

# Mercury TMDL Stakeholder Process

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Developing  
Recommendations for the  
State's Implementation Plan

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Kabby Jones

Minnesota Environmental Initiative

# Overview

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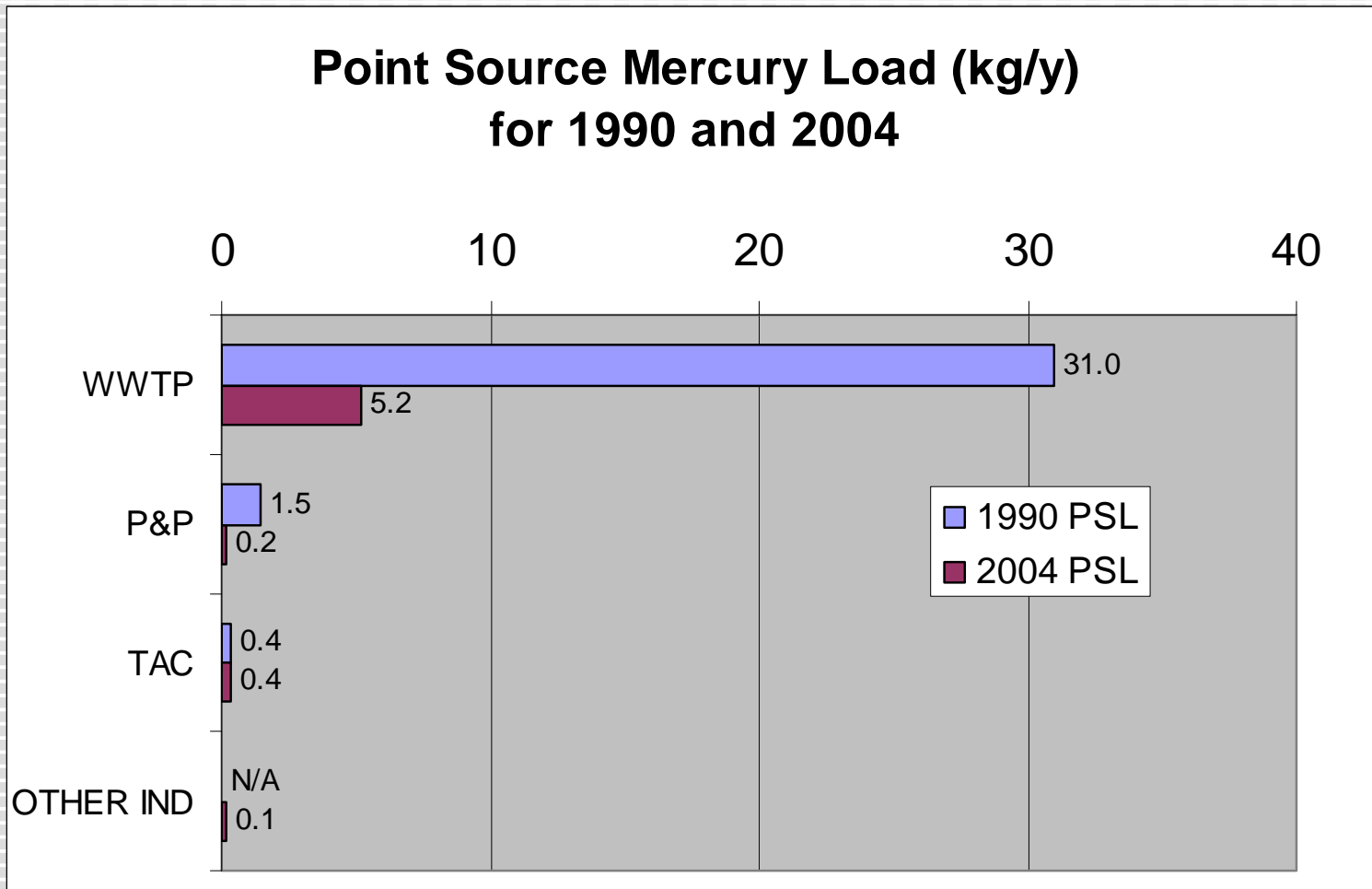
- Review of Mercury TMDL Goals
- Overview of Stakeholder Process
- Update on Progress

