Watershed Management Track A

Keynote Speech for Watershed Management and Irrigation & Drainage Tracks

America’s Watersheds: Technical Basis for New Strategies
L.J. Lane and M.H. Nichols

Session 1: History of Successful Watershed Management

History of the Arizona Watershed Program
Peter F. Ffolliott

Forty Years of Rangeland Hydrology Research: Are We Making Progress
Gary W. Frasier and Kathryn A. Holland

Session 2: Watershed Hydrology and Stream Management

A Framework for Assessment of Hydrologic Condition
Bruce McCammon, John Rector, and Karl Gebhardt

Hydrology, Metals, and Aquatic Physical Habitat in the Upper Animas Watershed, Colorado
Robert T. Milhous

Predicting and Managing Cumulative Watershed Effects
Lee H. MacDonald

FishXing 2.0: Software and Learning Systems for the Analysis of Fish Migration Through Culverts
Michael J. Furniss, Susan Firor, Michael Love, Thomas Dunklin, Robert Gubernick, and Margaret Lang

Session 3: Integrated Information

Integration of Watershed and Ecological Site Land Classification Scales Using GIS Technology
L.R. Levick, M.R. Kidwell, and H.D. Fox

An Integrated Systems Approach to Modeling Sediment Yield from Rangeland Watersheds
M.H. Nichols and L.J. Lane

Participatory Multiple Objective Decision Making Processes: Emerging Approaches with New Challenges
Paul Lawrence, Roger Shaw, Leonard Lane, and Rowan Eisner
Session 4: Watershed Management on the New York City Watershed

New York City’s Approach to Watershed Management
Margot W. Garcia

A Management Challenge: Living in a Phosphorus-Restricted Watershed
Keith S. Porter

Assessing the Effectiveness of New York City’s Watershed Protection Program
Michael A. Principe, Lorraine Janus, and David Warne

Session 5: Hydraulics in Environmental Watershed Management

Using B.A.S. to Optimize the 10th Street Detention Basin
Nadeem H. Majaj

An Approach to Optimum Hydraulic Design of Diversion Weirs
A. Melih Yamanav and Vehbi Ozaydin

Stormwater Management and Implementation of BMPs at Miami International Airport
Michael F. Schmidt, Nancy B. Pantoja, and Luis Lopez-Blazquez

Channel Mining Induced Stream Bed Instability Around Bridges
A. Melih Yamanav and Ozgur Cicekdag

Session 6: PL566

Computer Program for Project Formulation: Hydrology (TR-20) Revisited
Roger G. Cranshe and Donald E. Woodward

Rehabilitating Our Nation's Aging Flood Control Dams
Larry W. Caldwell

Good For Another 100 Years: The Rehabilitation of Sergeant Major Creek Watershed
Larry W. Caldwell

Antecedent Moisture Conditions: NRCS Viewpoint
Donald E. Woodward and Arlis Plummer

Session 7: US Forest Service Road Systems and Impacts

The National Forest Road System: A Public Policy Issue for the 21st Century
John W. Bell

Reducing Low Traffic Road: Stream Impacts
Richard G. Burns and Lloyd W. Swift, Jr.

Roads Analysis: Informing Decisions About Managing the National Forest Transportation System
Michael J. Furniss
Session 9: Riparian Issues in Watershed Management - Society of Range Management

Stream Shading Assessment with Airborne Multispectral Videography
Patrick Clark

Road Decommissioning and Road Stabilization, Promoting Natural Watershed and Riparian System Functions: Case Study—Washington State, South Fork Skokomish Watershed
Lisa Lewis

Plant Materials for Western Riparian Areas
Nancy L. Shaw, Scott M. Lambert, and J. Chris Hoag

Enhanced Environments Through Water Development: Riparian Zones Then and Now
Quentin D. Skinner, Kelly K. Crane, and Joseph G. Hiller

Watershed Management Track B

Session 1: Watershed Planning

State Approaches to Watershed Management: Transferring Lessons Between the Northeast and Southwest
Sarah Michaels and Douglas S. Kenney

