

JOINT FEDERAL INTERAGENCY CONFERENCE
9TH FISC & 4TH FIHMC www.jfic.us

Version 6/1/2010



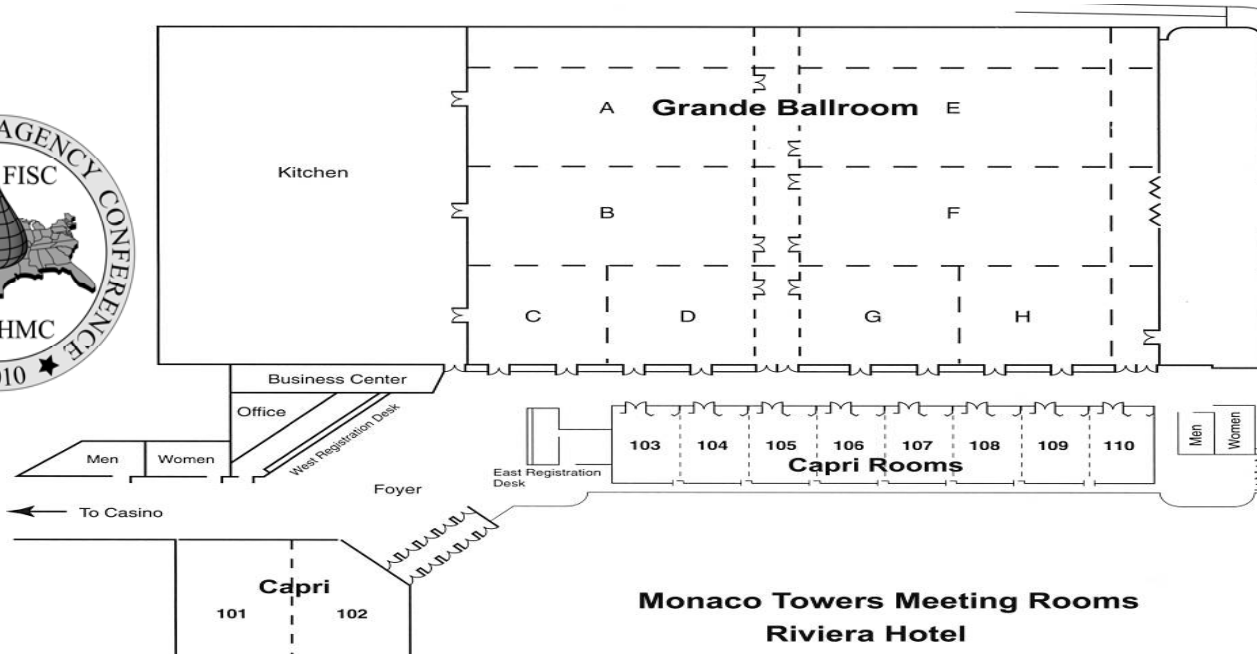
Hydrology and Sedimentation for a Changing Future

Please note changes:
~~strikethrough~~ = withdrawn;
underscore = added or changed.

RIVIERA HOTEL
JUNE 27 – JULY 1, 2010
LAS VEGAS, NEVADA, USA

Conference Program





2nd JOINT FEDERAL INTERAGENCY CONFERENCE (9th FISC & 4th FIHMC)

BACKGROUND. The Federal Interagency Sedimentation Conferences (FISCs) began in 1947, and the Federal Interagency Hydrologic Modeling Conferences (FIHMC) began in 1998. These highly successful conferences, which together have produced over 2,100 technical papers, are being held again jointly in 2010. The Joint Conference provides Federal and non-Federal scientists and managers from various disciplines the opportunity to discuss recent accomplishments and progress in research and on technical developments in the physical, chemical, and biological aspects of sedimentation and the development and use of models addressing surface water quality and quantity issues. The Joint Conference follows a mixed set of formats including formal technical presentations, poster sessions, field trips, short courses, and model demonstrations. A separate student poster and paper competition for cash prizes is also scheduled.

The Subcommittee on Hydrology (SOH) held the Federal Interagency Workshop on Hydrologic Modeling Demands for the 90's in Fort Collins, Colorado, in 1993. That highly successful workshop was limited to Federal participants. Subsequent to that workshop, the SOH decided to hold a broader series of conferences and to open it to all interested parties. Federal Interagency Hydrologic Modeling Conferences were held in 1998, 2002, and 2006, and covered models addressing surface water quality and quantity issues.

