

# DRAFT – SUBJECT TO REVISION

**Anacostia River TMDL Working Group  
July 29, 2003 Meeting Minutes  
10:00 a.m. – 12:00 noon**

**Government of the District of Columbia  
Department of Health  
Environmental Health Administration  
Bureau of Environmental Quality**

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**Meeting Location:** Metropolitan Washington Council of Governments  
Department of Environmental Programs  
777 North Capitol Street, N.E., Suite 300  
Washington, D.C. 20002-4239

## **Overview:**

Jim Collier (DC-DOH) presented an overview of the cooperative Chesapeake Bay Program effort to upgrade the Potomac River Estuary Model and the Upper Bay Sediment Transport Model. Cherrie Schultz (ICPRB) provided a brief update on the status of small tributary TMDL models that were developed for use by DC-DOH. Jerusalem Bekele (DC-DOH) provided an overview of the District's TMDL development schedule as well as the schedule for updating the District's water quality standards. Under New Issues, Ross Mandel (ICPRB) presented a summary of the Phase II Nontidal Anacostia Model that has been developed for MDE. A copy of the meeting agenda and presentations are attached.

## **Presentations:**

### Potomac River TMDL (Jim Collier, D.C. DOH)

**GOAL:** Provide an overview of the cooperative Chesapeake Bay Program modeling directions and initiatives, especially the effort to upgrade the Potomac River Estuary Model (PREM) and the Upper Bay sediment transport model.

- ❖ Major Areas to be Addressed
  - Shoreline erosion and shallow water processes
  - Living resources
  - Water quality standards attainment
  - Development of Potomac TMDLs
- ❖ Phase 5.0 Watershed Model
  - Phase 5, the latest version of the Chesapeake Bay Program's Watershed Model, is now under development.
  - The model is being developed on a fine scale, consistent with the scale needed for State developed TMDLs.

## DRAFT – SUBJECT TO REVISION

- In this way, watershed load analysis can be consistent between State-led basin and small tributary TMDLs, and the CBPO led overall assessment of Chesapeake Bay water quality.
- Partners in the watershed model effort include:
  - EPA – Chesapeake Bay Program Office (CBPO)
  - United States Geological Survey (USGS)
  - Interstate Commission on the Potomac River Basin (ICPRB)
  - Maryland Department of the Environment (MDE)
  - University of Maryland
  - Virginia Department of Conservation and Recreation (DCR)
- More information is available on the CBPO web site at:  
<http://www.chesapeakebay.net/phase5.htm>
- ❖ Air Quality Models
  - \$60,000 has been allocated by the CBPO to update air quality models.
  - Moving from RADM (Regional Acid Deposition Model) to the next generation air model CMAQ (Community Mesoscale Air Quality Model).
  - Same model used for air quality and water quality purposes allowing potential for improved coordination among air and water programs.
- ❖ Next Efforts – Main Bay
  - Refined resolution of the Upper Bay with the goal of including the fine scale Patuxent, Choptank, Chester, and Patapsco grids if practicable.
  - Refinement of bottom boundary dynamics (1-10cm in vertical).
  - Improved spatial and temporal scale of bank load inputs.
- ❖ Next Efforts – Potomac River
  - Refinement of Potomac grid including the Anacostia.
  - Inclusion of three toxic substances.
  - Simulation of pH-carbonate-phosphorus processes.
  - Refinement of algal speciation, including representation of the spring diatom bloom, species succession, and *Microcystis*.
  - Partners Include:
    - Army COE
    - EPA
    - DC-DOH
    - COG
    - MDE
    - VA-DEQ
    - ICPRB
- ❖ Conclusions
  - Continued improvements in the CBP watershed model.
  - Refinement of tidal nearshore processes.
  - Improved DO/algae calibration.
  - Movement toward “top down” management simulations.
  - Ability to simulate toxics.
  - Better coordination with TMDLs.

**Discussion:** As part of these modeling efforts, the CBP Principals’ Staff Committee agreed to investigate the potential for using “nitrogen equivalents” in

## DRAFT – SUBJECT TO REVISION

meeting nutrient reduction goals for the Bay. This could be in the form of enhanced phosphorus or sediment reductions, or even the ability of biological communities (e.g., oysters) to filter water and remove nutrients. Virginia is particularly interested in these types of in-situ technologies. Questions were asked about the role of NOAA in the modeling effort. At this point, NOAA is included in all of the coordination meetings. Questions were also asked about the ability to include “top down” living resource nutrient reduction in the present round of Tributary Strategies, and it was indicated that it is unlikely this kind of option could be included now due to differences in timing. Tributary Strategies are scheduled for completion in 2004 and the modeling effort is scheduled for completion a couple of years after that. Questions were also asked about the schedule for Potomac River TMDLs, and it was stated that DC, MD, and VA are all working together in the Potomac effort with a goal of having completed TMDLs in 2008 at the earliest (2009 or 2010 are probably more likely).

