

## *Program*

# **Urban Runoff Modeling: Intelligent Modeling to Improve Stormwater Management**

22-27 July 2007  
Humboldt State University, Arcata, California

*Conference Chair*  
Wayne Huber  
Oregon State University

*Conference Co-Chair*  
Eric Strecker  
Geosyntec Consultants

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Rob Traver, Villanova University, Villanova, PA

**Sunday, July 22, 2007**

|               |  |
|---------------|--|
| 14:00 – 16:30 | Registration   |
| 16:30 – 17:30 | Opening reception  |
| 17:30 – 19:00 | Opening dinner   |
| 19:00         | Conference welcome<br>Conference Co-Chairs<br>ECI Technical Liaison<br>Participant self-introductions  |
| 19:30         | <i>Keynote Presentation</i><br>Ben Urbonas, Denver Urban Drainage and Flood Control District<br>Stormwater runoff modeling: Is it as accurate as we think? |

**Monday, July 23, 2007**

- 07:30 – 08:30 Breakfast
- 08:30 – 10:15 Session 1: Keynote Session 2  
Session Chair: Wayne Huber, Oregon State University
- Keynote Presentation*  
Tony Donigian, Aqua Terra Consultants  
US EPA BASINS and HSPF: Historical evolution, current developments, and applications
- Keynote Presentation*  
Larry Roesner, Colorado State University  
Modeling to help municipalities achieve sustainable urban streams: The way forward
- 10:15 – 10:45 Coffee break
- 10:45 – 12:30 Session 2: Practical issues of model use  
Session Chair and Moderator: Billy Barfield
- Panelists:*
- Clarence Robbins, Woolpert, Inc.
- Mike Borst, US EPA National Risk Management Research Laboratory
- Tim Smith, Greene County MO Resource Management Department
- 12:30 – 13:30 Lunch
- 13:30 – 17:30 *ad hoc* sessions/free time for recreation
- 17:30 – 18:30 Dinner
- 18:30 – 19:45 Session 3: Hydrology, hydraulics and drainage system modeling  
Session Chair: Robert Carr, Water Resources Modeling, LLC
- Anthony Kuch/S. Mudaliar/B. Philips/S. Yu, XP Software  
Modeling overland flooding in urban areas in Australia using xpswmm2D
- Adri Verwey, Delft Hydraulics  
Some new developments in urban flood modeling
- 19:45 – 20:00 Break

**Monday, July 23, 2007 (continued)**

20:00 – 21:15

Session 4: Hydrology, hydraulics and drain system modeling (continued)  
Session Chair: Robert Carr, Water Resources Modeling, LLC

Patrick Delaney, DHI Software

An overview of methods and applications of integrated 1D and 2D urban flood modeling

Gregory Kacvinsky, Clark-Dietz

Innovative stormwater modeling in the Midwest

21:15 – 22:30

Social hour

**Tuesday, July 24 2007**

07:30 – 08:30

Breakfast

08:30 – 10:15

Session 5: Design Storm Issues

Session Chair: Eric Strecker, Geosyntec Consultants

*Panelists:*

Bill Lucas, Integrated Land Management  
Design storms

Billy Barfield, Oklahoma State University  
Derived distributions

Eric Strecker/Wayne Huber, Geosyntec Consultants/Oregon State  
University  
Continuous simulation

10:15 - 10:45

Coffee break

10:45-12:30

Session 6: Modeling for Stream Morphology

Session Chair: Eric Strecker, Geosyntec Consultants

Gary Palhegyi, E. Strecker, P. Mangarella, Geosyntec Consultants  
A modeling methodology to assess and manage the effects of  
hydromodification in urban streams subject to development

Jorge Gironas, Colorado State University  
Morphologic approach in studying developing urban watersheds

David Dust, Colorado State University  
Observed changes in stream morphology due to hydromodification in  
Southern California

12:30 – 13:30

Lunch

13:30 – 17:30

*ad hoc* sessions/free time for recreation

17:30 – 18:30

Dinner

18:30 – 21:30

Session 7: Model Presentations/Demos 1

Session Chair: Wayne Huber, Oregon State University

Patrick Delaney, DHI Software  
DHI Models

Mike Reeves, Wallingford Software  
InfoWorks

Tony Kuch, XP Software  
XP SWMM

**Tuesday, July 24 2007 (continued)**

Break

Trent Schade, MWH Soft  
InfoSWMM

Adri Verwey, Delft Hydraulics  
SOBEK

William James and Rob James, Computational Hydraulics International  
PCSWMM

21:30 – 22:30

Social hour



**Wednesday, July 25 2007**

07:30 – 08:30 Breakfast

08:30 – 10:15 Session 8: CSO and SSO pollution control  
Session Chairs: Richard Field/D. Lai, USEPA

