

**Anacostia River TMDL Working Group  
June 17, 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:**

The District of Columbia presented a brief overview of their 2003 TMDL schedule and their proposed schedule for the 2003 Triennial Review of water quality standards. Ross Mandel (ICPRB) gave a presentation about the Phase II calibration of the ICPRB non-tidal Anacostia model. Scott Rybarczyk (LimnoTech) provided a Rock Creek TMDL data update and Dr. Wu-Seng Lung (University of Virginia) presented an update on modeling of the Tidal Basin and Washington Ship Channel. A copy of the agenda and presentations are attached.

**Presentations:**

TMDL Schedule Update (Gregory Hope, D.C. DOH)

**GOAL:** Provide an overview of the District's TMDL development schedule.

- ❖ Several draft TMDL analysis reports were released in early 2003
  - Anacostia River
    - Organics and metals (final expected in August 2003)
    - Fecal coliform bacteria (final submitted to EPA in May 2003)
    - Oil and grease (final expected in October 2003)
  - Watts Branch
    - Total Suspended Solids (TSS) (final expected June 2003)
  - Kingman Lake
    - Total Suspended Solids (TSS) (final expected October 2003)
    - Fecal coliform bacteria (final expected October 2003)
    - Organics and metals (final expected October 2003)

**Discussion:** Several people requested copies of the draft TMDL documents. It was decided that copies of the draft TMDLs will be emailed to workgroup members and will also be made publicly available on COG's web site. Questions were also asked about the relationship between the District's

MS4 permit and TMDLs. EPA indicated that future MS4 permits for the District are expected to include waste load allocations from those TMDLs approved by EPA.

### Anacostia Model – Progress on Phase II of the non-tidal model (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.
- ❖ 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.
- ❖ 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:** The discussion covered several topics including differences in the land use data being used, statewide assumptions about stormwater concentrations vs. local data, and the need to account for the ability of local BMPs to attenuate storm flows. Questions were also asked about MDE’s schedule for developing Anacostia TMDLs. However, nobody from MDE was present to answer those questions. Attempts will be made to insure MDE participation at future workgroup meetings.

### Rock Creek TMDL Update (Scott Rybarczyk, Limno-Tech, Inc.)

GOAL: Provide an overview of the project timeline, data sources and gaps, and potential TMDL approaches for Rock Creek (see attached copy of the presentation).

- ❖ Project background
  - LTI was contracted by EPA Region III in September 2002 to assist in the development of TMDLs for Upper and Lower Rock Creek.
    - Includes metals and organics
    - Bacteria and tributary TMDLs are being developed by DOH.
- ❖ Project timeline
  - Phase 1: September 2002 – December 2002
    - Review available data
    - Recommend options for each TMDL
  - Phase 2: January 2003 – December 2003
    - Collect data
    - Assist in TMDL development
  - Phase 3: Early 2004
    - Respond to public comments
- ❖ Review of available data
  - Hydrography and topography collected from USGS
  - GPS derived stream channel from ICPRB
  - Soils from State soil geographic database
  - Land use from National Land Cover Dataset
  - Sewer collection system from DC WASA
- ❖ Water Quality Investigations
  - DC WASA Long Term Control Plan
  - Draft Phase II stormwater MS4 permit
  - 1989 LTI sediment study
  - 1999 USGS water quality baseline study
  - Bioassessment studies (1992-93, 1997-98)
  - DC-DOH routine monitoring (STORET)
- ❖ Data Gaps
  - Water column
    - Sparse organics data
    - High detection limits for metals result in missing values
    - Additional cadmium and copper samples could be used at upstream and downstream boundaries
  - Point Sources
    - Data is limited to one CSO and three stormwater outfalls
  - Sediments – limited knowledge of characteristics
    - Need to collect TSS data at upstream and downstream boundaries to compute sediment balance
    - A sediment characterization study would also be helpful
  - Biology
    - No fish tissue data
    - Bioassessments used different protocols

