

SESSIONS AND SPEAKERS (Sessions and Speakers listed in alphabetical order, not in order of presentation)

(Draft, subject to change)

Agency specific hydrologic modeling practices

National Weather Service Site Specific Hydrologic Modeling and Forecasting	Brazil, L et al
XP-SWMM2000	Carr, R
Infusing new science into the National Weather Service River Forecast System	Carter, G
Corps water management system decision support modeling	Charley, W and Evans, T
Towards a closer integration of GIS into simulation frameworks: The OMS example	David, O et al
HEC Software – Present Status and Activities, Future Prospects	Davis, D
Predicting System Response in Watersheds with Surface Water and Groundwater Interactions	Downer, C et al
General Data Representation and Interchange Approaches	Fine, S
U.S. EPA's Multimedia Integrated Modeling System Framework	Fine, S
Overview and Status of the Hydrologic Forecast System in the National Weather Service Weather Forecast Offices	Glaudemans, M
Development of Integrated Water Resources Modeling, Assessment, and Decision Support Tools	Holland, J et al
MIKE SHE – a generalized integrated hydrological modeling system	Kjelds, J et al
Colorado's Decision Support Systems Water Resource Planning Model, StateMod	Malers, S, and Bennett, R
Distributed Data Sharing and Module Integration Framework	Pelton, M and Dorow, K
Hydrologic Modeling System (HEC-HMS) New Capabilities and Future Plans	Scharffenberg, W et al
Dynamic information architecture system (DIAS): Multiple model simulation management	Simunich, K et al
Distributed modeling for improved NWS river forecasts	Smith, M
Integrated water resources modeling and object oriented code architecture	Sorensen, H and Kjelds, J
An overview of USDA-ARS water quality models	van Genuchten, M et al

Agricultural modeling

Application of AGNPS on Small and Large Scale Watersheds for Conservation Management Planning	Bingner, R and Theurer, F
Discussion of the benefits and limitations of the models AGNPS and AnnAGNPS	Finney, V
Point and Field Scale Simulation Models for Decision Support of Midwestern Agricultural Water Quality	Heilman, P et al
The HYDRUS software packages for simulating water, heat, and solute movement in the subsurface	Simunek, J and van Genuchten, M
Impoundment Feature in AnnAGNPS	Theurer, F and Bingner, R
Integrated Watershed-Channel Modeling of Sediment and Nutrients	Vieira, D et al
Pesticide fate and transport modeling: An approach for ARS water quality models at 3 scales	Wauchope, D et al
Subsurface Flow Component Development for AnnAGNPS	Yuan, Y and Bingner, R

California Central Valley modeling topics

CALSIM: A generalized modeling tool for complex reservoir system operations simulation	Arora, S et al
CALSIM II: Next generation model fro the planning and management of	Arora, S et al

California's state water project and Central Valley project	
Analysis of Potential Hydrometeorological Responses to Climate Change within the San Joaquin River Basin (SJR)	Bashford, K et al
The development of hydrologic models using HEC-HMS for the Sacramento and San Joaquin River basins comprehensive study	Dunn, C and Collins, B
Simulation of Potential Climate Change Impacts on Water Resources, Water Quality, Agricultural Production and the Rural Economy in the San Joaquin River Basin	Hidalgo, H et al

Case studies of interagency cooperation in hydrologic modeling

Application of a distributed, physically based, hydrologic model to improve streamflow forecasts in the upper part of the Truckee River basin	Boyle, D et al
An evaluation of real-time streamflow forecasts from a distributed, physically based, hydrologic model applied in the upper Rio Grande basin	Gorham, T et al
Watershed and river systems management program -- assessment of runoff forecasts for the Yakima project, WA	Mastin, M et al
Modeling Water Operations On The Rio Grande In New Mexico	Yuska, M

Dam safety and decommissioning

2-D model for dam decommissioning	Delcau, M and Greimann, B
Removing Matilija dam's sediment	Greimann, B et al
Hydrological Assessment System for Reservoir Spillway Capacity	Jeong, C et al
Development of Design Storm for Spillway Remediation of Dams in Nicaragua	Stout, S and Webb, J
Demonstration of Portfolio Risk Assessment For Huntington District Dams	Webb, J et al

