

National Surface Water Conference & Hydroacoustics Workshop
April 2-6, 2007

Monday April 2, 2007

Time	Event	Room
7:00 am	Registration Open	St. Louis East
8:00-4:30 pm	Training Classes and Field Trip	
8:00-12:00	<u>AM Classes (Break at 10-10:15 am)</u>	
	SWSTAT—Aqua Terra Consultants and Idaho State University	Jefferson A
	Wireless Communications—Paul Diaz	Jefferson B
	Application of Upward Looking ADCP's—Marinna Martini	Jefferson C
	Measurements in Extreme Conditions—Dave Mueller	Jefferson D
	Introduction to WinRiver II for WinRiver Users—Jeff East	Jefferson E
	HEC/RAS 1-D Steady Flow Model—Army Corps of Engineers	Jefferson F
	MD-SWMS—Richard McDonald and Jonathan Nelson	Lewis
1:00-5:00pm	<u>PM Classes (Break at 2:30-2:45 pm)</u>	
	MapWindows GIS—Aqua Terra Consultants and Idaho State University	Jefferson A
	Section by Section Measurements—Mike Rehmel	Jefferson B
1:00-2:30pm	Filtering Tidal Data for ADAPS—John Donovan, Pete Smith, and Cathy Ruhl	Jefferson C
	Estimating Suspended Sediment—Jeff Gartner, Scott Wright, and Victor Levesque	Jefferson D
	Introduction to WinRiver II for WinRiver Users—Kevin Oberg	Jefferson E
	HEC/RAS 1-D Unsteady Flow Model—Army Corps of Engineers	Jefferson F
12:15-6:15 pm	USACE Field Trip	Riverfront
6:00-8:00 pm	Western Region Meeting	Chouteau
1:00-8:00 pm	Open for Exhibitor Setup	Grand Ballroom

Tuesday April 3, 2007

Time	Event	Room
8:00-8:10 am	Welcome—Conference Agenda and Goals/ Chief OSW	Grand Ballroom
8:10-8:15 am	Engineering Foundation of St. Louis “Welcome to St. Louis”	
8:15-9:00 am	Surface Water Science in the USGS—“Accomplishments, Future Directions, and Challenges/Associate Director for Water	
9:00-10:00 am	Dr. Gerry Galloway, Keynote Speaker, presenting—“You Never Stop Learning about Water: Lessons from Disasters and Road Maps to the Future”	
10:00-10:15 am	BREAK	
10:15-11:45 am	Technical Sessions	
	1A—Statistical Hydrology—Uncertainty Analysis	Moderator: Julie Kiang Lewis/Clark
	<ul style="list-style-type: none"> • <i>Uncertainty of Slope-Area Discharge Measurements</i> / Janice Fulford (HIF) • <i>Discharge Uncertainty Calculations Using a SonTek/YSI FlowTracker</i> / Craig Huhta (SonTek/YSI, Inc.) • <i>Uncertainties in Discharge Records: Stage-Slope Discharge Stations and Rating Shifts</i> / Art Schmidt (University of Illinois) • <i>Estimating Discharge Uncertainty in Real Time</i> / Julie Kiang (OSW) 	
	1B—Hurricane Lessons	Moderator: Van Wilson Jefferson A
	<ul style="list-style-type: none"> • <i>Mapping Hurricane Katrina Peak Storm Surge in AL, MS, and LA</i> / Van Wilson (MS WSC) • <i>Mapping Rita Storm Surge in SE Texas and SW Louisiana</i> / Robert Mason (OSW) • <i>RTK-GPS Surveying Methodology for Surveying in the Face of Hurricane Land Fall</i> / Wade Kress (TX WSC) • <i>Overview of USGS Coastal and Marine Group in Hurricane Research</i> / Hillary Stockton (GD) 	
	1C—Hydrologic and Hydraulic Modeling	Moderator: Pete Smith Jefferson D
	<ul style="list-style-type: none"> • <i>Strategies for Optimizing Computationally Intensive 3D Particle Tracking to Generate Transit Times and Zones of Entrainment from Open-Channel Velocity Fields</i> / John Donovan (CA WSC) • <i>Combining Observations and Models to Investigate the 1950-2000 Climate, Evaporation Rate, and Water Balance of Klamath Lake, OR</i> / Steve Hostetler (WR) • <i>Modeling hydrodynamics and tidal circulation in Glacier Bay, Alaska</i> / Ralph Cheng (NRP-WR) • <i>Hydrodynamic Clues for Solving the Mystery of the Declining Delta Smelt Population in the San Francisco Bay-Delta Estuary, California</i> / Pete Smith (CA WSC) 	
	1D—Stream Restoration/Geomorphology	Moderator: Matt Larsen Chouteau
	<ul style="list-style-type: none"> • <i>Use of Laboratory Experiments to Aid in Testing Numerical Models of River Channel Evolution</i> / Paul Kinzel (NRP-CR) • <i>Interactions Among River Flow, Geomorphic Processes, and Riparian Vegetation</i> / Andrew Wilcox (NRP-CR) • <i>Geomorphic Applications of Streamflow-Gage Information</i> / Kyle Juracek (KS WSC) • <i>Equations for Estimating Bankfull Channel Geometry and Discharge for Streams in the Northeastern US</i> / Gardner Bent (MA/RI WSC) 	

