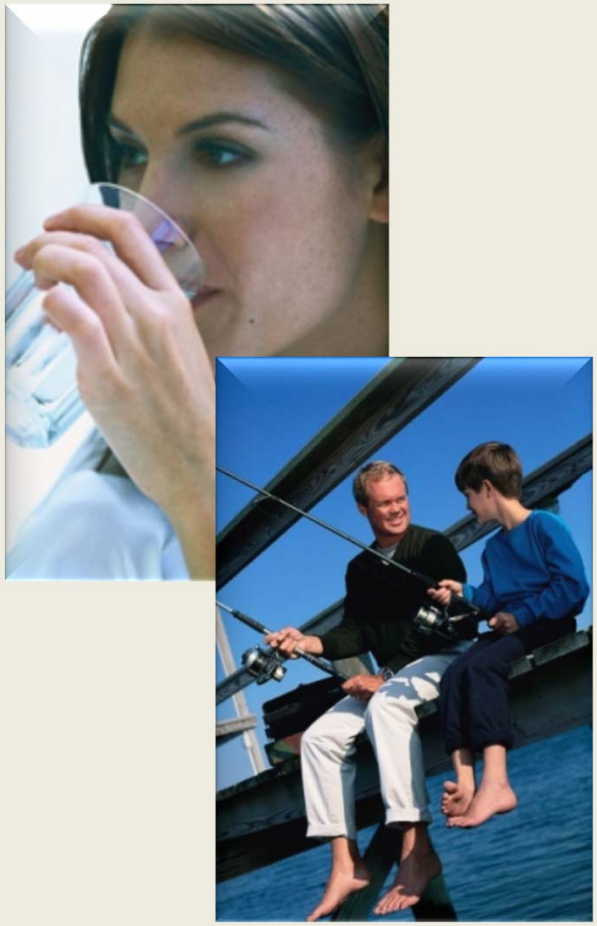
- Clean Water Act
- Clean Water Legacy Act
- Clean Water Land and Legacy Amendment
  - Established Clean Water Fund
  - Enables science

Benchmarks

1. **Beneficial use classifications** for waterbodies
2. **Numeric and narrative criteria** that protect those beneficial uses
3. **Nondegradation requirements** to provide extra protection to high quality waters

Benchmarks: beneficial uses

- Designated and existing uses
- Multiple classes of use



Benchmarks: water quality standards

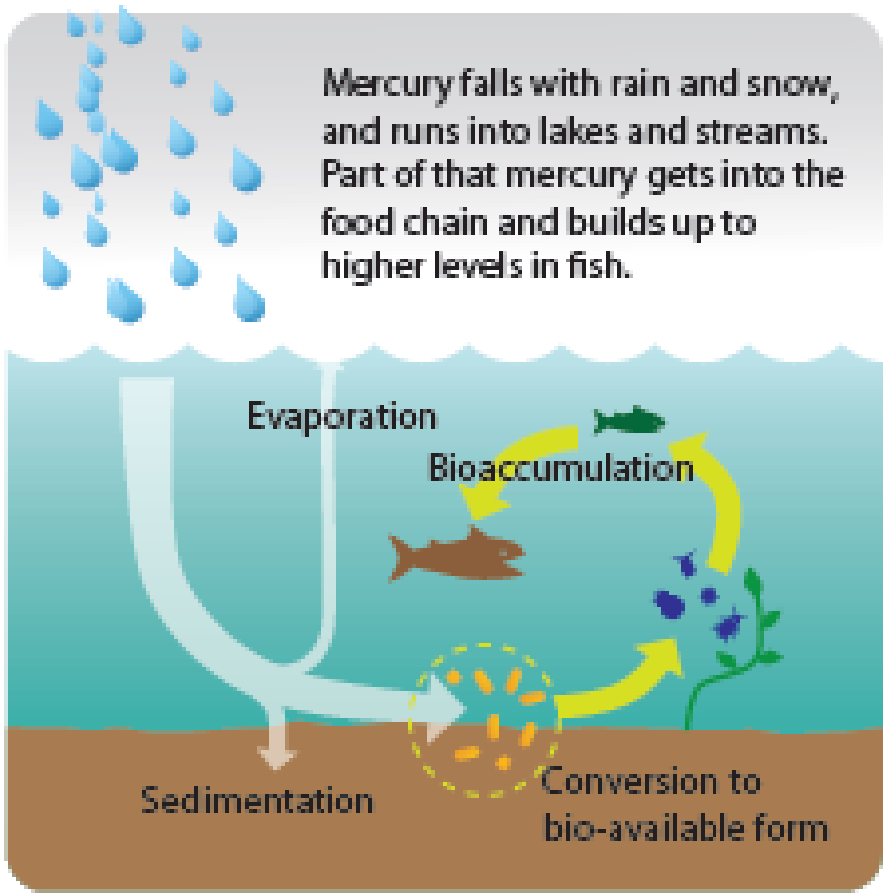
- Numeric translation of beneficial uses
- Address three key questions
  - Who are we protecting?
  - What conditions are protective?
  - How do we maintain high quality?