# Minnesota's Mercury TMDL

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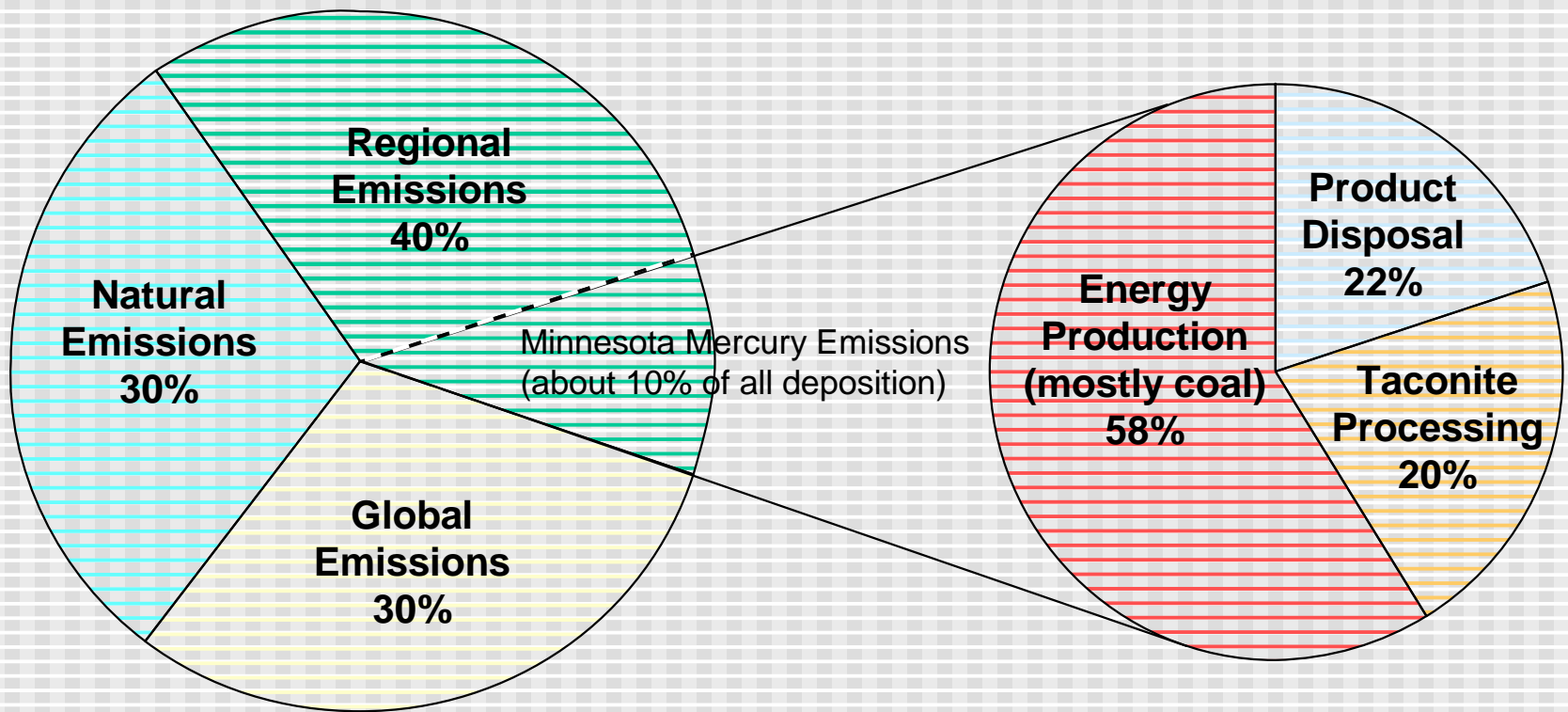
- Minnesota's Mercury TMDL approved March 2007
- Statewide\*
- Water Point Source Discharge Cap 24.2 lb
  - Discharges in 1990: 72 lb
  - Current discharges: 15.2 lb
- Air Emissions Target 789 lb/yr
  - 93% reduction from 1990 levels
  - 67% reduction from 2005 levels (3328 lbs)