The Importance of a Long Range Vision to the Los Angeles and San Gabriel Rivers Watershed Council
Michael Drennan, Carl Blum, and Eliza Jane Whitman

Mixing Local Flavor with River Basin Planning
Jack Rutledge, William J. Owen, J. Steve Newton, and John K. Ricketts

Water Resources Management in the Mystic River Watershed I: Water Quality History and Challenges for the Future
John L. Durant and Kalsoum Abbasi

Water Resources Management in the Mystic River Watershed II: University and Community Collaboration Through Service Learning and Active Citizenship
Paul Kirshen, John Durant, and Grace Perez

Session 2: Watershed Management Education – A Look to the Future

Penn State’s Graduate Option in Watershed Stewardship
David R. DeWalle

Watershed Management Education at the University of Arizona
Richard H. Hawkins

Watersheds: Preparing Students for the Future
Freeman M. Smith and John D. Stednick
Watershed Design: Principles for Training Students for the Future
Susan Bolton

Session 3: Erosion on Federal Lands

Modeling Rangeland Watershed Erosion Processes
W.J. Elliot

Restoration of the Caribou Creek Watershed
Kenneth F. Karle

Subdrainage Zone No. 1167 Watershed Condition Assessment: John Muir National Historic Site, Martinez, California
Richard Inglis

Water Quality Restoration of the Mammoth Cave Karst Aquifer: A Work in Progress
Joe Meiman

Session 4: Fire and Impact on Hydrology

Fire and Erosion: Evaluating the Effectiveness of a Post-Fire Rehabilitation Treatment, Contour-Felled Logs
Peter R. Robichaud

Prescribed Fire as a Watershed Sediment Management Tool: An Example from Southern California
Peter M. Wohlgemuth

Debris-Flow Susceptibility of Watersheds Recently Burned by Wildfire
Susan H. Cannon

Effects of Wildfire on Water Supplies: A Case Study from Denver, Colorado
Deborah A. Martin and John A. Moody

The Effects of Wildfire on the Peak Streamflow Magnitude and Frequency, Frijoles and Capulin Canyons, Bandelier National Monument, New Mexico
Jack E. Veenhuis

Session 5: Impacts of Roads on Watershed Hydrology I

Comparison of Methods to Evaluate Surface Erosion from Logging Roads Using Watershed Analyses
W.J. Conroy, K.V. Dubé, and T.E. Koler

Landslide and Roadway Stability Watershed Analyses on Industrial Forestlands
Thomas E. Koler

Road Alignment and Haul Routing in Estimating Sediment Delivery to Streams
Finn Krogstad, Peter Schiess, and Luke Rogers

Removing Roads and Restoring Watersheds on the Clearwater National Forest
Anne Hall Connor, Christine Bradbury, and Emmit Taylor
Session 6: Impacts of Roads on Watershed Hydrology II

Monitoring Road Removal on the Clearwater National Forest
  Alfred Stonesifer, Anne Hall Connor, and Felix McGowan

Relationship of Forest Road Aggregate Test Properties to Sediment Production
  Randy B. Foltz, Gary L. Evans, and Mark Truebe

Road Erosion Estimation Equations Derived Using a WEPP Database
  Susan R. Graves and William J. Elliot

Erosion from an Industrial Forest Road in the Ouachita Mountains of Southeastern Oklahoma
  Donald J. Turton and Jeffery L. Vowell

Modeling Soil Erosion from Insloping Forest Roads with Impoundment or Surface Cross Drain Structures
  Joan Q. Wu, Maya K. Place, and William J. Elliot

Session 7: Use of Models in Watershed Management I

Advances in Physically Based Hydrologic Modeling with CASC2D
  C.W. Downer, B.E. Johnson, F.L. Ogden, and E.A. Meselhe

The Watershed Modeling System
  Jeff Jorgeson and Jim Nelson

Rainfall Input for Distributed Hydrologic Modeling: The Case for Radar
  F.L. Ogden and H.O. Sharif