Federal Interagency Sedimentation Conferences (FISCs) were held in 1947, 1963, 1976, 1986, 1991, 1996, 2001, and 2006. As a continuation of these highly successful conferences, the 9th FISC will again provide an interdisciplinary mix of scientists and managers from government agencies, academia, and the business community to make professional presentations on recent accomplishments and progress in research and on technical developments related to sedimentation processes and the impact of sediment on the environment.

CONFERENCE SITE

The Joint Conference will be held at the Riviera Hotel in Las Vegas, Nevada, USA. The area offers spectacular desert landscapes and ecosystems, as well as numerous indoor and outdoor recreational opportunities.

SPONSORS: The Federal Interagency Subcommittees on Hydrology (SOH) and Sedimentation (SOS), under the Advisory Committee on Water Information (ACWI).

ACWI SUBCOMMITTEE ORGANIZATIONS

American Forests, American Society of Civil Engineers, Association of State Floodplain Managers, Bureau of Land Management, Bureau of Reclamation, Colorado Water Resources Research Institute, Defenders of Property Rights, U.S. Army Corps of Engineers, Electric Power Research Institute, Federal Emergency Management Agency, Federal Energy Regulatory Commission, Federal Highway Administration, National Aeronautics and Space Administration, National Hydrologic Warning Council, National Park Service, National Science Foundation, NOAA-National Weather Service, Office of Surface Mining, U.S. Environmental Protection Agency, U.S. Geological Survey, Universities Council on Water Research, USDA-Agricultural Research Service, USDA-Forest Service, USDA-Natural Resources Conservation Service.

Organizing Committee for the 2nd Joint Federal Interagency Conference

Joint Conference Chair– G. Douglas Glysson, USGS
Operations Chair– Paula Makar, USBR
Proceedings Coordinator– Francisco Simões, USGS
Poster/Demo Coordinator– Tim Randle, USBR
Registration– Jeff Rieker, USBR
Exhibits– Joe Treadway, USGS
Short Course Coordinator– Jayantha Obeysekera, South Florida Water Management District
Computer-AV Coordinator– Jeff Harris, USACE
Field Trip Coordinator– Tim Rowe, USGS
Student Program– Richard Hawkins, University of AZ
Spousal and Guest Program– Cassie Klumpp, USBR
ACWI-SOS Chair– John R. Gray, USGS
ACWI-SOH Chair– Mary Greene, NRCS

Chairs 4th FIHMC 9th FISC

Conference Chairs–Don Frevert, USBR (ret.) Jerry M. Bernard, NRCS
Technical Program Chairs–Don Woodward, NRCS (ret.) Jerry W. Webb, USACE
Co-chairs–Teri Seeman, NRCS (ret.) Dinah McComas, USACE
AV Coordinators–Jeff Harris, USACE Marie M. Garsjo, NRCS

EXHIBITS

The Exhibit Hall contains about 35 booths and is open during conference hours on Sunday through Tuesday. A Grand Opening of the Exhibit Hall is on Sunday and includes a two-hour get-acquainted reception in the Exhibit Hall from 5:30pm to 7:30pm. All Monday and Tuesday coffee breaks, poster sessions, and receptions are held in the Exhibit Hall to insure that participants have ample time to visit all the exhibits. A special Exhibitor's Reception and Student Poster Session is planned for Monday evening following the Technical Sessions. Exhibits will close around 3:30pm on Tuesday. Exhibit Hall hours are:

EXHIBIT HALL	Opens	Closes
Sunday, Grand Opening	5:30pm	7:30pm
Monday	8:30am	6:45pm
Exhibitors' Reception	5:15pm	6:45pm
Tuesday	10:00am	3:30pm

Note: All times are Pacific Time.

The Exhibit Hall is located in the **GRANDE BALLROOM E, F, G, AND H.**

STUDENT COMPETITION

Student posters on sedimentation and hydrologic modeling will be displayed and presented during the Exhibitor's Reception on Monday evening. See the list of student posters later in this program. The student authors will present their topics, and their posters and papers will be judged for cash prizes. Separate cash awards will be given to the best papers and best posters.