1E—Index Velocity Measurements	Moderator: Roy Wellman	Jefferson B/C
<ul style="list-style-type: none"> • <i>Acoustic Enhancement for Low-Velocity Data</i> / Molly Wood (FL-ORL WSC) • <i>Lessons Learned through Real-Time Springflow Monitoring at Jacobs Well Spring near Wimberly, Texas</i> / William Asquith (TX WSC) • <i>Merging Use of Index-Velocity with Traditional Methods for Flow Computation in Oregon Streams</i> / Karl Lee (OR WSC) 		
1F—Field Application - I	Moderator: John Goodson	Jefferson E
<ul style="list-style-type: none"> • <i>An Overview of Reclamation's Hydroacoustic Activities</i> / Tracy Vermeyen (Bureau of Reclamation) • <i>Hydroacoustics in Missouri</i> / Gary Wilson (MO WSC) • <i>Streampro ADCP experiences in Sweden</i> / Christer Jonsson (SMHI) 		
1G—Water Quality Applications	Moderator: Chad Wagner	Jefferson F
<ul style="list-style-type: none"> • <i>Effect of discharge on dispersion in rivers</i> / Meredith Carr (University of Illinois) • <i>Estimating contaminant dispersion with acoustic Doppler current profilers</i> / Chris Rehmann (Iowa State University) • <i>Monitoring the hydrologic processes controlling mercury cycling in Great Salt Lake, Utah</i> / Cory Angerth (UT WSC) 		
11:45-1:00 pm LUNCH ON YOUR OWN		
1:00-2:30 pm Technical Sessions		
2A—Floods and Droughts—Flood Documentation and Warning	Moderator: John Costa	Lewis/Clark
<ul style="list-style-type: none"> • <i>Debris flows and Record Floods from Extreme Mesoscale Convective Thunderstorms over the Santa Catalina Mountains, Arizona</i> / Chris Magirl(NRP-WR) • <i>Flash-Flood Warning for the Upper Sutlej River Basin, Northern India</i> / Jerad Bales (NC WSC) • <i>Rating Development and Ongoing Verification in High-Gradient Streams</i> / Rick Fontaine (HI WSC) • <i>Flood Science in the USGS</i> / John Costa (OSW) 		
2B—Statistical Hydrology—Flood Frequency Analysis	Moderator: Tim Cohn	Jefferson A
<ul style="list-style-type: none"> • <i>Annual Peak Discharges in Southern California—Are the Data Trendy?</i> / Chuck Parrett (CA WSC) • <i>Techniques for estimating magnitude and frequency of floods in GA, NC, and SC</i> / Toby Feaster (SC WSC) • <i>Updating Bulletin 17B: What May Change, What is Likely to Remain the Same</i> / Tim Cohn (OSW) • <i>A mixed population approach for Peak-Flow Frequency Analysis for the Black Hills of Western South Dakota</i> / Dan Driscoll (SD WSC) 		
2C—Hydrologic and Hydraulic Modeling	Moderator: Kate Flynn	Jefferson D
<ul style="list-style-type: none"> • <i>Two-Dimensional Flow Modeling for a Flood Insurance Study in Montana</i> / Katherine Chase (MT WSC) • <i>Near Real-Time Continuous Rainfall-Runoff/Dynamic-Wave Streamflow Simulation with USGS/NWS Inputs for Salt Creek in Northeastern Illinois</i> / Audrey Ishii (IL WSC) • <i>SToRM: an unstructured-grid surface water modeling tool in MD_SWMS</i> / Francisco Simoes (NRP-CR) • <i>Use Of UnTRIM To Investigate Dissolved Oxygen Transport In Upper Klamath Lake, OR</i> / Tamara Wood (OR WSC) 		
2D—In-Stream Flow Analysis/Modeling	Moderator: Robb Jacobson	Chouteau
<ul style="list-style-type: none"> • <i>Water for ecological needs: An overview of the state of the science</i> / Robb Jacobson (BRD) • <i>A New Hydroecological Assessment Process To Evaluate The Effects Of Water Management On Hydrologic Variability In Streams</i> / Jim Henriksen (BRD) • <i>Physical Habitat Classification and Instream Flow Modeling to Determine Habitat Availability During Low-Flow Periods, North Fork Shenandoah River, Virginia</i> / Jennifer Krstolic (VA WSC) • <i>Guidelines Intended to Optimize Preservation of a Riparian Habitat and Aesthetics of Multi-Use Areas, While Mitigating Damage from Floodflows</i> / Jeff Phillips (AZ WSC) 		