Implementation of Water Quality Components in the Watershed Modeling System
  Patrick N. Deliman, Carlos E. Ruiz, Colby T. Manwaring, and Terry K. Gerald

Session 8: Use of Models in Watershed Management II

Development of a Land Management System
  Jeffery P. Holland

Corps of Engineers' Models for TMDLs
  Mark Dortch, James L. Martin, Bill Johnson, and Patrick Deliman

Designing a Management-Oriented Watershed Simulation Environment
  James D. Westervelt and Richard Farnsworth

Lumped Conceptual Hydrological Modelling in Combination with GIS for Integrated Watershed Management
  M. Radwan, P. Willems, and J. Berlamont
Session 9: Watershed Modeling Studies in the Bureau of Reclamation I

Case Study of the Culbertson Canal in Southwest Nebraska
Chuck Jachens and Craig Albertsen

 Conjunctive Management Analyses for Endangered Species Flow Augmentation Alternatives in the Snake River
Roger K. Larson and Joe Spinazola

The Watershed and River Systems Management Program: An Overview of Capabilities
Donald Frevert, Harry Lins, Terrance Fulp, George Leavesley, and Edith Zagona

Uncertainty Modeling in RiverWare
John C. Carron, Edith A. Zagona, and Terrance J. Fulp

Session 10: Watershed Modeling Studies in the Bureau of Reclamation II

Environmental Applications of Decision Support Systems for River System Management: Examples from the Colorado and Rio Grande Basins
Dave Matthews, Curt Hartzell, Steffen Meyer, and Terry Fulp

Stochastic Simulation of the Colorado River Flows Using SAMS
J. Salas, W. Lin, D. Frevert, and W. Lane

The Hydrologic Modeling Inventory: A Cooperative Research Effort
Vijay P. Singh, Donald K. Frevert, Mark A. Treviño, Steffen P. Meyer, and Jeffrey D. Rieker

Watershed Management Track C

Session 1: Stormwater Discharge Management

A Participative Planning Methodology: Urban Stormwater Quality Management at the Watershed
R.R. Brown, R. Ryan, and J.E. Ball

Value of Public Participation: Policy for Stormwater Quality for the Watershed
R. Ryan and R.R. Brown

National Water Quality Assessment: Moving from Measurement to Understanding
Timothy L. Miller and Ivan C. James, II

Shape of Storm Pollutograph from the Four Different Rural Watersheds
Youngchul Kim, Jaesoo Lee, and Wang-Joong Kim

Implementation of the Phase II Stormwater NPDES Permits
Jennifer N. Patty
An Innovative Stormwater Management Project in Sydney, Australia
J.E. Ball, R. Ryan, P. Davies, and R. Brown

Session 2: Non-Point Source Modeling

Probabilistic Simplified and Detailed Subsurface Drainage Water Quality Modelling of Nitrate Leaching
Alaa El-Sadek and Mona Radwan

Grass and Leaf Decomposition and Nutrient Release Study Under Wet Conditions
Justin Strynchuk, John Royal, and Gordon England

Estimation of Groundwater Pollution Potential by Pesticides in Mid-Atlantic Coastal Plain Watersheds
Zhonglong Zhang and Mohamed M. Hantush

Session 3: Water Quality Issues – TMDLs I

A Case Study of Pollutant Load Trading on the Truckee River
Steve McDonald, Seema Bhimani, Greg Dennis, Randall Gray, and Steve Walker

Framework to Calculate TMDL of Acid Mine Drainage for Cheat River Basin in West Virginia
Carl W. Chen, Joel Herr, Laura H.Z. Weintraub, Robert A. Goldstein, Rick Herd, and J.M. Brown

How the Impacts of Urbanization are Being Addressed in the Los Angeles River Watershed
Michael Drennan, Gary Moore, Andy Lipkis, and Steve Davis

Session 4: Water Quality Issues – TMDLs II

Assessment of Total Dissolved Solids and Nutrient Inputs from Nonpoint Groundwater Discharge in the Lower Truckee River Basin, Nevada
W. Alan McKay, John Warwick, and John Tracy