Environmental modeling

Evaluating Water Allocations for Drought Management	Campbell, S et al
The Ecosystem Functions Model (EFM)	Dunn, C et al
Complexities of Ecosystem and River Management Decisions	Flug, M et al
Modeling Climatic and Forest Management Effects on Annual Water Yield across the Southern US	Sun, G et al

Flood hydrology

Calibrating Synthetic Storms to Predicted Peaks for the Colorado River Basin in Texas	Anderson, M
Unsteady Flow Modeling With HEC-RAS	Brunner, G
PMF estimation using systematic, historical and paleoflood information	Frances
Distributed Modeling of Large Basins For A Real Time Flood Forecasting System in Spain: Description, Estimation, Calibration and Validation	Frances
Evaluation of a radar-based one-hour rainfall nowcasting algorithm for flash flood warnings	Fulton, R and Seo, D
Cost-Effective Methods for Estimating Peak Discharge of Floods	Jarrett, R
Regional Flood-Frequency Relations Using -Gage Station, Historical, and Paleoflood Data	Jarrett, R
Determination of Flood Frequency of the Missouri River Below Gavins Point Dam	Kay, Roger
Identification and Assessment of Regional Frequency Distribution - A Case Study	Minocha, V and Upadhyaya, P
Using Hydraulic Routing to Determine the Accuracy of Hypothetical Flood Hydrology	Perkins,
A Comprehensive Frequency Analysis is Presented on the Llano River in the Colorado River Basin of Texas	Reis, B et al
The new USDA-NRCS Windows TR-55 small watershed model	Scheer, C
A dynamic wave (FLDWAV) simulation of the October 1998 flood on the lower	Shultz, M

Guadalupe River, Texas	
Jflow: A real-time hydrological model	Vieux, B and Vieux, J
Simulations of Flooding on Tchoutacabouffa River at State Highways 15 and 67 at D'Iberville, Mississippi	Winters, K
Two-dimensional flow model of near real-time flood mapping	Fulford, J and Jones, J

Florida ecosystems

Simulation of Effects of Changes in Freshwater Inflow on Salinity Distributions: Suwannee River Estuary, Florida	Bales, J
Coupling Ecological and Hydrologic Modeling: SICS and ATLSS	Cline, J and Swain, E
A high resolution historical precipitation database for Florida	Fuelberg, H et al
Numerical Simulation of Integrated Surface-Water/Ground-Water Flow and Solute Transport in the Southern Everglades	Langevin, C et al
Application of the Everglades Agro-Hydrology Computer Model (EAHM) on South Florida Farm Fields	Savabi, M and Shinde, D
An overview of the tides and inflows in the mangroves of the Everglades project	Schaffranek, R and Jenter, H
Hydrologic and Water Quality Modeling in St Lucie Estuary Watershed, Florida	Wan, Y and Scully, S
Wetland Monitoring and Model Simulation For Environmental Protection	Yan, J et al

Hillslope and channel hydrologic modeling

Daily Flow Routing with the Muskingum-Cunge Method in the Pecos River RiverWare Model	Boroughs, C and Zagana, E
Simulated effects of a change in land cover on velocity distribution at a bridge in southeastern Arkansas	Funkhouser, J and Barks, C
A Study on Runoff Routing Scheme for Distributed Model	Guo, J and Liang, X
Simulation of flows around a submerged weir in channel bendways	Jia
Muskingum-Cunge Flood Routing Procedure in NRCS Hydrologic Models	Merkel, W
Development of a Predictive Relationship for Infiltration into Swelling/Cracking Soils an Update	Prasad, S and Romkens, M
Use of Soil Survey Information for Determining Soil Hydraulic Parameters for Hydrologic Modeling	Rawls, W and Pachepsky, Y
Estimating the unsaturated soil hydraulic properties using a hierarchical set of pedotransfer functions	Schaap, M, et al
Use of Velocity Data to Calibrate and Validate Two-Dimensional Hydrodynamic Models	Wagner, C and Mueller, D