	2E—Quality Assurance/Quality Control and Uncertainty – I (Mid-Section)	Moderator: Elizabeth Hittle	Jefferson B/C
	<ul style="list-style-type: none"> • <i>Automated Quality Assurance and Quality Control in the SonTek FlowTracker</i> / Craig Huhta (SonTek/YSI, Inc.) • <i>Optimum sampling time in wading discharge measurements using Acoustic Doppler Velocimeters (ADV)s</i> / Carlos Marcelo Garcia (Universidad Nacional de Cordoba) • <i>Uncertainty in Section-by-Section Discharge Measurements of Large Streams</i> / Art Schmidt (University of Illinois) 		
	2F—Coastal and Tidal Environments	Moderator: Robert Mason	Jefferson E
	<ul style="list-style-type: none"> • <i>Removing Tidal Influence from ADAPS Data using the Gr Time Series Filter (gr_filter)</i> / John Donovan (CA WSC) • <i>A Comparison of Tidal Filters on Two Sites Along the South Carolina Coast</i> / Paul Conrads (SC WSC) • <i>Lessons Learned from a Shallow Water Acoustic Telemetry Experiment</i> / Marinna Martini (GD) 		
	2G—Field Applications - II	Moderator: Molly Wood	Jefferson F
	<ul style="list-style-type: none"> • <i>Assessment of Remote Control Boats for Hydrometric Operations</i> / Paul Campbell (Environment Canada) • <i>Updating the Quality Management System and Sensor Installation in the Netherlands</i> / Aad Hartman (Rijkswaterstaat East Netherlands) • <i>Flow Meter Data Collection Methods using Sutron XPert/9210 Data Loggers</i> / Dave Gunderson (Bureau of Reclamation) 		
2:30-2:45 pm	BREAK		
2:45-4:15 pm	Technical Sessions		
	3A—Climate Change	Moderator: Glenn Hodgkins	Lewis/Clark
	<ul style="list-style-type: none"> • <i>An Overview of Climate Change in the WRD</i> / Earl Greene (NRP-HQ) • <i>Changes in Winter-Spring River Flows and River Ice in Eastern North America during the 20th Century</i> / Glenn Hodgkins (ME WSC) • <i>Modeling 100+ years of South Cascade Glacier Surface Mass Balance: 1900-2005</i> / Faron Anslow (OR State University) • <i>Feedback of climate variability to the mean state: Implications for surface water</i> / Steve Hostetler (WR) 		
	3B—Hydraulic Measurements	Moderator: Charles Berenbrock	Jefferson A
	<ul style="list-style-type: none"> • <i>Physical Monitoring of Flow Into and Within Great Salt Lake, Utah</i> / Terry Kenney (UT WSC) • <i>Hydrodynamics of high-amplitude Kinoshita meandering channels</i> / Jorge D. Abad (University of Illinois) • <i>Measuring Streamflow in Ice-Affected Streams using an Automated Dye-Dilution System</i> / Andrea Fleming (CO WSC) • <i>Using a Genetic Algorithm to Reduce Cross-Section Data</i> / Charles Berenbrock (OSW) 		
	3C—Hydrologic and Hydraulic Modeling	Moderator: Bob Holmes	Jefferson D
	<ul style="list-style-type: none"> • <i>Flood-Hazard and Flood-Mitigation Analysis of Blackberry Creek watershed, Kane County, Illinois</i> / Elizabeth Murphy (IL WSC) • <i>Comparisons between NEXRAD Radar and Tipping-Bucket Gage Rainfall Data: A Case Study for DuPage County, Illinois</i> / Tom Over (IL WSC) • <i>Phase-Doppler Particle Analysis and the Physics of Suspended-Sediment Transport</i> / Jonathan Nelson (NRP-CR) • <i>Hydrologic Model for Forecasting Floods by use of Near-Real-time Data in the Great Miami River Watershed, Ohio</i> / Barry Puskas (OH WSC) 		