A Prototype for Understanding the Effects of TMDL Standards: Tying Property Values to Sediment Loads in the Lake Tahoe Basin
John C. Tracy, Richard Bernknopf, Will Forney, and Kevin Hill

Florida's Total Maximum Daily Load Program
J.J. Warwick, D. Joyner, and J.J. Delfino

Sessions 5 & 6: Streambank Stabilization and Revegetation - IECA Workshop

Workshop Introduction
Tom Williams
Essential Hydraulics of Channel and Bank Design
Rodney Wittler

Other presentations (papers not provided)
- Streambank Bioengineering Techniques
  J. Chris Hoag
- Wetland Evaluation and Management
  Henry Sauer
- Plant Materials for Reclamation and Biostabilization
  Randy Mandel

Session 7: Urbanization of Watersheds – Floods
Streamflow Variations with Population Growth on Urbanizing Catchments in the United States
  David R. DeWalle, Bryan R. Swistock, and Thomas E. Johnson
Estimation of Floods Using Channel Geometry
  Youssef I. Hafez and Mona El-Kady
Estimation of Runoff and Sediment Yield in Albuquerque, New Mexico, Using Rainfall Simulation
  Tim J. Ward and Kenny Stevens

Session 8: City of Fort Collins – Adjustments to the 1997 and Other Floods
Repeated Flash Floods at Colorado State University
  Wayne A. Charlie and Don Doehring
Moving Beyond the 100-Year Flood: Redefining Flood Policies for Human Time Scales
  J. Zoe Barnard Miller, Roger A. Pielke, Jr., and Mary W. Downton

Watershed Management Track D

Session 1: International Watershed Studies I
Integrated Watershed Management Pilot Studies in Ghana
  Kwaku Adu-Boateng and Asum Kwarteng
Effects of Local People on the Success of the Watershed Rehabilitation Projects
  Gursel Kusek
Participatory Micro Watershed Development for Hill Dwellers in Bangladesh: A Challenge
  J.U. Shoaib
Watershed Approach—A Ray of Hope to Rainfed Farmer  
K. Narayana Gowda and K.M. Jayaramaiah

Session 2: International Watershed Studies II

Sustainability Indicator for Water and Land Resources  
Ching-pin Tung and Nien-Ming Hong

The National Water Resources Information System of Argentina  
M. Giraut, S. Ludueña, A. Postiglioni, C. Rey, M. Dente, and I. Sol

Watershed Management Strategies for the Sustainable Environmental Rehabilitation of Stressed Areas in Northern Greece  
Christos A. Karavitis and Ioannis G. Karavokyris

Session 3: Neural Networks

A Study on Real-Time Forecasting of Reservoir Inflow Based on Artificial Neural Networks  
Chang-Sam Jeong, Won-Jun Koh, and Jun-Haeng Heo

Forecasting of Flood Stage Using Neural Networks in the Nakdong River, South Korea  
Sungwon Kim and Soontak Lee

Session 4: Internet Applications

Sharing Watershed Information Through the World Wide Web  
Malchus B. Baker, Jr., Daniel P. Huebner and Peter F. Ffolliott

An Effective Method of Utilizing the Internet to Enhance Watershed Management  
Amy Johnson

Accuracy of a Distributed Runoff Model Using Weather Radar  
Brian E. Skahill and Lynn E. Johnson

Integration of Internet-GIS with Real-Time Rainfall-Runoff Prediction  
Xiaohui Zhang, Reno Fiedler, and Dahai Zheng

Session 5: GIS Applications

Fuzzy Logic for Watershed Assessment  
D. Phillip Guertin, Reno H. Fiedler, Scott N. Miller and David C. Goodrich

Application of GIS-PLAT in Analyzing Phosphorus Loads in the Lake Okeechobee Basin  
Gary Ritter, Yanling Zhao, Weihe Guan, and John Morgan, Jr.