Benchmarks

- Wild rice sulfate standard
  - Standard adopted 1973
  - Further study underway
  - Potential for change to standard based on updated science

Benchmarks

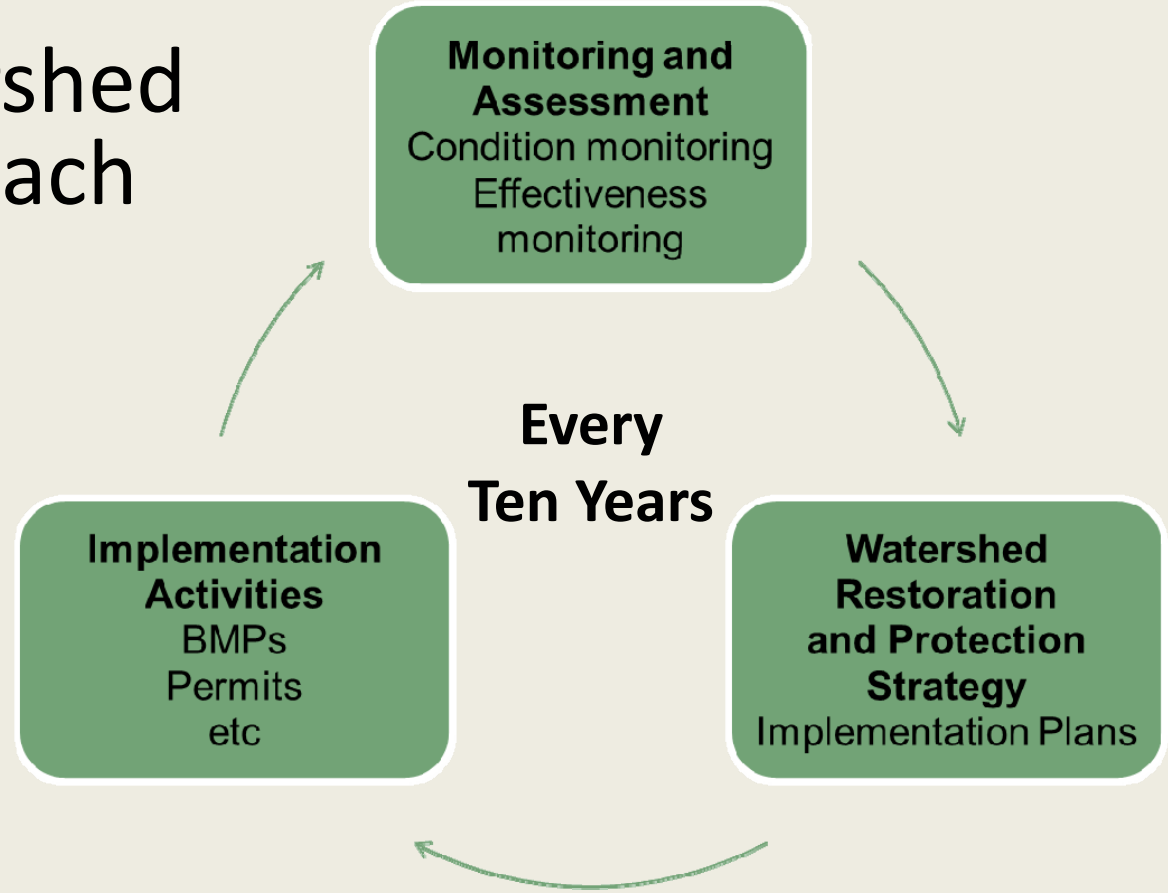
- Mercury and human health
  - Minnesota first state to address this
  - Additional study needed