3D—In-Stream Flow Analysis/Modeling <ul style="list-style-type: none"> • <i>Natural flow regimes for streams in southern New England</i> / Stacey Archfield (MA/RI WSC) • <i>Ecologically-relevant quantification of streamflow regimes for ungaged sites</i> / Valerie Kelly (OR WSC) • <i>Automation of River Cross-Sectional Data Analysis for Hydraulic Habitat Characterization</i> / Daniel Ginting (NE WSC) • <i>Linking Spatially Distributed Data From A Multidimensional Flow Model of the Kootenai River Near Bonners Ferry, Idaho and White Sturgeon Spawning Patterns and Telemetry</i> / Gary Barton (ID WSC) 	Moderator: Ken Bencala	Chouteau
3E—Measurements Under Ice <ul style="list-style-type: none"> • <i>Comparing instruments and methods for discharge measurements on ice-covered rivers</i> / Kristoffer Dybvik (The Norwegian Water Resources and Energy Directorate) • <i>Discharge Measurements Under Ice Using the Streampro</i> / Greg Stewart (ME WSC) • <i>ADCP Discharge Measurements under Ice</i> / Chris Laveau (ND WSC) 	Moderator: Jeff Woodward	Jefferson B/C
3F—Moving Bed Corrections <ul style="list-style-type: none"> • <i>Doppler Velocities from GPS for Use with ADCP</i> / Francois Rainville (Environment Canada) • <i>Loop Method for Correcting Acoustic Doppler Current Profiler Discharge Measurements Biased by Sediment Transport</i> / Chad Wagner (NC WSC) • <i>Measuring the Amazon River with Moving Bed. Difficulties and Learning Experiences</i> / Paulo Gamaro (Itaipu Binacional) 	Moderator: Jeff East	Jefferson E
3G—Quality Assurance/Quality Control and Uncertainty - I (Moving Boat ADCP) <ul style="list-style-type: none"> • <i>Accuracy and Uncertainty of ADCP Discharge Measurement</i> / Randy Marsden (Teledyne RD Instruments) • <i>Practical Approach for Assessment of ADCP Measurement Accuracy</i> / Marian Muste (IIHR-Hydroscience & Engineering) • <i>Open Forum Discussion</i> 	Moderator: David S. Mueller	Jefferson F

4:15 pm

ADJOURN

5:30-7:30 pm

Hydroacoustics Poster Session and Welcome Reception (Light hors d'oeuvres and drinks)

Grand Ballroom

Wednesday April 4, 2007

Time	Event	Room
8:00-8:30 am	Hydroacoustics Orientation / Kevin Oberg	Grand Ballroom
8:30-9:30 am	Dr. Jim Best, Keynote Speaker, presenting--"Acoustic Doppler profiling and multibeam echo sounding in a large river: some experiences from the Rio Paraná, Argentina"	
9:30-9:45 am	BREAK	
9:45-11:15 am	Technical Sessions	
	4A—National Surface Water Programs—Overview of Selected Programs Moderator: Joseph Nielsen <ul style="list-style-type: none"> • <i>The Future of ADAPS</i> / Joseph Nielsen (OSW, Maine) • <i>Water Science Center Current Meter Exchange Results for WY2006 and prior Years</i> / Kirk Thibodeaux (OSW-HIF) • <i>Update on Federal Interagency Sedimentation Project (FISP) Activities</i> / Brod Davis (OSW-FISP) • <i>Modeling rating changes</i> / Mike Nolan (WR) 	Lewis/Clark
	4B—Floods and Droughts—Drought Analysis and Prediction Moderator: Harry Lins <ul style="list-style-type: none"> • <i>Decadal-to-Multidecadal Variability in Global Sea-Surface Temperatures and North American Hydroclimate</i> / Greg McCabe (NRP-CR) • <i>2005-2006 Drought in Oklahoma -- Comparing the impact on streamflow with some major droughts in the 20th Century</i> / Robert Tortorelli (OK WSC) • <i>A fresh look at low-flow statistics for streams in Minnesota, 2004</i> / Allan Arnston (MN WSC) • <i>Regional Droughts and Floods: They Can Be Predicted!</i> / Charlie Perry (KS WSC) 	Jefferson A
	4C—Hydrologic and Hydraulic Modeling—Hydrologic Modeling with MMS Moderator: Lauren Hay <ul style="list-style-type: none"> • <i>Integrated Modeling</i> / Steve Markstrom (NRP-CR) • <i>Integration of surface-water and groundwater modeling</i> / Steve Regan (NRP-CR) • <i>Water quality modeling in the Modular Modeling System – The Water, Energy and Biogeochemical Model (WEBMOD)</i> / Rick Webb (NRP-CR) • <i>The role of geographic information in modeling</i> / Roland Viger (NRP-CR) 	Jefferson D
	4E—Hydrodynamic Applications - I Moderator: Victor Levesque <ul style="list-style-type: none"> • <i>Acoustic Doppler Current Profiler Surveys and Hydraulic Modeling of Endangered-Mussel Habitat at a Bridge Replacement Site along the Allegheny River in Western Pennsylvania</i> / Chad Wagner (NC WSC) • <i>Multidimensional Hydrodynamic and Channel Evolution Modeling of the Knik River, Alaska</i> / Jeff Conaway (AK WSC) • <i>Using Hydroacoustic Measurements to Calibrate and Validate a Three-Dimensional Hydrodynamic Model for the Delta Cross Channel Region of the Sacramento River, California</i> / Pete Smith (CA WSC) 	Jefferson B/C
	4F—Streambed Measurements Moderator: Marinna Martini <ul style="list-style-type: none"> • <i>Ground-truthing bedforms Recorded by an Imagenex Sonar</i> / Ellyn Montgomery (NER) • <i>Use of single beam and side-scan sonar to map benthic substrates in Great Salt Lake, Utah</i> / Rob Baskin (UT WSC) • <i>Applications of Single-Beam Multi-Path Acoustics to Discriminate and Characterize Submerged Aquatic Substrates</i> / Hans Biberhofer (Environment Canada) 	Jefferson E