Hydrologic database issues including standards and quality

The Ingest, Quality Control, and Processing of Hydrometeorological Data at National Weather Service Field Offices	Glaudemans, M
Information systems development techniques and their application to the hydrologic database derivation application	Leavy, T et al
A vision for a standardized hydrologic data exchange format	McFadden, D
Managing Hydrologic Data for Operational Forecasting	McFadden, D et al

Identifying model parameters

Results from the second international model parameter estimation experiment (MOPEX) workshop - SAC-SMA and NOAA LSM experience	Duan, Q
Recent Developments in Automatic Calibration and Application to Hydrologic Modeling	Hogue, T et al
General methodology of parameters estimation of non-linear regressions by modified least squares criterion	Kachiashvili, K and Melikdzhanian
Incorporating Hydrograph Shape Descriptors in Model Parameter Estimation	Shamir, E et al
FLDWAV Application: Transitioning from Calibration to Operational Mode	Sylvestre, J et al

Landscape erosion; sediment transport

Application of HEC-6 Model to Evaluate the Potential Effects of Ecosystem Restoration Projects	Bhowmik, N et al
Is Knickpoint Retreat a Mass Failure-Limited Process Rather Than an Erosion-Limited Process? Insights gained from monitoring and modeling pore-water pressure effects on the retreat of knickpoints	Collison, A et al
Simulation of Meandering Channel Migration Processes With an Enhanced Two-dimensional Numerical Model	Duan, J
Kankakee River Sediment Management Plan	Hrzic, M
Sedimentation investigation of the South Delta of the San Joaquin River, CA	Klumpp, C
CONCEPTS: A Process-Based Computer Model of Instream Hydraulic and Geomorphic Processes	Langendoen, E
Physically-Based Distributed Modeling of Event-Scale Erosion: The Relationship Between Rainfall Erosivity and Suspended Sediment Discharges	Ogden, F and Daraio
Forest road erosion, sediment transport and model validation in the Southern Appalachians	Riedel, M and Vose, J
Grid Resolution Effects on Upland Erosion Predictions	Rojas, R and Julien, P
Incorporating Bank-Toe Erosion by Hydraulic Shear into the ARS Bank-Stability Model	Simon, A et al
CCHE1D – Flow and Channel Morphology Model for Channel Networks	Vieira, D et al
CCHE2D Nonuniform Sediment Transport Model	Wu, W et al

Model applications

Hydrologic Modeling of San Diego Creek Watershed, Orange County, California	Chieh, J et al
Performance analysis of a lumped and distributed model using discharge time series of the Jeker catchment in Belgium	El-Nasr, A
Simulating best management practice effects on water quality in the Town Brook watershed, New York	Gitau, M.W. et al
Calibrating and Validating Hydrologic Model Performance for a Forested Watershed in a Snow Regime: The Dueling Model Mica Creek Watershed Study	Ice, G et al
HEC-ResSim Capabilities and Plans	Klipsch, J et al
A New Model To Predict Runoff From Wetland Regions	Kreymborg, L et al
Development of the NOAH land surface model at NCEP/EMC	Lohmann, D et al
AGWA - Automated Hydrologic Modeling for Landscape Assessment	Miller, S et al
Simulation of Channel Losses and Recharge For an Aquifer Recharge Zone Watershed Using HSPF	Ockerman,
Use of Hydrological Models When Designing Water Projects in Turkmenistan	Vecher, A et al
Water Supply Study for the Big Sandy Watershed	Webb, J et al
XTOP_PRMS, a semi-distributed model for simulating hydrologic processes at the five USGS WEBB sites	Webb, R et al

Modeling of major river systems

Great Lakes Large Basin Runoff Model	Croley, T and He, C
Water Availability Modeling across Four State Boundaries	Harkins, D et al
A Development Framework for Two-Dimensional Large Basin Operational Hydrologic Models	He, C and Crowley, T
Development of Data in Support of the Kansas River Basin Flow Frequency Study	Owens, A et al

Model sensitivity analysis and error estimates

Great Lakes Evaporation Model Sensitivities and Errors	Croley, T and Assel, R
A kinematic runoff and erosion model used for research and watershed assessments	Goodrich, D et al
A Sensitivity Study of Roughness Parameters with Variable Infiltration Variability	Huang, M and Liang, X