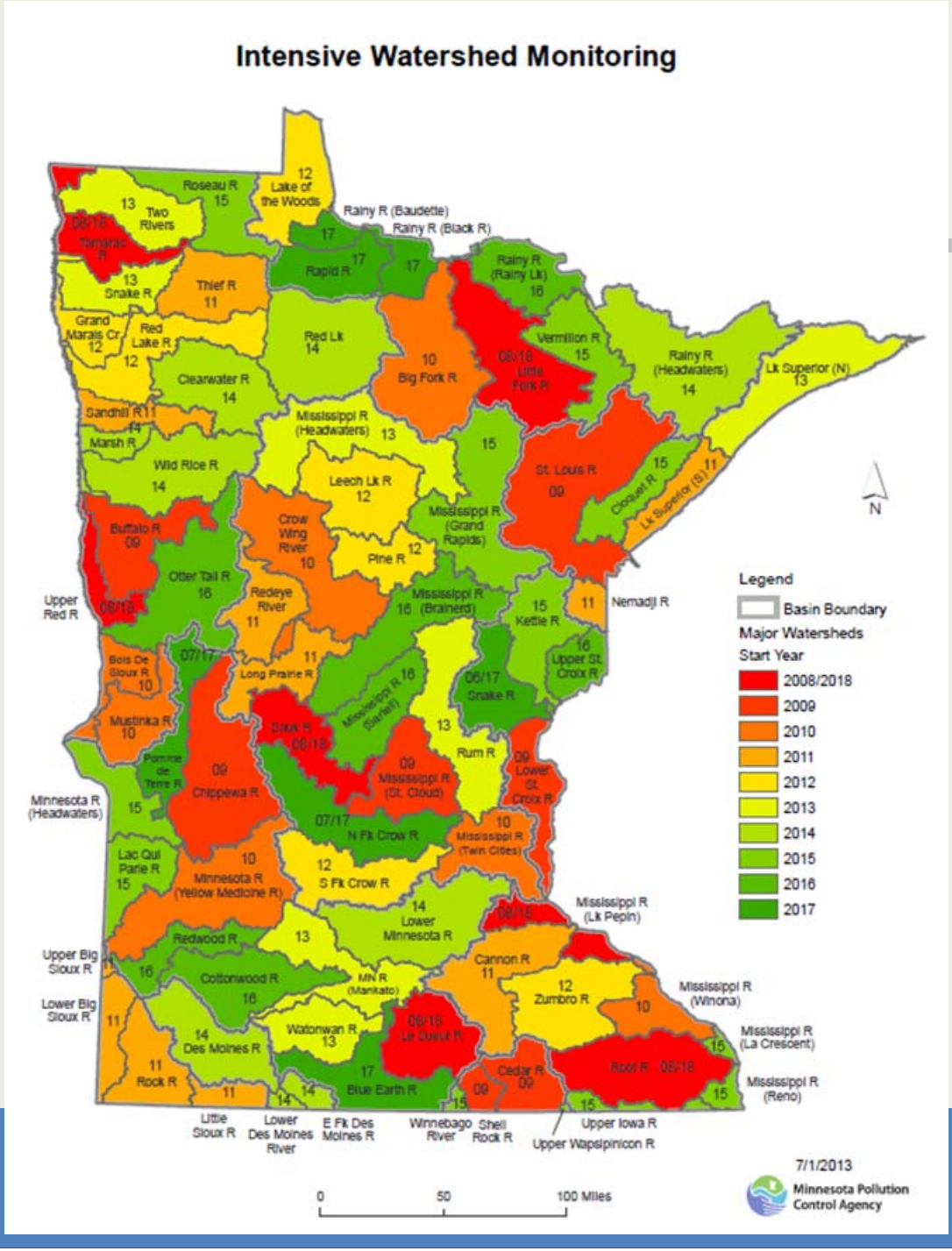


Mercury cycling is complex. Bioaccumulation appears to happen more efficiently in certain lakes and rivers, including the St. Louis River and Red River of the North.

Status and progress

Watershed Approach

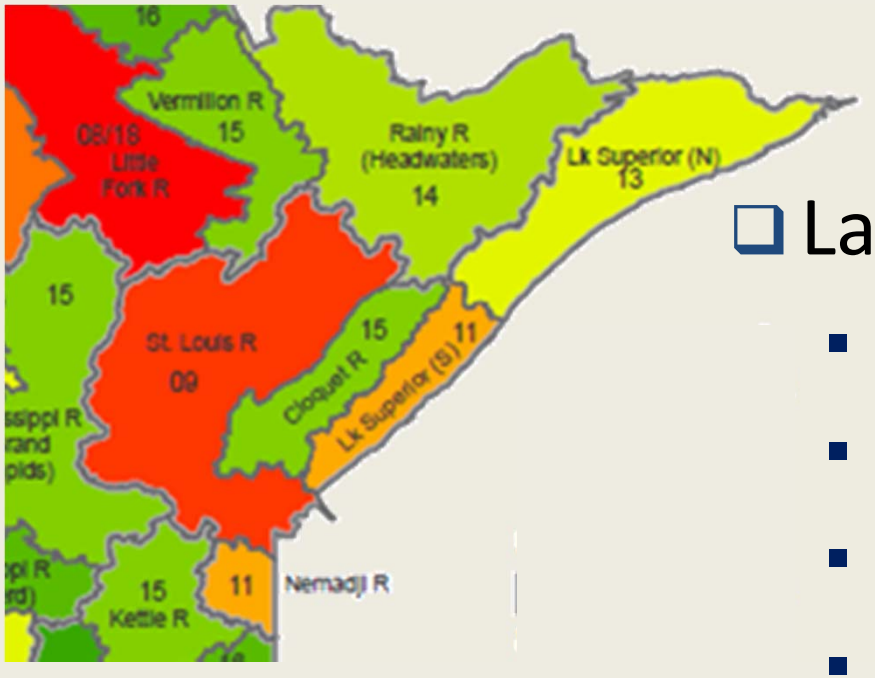




Status and progress

- 42 of 81 watersheds have been intensively monitored (52%)
- On track to complete state in ten years

Status and progress



- Lake Superior Basin
  - Nemadji
  - Lake Superior North
  - Lake Superior South
  - Cloquet
  - St. Louis River