4G—Daily Quality Improvements		Moderator: Francois Rainville	Jefferson F
	<ul style="list-style-type: none"> • <i>Acoustic directivity and its role in the quality assurance of discharge measurements using side-looking Doppler instruments in shallow water</i> / John Romeo (SonTek/YSI Inc) • <i>Application of a Kalman Filter with GPS and Bottom Track to Improve the Reference Velocity Precision of ADCP Measurements</i> / Shalini Kashyap (University of Ottawa) • <i>Automated Quality Assurance of Broadband Acoustic Doppler Current Profiler Data</i> / David Mueller (OSW, KY) 		
11:15 am-1:00 pm	LUNCH		
1:00 – 2:00 pm	Distinguished Awardees Presentation		Grand Ballroom
2:00 - 2:30 pm	BREAK		
2:30 – 4:00 pm	Technical Sessions		
	5A—National Surface Water Programs— The Future of Streamgaging in the USGS	Moderator: Robert Mason	Lewis/Clark
	<ul style="list-style-type: none"> • <i>The Future of Streamgaging in the USGS</i> / Scott Gain (TN WSC) • <i>Panelist</i> / J. Michael Norris (OSW, NH) • <i>Panelist</i> / Gregg Wiche (ND WSC) • <i>Panelist</i> / Walt Aucott (KS WSC) 		
	5B—Sedimentation	Moderator: Stephen Benedict	Jefferson A
	<ul style="list-style-type: none"> • <i>Guidelines for Computation of Time-Series Suspended-Sediment Discharges Using Continuous In-Stream Turbidity and Streamflow Data</i> / Patrick Rasmussen (KS WSC) • <i>Collection and Distribution of Near Real-Time Streambed Scour Monitoring Data from Bridges in Alaska</i> / Josh Morse (AK WSC) • <i>Comparison of 1-D and 2-D Model Results with Field Data for the Development of Modeling Guidelines at Bridges in North Carolina</i> / Chad Wagner (NC WSC) • <i>Calibration of Clear-Water Abutment Scour Equations Using Field Data</i> / Stephen Benedict (SC WSC) 		
	5C—Hydrologic and Hydraulic Modeling— Hydrologic Modeling with MMS	Moderator: Steve Markstrom	Jefferson D
	<ul style="list-style-type: none"> • <i>Surface Water Modeling With the Precipitation Runoff Modeling System</i> / Lauren Hay (NRP-CR) • <i>Hydrologic Modeling for the Flint River Science Thrust Project in Georgia to Assess Water Availability for Ecological Needs</i> / Kenneth Odom (KY WSC) • <i>A Watershed Model for the South Fork Flathead River Basin Upstream from Hungry Horse Dam</i> / Katherine Chase (MT WSC) • <i>Estimation of the effects of land use on ground water recharge and streamflow using the Precipitation Run-off Modeling System (PRMS) Watershed Model for the Pomperaug River, Connecticut</i> / David Bjerklie (CT WSC) 		
	5E—Hydrodynamic Applications II	Moderator: John Shelton	Jefferson B/C
	<ul style="list-style-type: none"> • <i>Differences in Measured and Modeled Vertical Velocities in Upper Klamath Lake, Oregon</i> / Jeffrey Gartner (NRP-WR) • <i>Bathymetric and Velocity Mapping on the Matauska River, Alaska</i>: Jeff Conaway (AK WSC) • <i>Characterization of River Hydrodynamics Using ADCP Measurements</i> / Marian Muste (IIHR-Hydroscience & Engineering) 		

5F—Index Velocity Ratings

Moderator: Jim DeRose

Jefferson E

- *Development of Index Velocity Ratings at Two Complex Tidally Influenced Locations in the Sacramento-San Joaquin Delta, California* / Paul Stumpner (CA WSC)
- *Index Velocity Ratings and Verification in High Gradient Coastal Streams* / Ed Mayert (Environment Canada)
- *The Use of Channel Characteristics for the Calibration of Index Velocity Ratings for Acoustic Doppler Velocity Meters* / Brent Hanson (ND WSC)

5G—Instrument Testing & Intercomparisons - I

Moderator: Mike Rehmel

Jefferson F

- *Comparison of ADCP measurements showing bias in mode 12 small bins* / Erlend Moe (Norwegian Water Resources and Energy)
- *Validation of Streamflow Measurements Made with Acoustic Doppler Current Profilers* / Kevin Oberg (OSW IL)
- *Duration of Streamflow Measurements Made with Acoustic Doppler Current Profilers* / Kevin Oberg (OSW IL)