### Small Tributary TMDL Model Development (Cherrie Shultz, ICPRB)

**GOAL:** Provide an update on water quality models developed by ICPRB for use in conducting TMDL analyses for small tributaries in the District.

- ❖ ICPRB delivered the completed small tributary model to DC-DOH several weeks ago.
- ❖ DC-DOH has recently started working with the model to conduct TMDL analyses for small tributaries.
  - 23 small tributaries are on the District’s most recent 303(d) list.
  - The model is a very simple mass balance model.
    - Not calibrated, as the data has not yet been collected.
    - Data collection was delayed due to the need for a modification in the District’s MS4 permit.
  - The model assumes that the characteristics of all District stormwater are equivalent (e.g., target concentrations of pollutants). This assumption has been verified at a few stations.
  - These TMDL analyses should ultimately help with efforts to coordinate between jurisdictions.

**Discussion:** A question was asked as to whether the streams would be cleaned up after the TMDLs were completed. It was mentioned that, although TMDLs are not the only mechanism to clean up a stream, they could lead to better coordination between programs. Basically, the TMDL provides a baseline for guiding the work needed to achieve good water quality in a stream.

## DRAFT – SUBJECT TO REVISION

### District of Columbia Water Quality Standards Schedule (Jerusalem Bekele, D.C. DOH)

**GOAL:** Provide an overview of the District's schedule for water quality standards development.

- ❖ TMDL Analyses
  - Water quality models are now available to conduct analyses for:
    - Small tributaries
    - Oxon Run
    - C & O Canal
- ❖ On May 30, 2003, the Department published a Public Notice in the D.C. Register 50 DCR 4303.
  - The public comment period lasted for 45 days, ending on July 14, 2003.
  - A copy of the 2003 District of Columbia Water Quality Standards for surface water is attached.
- ❖ Proposed Rulemaking of the revised District of Columbia Surface Water Quality Standards is scheduled to begin in September 2003.
  - Public hearings will be held in October 2003.
  - Final rulemaking is proposed for November 2003.
  - Proposed new water quality standards are scheduled for submittal to EPA Region III in January 2004.
  - The new standards will incorporate water quality criteria guidance recently published by the EPA Chesapeake Bay Program Office as well as new PCB criteria based on EPA guidance.

**Discussion:** The proposed schedule is fairly optimistic and is dependent upon the amount and nature of public comments received. It is likely that the schedule will be extended to allow for the incorporation of public comments.

### New Business: Anacostia Nontidal Model - Progress on Phase II (Ross Mandel, ICPRB)

**GOAL:** Provide an update on land use data used in the model, the hydrology calibration, and proposed target stormwater concentrations (see attached copy of the presentation).

- ❖ The Phase II Non-tidal Anacostia Model is being funded by the Maryland Department of the Environment.
  - The model calibration is now completed.
  - A final report documenting the results of the effort should be available this week.
- ❖ Features of the model include:
  - 1996 – 2000 simulation period
  - Updated land use data provided by Prince George's and Montgomery Counties
  - Calibrated against storm and base flow data collected at the Northeast and Northwest flow gages for WASA's CSO Long Term Control Plan.

## DRAFT – SUBJECT TO REVISION

- ❖ Hydrology Calibration
  - The model appears to capture low flows, high flows, and seasonal variations adequately.
  - Simulated flow volumes by season ranged between 93% - 118% of actual measured flows.
- ❖ Land Use
  - Prince George's County land use was prepared by Towson State University
  - Montgomery County land use was based on a zoning layer and photogrammatic data.
- ❖ Nutrient and sediment calibration
  - This will be highly dependent on the target stormwater concentrations used for residential, industrial, and commercial land uses.
  - Further work is needed to compare statewide averages with data generated for the Anacostia.

**Discussion:** Questions were also asked about MDE's schedule for developing Anacostia TMDLs. MDE staff indicated that the Department is presently monitoring in the Anacostia watershed for bacteria and toxics. The monitoring is scheduled for completion in 2005 and TMDL development would follow at some point after that. Questions were also asked about whether MDE had a commitment in their TMDL agreement with EPA to develop TMDLs for the Anacostia prior to 2008. MDE staff and others at the meeting indicated that they thought MDE's schedule in the TMDL agreement with EPA only requires a certain number of TMDLs to be completed. It does not specify which ones. MDE staff will be asked to clarify this issue at the next meeting.

### Scheduled Meetings:

All meetings are to be held at the:

#### **Metropolitan Washington Council of Governments**

Department of Environmental Programs  
777 North Capitol Street, N.E., Suite 300  
Washington, D.C. 20002-4239

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Meetings are proposed to be held approximately monthly. The next meeting date will be announced in about two weeks. A meeting notice and agenda will be sent out at least one week in advance of the meeting. Other technical meetings will be scheduled on an as needed basis.