Nancy Schultz, CH2MHill  
Rainfall-derived infiltration and inflow (RDII) and SSO Control

James Smullen/E. Burgess/R. Dickinson, CDM  
SWMM in real-world application: Successes and failures

10:15 – 10:45 Coffee break

10:45 - 12:30 Session 9: Quality and advanced modeling techniques  
Session Chair: TBA

John Sansalone *et al.*, University of Florida  
Computational fluid dynamics modeling of rainfall-runoff unit operations

Rob James/William James *et al.*, Computational Hydraulics International  
Long-term rain disaggregator, radar and a web-based, real-time modeling system for optimizing wide-area sewer infrastructure

Krista Reininga/Eric Strecker/Wayne Huber, URS Corporation/Geosyntec/Oregon State University  
SWMM modeling and multiple-objective stormwater mater planning based on continuous simulation and real historic design events in Eugene

12:30 – 13:30 Lunch

13:30 – 17:00 Session 10: Model presentations/demos2  
Session Chair: Wayne Huber, Oregon State University

Lew Rossman, USEPA  
SWMM5

Tony Donigian, Aqua Terra Consultants  
HSPF

William Scharffenberg, US Army Corps of Engineers, Hydrologic Engineering Center  
HEC-HMS

Break

Bob Pitt, University of Alabama  
WinSLAMM

Leslie Shoemaker/Ting Dai, Tetra Tech  
SUSTAIN

Dan Medina, CH2M Hill  
LIFE

18:00 (approximately) Conference BBQ and beach recreation at Big Lagoon on the Pacific Coast

**Thursday, July 26 2007**

- 07:30 – 08:30 Breakfast
- 08:30 – 10:15 Session 11: Watershed Approach: TMDL Modeling and Applications  
Session Chairs: Richard Field/Dennis Lai, USEPA
- Leslie Shoemaker, TetraTech  
The State-of-the-Art in TMDL Modeling
- Bruce Wilson/John Nieber, University of Minnesota  
As simple as possible: Status and needs in hydrologic and water quality modeling
- Sri Rangarajan/K. Mahoney/P. Simmons, HydroQual, Inc.  
New York City's wet weather discharges in the Long Island Sound: TMDL Context
- 10:15 – 10:45 Coffee break
- 10:45 – 12:30 Session 12: BMP/LID Modeling  
Session Chair: Dan Medina, CH2M Hill
- Mitch Griffin, CH2M Hill  
Modeling wetland BMPs for urban stormwater
- Mike Reeves, Wallingford Software  
The integrated modeling of sustainable urban draining systems
- Bill Lucas/Dan Medina, Integrated Land Management/CH2M Hill  
Computational methods in low impact development (LID) BMPs – Back to basics
- 12:30 – 13:30 Lunch
- 13:30 – 17:30 *ad hoc* sessions/free time for recreation
- 17:30 – 18:30 Dinner
- 18:30 – 19:45 Session 13: BMP/LID Modeling 2  
Session Chair: Scott Struck, Tetra Tech, Inc.
- Bob Pitt, University of Alabama  
The use of WinSLAMM to evaluate combinations of source area and outfall controls using continuous, long-term rainfall records
- Ken MacKenzie/B. Urbonas/G. Guo, Urban Drainage and DCF/U. Denver  
Simplified hydrologic and hydraulic design methods using Microsoft EXCEL- based workbooks with Visual BASIC programming techniques
- 19:45 – 21:30 Session 14: Posters with refreshments  
Session Chair: TBA
- Brief introductions to posters by presenters

**Friday, July 27 2007**

07:30 – 08:30

Breakfast

08:30 – 10:15

Session 15: Data, Uncertainty, Calibration, Optimization

Session Chairs: Sri Rangarajan/ Charles Rowney, HydroQual/ACR, LLC

Charles Rowney, ACR, LLC

Data, uncertainty, calibration and optimization

Sri Rangarajan, Hydro Qual, Inc.

Model transferability to future conditions

10:15 – 10:45

Coffee break

10:45 – 12:30

Session 16: Wrap-up, recommendations, research needs

Session Chair: Wayne Huber, Oregon State University

This session will feature summaries from other session chairs leading to conference summary and research recommendations.

12:30 – 13:30

Lunch and Departure