4:00 pm

ADJOURN

4:30 pm -

Open house for 1993 Flood Presentation on Levee in from the Arch

Riverfront Stage

7:00 – 7:30 pm

Loading at docks for Dinner Cruise

Right of

7:30 – 9:30 pm

Gateway Arch Riverboat Dinner Cruise

Riverfront Stage

Thursday April 5, 2007

Time	Event	Room
8:00 - 8:30 am	Committee Recognition / Deputy Chief OSW	Grand Ballroom
8:30 - 9:30 am	Keynote Speaker—Dr. Gary Parker	
9:30 - 9:45 am	BREAK	
9:45 - 11:15 am	Technical Sessions	
	6A—Hydraulic Measurements	Moderator: Janice Fulford Lewis/Clark
	<ul style="list-style-type: none"> • <i>Estimating Manning's Roughness Coefficients for Illinois Streams</i> / David Soong (IL WSC) • <i>ADCP measurement of bathymetry and velocity field over a deep scour hole</i> / Bob Rowsell (Environment Canada) • <i>Continuous Slope-Area Method for Determining Stream Discharge</i> / Chris Smith (AZ WSC) • <i>Accuracy Testing of Pulse Radar Water Level Sensors</i> / Janice Fulford (OSW-HIF) 	
	6B—Sedimentation	Moderator: John Gray Jefferson A
	<ul style="list-style-type: none"> • <i>Sedimentation Patterns within the Atchafalaya Basin, Louisiana</i> / Cliff Hupp (NRP-ER) • <i>When Sediment Rating Curves Fail</i> / Scott Wright (CA WSC) • <i>Calibrating a Watershed-Scale Sediment Transport Model in a Data Poor Environment</i> / Lorrie Flint (CA WSC) • <i>Real Time Monitoring of Suspended Sediment Particle Size Distribution and Concentration in Shallow and High Concentration Rivers and Streams</i> / Chuck Pottsmith (Sequoia Scientific, Inc.) 	
	6C—Statistical Hydrology—Flood Frequency Analysis	Moderator: William Asquith Jefferson D
	<ul style="list-style-type: none"> • <i>Regionalization of streamflow characteristics for the Gulf-Atlantic Rolling Plains using leverage-guided region-of-influence regression</i> / Ken Eng (NRP-ER) • <i>Recent progress in applications of scaling to regional flood analysis</i> / Brent Troutman (NRP-CR) • <i>A Logistic Regression Equation and an Automated Procedure for Mapping the Probability of a Stream Flowing Perennially in Massachusetts</i> / Gardner Bent (MA/RI WSC) • <i>National Streamflow Statistics Program: An expanded hydrologic tool for planning, management and design</i> / Phil Turnipseed (OSW) 	
	6D—In-Stream Flow Analysis/Modeling	Moderator: Jim Henriksen Chouteau
	<ul style="list-style-type: none"> • <i>The Influence of Ecological Uncertainty on Evaluations of the Effect of Water Use on Stream Fishes</i> / James Peterson (BRD) • <i>Characterization and Trends of Hydrologic Indices at Lower Platte River Gaging Stations</i> / Daniel Ginting (NE WSC) • <i>Optical property measurements for high resolution monitoring of dynamic systems</i> / Bryan Downing (CA WSC) • <i>Botanical Evidence of Paleofloods</i> / Tom Yanosky (NRP-ER) 	
	6E—Hydrodynamic Applications - III	Moderator: Jeff Conaway Jefferson B/C
	<ul style="list-style-type: none"> • <i>Flow measurement in swift water using an ADCP and a pitot-static tube</i> / Chris Magirl (NRP-WR) • <i>Velocity Bias Induced by Flow Patterns Around an Acoustic Doppler Current Profiler</i> / David Mueller (OSW KY) • <i>Mapping and Quantification of the ADCP Flow Disturbance Error</i> / Marian Muste (IIHR-Hydroscience & Engineering) 	
	6F—Innovative Hydroacoustics Applications	Moderator: Clinton Hittle Jefferson E
	<ul style="list-style-type: none"> • <i>Unique Measurements of Density Currents in the Chicago River Using ADCPs</i> / Kevin Oberg (OSW IL) • <i>Field characterization of bi-directional flows generated by gravity currents in the Chicago River, Illinois, USA</i> / Carlos Marcelo Garcia (Universidad Nacional de Cordoba) 	

- *Upward Looking Velocity Meter Experiences in central New York State* / Hank Zajd (NY WSC)

6G—Instrument Testing & Intercomparisons - II**Moderator: Paul Émile Bergeron**

Jefferson F

- *Comparison of discharge data using different Acoustic Doppler profilers at Chateauguy River* / Yves Choquette (Hydro-Quebec)
- *Hydrometric Measurements to Verify the Ashland Avenue Stage-Discharge Relationship in the Niagara River* / Aaron Thompson (Environment Canada)
- *Potential Issues when Measuring Streamflow with the StreamPro* / Mike Rehmel (IN WSC)