A special student lunch session on Monday will be provided, during which students will have a chance to learn about careers in the Federal Government.

INFORMATION / MESSAGE CENTER. Messages for participants at the Conference will be posted on the message board in the registration area. Messages may be directed to the Riviera Hotel operator at 702-734-5110.

TRANSPORTATION. Las Vegas McCarran International Airport (LAS) is the main airport serving the Las Vegas metropolitan area. It is located about 3.5 miles from the Riviera Hotel. Transportation from the airport to the Riviera is available through airport shuttles (\$6 to \$7 one-way fares) outside the baggage claim area, or by taxicab.

REGISTRATION

Conference Registration:

\$425 before May 31, 2010
\$475 after May 31 and onsite

Registration Includes:

- ✓ Conference Proceedings (printed abstracts + CD-ROM w/all papers)
- ✓ Grand Opening Reception (Sunday pm)
- ✓ Reception (Monday pm)
- ✓ All refreshment Breaks
- ✓ Demonstration Dinner (Wednesday pm)

The registration desk is located next to the Business Center and adjacent to the **GRANDE BALLROOM** in the Riviera Convention Center. On-site registration will be open as follows:

Registration Desk Hours

Sunday	7:00 am	to	6:00 pm
Monday	7:30 am	to	5:30 pm
Tuesday	8:00 am	to	5:00 pm
Wednesday	8:00 am	to	5:00 pm
Thursday	8:00 am	to	1:00 pm

Registration for single day attendance is also available: Monday, \$290; Tuesday, \$265; Wednesday, \$320; and Thursday \$240. Single day registration will include a copy of the conference proceedings and all functions occurring on that day. Payment must be made at the time of registration, and all credit card payments will be charged at the time of registration.

STUDENT REGISTRATION. Full-time students may register for the conference at a special fee of \$180 before May 31, 2010, and \$210 after May 31 or onsite. These fees include all of the above full conference registration items. Student identification is required.

SPOUSAL AND GUEST REGISTRATION. Spousal and guest registration includes all receptions, coffee breaks, and Wednesday's dinner. Directions and information on local attractions will be available at the registration area. Spouse registration is \$80 before May 31, 2010 and \$110 after May 31, 2010, and includes all of the registration items, except for the proceedings.

CANCELLATIONS. Cancellation with full refund will be accepted if received in writing no later than May 31, 2010. A \$50 processing fee will be deducted from written cancellations received between June 1 and June 24. **NO REFUNDS WILL BE GIVEN FOR CANCELLATIONS RECEIVED AFTER JUNE 24, 2010.**

PROCEEDINGS

A printed volume of the Conference abstracts and a CD-ROM with the full papers are provided to all registered attendees.

Additional printed abstract volumes are available at the conference for \$20, and the CD-ROM with all papers for \$25. To order by mail after the conference, make check or money order payable to the "Federal Interagency Sedimentation Conference," and send to G. Douglas Glysson, USGS Office of Water Quality, 412 National Center, Reston, VA, 20192-5603.

OPENING RECEPTION. A "get-acquainted" reception will be held on Sunday afternoon from 5:30pm to 7:30pm in the Exhibit Hall (**GRANDE BALLROOM E-H**). Come and visit our exhibitors, meet old friends, and make new ones while enjoying refreshments and hot and cold hors d'oeuvres.

EXHIBITORS' RECEPTION & STUDENT POSTERS (I)

EXHIBIT HALL

Monday, June 28, 5:15pm to 6:45pm. A reception will be held in the **GRANDE BALLROOM E-H** after the close of Technical Sessions. Student posters will be available for viewing, and authors will be available for discussion at that time.

MODEL DEMONSTRATIONS / POSTER SESSION (II) AND DINNER

GRANDE BALLROOM F

On Wednesday, from 4:30 – 9:00pm, a session for computer-model demonstrations and posters will be offered, including sedimentation and hydrologic modeling. A light dinner will be provided from 6:00 to 7:30pm.

