

2015 Annual Public Meeting

Interagency Steering Committee on Multimedia Environmental Models (ISCMEM)

October 27 - 29, 2015

U.S. Army Corps of Engineers – Hydrologic Engineering Center – Davis, CA
Main Conference Room

Theme: Environmental Modeling for Complex Decision Analysis

October 27, 2015 (Tuesday)

08:00 **Meet at HEC for Tours – (Yolo Bypass and Putah Creek)**

October 28, 2015 (Wednesday)

08:00 **Registration**

08:15 **Welcome and Opening Remarks - Pat Deliman (ISCMEM Chair) and John Hickey (USACE HEC)**

08:30 **Keynote: Integrated Environmental Modeling at HEC Chris Dunn (USACE)**

09:15 **System Integration Gene Whelan (EPA)**

- EPA's Science Vocabulary: Providing a Terminology Infrastructure to Support Systems Integration Lynne Petterson/Gail Hodge
- Watershed and Economic Development Ontology Rajbir Parmar

10:15 **Break**

10:30 **System Integration Gene Whelan (EPA)**

- Preparing Science Software Components for Web-enabled Reuse and Interoperability..... Gerry Laniak
- Quantitative Environmental Domain S. Thomas Purucker
- Chemical Transformation Simulator Caroline Stevens

12:00 **Lunch**

13:00 **Keynote: Jay Lund (Center for Watershed Sciences)**

13:45 **System Integration Gene Whelan (EPA)**

- Hydrologic Nutrient Modeling within a Watershed-based Workflow YongPing Yuan

14:15 **Uncertainty and Parameter Estimation Tom Nicholson (NRC)**

- The Scientific Method: Bayes Theorem, Advanced Search Algorithms, Likelihood Functions & Diagnostic Model Evaluation Jasper Vrugt

14:45 **Break**

15:00 **Uncertainty and Parameter Estimation Tom Nicholson (NRC)**

- The Role of Integrated Groundwater-Surface Water Modeling and Uncertainty in Decision-Making for a Sustainable Future Thomas Harter
- Modeling Uncertainties in Urban Hydrology with Focus on Loss from Infrastructures .. Boris Faybishenko

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- 16:00 **Environmental Flows and Ecohydrology** **Brenda Rashleigh (EPA)**
- Ecological Analyses with the Ecosystem Functions Model John Hickey
 - Trinity River Modeling (Yurok Tribe) DJ Bandrowski

17:00 **Questions from the Public/Adjourn**

October 29, 2015 (Thursday)

- 08:00 **Environmental Flows and Ecohydrology** **Pierre Glynn (USGS)**
- A Habitat Suitability Index Free Method of Estimating Fish Response to Changed Discharge and Habitat David Smith
 - The National and Regional Predictability of Hydrologic Metrics and Their Relevance to Aquatic Biota Ken Eng

- 09:00 **Environmental Risk Analysis** **Ming Zhu (DOE)**
- Hanford Site-wide Risk Review David Kosson

09:30 **Break**

- 10:00 **Watershed Modeling** **Billy Johnson (USACE)**
- Overview of NRC Development Efforts for Low Probability Rainfall Events Joe Kanney
 - Numerical Modeling of Local Intense Precipitation Processes Levent Kavvas
 - Overview of HEC-HMS William Scharffenberg

11:30 **Lunch**

13:00 **Environmental Modeling for Complex Decision Analysis** **Panel Discussion**

Panel Leader: Pat Deliman

Panelists: HEC, DJ Bandrowski, David Smith

Session 1 Topics

- Forecasting Responses in Complex Environmental Systems
- Uncertainty Analysis – Implication of Uncertainty for Engineering Design
- Resolution and Time Scale Implications

14:30 **Break**