11:15-1:00 am

LUNCH ON YOUR OWN

1:00-2:30 am

Technical Sessions

7A—Hydrologic and Hydraulic Modeling—Hydraulic Modeling**Moderator: Jerad Bales**

Lewis/Clark

- *Peak Discharge, Flood Profile, Flood Inundation, and Debris Movement Accompanying the Failure of the Upper Reservoir at the Taum Sauk Pump Storage Facility near Lesterville, Missouri* / Paul Rydlunc, Jr. (MO WSC)
- *Propagation of dambreak waves on steep slopes; application to the Taum Sauk Dambreak, Dec 14, 2005* / Roger Denlinger (WR)
- *Stage-Discharge Rating Extensions to the 200-Year Flood for Flood-Hardening of Coastal Streamgages in Texas* / Karl Winters (TX WSC)
- *Three-Dimensional Modeling of Flows in Devils Lake, ND* / Jerad Bales (NC WSC)

7B—Data Processing—Data Processing**Moderator: William Bartlett**

Jefferson A

- *An Automated Tool for Processing Discharge Measurements* / Jay Kiesler (IN WSC)
- *A New Method for Automated Validation of Continuous and Real Time Water Quality and Quantity Data* / Peter Hudson (Aquatic Informatics, Inc.)
- *Go2: A Computer Script Which Tries to Determine Where Site Visits are Needed* / Brian Loving (KS WSC)
- *Surface Water Related Software Survey* / Kate Flynn (OSW)

7C—Statistical Hydrology**Moderator: Phil Turnipseed**

Jefferson D

- *A Reconnaissance Paleoflood Study for the Black Hills of Western South Dakota* / Dan Driscoll (SD WSC)
- *Significant Changes in Magnitude and Frequency of Floods in the Congaree River, South Carolina: A Result of Regulation?* / Toby Feaster (SC WSC)
- *The Unbearable Heaviness of the Right-Hand Tail* / Tim Cohn (OSW)
- *A Poor Man's Tool for Removing Bias in Hydrologic Regression Equations Using PRESS Minimization* / William Asquith (TX WSC)

7D—In-Stream Flow Analysis/Modeling**Moderator: Tom Yanosky**

Chouteau

- *A Method to Thermally Profile Long River Reaches to Identify Potential Ground-Water Discharge Areas and Preferred Salmonid Habitat* / John Vaccaro (WA WSC)
- *Regionalized predictors of ecological flow requirements for the management of Tennessee streams* / Rodney Knight (TN WSC)
- *Effects of surface-water diversions on habitat availability for native macrofauna, northeast Maui, Hawaii* / Stephen Gingerich (HI WSC)
- *Incorporation of habitat models within the U.S. Geological Survey's Multi-dimensional Surface Water Modeling System* / Richard McDonald (NRP-CR)

7E—Acoustics & Sediment - I**Moderator: Terry Kenney**

Jefferson B/C

- *Monitoring suspended-sediment flux with hydroacoustics on the Colorado River in Grand Canyon* / Scott Wright (CA WSC)

- *Real Time Moving Bed Prediction Using ADCP Data Only* / Francois Rainville (Environment Canada)
- *In-situ measurements of turbidity currents in Monterey Submarine Canyon* / Jingping Xu (GD)

7F—Bathymetric and Velocity Applications**Moderator: Jon Hortness**

Jefferson E

- *Overview of Hydroacoustic Surveying Post-Processing Software* / Mike Anderson (NE WSC)
- *Accuracy Assessment of Bathymetric Maps and Area/Capacity Tables for Small Reservoirs* / Gary Wilson (MO WSC)
- *Acoustic Doppler Measurement Analysis and Processing (AdMap)* / David Mueller (OSW IL)

7G—Mid-Section Measurements with Acoustics**Moderator: Marc Stewart**

Jefferson F

- *Comparison of Sontek RiverSurveyor system with the Stationary Measurement Software to Current Meter Measurements and Stable Stage-Discharge Ratings* / Sonny Anderson (FL-ORL WSC)
- *Using Hydroacoustic Instruments in a discrete mode for open water and under ice measurements* / Paul Campbell (Environment Canada)
- *Acoustic Doppler Instruments for Mobile and Stationary Measurement of Flow in Rivers and Open Channels* / Stefan Siedschlag (Ott Messtechnik GmbH & Co. KG)

2:30-2:45 pm**BREAK****2:45-4:15 pm****Technical Sessions****8A—International Surface Water Projects****Moderator: Verne Schneider**

Lewis/Clark

- *Water Education Outreach in Latin America and the Caribbean* / Molly Wood (ID WSC)
- *An Early Flood-Warning System for Fond Verrettes, Haiti* / Mark Smith (CR)
- *Renovation of the Iraqi Stream Gaging Network: A Field Trip to the Tigris River* / John Shelton (SC WSC)
- *Real-time Streamgaging in the Afghanistan* / Gregg Wiche (ND WSC)