SPOUSAL AND GUEST PROGRAM. Welcome room for guests of conference attendees—The conference will provide a room for registered guests of conference attendees to gather and meet (**CAPRI 110**). This room will be open 9:00am to 5:00pm Monday through Wednesday, and 9:00am to noon on Thursday. Brochures from the Las Vegas Visitors Bureau and light refreshments are provided mid-morning and afternoon. Planned activities (information below) will meet here.

Madame Tussaud's Wax Museum (Monday morning)—Visitors experience a unique, historical journey of the realms of the powerful and famous. Guests can see, touch, and hug over 100 lifelike celebrities, sports figures, and world icons, all masterfully recreated in wax. Tickets are about \$18/person plus a transportation fee.

Jubilee's Backstage Tour (Wednesday morning)—Gain a true appreciation for "Jubilee!" Hosted by one of the show's charismatic cast members, a "Jubilee!" dancer takes guests on an in-depth look at costumes, props, headresses and much more. Cost: \$25/person plus transportation fee.

Shows at the Riviera. The Riviera offers a variety of evening shows. Anyone registered at the conference and staying at the Riviera will be able to purchase Riviera show tickets at a 50% discount.

SPEAKERS' BREAKFASTS

A working breakfast will be served Monday through Thursday for each day's speakers:

Speakers' Breakfasts

Monday	8:00 am	to	9:00 am	CAPRI 104-106
Tuesday	7:15 am	to	8:15 am	CAPRI 104-106
Wednesday	7:15 am	to	8:15 am	CAPRI 104-106
Thursday	7:15 am	to	8:15 am	CAPRI 104-105

This is a full breakfast for all speakers, presenters of posters/models, session chairpersons, and audio/visual (A/V) assistants. Please attend on the morning of your session to be briefed on the day's activities. Speakers will coordinate their

computer files with the A/V assistants before and during this breakfast meeting. Speakers are requested to attend this breakfast the day of their talks and to verify their arrangements with the session chairs and the A/V coordinator.

SPEAKERS' VIEWING ROOM CAPRI 103

The **CAPRI 103** room is set up for speakers to view their computer presentations and for session chairpersons and A/V assistants to meet with speakers. Computers will be available throughout the day in this room for previewing presentations.

FIELD TRIPS

All field trips (except the "Grand" Grand Canyon Tour) meet in the Foyer of the Riviera Conference Center, opposite the JFIC registration desk. Note that field trips are subject to cancellation and refund in case of poor weather conditions or insufficient number of participants. A \$25 fee will be charged for participant cancellation after May 15, 2010. **NOTE: Field trips convene in the Foyer 15 minutes prior to departure.**

Preconference Field Trip (Thursday, 6/24/10 to Sunday, 6/27/10). The "Grand" Grand Canyon Tour

Visit Hoover Dam, Grand Canyon National Park south rim, Little Colorado River, Glen Canyon Dam, and take a 16-mile float trip down the Colorado River from Glen Canyon Dam to Lees Ferry. Learn about Grand Canyon geology and river history and how dams have affected river sediment conditions in Grand Canyon and how dam operations have been used as part of an adaptive management program to improve environmental conditions. Field trip participants will stay the night in Williams, AZ; Cameron, AZ; and Kanab, UT; before arriving at the Riviera Hotel, Las Vegas, NV, on June 27th.

Agencies involved: Bureau of Reclamation and the USGS Grand Canyon Monitoring and Research Center. Cost: \$295, includes bus transportation, lunches, snacks, park entrance fees, and float trip (lodging, breakfasts, and dinners are not included). Registrants must make and pay for their own lodging reservations from a block of rooms in reserve until May 25, 2010, under the name of "Federal Conference Tour" (see below for contact information).

Thursday, June 24, 2010, 2:00pm to 3:00pm. Meet tour leader Tim Randle at the Information Booth located between the north and south baggage claim areas. The tour bus will depart directly from the Las Vegas McCarran (LAS) airport by 3:00pm for a tour of Hoover Dam (about a 40-mile drive). 6:00pm to 7:00pm. Dinner in Kingman, AZ (about a 70-mile drive from Hoover Dam) and then continue another 110 miles to Williams, AZ, for lodging:

- Fairfield by Marriott (928-635-9888), \$69 per room + tax, breakfast included, <http://www.marriott.com/hotels/travel/flglw-fairfield-inn-williams-grand-canyon/>