Electronic Master Planning for Watershed Analysis  
Robert Krehbiel
Remote Sensing and GIS Derived Hydrologic Parameters for a Distributed Urban Stormwater Runoff Simulation
Xiaohui Zhang, Eve Halper, and George Ball

Session 6: Hydrology and Hydraulic Considerations in Watershed Management
Exploring the Benefits of Paired Watersheds for Detecting Cumulative Effects
Jim C. Loftis and Lee H. MacDonald

SITES Integrated Development Environment for Watersheds with Multiple Reservoirs
Darrel M. Temple and Mitchell L. Neilsen

Watershed Based Management of the Kankakee River
Nani G. Bhowmik, Mike Demissie, Jim Mick, and Bill White

Delineating Hydrologically-Based Conjunctive Management Units in Idaho
Gerald Sehlke and Gary S. Johnson

Session 7: Instability of Stream Channels
Observed Thresholds of Stream Ecosystem Degradation in Urbanizing Areas:
A Process-Based Geomorphic View
Brian P. Bledsoe and Chester C. Watson

Regional Risk Analysis of Channel Instability
Brian P. Bledsoe and Chester C. Watson

System Level Analysis of Watershed Instability in the Yalobusha Basin, Mississippi
Chester C. Watson, Brian P. Bledsoe, and David S. Biedenharn

Session 8: Design of Watershed Management Restoration
Stochastic and Deterministic Origins of Aquatic and Riparian Habitats
Lee E. Benda and Daniel J. Miller

The Use of Active Watershed Management to Achieve or Accelerate the Accomplishment of Watershed Goals
George G. Ice

Urban Stream Restoration in Maryland: Can Urban Streams be Saved?
Conor Shea and Michael A. Ports

Session 9: Stream Sedimentation I
Using a CDS Unit for Sediment Control in Brevard County, Florida
Justin Strynchuk, John Royal, and Gordon England

Width and Depth Adjustments for Sediment Models of Scour and Deposition
Youssef I. Hafez
Using Tracer Response Curves to Quantify Hydraulic and Channel Complexity of Prairie Creek, Northwestern California
Montgomery Schmitt and Margaret Lang

Investigation of Flood Protection from Alluvial Fan Flows and Minimizing Impacts to a Sensitive Habitat Preserve: Whitewater River Basin, Coachella Valley, California
Anna Lantin

Session 10: Stream Sedimentation II

A Comprehensive Watershed Program for Atlanta Streams
Robbin B. Sotir, Thomas Brosnan, Bruce K. Ferguson, Robert Iosco, Gary Moll, Thomas Schueler, and Rick Watson

Revised Operation of a Dam and Reservoir to Achieve Environmental Objectives
Robert J. Stuart, Susan A. Desaddi, and Timothy J. Smith

Design Considerations for the North Railroad Alluvial Fan Levee System in Boulder City, Nevada
Jun Wang

Channel Network Routing of Flow and Sediment in Agricultural Watersheds
Dalmo A. Vieira, Weiming Wu, Abdul Khan, and Sam S.Y. Wang

Watershed Management Track E

Session 1: Watershed Management Council – Integrated Watershed Management I

Opportunities for Expanding Watershed Management in the Sierra Nevada
Richard Kattelmann

Session 2: Watershed Management Council – Integrated Watershed Management II

Watershed Planning and Management: Institutional Realities
Sari Sommarstrom and Jonathan Bulkley

Comprehensive Watershed Management at the Southwest Florida Water Management District
Craig W. Dye and Mikel E. Renner

Developing and Implementing a Comprehensive Watershed Management Plan for North Carolina’s Neuse River Basin
Lin Xu

A Public-Private Partnership in the Implementation of Watershed-Wide Solutions in Rockledge, Florida
Michael F. Schmidt, James P. McKnight, and James J. Gilliard
Session 3: Report of the ASCE Curve Number Task Committee

Effects of Land Use on Runoff Curve Number
DeAnne Rietz and Richard H. Hawkins

Progress Report: ASCE Task Committee on State of the Practice in Curve Number Hydrology
Richard H. Hawkins