8B—Surface Water-Ground Water-Water Quality**Moderator: Harry Jenter**

Jefferson A

- *Variability of Near-stream Major-ion and Tracer Concentrations: Implications for Identification of Solute Loading and Hyporheic Exchange Flow* / Ken Bencala (NRP-WR)
- *A Stochastic Approach for Simulating the Effects of Water-Supply Alternatives on Water-Quality in the Red River of the North Basin* / Rochelle Nustad (ND WSC)
- *Heat as a tracer of stream exchanges with shallow ground water* / Jim Constantz (NRP-WR)
- *Current Research Using Stable Isotopes of Water to Identify Surface Water Sources* / Jurate Landwehr (NRP-ER)

8C—Data Processing and Data Mining—Data Mining Techniques**Moderator: Jayne May**

Jefferson D

- *Typesetting small- to MASSIVE- scale USGS Reports using LaTeX---An exercise in saving money* / William Asquith (TX WSC)
- *Using Data Mining Techniques to Blow Up Saluda River Dam - A Case Study of the Congaree Swamp National Park, South Carolina* / Paul Conrads (SC WSC)
- *Data Mining in the Concho River Basin, Texas* / Jayne May (CR)
- *Evaluating Trends in Runoff Characteristics using Long-Term Gaging Station Records from Idaho* / Greg Clark (ID WSC)

8D—Hydrologic and Hydraulic Modeling—Hydraulic Modeling**Moderator: Audrey Ishii**

Chouteau

- *Hydraulic Model Development and Channel Mapping of the Lower Copper River, Alaska, Using Light Detection and*

Ranging Data / Jeff Conaway (AK WSC)

- *Hydrologic Characteristics of Watersheds in Metropolitan Atlanta, Georgia, 2003-2006* / Jacob LaFontaine (GA WSC)
- *Modeling Flood Profiles in an Urban Area with Long Culverts and Overland Flow* / Matt Whitehead (OH WSC)
- *Hydroacoustic Measurement and Numerical Simulation of Flow in the Everglades* / Ray Schaffranek (NRP-ER)

8E—Acoustics & Sediment – II

Moderator: Jeff Gartner

Jefferson B/C

- *Quantification of SSC and Fluxes with ADCP* / Jeroen Aardoom (Aqua Vision BV)
- *How Multi-Frequency Acoustics Improves Measurement of Suspended Sediment Size Distribution and Load Profiles* / Stephen Caine (Aquetec Group Ltd)
- *What merging multi-frequency acoustics backscattering and small-angle forward Laser diffraction can do for studying sediment transport processes* / Yogesh Agrawal (Sequoia Scientific, Inc.)

8F—Sharing Data for Enhanced Applications

Moderator: Scott Morlock

Jefferson E

- *Approaching Metadata Interoperability* / Ellyn Montgomery (NER)
- *Measuring and Communicating Outdraft on the Inland Waterway System* / Michael Winkler (Corps of Engineers)
- *Computation of channel discharge with ADV data and flow velocity distribution model* / Dapei Wang (Environment Canada)

8G—Integration of Hydroacoustics into Long-term Monitoring Programs

Moderator: Brian Loving

Jefferson F

- *Lessons Learned during the Integration of Hydroacoustics in the Houston, TX WRD Program Office* / Jeff East (TX WSC)
- *Long-Term Hydroacoustic Flow Monitoring in the Sacramento-San Joaquin Delta, California* / Catherine Ruhl (CA WSC)
- *Cups to Computers in two (years), Hydroacoustic integration in the Massachusetts/Rhode Islands WSCs Long term Network* / Joe Zanca (MA/RI WSC)

4:15 pm

ADJOURN

5:30-7:30 pm

Surface Water Poster Session and Bon-Voyage Reception (Light hors d'oeuvres and drinks)

Grand Ballroom

Friday April 6, 2007

Time	Event	Room
6:00am - 3:00pm	Taum Sauk Field Trip	Meet in Grand Ballroom
8:00 – 12:00 pm	Exhibitors Removal	Grand Ballroom
8:00 - 4:30 pm	Training Classes and Field Trip	
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AM Classes (Break at 10-10:15 am)		
8:00 - 12:00 pm	Reviewing ADCP Data—Kevin Oberg	Jefferson A
	Introduction to WinRiver II for WinRiver Users—Mike Rehmel	Jefferson B
	Discharge Measurements in Moving Bed Conditions—Chad Wagner	Jefferson C
8:30 – 3:00 pm	Special Session on Low-Flow Studies—Julie Kiang	Jefferson D
8:00 – 4:30 pm	EXCEL-Lent—Darrell G. Fontane, Colorado State University	Jefferson E
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1:00 - 4:30pm	PM Classes (No PM Break)	
	Introduction to WinRiver II for WinRiver Users—David S. Mueller	Jefferson B
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