Friday, June 25, 2010. From Williams, AZ, field trip participants will proceed by bus to Grand Canyon National Park (about a 60-mile drive). At the south rim of Grand Canyon, participants will learn about canyon geology and river history. The tour bus will then continue to Cameron, AZ (about a 60-mile drive) where participants will learn about the Little Colorado River geomorphology. Lodging will be in Cameron, AZ:

- Cameron Trading Post Lodge (1-800-338-7385), \$99 per room + tax, <http://www.camerontradingpost.com/lodge.html>

Saturday, June 26, 2010. From Cameron, AZ, field trip participants will proceed by bus to Page, AZ (about a 90-mile

drive) for a tour of Glen Canyon Dam. From the base of the dam, field trip participants will board rafts for a 16-mile float trip down the Colorado River to Lees Ferry, AZ (There are no rapids on this float trip, and luggage will remain on the bus). While on the river, participants will learn about the Grand Canyon Monitoring and Research Center, Adaptive Management Program, and sediment related research. From Lees Ferry, participants will proceed by bus to Kanab, UT, for dinner and lodging (about a 120-mile drive from Lees Ferry, AZ):

- Shilo Inn Suites (435) 644-2562, 33 rooms reserved (1 bed each). Ask for government rate \$70 per night + tax, including breakfast, www.shiloinns.com
- Parry Lodge Motor Hotel (435) 644-2601, 7 rooms reserved, Group rate of \$64 per night + tax (optional \$6 per person breakfast buffet), www.parrylodge.com

Sunday, June 27, 2010. Field trip participants will see eolian sedimentary structures near the east entrance of Zion National park and then continue by tour bus to Las Vegas (about a 200-mile drive from Kanab, UT) and end field trip by 2:00pm at the Riviera Hotel.

Sunday, June 27, 2010

Hoover Dam and new Hoover Dam Bypass Project Bridge – 10:00am to 4:00pm, \$60, Lunch provided. Visit Hoover Dam, the new visitor center and tour inside the dam. Also hear about and view construction of the new Hoover Dam Bypass Project Bridge over the Colorado River below Hoover Dam. Agencies involved: USBR, FHWA, NPS, WAPA, Arizona DOT, Nevada DOT, and Central Federal Lands Highway Division (CFLHD). Websites of interest:

- <http://www.usbr.gov/lc/hooverdam/>
- <http://www.hooverdambypass.org/>

Spring/Ecology Tour of Muddy River -Virgin River Valley areas – 9:30am to 3:30pm, \$60, Lunch provided. Tour monitoring/ restoration efforts within the regional White River Carbonate groundwater flow system terminal discharge area and Muddy River Springs Complex. Visit various springs (Warm, Pederson, Rogers, and Blue Point Springs for example), hear about current/historical flows, flow credits, fish studies and habitat restoration efforts, get close to Moapa Dace at Moapa Springs National Wildlife Refuge Visitor Center and Fish Viewing chamber and then Virgin/Muddy River real-time flow and sediment study and recent Virgin River floods, State of Nevada Lost City museum in Overton and possibly visit/take a short hike to the ghost town of St. Thomas, an old abandoned town site, while Lake Mead is low. Coordinated by BLM, USBR, USFWS, USGS, State of Nevada, SNWA, The Nature Conservancy, Clark County, and Virgin Valley Water District. Websites of interest:

- <http://www.fws.gov/desertcomplex/moapavalley/>
- http://www.snwa.com/html/env_muddyrvr_research.html
- <http://waterdata.usgs.gov/nv/nwis/current/?type=flow>
- <http://www.nature.org/wherework/northamerica/states/nevada/preserves/art11308.html>
- <http://www.ghosttowns.com/states/nv/st.thomas.html>

Red Rock Canyon National Conservation Area – 9:00am to 3:00pm, \$60, Lunch provided. Experience cultural, geological, and biological resources, sandstone quarry, Willow Springs, Red Rock Scenic Road Loop, Red Rock Visitor Center, Spring Mountain Ranch State Park, and Quickbird Study in Red Rock National Conservation Area near urban Las Vegas. Coordinated by BLM, USGS, Friends of Red Rock and Nevada State Parks. Websites of interest:

- http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/blm_special_areas/red_rock_nca.html; <http://www.redrock.org/>
- <http://www.parks.nv.gov/smr.htm>

SHORT COURSES

Note: Short courses are subject to cancellation and refund if the number of registrants are not sufficient to cover the class. Non-conference attendees can register but will have a lower priority than those who register for the full conference. A \$25 handling fee will be charged if a registration for a short course is cancelled after June 1, 2010.