(VIC) Land Surface Model	
Bias in Runoff Parameter Estimation Induced by Rainfall Data	Straub, T and Bednar, R

Modeling water quality

The Bull Run River-Reservoir System Model	Annear, R and Wells, S
Willamette River and Columbia River Waste Load Allocation Model	Berger, C et al
Total Maximum Daily Load Modeling System For the Grand Calumet Watershed, Indiana	Bunch, B et al
Development of a Dissolved Oxygen Model for the Beaufort River using Neural Network Models	Conrads, P et al
Mattawoman Creek Watershed TMDL Study	Deliman, P et al
Modeling of water quantity and quality at catchment scale	El-Sadek, A et al
An operations model for temperature management of the Truckee River	Neumann, D et al
Accurate Modeling of Water Quality Transport in Open Channels	Patel, R and Misra, R
Using Artificial Neural Network Models to Estimate Water Temperatures in Small Streams in Western Oregon	Risley, J and Roehl, E
Development of a Neural Network Model for Dissolved Oxygen in the Tualatin River, Oregon	Rounds, S
Basis for the CE-QUAL-W2 Version 3 river basin hydrodynamic and water quality model	Wells, S
Development of a Cost-effective NPS Pollution Control Strategy for TMDL Implementation by Applying AGNPS and Optimization Technique	Zhen, J and Yu, S

New observations and data for hydrologic modeling

Activities to improve WSR-88D radar rainfall estimation in the National Weather Service	Fulton, R
Use of statistically and dynamically downscaled atmospheric model output for hydrologic simulations in three mountainous basins of the w US	Hay, L et al
A test of the distributed hydrologic model CASC2D with WSR-88D radar precipitation data input Hydrologic database issues including standards and quality	Jorgesen, J and Hunter, S
Alternative Methods To Determine Shortages and Naturalized Flows Abstract	King, D et al
Multivariable, Multi-process Validation of Hydrological Models	Lakshmi, V

Remote sensing/GIS

HEC-GeoRAS: GIS Support for Hydraulic Modeling and Analysis	Ackerman, C and Brunner, G
FLDVIEW: The NWS Flood Forecast Mapping Application	Cajina, N et al
Implementation of a Real-Time Flood Mapping System in Honduras	Day, G et al
Geospatial hydrologic model extension (HEC-GeoHMS)	Doan, J
The Evolution of GIS Based Hydrologic Model Integration and Object Oriented Model Interface Design at the U.S. Bureau of Reclamation	Heinzer, T and Sebhat, M
Soil Moisture Mapping Using Satellite Microwave Remote Sensing: Current and Future Data for Hydrologic Modeling	Jackson, T
Methods and Tools For The Development of Hydrologically Conditioned Elevation Data and Derivatives For National Applications	Kost, J
ARC-VIEW GIS Interface for the Agricultural Non-Point Source Pollutant Model (AGNPS)	Liu, S and Merkel, W
Data sharing: A GIS approach	Rieker, J
Application of Geographical Information System (GIS) Technologies for the Marlinton Local Protection Project	Smith, S and Webb, J
Assessment of Watershed Management on Reservoir Eutrophication: An Integrated GIS-Based Modeling Approach	Tsou, M et al
AGNPS watershed modeling with GIS databases	Usery, E.L. et al

Reservoir management

Multi-objective Simulation and Optimization of Reservoir Operation using EXCEL	Fontane, D
Optimizing daily reservoir scheduling at TVA with RiverWare	Magee, T et al
A Study on Optimal Reservoir Operation Using Dynamic Programming and Genetic Algorithm	Shin, H et al
A Hydrologic Forecast and Reservoir Operations Model for the Winnepesaukee River, NH	Woodbury, M et al

Runoff Estimations Using Curve Numbers

Curve number methods: Origins, applications, and limitations	Hawkins, R et al
Runoff curve number method: Beyond the handbook	Hawkins, R et al
Runoff curve number method: Examination of the initial abstraction ratio	Hawkins, R et al
Rainfall-runoff by curve numbers: Does it work? Is it science?	Hawkins, R et al

