

# Exploring and Applying Surface Water Modeling Tools to Achieve Program Goals

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

## TRAINING WORKSHOP

FOR EPA, STATES, TRIBES, AND TERRITORIES

### AGENDA

#### MONDAY AFTERNOON

**1:00 pm–4:00 pm**

##### Pre-Workshop Training

Tools for Processing Data for Model Inputs and Reviewing Model Results

*Trainers:* Tim Wool, Glenn Fernandez, John Davis, Catherine York, and Craig Hesterlee, EPA Region 4

#### TUESDAY

**9:00 am–12:00 pm**

##### PLENARY SESSION

##### Setting the Stage and Understanding Models

**9:00–9:30** Welcome and Kick-Off

*Speakers:* Randy Rush, Acting Deputy Director, Water Division, EPA Region 6, Taimur Shaikh, EPA Region 6

**9:30–9:45** The Direction of Modeling (Opening Perspective)

*Speaker:* Jeff Berckes, Iowa DNR

##### Regional Perspectives/Mini-Case Studies

**9:45–10:15** Application of SnapPlus for TMDL Implementation

*Speaker:* Eric Hettler, Wisconsin DNR

**10:15–10:45** Region 10 Modeling Perspective on Technical Approaches to Temperature

*Speaker:* Ryan Shojinaga, Oregon DEQ

**10:45–11:15** Networking Break

**11:15–11:45** Region 4 Modeling Perspective

*Speaker:* Erin Rasnake, Florida DEP

**11:45–12:00** Group Discussion

**12:00 pm–1:30 pm** Lunch (On Your Own)

**1:30 pm–5:00 pm**

##### BREAKOUT SESSIONS BY TRACK

(Please attend only the session selected at registration)

##### Hands-on Modeling Training Track-HSPF

##### HSPF Overview and Getting Started

*Trainers:* Taimur Shaikh, EPA Region 6, Glenn Fernandez, EPA Region 4, and John Johnston, EPA ORD

##### Hands-on Modeling Training Track-WASP

##### WASP Overview and Getting Started

*Trainers:* Tim Wool, John Davis, and Catherine York, EPA Region 4

##### Model Overview Track

*Moderator:* Craig Hesterlee, EPA Region 4

**1:30–2:00** BASINS

**2:00–2:30** Qual2K

**2:30–3:00** CE-Qual-W2

**3:00–3:30** Break

**3:30–4:00** WASP

**4:00–4:30** EFDC

*Trainers:* Craig Hesterlee and Glenn Fernandez, EPA Region 4, Sam Sarkar and René Camacho, Tetra Tech

##### Model Managers Track

**1:30–1:50** Contracting Modeling Projects

*Moderator:* Antony Tseng, EPA Region 2

**1:50–2:30** Contracting for Modeling Services

*Speaker:* Traci Iott, Connecticut DEEP

**2:30–3:10** Contractor Modeling Support for TMDL Development: A Florida Experience

*Speaker:* Erin Rasnake, Florida DEP

**3:10–3:40** Break

**3:40–4:20** Understanding Your Model Deliverable: Is My Model Getting the Right Answer for the Right Reasons?

*Speaker:* Brandon Jarvis, EPA ORD

**4:20–5:00** Best Practices for Managing Modeling Projects

*Speaker:* Ben Cope, EPA Region 10

## WEDNESDAY

**9:00 am–12:00 pm**

### PLENARY SESSION

#### Models at Work

*Moderator:* Tim Wool, EPA Region 4

#### Modeling Data Considerations for Calibration and Acceptance

*Speakers:* Tim Wool, Glenn Fernandez, John Davis, Catherine York, and Craig Hesterlee, EPA Region 4

**12:00 pm–1:30 pm** Lunch (On Your Own)

**1:30 pm–5:00 pm**

### BREAKOUT SESSIONS BY TRACK

(Please attend only the session selected at registration)

#### Hands-on Modeling Training Track-HSPF

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##### HSPF Review and Exercises

*Trainers:* Taimur Shaikh, EPA Region 6, Glenn Fernandez, EPA Region 4, and John Johnston, EPA ORD