Session 6: Water Quality Challenges in the East

Field Evaluation of Irrigation Systems Applying Lagoon Effluent
J.T. Smith and R.O. Evans

BMPs to Reduce Nutrient Loads in Delaware’s Inland Bays
William F. Ritter

A Weed Wiper for Drainage Ditch Brush Control
J.L. Kemble, W.F. Ritter, and P. Krishnan

Current Water Resources Issues in Georgia: Their Potential Impact on Irrigation
D. Thomas, K. Harrison, J. Hook, G. Hoogenboom, and D. Stooksbury

Session 7: Integrated Approaches to Watershed Management I

Decision Support Process for Truckee River Watershed Management
Steve McDonald, Seema Bhimani, Laura Weintraub, Joel Herr, Carl Chan, and Greg Dennis

A Watershed-Based Trading Program for Cleaning Up Orphan Sites: Testing the Concepts
Jean Marie Boyer, Lee Rozaklis, Robert Weaver, and Ana Oliveira

Big Dry Creek Watershed: A Scientific Approach to Prioritizing Watershed Protection Activities
Jane Clary, Hallie Mahan, and Robert Fiehweg

Recent Case Studies: Decision Support for Environmental Restoration Projects
Ridge Robinson

Session 8: Integrated Approaches to Watershed Management II

Arizona Rural Watershed Initiative: Addressing Arizona's Rural Watershed Needs Through Regional Partnerships
Ellen G. Endebrock

Pollutant Trading: An Innovative Approach to Achieving Water Quality Benefits
Angela Fowler and Ronda Sandquist

Better BMP Practices
Paul R. Koch

Proceedings from conferences held June 20-24, 2000 in Fort Collins, CO.
Edited by Marshall Flug, Donald Frevert, and David W. Watkins, Jr.
Science-Based Decision Making in the Lake Tahoe Watershed
Charles R. Goldman, John E. Reuter, Alan D. Jassby, M. Levant Kavvas,
Alan C. Heyvaert, Geoffrey Schladow, and Theodore J. Swift

Irrigation & Drainage Track F

Session 1: E T in Watershed Management I

The Lower Colorado River Accounting System
Paul Matuska and Jeff Milliken

Development of Evaporation and Evapotranspiration Coefficients
Marvin E. Jensen and Paul Matuska

Session 2: E T in Watershed Management II

Irrigation Water Demand Estimates for the Texas Panhandle (Region A)
Thomas Marek, Steve Amosson, Leon New, Fran Bretz, B.A. Stewart, and
John Sweeten

Revised FAO Procedures for Calculating Evapotranspiration: Irrigation and
Drainage Paper No. 56 with Testing in Idaho
Richard G. Allen, Martin Smith, Luis S. Pereira, Dirk Raes, and
J.L. Wright

ASCE's Standardized Reference Evapotranspiration Equation
I.A. Walter, R.G. Allen, R. Elliott, M.E. Jensen, D. Itenfisu,
B. Mecham, T.A. Howell, R. Snyder, P. Brown, S. Echings,
T. Spofford, M. Hattendorf, R.H. Cuenca, J.L. Wright, and D. Martin

Use of Remote Sensing for Monitoring Evaporation over Managed Watersheds
M. Susan Moran

Session 3: O & M of I & D in the Wet

Construction Practices at a Year-Round-Delivery Irrigation District
Steven R. Knell

Modernization of Major Water Supply Facilities Without Restricting Operation
Arnold K. Dimmitt

Mechanical Maintenance In-the-Wet on the Salt River Project Irrigation System
Gregg O. Elliott and Charles W. Thums

Operational Aspects of Biological Weed Control in Salt River Project Canals
Brian K. Moorhead and Gregg O. Elliott
Session 4: Water Issues in the South Platte

Tamarack Managed Groundwater Recharge Project
Jon Altenhofen

Salinity Characterization and Source Assessment in the South Platte River Basin, Northeastern Colorado
P.A. Haby and J.C. Loftis

Predicting Droughts for the South Platte River System
Chen-hua Chung and Jose D. Salas