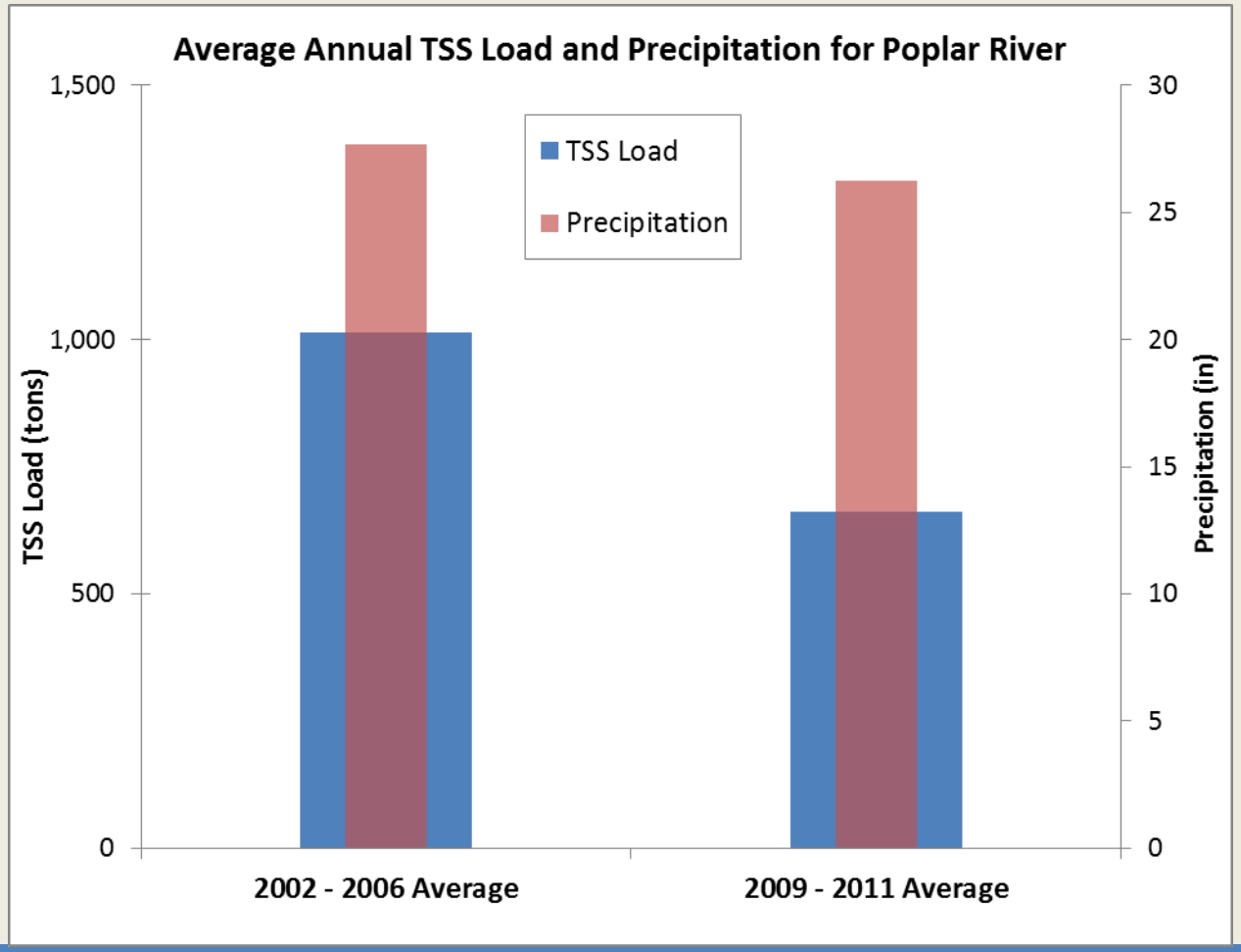
Status and progress

Poplar River Watershed

Part of Lake Superior (N) Watershed

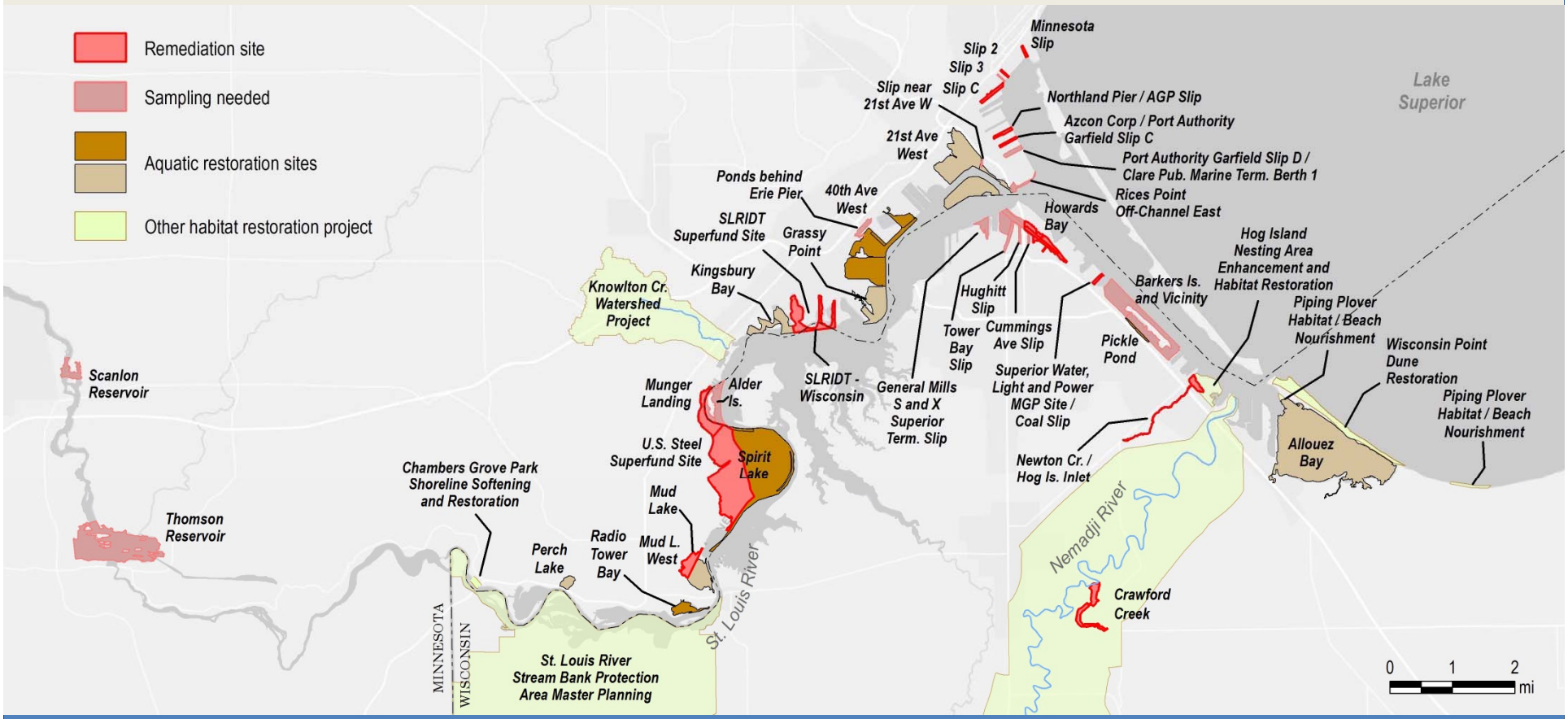
Status and progress

Poplar River Watershed



Status and progress

St. Louis River Area of Concern



Status and progress: St. Louis River AOC

- Leveraging state dollars (FY 2010-2014)
  - Minnesota Legacy funds

• Clean Water Fund	$3,945,020
• Outdoor Heritage Fund	$3,460,000
	$7,405,020

  - Federal funds

• US EPA	$8,733,338
• US ACE	$5,732,100
• NOAA	$4,129,000
• US FWS	$1,100,000
• NFWF	$ 559,504
	$20,293,942

Conclusions

- Watershed science: we are seeing change as a result of this work
- The state of Minnesota has received national recognition for our commitment to water quality protection and restoration

Closing thoughts

- Significant contributions of pollutants to Minnesota's air, land and water originate outside the state
- However, it is incumbent upon us to do our part to reduce local contributions
- To understand the value of our actions, we need ongoing scientific monitoring & research

Things I used to know…