# Water Point Source Discharges



Source: Mn Pollution Control Agency

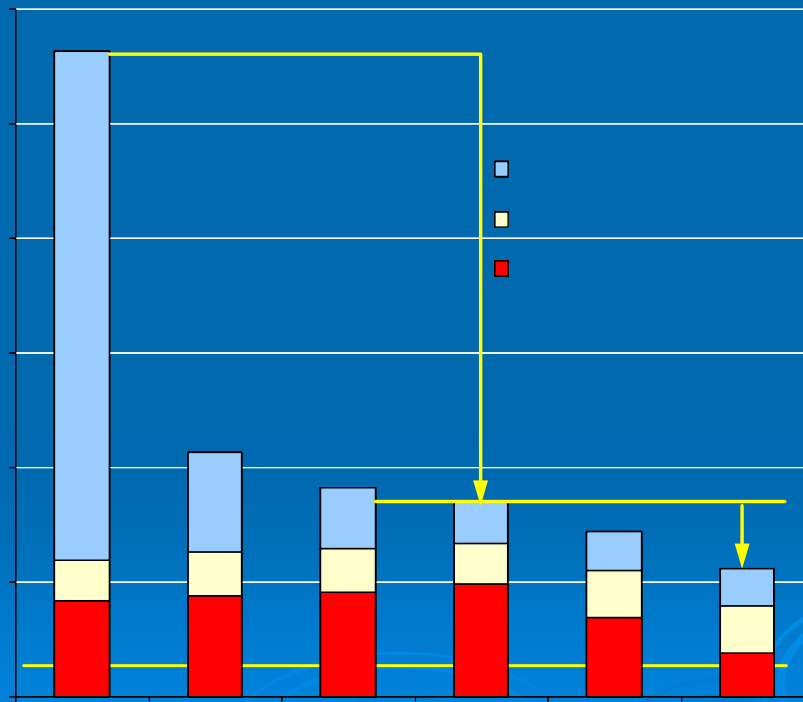
# Atmospheric Deposition - 2005



Source: Mn Pollution Control Agency

# Air Emissions 1990-2015

## Estimated annual mercury emissions in Minnesota: 1990-2015



# Stakeholder Process

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- State needs implementation plan to reach TMDL goals
- MEI designs, manages and facilitates stakeholder process to develop recommendations for implementation plan
- Designed as 1-year process (conclude in May '08)
- Open, transparent, balanced representation
- Develop strategies and timelines to meet air and water goals
- Include strategies for new sources

# Stakeholder Process

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- Stakeholder Groups
  - Strategy Work Group
    - 17 members
    - Meets Monthly (June '07 - April '08)
    - Various Sectors & Interests
      - Taconite
      - Electric Power
      - Wastewater Treatment
      - Environmental Advocacy
      - Tribes
      - State Agencies
      - Environmental Justice
      - Recreational Fishing

# Stakeholder Process

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- Stakeholder Groups
  - Partners Group
    - Over 75 organizations invited
    - Two meetings during process
    - Provides input and feedback
  - Technical Advisory Group
    - Scientists, Technical Experts
    - Advise on questions of science, fact, technology
    - Accepts tasks from Strategy Work Group

# Stakeholder Tasks

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- Water Point Sources
  - Recommended strategies and guidelines for water point source discharges to ensure that total statewide mercury discharges remain below 24.2 lb. (11kg).
    - Discharges in 1990: 72 lb
    - Current discharges: 15.2 lb

# Stakeholder Tasks

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## ■ Water Point Sources

### ■ Plan should include:

- How to address existing sources as well as new and expanding sources (a permitting strategy/guideline)
- How to allocate future reserve capacity of 8.8 lb (4 kg) among municipal and industrial sectors
- Mercury minimization plan guidance for municipal wastewater treatment plants
- How to account for chemicals or conditions that impact methylation including sulfate discharges to mercury-impaired waters

# Stakeholder Tasks

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## ■ Air Emissions

- Recommend strategies and timeframes for meeting the TMDL air emission goal of 789 lb annual emissions from Minnesota sources, including:
  - Establish air emission sector reduction targets for emissions from energy, taconite and product-related sectors.
  - Develop sector-specific strategies to meet the overall and sector goals.

