



Hg TMDL for South River

Presented by Jutta Schneider, VADEQ

To the South River Science Team

November 9, 2004

Harrisonburg, VA



Overview

- ∩ Problem
- ∩ Recent Developments
- ∩ Current Status
- ∩ Proposed Approach
- ∩ Involvement of Science Team
- ∩ Comments/Discussion



Problem

- ∞ South River listed on 1998 303(d) list due to fish consumption advisory for mercury
- ∞ Most recent 303(d) list shows impaired segment from DuPont foot bridge to Warrenton Power Dam (128.82 miles)
- ∞ TMDL is due no later than May 1, 2010 as specified in Federal Court Consent Decree



Recent Developments

- Ω **USGS proposal to develop mercury TMDL**
- Ω **Conference call with DuPont and subsequent comment letter**
 - **TMDL alternatives**
 - **Involvement of Science Team**
- Ω **Meeting with EPA to discuss proposal and DuPont ideas on TMDL alternatives**



Current Status

- ∞ **Insufficient controls to allow category 4B listing (impaired but TMDL not needed because existing programs are expected to remove impairment)**
- ∞ **Insufficient remediation in place to support UAA**



Current Status

- ∞ TMDL study can result in outcomes other than TMDL
- ∞ TMDL process incorporates concept of staged implementation/adaptive management
- ∞ TMDL study should begin now to allow time for adjustments



Proposed Approach

∞ Focus on South River as area of greatest concern (fish tissue, sediment and water column all indicate greatest mercury concentrations)

- If tributary data support, addressing elevated mercury in the South River will also result in attainment in downstream sections of Shenandoah
- Need to evaluate/address air deposition



Proposed Approach

∞ Focus on methylmercury

- Collect data needed to understand methylmercury cycling/flux/production in the South River basin
- TMDL endpoint may be MeHg, total Hg or, if investigation demonstrates, TMDL may focus on surrogate parameters to control methylation
- Fish tissue criteria will drive allowable load in stream



Proposed Approach

- ∞ Carefully review existing data for potential input to conceptual model
- ∞ Establish stream monitoring stations and sediment core locations (MeHg production)
- ∞ Collect data (2 years)
- ∞ Build conceptual model
- ∞ Build numerical model
- ∞ Complete TMDL analysis



Involvement of Science Team

- ? **Data source**
- ? **Selection of monitoring sites**
- ? **Support/supplement data collection effort**
- ? **Support/review source identification**
- ? **Development of conceptual model**
- ? **Review/input of numerical model**
- ? **Coordinate public participation effort**



Involvement of Science Team

- ? **Standing advisory committee for TMDL development**
 - ? **Meet on same schedule as entire Science Team**
 - ? **Periodically present progress to entire Science Team**
 - ? **Proposed membership**



Comments/Discussion



Next Steps

- ⌚ Set up advisory committee - today?
- ⌚ Finalize contract - by end of year
- ⌚ Plan TMDL public meeting - by early 2005