Mercury Reduction in the Northeast: Successes and Challenges

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Framework for Regional Mercury Reduction

- Three Regional Interstate Organizations
  - NEIWPCC – Water
  - NESCAUM – Air
  - NEWMOA - Waste
- New York State DEC Mercury Work Group
- New Jersey Mercury Task Force and Reduction Action Plan
- State Strategies and Plans
NEG-ECP Mercury Action Plan

- Adopted in June 1998
- Ultimate goal: virtual elimination of anthropogenic mercury emissions and discharges
- Interim goals:
  - 50% Reduction by 2003
  - 75% Reduction by 2010
- Broad political support in both U.S. and Canada
- Informed by state and regional mercury assessments
- Implemented by regional Task Force
Action Plan Principles

- Scientifically-informed precautionary principle
- Comprehensive solutions
- Cooperation and collaboration
- Importance of State/EPA leadership in addressing global sources
Pollution Prevention

• Action Plan Objectives
  • Reduce/eliminate non-essential uses
  • Segregate, collect, and recycle discarded products

• Accomplishments
  • Comprehensive mercury products legislation:
  • Recycling and collection of more than 10,000 lbs in region
Emissions Reductions

- Goals under MAP:
  - Maximum feasible reductions
  - Specific emission limits included
- Tracking and monitoring by jurisdictions
Reductions by Source

- Municipal waste combustors
  - States have limit 3 times more stringent than EPA; resulted in more than 85% reduction in emissions
- Medical waste incinerators
  - States agreed to limit 10 times more stringent than EPA; resulted in more than 95% reduction in emissions
Reductions by Source

- **Dental Sector**
  - All Northeast state require amalgam separator wastewater pollution controls
    - Legislation or regulations (under state CWA)
  - Reduce SSI emissions, releases from sludge reuse and wastewater discharge
Reduction by Source

- **Utilities**
  - MAP Objective: maximum feasible reductions
  - All Northeast states with coal-fired power plants have stringent limits
  - Adopted rules requiring 80-95% at coal plants by 2015 or earlier
Monitoring and Research

- Tracking and assessing trends
  - Emissions
  - Deposition
  - Fish
- Improving source estimates
  - Home heating and residual oil
Summary of Progress to Date

- Mercury emissions decreased significantly across region
  - >60% in NE states by 2003
  - >80% estimated now
  - Inventory being updated in 2010-2011

- Product bans and collection efforts are yielding results
  - IMERC data trending strongly downward
Modeled Decreases in Modeled Deposition – Particularly in “Hotspots”

Pre-Action Plan ($\mu g/m^2$)  

Post-Action Plan ($\mu g/m^2$)
Mercury Levels in Biota Improving
Ongoing Regional Priorities

- Continue to implement strategies to achieve 2010 goal
- Continue strategic monitoring to assess progress
- Assist/inform national and international efforts
Challenges

- Mercury still high!
- Out-of-region and global sources
- Funding and resource limitations
- New mercury –added products and legacy products
For More Information

- NEG-ECP Mercury Action Plan
- NYS DEC Mercury Work Group
- NJ Mercury Task Force
Contact Information

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- **NJ Mercury Task Force**
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Mercury Levels in Biota Improving

- Mercury levels in NH loon and MA fish down

Percent Change in Mercury Concentrations in MA Fish Post Emission Reductions (1999 - 2008)

- Yellow perch
- Largemouth bass

*# of statistically significant declines/ number of lakes sampled.