- Future bioassessment studies would provide consistency
- ❖ Potential TMDL Approaches
  - Four options were considered
    - Delisting
    - Simple TMDL modeling
    - Complex TMDL modeling
    - Moving impairments to Section 4.2b of the 303(d) list
    - A table of recommended approaches and case studies are attached
- ❖ Next Steps
  - Sample for cadmium and copper in Rock Creek
  - Integrate efforts with those of the tributary TMDLs
  - Decide on an approach for the Mercury TMDL

**Discussion:** The discussion focused primarily on the proposed TMDL approaches for Rock Creek. In particular, questions were asked about when using a Section 4.2b listing might be appropriate. An example showing natural attenuation of a banned substance (DDE) was presented as one example of when “Other pollution control requirements are reasonably expected to result in the attainment of the WQ standard in the future”, and hence a Section 4.2b listing might be appropriate.

#### Tidal Basin and Washington Ship Channel Model (Dr. Wu-Seng Lung, UVA)

**GOAL:** Provide an update on the EFDC model and data gaps (see attached copy of the presentation).

- ❖ Modeling Framework
  - The University of Virginia has modified an EFDC model to simulate the following in the tidal basin and Washington ship channel:
    - Hydrodynamics
    - Sediment transport
    - Fecal coliform bacteria (fate and effects)
    - Toxics (PAH and metals fate and effects)
- ❖ In developing the model components, several data gaps have been identified, including:
  - Elevation/flow relationships for the tidal basin flood gate
  - Stormwater inflows
    - Volumes
    - Pollutant concentrations and loads
      - Sediment
      - Fecal coliforms
      - Metals
      - PAHs
  - Water elevation data
  - Sediment characteristics

- Boundary condition data

**Discussion:** The discussion focused primarily on data gaps that must be filled to adequately model the tidal basin and Washington ship channel. In particular, accurate data concerning pollutant loads, stormwater flows, flow relationships for the tidal basin floodgate were discussed.

Results of the model runs indicated that fecal coliform bacteria levels differed by an order of magnitude between stations in the tidal basin. In addition, the model estimated that one station in the tidal basin never exceeded 100 MPN fecal coliform bacteria, which is counter to best professional judgment about water quality in the basin.

#### District of Columbia Triennial Review Update (Greg Hope, D.C. DOH)

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

- ❖ An initial meeting was held with EPA Region III in April 2003
- ❖ On May 30, 2003, the Department began the review by publishing a Public Notice in the D.C. Register 50 DCR 4303.
  - The public comment period will last for 45 days, ending on July 14, 2003.
  - A copy of the 2003 District of Columbia Water Quality Standards for surface water is attached.
  - As required by federal law and regulation, Clean Water Act, section 303(c)(1) and 40 CFR 131.20, every three years each State and the District of Columbia must review, with public participation, its water quality standards.
- ❖ 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 December 2003.
  - The new standards will incorporate water quality criteria guidance recently published by the EPA Chesapeake Bay Program Office.

**Discussion:** The discussion included several topics, in the proposed schedule, the need to incorporate complex criteria guidance from the Chesapeake Bay Program, and whether or not a Use Attainability Analysis would be conducted as part of the rulemaking process.

#### New Business: Anacostia Bacterial Source Tracking

GOAL: Provide an update on monitoring being done in order to trace sources of bacterial contamination in the Anacostia watershed.

- ❖ Preliminary results of bacterial source tracking in the Anacostia River watershed were presented.
  - The data showed that under base flow conditions, most of the bacterial pollution comes from non-human sources:
    - Pets
    - Birds
    - Wildlife
    - Livestock
  - During storm events, the human and pet contribution of bacteria appears to increase significantly

### **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

Contact Person: Steve Bieber  
Phone: (202) 962-3219  
Email: [sbieber@mwkog.org](mailto:sbieber@mwkog.org)

The next meeting was tentatively scheduled for **July 15, 2003 from 10:00 a.m. – 12:00 noon**, pending the availability of meeting space. 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.