The Northeast Regional Mercury TMDL and the 319(g) Mercury Petition

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Who is NEIWPCC?

- New England Interstate Water Pollution Control Commission
- Compact Member States: New England States and New York
- Congressionally Authorized Interstate Commission formed in 1947
- Serve and assist our member states on water quality issues
- Coordinate with sister interstate agencies in the Northeast
Why is mercury a concern in the Northeast?

- Risks to human health
- Statewide or regional fish consumption advisories in all states
- Over 10,000 impaired lakes, ponds, and reservoirs
- Over 46,000 impaired river miles
What have we done to address it?

- All states implementing stringent mercury reduction programs
- Northeast Regional Mercury TMDL
  - Submitted to EPA in October 2007, approved by EPA in December 2007
- Northeast States Clean Water Act Section 319(g) Petition for Mercury
  - Submitted to EPA in October 2008
Why a regional TMDL?

- Atmospheric deposition of mercury and fish advisories are problems common to all states in the region.
- All states impacted by out-of-region sources.
- Less resource-intensive.
- Existing framework for regional collaboration.
Contributions of In-Region and Out-of-Region Sources to In-Region Deposition

1998:
- Out-of-Region: 57%
- In-Region: 43%

2002:
- Out-of-Region: 81%
- In-Region: 19%

Source: NESCAUM, based on REMSAD model, 1998-2002
General Approach

Based on MN Statewide Mercury TMDL

Assumes proportional relationship between reductions in mercury emissions, deposition, and fish tissue concentrations

Accounts for deposition due to natural sources
TMDL Baseline

- Baseline year 1998
- Baseline fish concentration 1.14 ppm for smallmouth bass
- Initial target fish concentration 0.3 ppm
Current Fish Tissue Levels 1.14 ppm

74% reduction

Target Fish Tissue Level 0.3 ppm
In-Region Sources
2,092 kg/yr

Anthropogenic Sources
4,879 kg/yr

Out-of-Region Sources
2,787 kg/yr

Deposition of Mercury
141 kg/yr

Natural Sources
1,626 kg/yr

6,647 kg/yr
Total Source Load
6,647 kg/yr

Loading Goal
1,749 kg/yr

Wasteload Allocation
37 kg/yr

1,712 kg/yr

Atmospheric Deposition Goal

Discount Natural Sources
1,626 kg/yr

74% Reduction

Represents 98% Reduction
Adaptive Implementation

- Three-phase plan: goals and dates match regional mercury action plan
- All Northeast states will continue with mercury reduction initiatives in place
- Re-evaluate fish tissue, emissions, and deposition data after completion of Phase II in 2010
- Reconsider end goal and timeline
Necessary In-Region Mercury Reductions

- Baseline 1998: 2,092 kg
- Phase I Target 2003: 1,046 kg
  - 50% Reduction: 1,046 kg
- Phase I Actual 2003: 543 kg
  - 73% Reduction: 543 kg
- Phase II Target 2010: 523 kg
  - 75% Reduction: 523 kg
- Phase III Target: 37 kg
  - 98% Reduction: 37 kg
Necessary Out-of-Region Mercury Reductions

- Baseline 1998: 2,787 kg
- Phase I Target 2003: 1,394 kg (50% Reduction)
- Phase II Target 2010: 697 kg (75% Reduction)
- Phase III Target: 49 kg (98% Reduction)
Where are we now?

- States are continuing ongoing mercury reduction activities
- Re-evaluation of the TMDL is now underway
  - Updating emissions and deposition data
  - Regional fish tissue monitoring project
- Using the CWA §319(g) Conference to work with the states and EPA on national initiatives
CWA § 319(g)(1)  
33 U.S.C. § 1329(g)(1)

“If any portion of the navigable waters in any State which is implementing a management program approved under this section is not meeting applicable water quality standards or the goals and requirements of this chapter as a result, in whole or in part, of pollution from nonpoint sources in another State, such State may petition the Administrator to convene, and the Administrator shall convene, a management conference of all States which contribute significant pollution resulting from nonpoint sources to such portion.”
319(g) Process

Step 1 - State or States with approved nonpoint source management plans determine that waters are being impaired in-part due to nonpoint source pollution from another state.

Step 2 – State(s) file a petition with the EPA Administrator.

Step 3 – EPA Administrator shall convene a management conference, the purpose of which is to develop an agreement for reductions to be made by those states contributing pollution.
NESCAUM Source Apportionment Study

Based on atmospheric deposition modeling undertaken by EPA HQ Contractor

Estimated the amount of mercury deposited in Northeast states from each of the lower 48 states

Allowed us to determine the states that are the most significant contributors to mercury deposition in the Northeast states
Petition Supports the Need and Purpose for the Conference

- State NPS Programs Approved
- Reviewed Approved TMDL – Documentation of Impairments
- Identified Contributing States
What Do We Want?

- Fish that are safe to eat
- Implementation of the TMDL
- Strong federal leadership on mercury issues
What Do We want?

💧 State mercury assessments and action plans

💧 Development and implementation of national mercury reduction plan
Next Steps

- Come to agreement with EPA and contributing states
- Implement mercury reductions
- Identify process and timeline for EPA and states to work on next steps
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