#### Hands-on Modeling Training Track-WASP

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##### WASP Review and Exercises

*Trainers:* Tim Wool, John Davis, and Catherine York, EPA Region 4

#### Model Overview Track

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*Moderator:* Craig Hesterlee, EPA Region 4

**1:30–2:00** HSPF/LSPC

**2:00–2:30** HEC-RAS

**2:30–3:00** SWMM

**3:00–3:30** Break

**3:30–4:00** SWAT

**4:00–4:30** Simplistic Models for Lakes

*Trainers:* Craig Hesterlee and Glenn Fernandez, EPA Region 4, Sam Sarkar and Rene Camacho, Tetra Tech

#### Model Managers Track

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**1:30–1:50** Model and Communications

*Moderator:* Ben Cope, EPA Region 10

**1:50–2:30** What I Talk About When I Talk About Modeling

*Speaker:* Jeff Berckes, Iowa DNR

**2:30–3:10** Interpreting and Communicating Model Results Using 3-dimensional Model Animation

*Speaker:* Scott Ellinger, EPA Region 6

**3:10–3:40** Break

**3:40–4:20** Cape Fear Low Dissolved Oxygen Study

*Speaker:* Narayan Rajbhandari, North Carolina DEQ

**4:20–5:00** Stakeholder Outreach Lessons Learned: Facilitated Group Discussion

*Speaker:* Antony Tseng, EPA Region 2

**9:15–9:45** National Agroecosystem Model for Environmental and Conservation Assessment

*Speaker:* Jeff Arnold, USDA

**9:45–10:15** TMDL Nutrient Target Setting for Lake Thonotosassa

*Speaker:* Kevin Petrus, Florida DEP

**10:15–10:45** Iowa Statewide Beach Bacteria TMDL

*Speaker:* Andrew Frana, Iowa DNR

**10:45–11:00** Break

**11:00–11:30** Challenges with WRTDS Parameterization for Load Estimation across Many Gage Sites: Balancing Tradeoffs between Model Accuracy and Stability – USGS

*Speaker:* Aaron Fisch, Wisconsin DNR

**11:30–12:00** Hannah Creek Case Study

*Speaker:* Narayan Rajbhandari, North Carolina DEQ

**12:00 pm–1:30 pm** Lunch (On Your Own)

**1:30 pm–5:00 pm**

### BREAKOUT SESSIONS BY TRACK

(Please attend only the session selected at registration)

#### Hands-on Modeling Training Track-HSPF

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##### HSPF Exercises and Wrap-Up

*Trainers:* Taimur Shaikh, EPA Region 6, Glenn Fernandez, EPA Region 4, and John Johnston, EPA ORD

#### Hands-on Modeling Training Track-WASP

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##### WASP Exercises and Wrap-Up

*Trainers:* Tim Wool, John Davis, and Catherine York, EPA Region 4

#### Model Overview Track and Model Managers Track (Joint Session)

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##### “Choose the Model” Case Studies

*Facilitators:* Antony Tseng, EPA Region 2; Sam Sarkar and René Camacho, Tetra Tech

## FRIDAY MORNING

**9:00 am–12:00 pm**

### PLENARY SESSION

**9:00–9:15** Looking Ahead to What’s Next in Modeling

*Moderator:* Erin Rasnake, Florida DEP

**9:15–11:00** Forecasting the Future of Modeling: Facilitated Discussion on Model Updates and Modeling Needs

*Facilitators:* Antony Tseng, EPA Region 2 and Ansel Bubel, Florida DEP

(Tentative) Self-Developed Breakout Discussion Sessions (based on participant interest from sign-ups on Day 1)

**11:00–12:00** Closing Remarks/Wrap-Up

*Speakers:* Erin Rasnake, Florida DEP; Jeff Berckes, Iowa DNR

## THURSDAY

**9:00 am–12:00 pm**

### PLENARY SESSION

**9:00–9:15** Parameter and Program Considerations in Modeling

*Moderator:* Traci Iott, Connecticut DEEP