Statistical and stochastic hydrology

CORRDSS - Hydrologic time-series cross correlation	Doan, W
QGEN - Generation of annual peak flow data	Doan, W
Disaggregation of intermittent stochastic processes	Durrans, S
Simplified probabilistic extreme flood hydrographs for dam safety	England, J
Risk Assessment and Uncertainty Analysis of Flood Quantile Estimation Based on GEV Distribution	Heo, J and Lee, D
Hydrological Prediction/Forecasting Modeling Using Computational Intelligent Techniques	Hsieh, B
Modeling of hydrological series and level of river water pollution with the help of multi-dimensional Markov series	Kachiashvili, K
The 2002 Version of SAMS - Stochastic Analysis Modeling and Simulation	Salas, J et al

Uncertainty estimates for data, parameters, and results

Impact of Parametric and Radar-Rainfall Uncertainty on Flow Simulations From a Distributed Hydrologic Model	Carpenter, T and Georgakakos, K
Surface runoff and infiltration with run-on on spatially variable hillslopes	Nahar, N and Govindaraju, R
Long-term salinity prediction with uncertainty analysis: Applications for Colorado River near Glenwood Springs, CO	Prairie, J et al
A Reliability Estimation in Hydrological Modeling with TOPMODEL	Rouabah, M
Watershed Modeling: A Historical Perspective	Singh, V and Frevert, D
Application of GLUE to HSPF in Goodwin Creek	Skahill, B et al
Comparing semianalytical and numerical groundwater contaminant transport modeling	Whelan, G et al

Demonstration and Poster Session

HEC-GeoRAS: GIS Support for Hydraulic Modeling and Analysis	Ackerman, C
National Weather Service Site Specific Hydrologic Modeling and Forecasting	Brazil, L et al
HEC RAS: the Corps' River Analysis System	Brunner, G.
FLDVIEW: The NWS Flood Forecast Mapping Application	Cajina, N et al
Simulating Water Storage, Delivery, Temperature and Fish Production in the Klamath River	Campbell, S et al
Catchment Geometric Representation and Identification of Sediment Yield Parameters in a Distributed Catchment Model (Poster only)	Canfield, H and Lopes, V
Corps Water Management System	Charley, W. et al.
Demonstration of the NOHRSC Operational Snow Mass/Energy Balance Model for the Continental U.S.	Cline, D et al

Dam Removal Express Assessment Models (DREAM)	Cui, Y et al
The Object Modeling System (OMS)	David, O et al
HEC-GeoHMS: Geospatial extension for Hydrologic Modeling and Analysis	Doan, J
Environmental Resources Analysis System	Flug, M et al
Multi-objective Simulation and Optimization of Reservoir Operation using EXCEL	Fontane, D
The Evolution of GIS Based Hydrologic Model Integration and Object Oriented Model Interface Design at the U.S. Bureau of Reclamation	Heinzer, T and Sebat, M
Alternative Precipitation Inputs For Near Real-Time Flood Simulation For Salt Creek In Northeastern Illinois	Ishii, A
Hydrological Assessment System for Reservoir Spillway Capacity	Jeong, C et al
CCHE2D flow and sediment transport model with graphical user interface	Khan, A and Wang S
The Modular Modeling System (MMS): A toolbox for water and environmental resources management	Leavesley, G. et al
Demonstration of DHI modeling systems	Kjelds, J and Sorensen, H
A multidimensional surface water modeling system for computational models of flow and transport	McDonald, R et al
The 2002 Version of SAMS - Stochastic Analysis Modeling and Simulation	Salas, J et al
HEC HMS: the Corps' Hydrologic Modeling System	Scharffenberg, W.
GSTARS 2.1 (Generalized Stream Tube model for Alluvial River Simulation) version 2.1	Simoës, F
Demonstration of the ARS-Bank-Stability Model (Ver. 2.0)	Simon, A et al
Upper Rio Grande water operations review and environmental impact statement and URGWOM	Stockton, G
The GIS Weasel	Viger, et al
The HYDRUS software packages for simulating water, heat, and solute movement in the subsurface	van Genuchten, M et al
The Rosetta model	van Genuchten, M et al
Jflow: A real-time hydrological model	Vieux, B and Vieux, J
Modeling Water Operations On The Rio Grande In New Mexico	Yuska, M