Session 5: San Joaquin Valley Drainage Issues I

Land Retirement Option and Retired Land Management
Wesley W. Wallender, Chair, and Members of the Land Retirement Technical Committee of California’s San Joaquin Valley Drainage Implementation Program and the University of California

Session 6: San Joaquin Valley Drainage Issues II

Off-Site Drainage Discharge Limitations and Drainage Management Options
J. Letey, D. Westcot, K. Knapp, W. Shannon, and A. Unger

Reuse of Saline-Sodic Drainage Water for Irrigation
S.R. Grattan, J.D. Oster, S.R. Kaffka, and M.C. Shannon

Hydrogeology and Irrigated Agriculture
Graham E. Fogg, Thomas H. Harter, Wesley W. Wallender, and Blaine R. Hanson

Innovative Drainage Management Practices in California
Joseph McGahan, Doug Davis, and Manucher Alemi

Session 7: Wetlands Management

Water Quality Improvement by a Small In-Stream Constructed Wetland in North Carolina's Coastal Plain
K.L. Bass and R.O. Evans

Brawley, California Wetlands: Design Considerations for Water Quality Improvement
Steve Muth

Reuse and Treatment Strategies for Agricultural Waste Waters
Alan D. Harrison

Parametric Sensitivity Analysis and Evaluation of a Constructed Wetland Model: FWETMOD, Field-Scale Wetland Model
Kevin E. Lynch, A. Ramachandra Rao, and Dennis A. Lyn
Session 8: Infiltration Issues, ET, and Models I

Cropping Systems for Utilization of Saline-Sodic Irrigation Waters
J.D. Oster, S. Kaffka, M.C. Shannon, and K. Knapp

Field-Parameter Estimation for Surface Irrigation Management and Design
T.S. Strelkoff, A.J. Clemmens, and E. Bautista

An Analytical Solution for the Stream-Aquifer Interaction Problem
A.M. Wasantha Lal

Session 9: Infiltration Issues, ET, and Models II

Comparison Between WAVE, SWAP, and DRAINMOD Models in Respect to Lateral Subsurface Drainage
A. El-Sadek, J. Feyen, and J. Berlamont

Changes in Transpiration by Emory Oak Following Tree Harvesting
Peter F. Ffolliott and Gerald J. Gottfried

Two-Dimensional Simulation Model for Contour Basin Layouts in South East Australia
Manoj Khanna, John D. Fenton, Hector M. Malano, and Hugh Turral

Infiltration and Runoff Response from a Complex Soil Plot
G.B. Paige, J.J. Stone, L.J. Lane, and DP. Guertin

Operations Management Track G

Session 1

Panel Discussion - Trends in Federal Water Policy
Moderator: George McMahon, Camp Dresser & McKee, Atlanta, GA
Panelists: Lindsay Thomas, ACT/ACF River Basin Commission, Atlanta, GA
Augustine J. Fredrich, Southern Indiana University, Evansville, IN
Neil Grigg, Colorado State University, Fort Collins, CO

No papers were submitted for this session.

Session 2
Panel Discussion - Southeast Water Compacts
Moderator: Edmund B. Burkett, US Army Corps of Engineers, Mobile, AL
Panelists: Nolton Johnson, Water Resources Branch, Atlanta, GA
Steve Leitman, Northwest Florida Water Management District, Havana, FL
Walter Stevenson, Alabama Office of Water Resources, Montgomery, AL
Matt Kales, Upper Chattahoochee Riverkeeper, Atlanta, GA
Mark Crisp, Southeast Federal Power Customers, Marietta, GA

No papers were submitted for this session.

Session 3: The Future of Panama's Canal

No papers were submitted for this session.

