Water Quality Modeling to Support Management Actions
A Workshop to Be Convened in Baltimore, Maryland
September 9 -10, 2008
Location: University of Maryland School of Nursing
655 W. Lombard Street, Room 140

Day 1: Tuesday, September 9

12:30 to 5:40

REGISTRATION: 12:30

A. 1:00 to 1:15
    Introduction
    Speakers: Michael Haire (MC) and Jim Carleton, U.S. EPA
    a. Purpose and vision of the workshop
    b. How the workshop will be conducted
    c. What we hope to accomplish
        i. Take home message
        ii. EPA action plan to meet State modeling needs

B. 1:15 to 1:30
    Keynote Address
    The role of computer modeling in the management of State water quality: "The good, the bad and the ugly"
    Speaker: Dr. Robert Summers, Deputy Secretary, Maryland Department of the Environment

C. 1:30 to 2:00
    Water Quality Modeling from the States' Perspective
    Speakers: Lori Belangia and Linda Eichmiller, Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and Michael Haire, U.S. EPA
    a. ASIWPCA survey results and state modeling needs
    b. What are the typical modeling approaches being employed by the states
    c. Which models are states most frequently using
    d. When and why states choose to develop models:
        i. In-house
        ii. Using a consultant

D. 2:00 to 2:20
    Open Discussion—State Modeling Needs
    Facilitators: John Hochheimer and Clair Meehan, Tetra Tech

E. State Case Studies

    a. 2:20 to 2:50
        North Carolina's Neuse River
        Presenter: Kathy Stecker, North Carolina Division of Water Quality

b. 2:50 to 3:20
   Watershed-Level Optimization of BMP Selection for Cost-Effective Pollutant Load Reduction in the Lower Fox River Basin and Green Bay, Wisconsin
   Presenter: Laura Blake, The Cadmus Group, Inc.

Break: 3:20 to 3:50

c. 3:50 to 4:20
   TAM/WASP Modeling Framework: Anacostia Nutrient and BOD TMDLs
   Presenter: Ross Mandel, Interstate Commission on the Potomac River Basin

d. 4:20 to 4:50
   Connecticut River Study: Model-Supported Evaluation of Potential Nitrogen Reduction Strategies
   Presenter: Dr. Barry Evans, Penn State Institutes of Energy and the Environment, Pennsylvania State University

e. 4:50 to 5:20
   The Beaver Creek and Grand Lake St. Marys Watershed TMDL Using the Load Duration Curve
   Presenter: Trinka Mount, Ohio EPA, Division of Surface Water

f. 5:20 to 5:40
   Panel Discussion on Case Study Presentations and Wrap Up
   Facilitators: John Hochheimer and Clair Meehan

Adjourn: 5:40

Day 2: Wednesday, September 10

8:30 to 5:00

A. State Case Studies (continued)

    a. 8:30 to 9:00
        A Linkage of HSPF and SWMM for Prediction of Hydrologic and Hydraulic Performance of a Large Drainage System
        Presenter: Tom Jobes, St. John's River Water Management District

    b. 9:00 to 9:30
        Modeling the Benefits of Two Cool Factors for a Typical Suburban Stream in Puget Sound Basin
        Presenter: Sinang Lee, Washington State Department of Ecology

    c. 9:30 to 10:00
        Panel Discussion on Case Study Presentations
        Facilitators: John Hochheimer and Clair Meehan

Break: 10:00 to 10:30

B. 10:30 to 11:00
    Water Quality Modeling from EPA's Perspective
    Speakers: Jim Carleton, U.S. EPA, and Tim Wool, U.S. EPA Region 4
    a. What has been the agency's approach historically to developing and supporting watershed and water quality models and related tools?
    b. What water models and related tools does EPA currently support, and in what ways does it support them?
    c. What groups within EPA have been responsible for developing and supporting these tools?
    d. What kinds of training and/or technical support does EPA provide for these models/tools, and which parts of the Agency are responsible?
    e. What kinds of changes have recently taken place or are now taking place, and where do we think EPA is heading in terms of water modeling?

C. 11:00 to 12:00
    Current Development of EPA Water Quality Models and Environmental Data in BASINS
    Speakers: Jack Kittle and Paul Duda, AQUA TERRA Consultants, Inc.
    a. What's new
    b. Introduction to MapWindow
        Introduction to new tools/models in BASINS (WASP 8.0, SWMM5, GWLF, WRDB)
    c. What types of environmental data do you need
    d. Where do you and how do you get environmental data
    e. Problems and solutions for accessing environmental data

Lunch: 12:00 to 1:30

Breakout session room assignments: Room 106 (red, blue, and yellow stickers on name tags) and Room 150 (nametags with green stickers and nametags without any sticker)

D. 1:30 to 2:30
Rooms 106 and 150
Breakout session: Identify and Discuss State Modeling Needs (See Attachment A)
Facilitators: John Hochheimer and Clair Meehan, Tetra Tech
    a. Support
    b. Priorities
    c. Information sharing

Break: 2:30 to 3:00

E. 3:00 to 4:00
Rooms 106 and 150
Breakout session: Discuss How EPA Can Meet State Needs (See Attachment B)
Facilitators: John Hochheimer and Clair Meehan, Tetra Tech
    a. Support
    b. Priorities
    c. Information sharing

F. 4:00 to 4:30
Room 140
Facilitators: John Hochheimer and Clair Meehan, Tetra Tech
    a. **Reconvene and Report Back to Group**
    b. **Summarize Group Recommendations**

G. 4:30 to 5:00
Next Steps/Closing Remarks
Speakers:
Michael Haire, U.S. EPA Office of Wetlands, Oceans and Watersheds, TMDL Program
Amy Newman, U.S. EPA Office of Science and Technology, WQS Program
John Goodin, U.S. EPA Office of Wetlands, Oceans and Watersheds, TMDL Program
Stuart Lehman, U.S. EPA Office of Wetlands, Oceans and Watersheds, Nonpoint Source Program
Linda Eichmiller, ASIWPCA

Adjourn: 5:00

ATTACHMENT A

1:30 to 2:30
BREAKOUT SESSION 1: Identify and Discuss State Modeling Needs

1) What additional modeling tools or modeling-related assistance would help you do your job more effectively?

2) What inconsistencies or gaps in EPA guidance and/or policy prevent your states from using environmental models to produce meaningful results for regulatory or other applications?

3) As discussed earlier (at the workshop), EPA views BASINS as a valuable tool for State environmental agencies to gather up-to-date environmental data for a watershed. This open source GIS tool facilitates configuring water quality models. EPA is investing in BASINS by adding data features, GIS capability, and models. Do you find that BASINS is a useful tool? Is this the direction you would like EPA to go?

ATTACHMENT B

3:00 to 4:00
BREAKOUT SESSION 2: Discuss How EPA Can Meet State Modeling Needs

1) In what specific ways could EPA support models and modeling to help states meet their regulatory water quality needs? Please consider the following functions:

   – Model development and technical support[1],
   – Training[2], and/or
   – Guidance and policy.

2) What should EPA's priorities be when providing assistance to states in the development and use of watershed and water quality models?

3) How should EPA facilitate sharing of watershed and water quality modeling information among states?

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[1] *Development* is the addition of models to existing decision support systems, or enhancements to models that add features or increase functionality. *Support* is answering questions from users as they are configuring or applying models.

[2] *Training* is presenting prepared material to a group to teach them how to use models or related software tools.