REDUCING PCB LOADINGS TO THE DELAWARE ESTUARY:

A Staged Approach to Establishing TMDLs

- DRBC
- USEPA
  - Regions II and III
- DNREC
- NJDEP
- PADEP

Staged PCB TMDLs for the Delaware Estuary

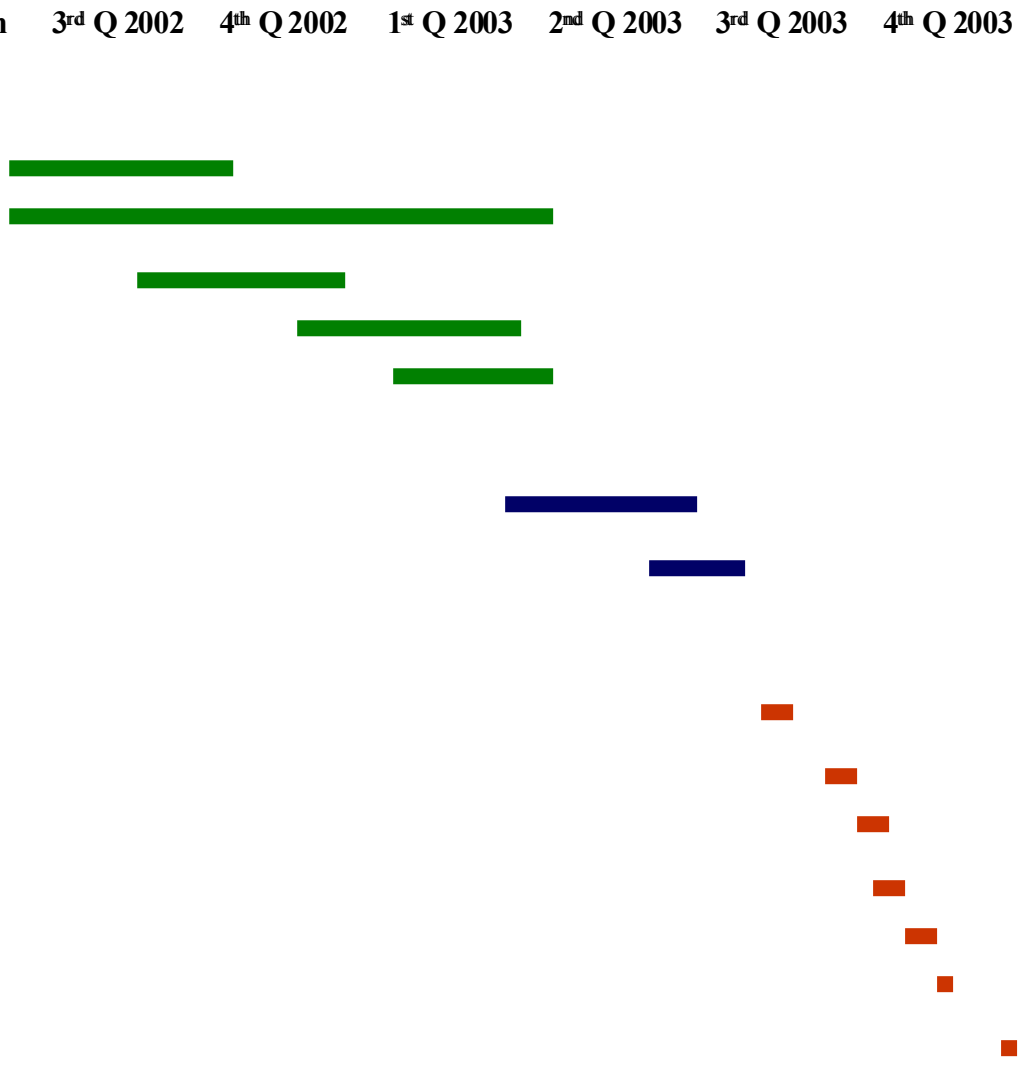
- Overall Plan
- Stage 1 TMDL Development Schedule
- The Staged TMDL Approach and NPDES Permitting
- Identification of Significant Point Sources
- Identification of Actions to Reduce Non-point Sources

Overall Plan

- Meet December TMDL deadline.
- Refine the model in 2 stages.
- Assess all sources.
- Begin to reduce loadings now.
  - Stage I will include WLAs and define permit implications.
  - Accelerated implementation of voluntary efforts.