Session 4: Reallocation Studies I: ACT-ACF River Basin

Environmental Impact Assessment for Water Allocation and Reservoir Reallocation in the Apalachicola-Chattahoochee-Flint and Alabama-Coosa-Tallapoosa River Basins: A Programmatic Evaluation Approach
Joanne U. Brandt

Environmental Analysis for Water Allocation in the ACT and ACF River Basins: Water Quality and Freshwater Resources
Michael J. Eubanks

Session 5: Reallocation Studies II

Youghiogheny River Lake Water Management and Reallocation Study
Werner C. Loehlein and Corey A. Rich

Session 6: USACE Water Control Data System Modernization

Water Control Data System Modernization: Huntington District, Corps of Engineers
Coy W. Miller and Jerry W. Webb

Session 7: Hydropower in the 21st Century

Automated Real-Time Hydropower Scheduling for Lower Colorado River, Texas
Quentin W. Martin

Operating Policy for a Pumped Storage Hydropower System
G.V. Loganathan and C. Moore
Session 8: Panel Discussion: Why Aren't Inflow Forecasts Used More Often in Operations and How Can That Be Changed?

Moderator: Quentin Martin, Lower Colorado River Authority, Austin, TX

Panelists: Edmund Burkett, US Army Corps of Engineers, Mobile, AL
Charles Howard, Charles Howard Associates, Victoria, Canada
Werner Loehlein, US Army Corps of Engineers, Pittsburgh, PA
Arland Whitlock, Tennessee Valley Authority, Knoxville, TN
Darell D. Zimbelman, Northern Colorado Water Conservancy District, Loveland, CO

No papers were submitted for this session.

Operations Management Track H

Session 1: Decision Support Systems I

Colorado's Decision Support Systems: Data-Centered Water Resources Planning and Administration
Steven A. Malers, Ray R. Bennett, and Catherine Nutting-Lane

Spatial Decision Support System for River Basin Management
John W. Labadie, Tarek H. Salem, and Roger K. Larson

Session 2: Decision Support Systems II

WATSIDE: A Methodology for WATer Supply Integrated Development
Jean-Sébastien Thomas, Jean-Claude Deutsch, Ian Bates, Laurent Phan, and Thierry Vandevelde

Monthly Reservoir Operating Rules Generated by Implicit Stochastic Optimization
Taesoon Kim, Jun-Haeng Heo, and Jaeewon Yi

Streamflow Forecasting Systems for Operations and Emergency Management
Steven A. Malers, Fritz R. Feidler, and Larry E. Brazil

Scenario-Based Approaches to Flood Control Operations Support
David W. Watkins, Jr.

Session 3: Potential Impacts of Climate Change on Operations

Climate Change Impacts on Water-Resource Operations in the Rocky Mountain/Great Basin Region
Connely K. Baldwin, Upmanu Lall, and Frederic H. Wagner

Session 4: Forecasting Systems for Operations and Emergency Management

Establishing an Operational River Forecasting Environment in Mexico
Mark S. Woodbury, Antonio Acosta Godinez, Gerald N. Day, and Richard W. Paulson
A Streamflow Forecasting System for the Operation of the Panama Canal
Michael D. Kane, Gerald N. Day, Robert Jubach, and Modesto Echevers

Flood Warning Systems Implementation within Huntington District, Corps of Engineers
Coy W. Miller and Jerry W. Webb

Session 5: Climate Forecasts and Severe Hydrologic Events

Value of ENSO Information in Reservoir Operations in Korea
Young-Oh Kim and Hyun-Suk Lee

Operational Seasonal Streamflow Forecasting Using Climate Information
Connely K. Baldwin and Upmanu Lall

Risk and the Management of Severe Droughts in England and Wales
John Mawdsley, Miranda Foster, and Stuart Homann

Risk Based Design and Evaluation of Spillway Structures: An Overseas Perspective
Stephen W. Rogers

Session 6: Operation of Urban Water Systems

Rain and Gray Water Reuse Systems: The Hazard of Legionnaires’ Disease
T. Clark Lyons

Application of Simulated Annealing for Integrated Urban Water Systems: Infrastructure, Treatment, and Re-Use Optimisation
Christopher Zoppou

Salinity Management in Urban Southern California
James V. Daber and Andrew Sienkiewich

Lake Solano Sediment Management Study
Larry L. Harrison, Robert C. MacArthur, and Roland A. Sanford