# Stakeholder Tasks

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## ■ Air Emissions

- Develop interim and final timeframes for the sector and overall goals.
- Determine how to accommodate potential new sources of air emissions. (inform development of guidelines/rules that will closely follow this process)

# Stakeholder Process

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- Knowledge Building
  - Review of emissions inventory
  - Presentations from sector representatives
- Development of Strategies to Meet Goals
  - Variety of proposals introduced by Strategy Work Group, MPCA and others
  - Technical aspects evaluated
  - SWG considers, selects
  - Partners Group provides input/feedback

# Stakeholder Process

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- Strategy Development
  - Sector-by-Sector approach
  - Criteria for strategy evaluation (Air)
    - Reaching goal of 789 lbs
    - Identify implementation issues and barriers
    - Consider costs
    - Determine timeframe for achieving reductions
  - Strategy selection
    - Politically, socially acceptable, economically feasible
    - Consensus = can live with it (not voting process)

# Findings

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- Work to be done in all sectors/emission categories
- No source is insignificant
- Identify research needs & opportunities
- Identify implementation barriers

# Progress Update

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- Water Discharge Strategy - accepted
- Improvements/Refinements in Air Source Inventory
- Significant Progress in all Sectors
- Need to address new and expanding sources

# Proposed Strategies

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- Water Point Source Discharges
  - Distribution of Unallocated Load
    - First-come, first-served, if meet planning, monitoring and discharge criteria
    - Allocations made through MPCA permitting
    - When reserve used, new loads must be offset
      - Adequate reserve exists for projected future loads

# Proposed Strategies

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## ■ Air Emissions

### ■ Electric Power Generation

- Require controls at major facilities (not already covered by other initiatives)
- Assess effectiveness of MCCAG recommendations re: energy efficiency and renewables, CIP. Extend goals if necessary.

# Proposed Strategies

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- Air Emissions

- Taconite Processing

- Outline and follow research plan to determine appropriate technology
    - Require percentage reductions by target dates

# Proposed Strategies

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## ■ Air Emissions

### ■ Industrial Boilers and Wood Combustion

- Assess anticipated Federal MACT standard for industrial boilers
- Require further controls if not acceptable Hg control

### ■ Metal Smelting

- Increase removal of mercury in scrap metal sources
- Require controls at facilities to achieve percentage reductions

# Proposed Strategies

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## ■ Air Emissions

### ■ Cremation

- Study options for abatement and/or controls
- Require percentage reduction by target date

### ■ Dental Preparations

- Continue prevention and education efforts
- Address insurance bias against non-mercury fillings
- Study technologies to control emissions from clinics

# Proposed Strategies

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## ■ Air Emissions

### ■ Products

- Education on mercury in products
- Improve opportunities for collection and processing
  - Product stewardship
  - Recycling
  - Outreach with specific industry sectors
  - Increase compliance with existing laws
- Lamp Recycling
  - Improve practices
  - Require controls on facilities

# New and Expanding Sources

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- Challenging Topic
- Options Include:
  - Create reserve capacity (below 789)
  - Require/allow in-state offsets
  - Require/allow out-of-state offsets
  - Pursue cap and trade

# For More Information

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- Track Progress at:

[www.mn-ei.org](http://www.mn-ei.org)

- Email Distribution List

- Contact Info:

Kabby Jones

Minnesota Environmental Initiative

612-334-3388, x109

[kjones@mn-ei.org](mailto:kjones@mn-ei.org)