Delaware Estuary PCB Stage 1 TMDL Schedule

Activity	Completion Date
PCB Model	
Hydrodynamic Model	Nov 30, 2002
Water Quality Model	Mar 31, 2003
Chloride Model	Dec 31, 2002
Sorbent Model	Mar 31, 2003
Penta-PCB Model	Apr 15, 2003
TMDL Development	
Model Runs	Jun 30, 2003
Report Preparation (includes elements of approval package and draft individual WLAs)	Jul 25, 2003
Public Participation of TMDLs	
Notice public hearings	Aug 1, 2003
Conduct public hearings	Sep 15, 2003
Prepare response document	Oct 17, 2003
Establish proposed action	Oct 24, 2003
Prepare TMDL approval package	Nov 7, 2003
Transmit proposed action to EPA	Nov 21, 2003
EPA Regions II and III approve TMDLs for the Delaware Estuary	Dec 15, 2003



The Staged TMDL Approach and NPDES Permitting

Overview

- TMDLs will meet all regulatory requirements, including individual WLAs.
- Stage I TMDL will require NPDES permits to include WQ-based limits which require pollutant minimization plans for significant dischargers.
- Joint public hearings
- DRBC will take the lead in preparing responses to public comments.

The Staged TMDL Approach and NPDES Permitting

Stage I Technical Approach

- WLAs will be based on simplified methodologies.
- WLAs will be extrapolated from penta homolog data using the observed ratio in the Estuary of penta to total PCBs.
- In approving this TMDL, EPA will clarify the authority of the states to adjust the individual WLAs as long as the sum of the WLAs in each zone is not exceeded.

The Staged TMDL Approach and NPDES Permitting

NPDES Permits

All permits issued after approval of Stage 1 and prior to approval of Stage 2 will include *non-numeric* WQBELs because:

(1) The BMP approach is the most appropriate way to control PCB discharges as additional info is collected; and

(2) It will not be feasible to precisely calculate the individual WQBELs in Stage 1.

The Staged TMDL Approach and NPDES Permitting

- For potentially significant dischargers, the non-numeric WQBELs will require:
  - *Use of Method 1668A to accurately characterize loadings of PCBs*
  - *Development of a PCB minimization plan*
  - *Implementation of appropriate cost-effective PCB minimization measures*
- For potentially non-significant dischargers
  - *Use of Method 1668A on influent and effluent*

The Staged TMDL Approach

The TMDLs will in all cases be based on the water quality standard in force when the TMDL is approved.

Identification of Significant Point Sources

Defined as*

- The fewest NPDES permittees with continuous discharges that, when combined, contribute the largest loading of pentachlorobiphenyls (penta-PCBs) during either dry or wet weather, and
- NPDES permittees with stormwater discharges that have elevated concentrations of PCBs.

**Please see handout at page 8.*

Identification of Significant Point Sources

1. The identification of significant sources is a dynamic process that depends on the following factors:
   - ✓Quality of available PCB congener data,
   - ✓Effluent flows used for each discharge,
   - ✓Location of a discharge in the estuary, and
   - ✓The proximity and loadings of other sources of PCBs.
2. The list of significant point source dischargers is subject to change both prior to December 2003 and during the development of the Stage 2 TMDLs.

A Strategy for Non-Point Sources

- **Air**

  DRBC will seek funding sources to conduct monitoring to identify local sources and establish sites for long term/regional trend analysis.

- **Tributaries**

  States will use data collected for the TMDL in their 303d listing.

  DRBC will seek funding to continue tributary monitoring to refine the loadings of PCBs.

A Strategy for Non-Point Sources

- **Hazardous Waste Sites**

  EPA will estimate PCB loads for sites that have significant PCB contamination and are in close proximity to the Estuary.

  The States will provide comparable PCB loading information for state lead sites.

  DRBC will coordinate and utilize load estimates as part of the overall PCB TMDL effort.

A Strategy for Non-Point Sources

- **Non-Point Stormwater Runoff**

  DRBC will develop stormwater monitoring plans and seek stable funding for monitoring.

  DRBC,EPA, and the states will work to:

  1. establish BMPs to minimize PCB discharges; and
  2. identify significant local sources.

A Strategy for Non-Point Sources

- **Contaminated Sediments**

  DRBC,EPA, the states and other agencies will work to:

  1. identify PCB hot spots in sediments in the Estuary; and
  2. identify strategies to address sediment contamination.

Reducing PCB Loadings

DRBC will lead the effort to develop an implementation strategy to complement the NPDES permit requirements. The DRBC effort will focus on achieving PCB load reductions as soon as is practicable.

EPA, the states and DRBC hope to forge a long-term watershed partnership with stakeholders to reduce the need for fish consumption advisories and achieve a cleaner, healthier Delaware Estuary.