Day	Short Course Title	Fee	Time	Location
Sunday, June 27, 2010	Steam Restoration Design	\$100	8:00am–5:00pm	<i>GRANDE BALLROOM C</i>
	SRH 2D	\$75	8:00am–5:00pm	<i>GRANDE BALLROOM D</i>
	RiverWare	\$125	8:30am–5:00pm	<i>CAPRI 101</i>
	Curve Number Rainfall-Runoff	\$120	9:00am–4:00pm	<i>CAPRI 102</i>
	Overview of Collection of Fluvial-Sediment Data	\$45	1:00pm–5:00pm	<i>CAPRI 104</i>
Thursday, July 1, 2010	Principles of Streambank Erosion	\$210	10:30am–5:00pm	<i>CAPRI 106</i>
	SEAWAT	\$200	10:30am–5:00pm	<i>CAPRI 107</i>
	Sediment Transport Modeling	\$50	1:00pm–5:00pm	<i>CAPRI 109</i>
	EXCEL-LEnT	\$210	10:30am–5:00pm	<i>CAPRI 108</i>
	HEC-HMS	\$100	1:00pm–5:00pm	<i>CAPRI 104</i>

All Sunday courses that start before noon have morning refreshment breaks. All Sunday courses have afternoon refreshment breaks. All Thursday courses have afternoon breaks only. No lunches are included.

Short Courses: Sunday, June 28, 2010

Stream Restoration Design

Sunday, 8:00am to 5:00pm, \$100. GRANDE BALLROOM C
 Instructors: Jon Fripp, USDA-NRCS National Design, Construction, and Soil Mechanics Center; Kerry Robinson, USDA-NRCS East National Technology Support Center; Jerry Bernard, National Geologist, USDA-NRCS Conservation Engineering Division; and Dave Rosgen, Wildland Hydrology (wildlandhydrology.com).

The USDA Natural Resources Conservation Service (NRCS) has recently released a stream design guide that is a companion to the 1998 interagency document, "Stream Corridor Restoration: Principles, Processes, and Practices." This comprehensive design guide, USDA-NRCS NEH-654 Stream Restoration Design Handbook, presents engineering assessment and design tools that are applicable to any stream restoration work, whether it primarily follows a natural stream restoration or is strictly a structural project. The basis for this short course will be this handbook, which was released in August of 2007. A CD copy of this handbook will be provided to the students. Although the importance of proper planning for stream restoration work will be stressed, the focus of this workshop will be on selected design tools and procedures from the USDA-NRCS Stream Restoration Design Handbook. Specific design tools and short example problems will be provided.

The course will focus on the basics of design techniques which have been compiled from over 120 contributing authors and practitioners. The course is therefore of benefit to those who are or will become engaged in designing stream restorations.

SRH-2D (U.S. Bureau of Reclamation's two-dimensional hydraulic and sediment transport model-river hydraulics modeling)

Sunday, 8:00am to 5:00pm, \$75. GRANDE BALLROOM D

Instructors: Yong Lai and Blair Greimann, U.S. Bureau of Reclamation

SRH-2D is a two-dimensional (2D) depth-averaged hydraulic and sediment transport model for river systems developed at the U.S. Bureau of Reclamation. It has been used both at Reclamation and many outside institutions, with great success. SRH-2D has a few boasting features. First, SRH-2D uses a flexible mesh that may contain arbitrarily shaped cells. In practice, the hybrid mesh of quadrilateral and triangular cells is recommended, though purely quadrilateral or triangular elements may be used. A hybrid mesh achieves the best compromise between solution accuracy and computing demand. Second, SRH-2D adopts very robust and stable numerical schemes with seamless wetting-drying algorithm. Reliable solutions may be obtained with few tuning parameters; program "crash" rarely occurs.

SRH-2D is also developed with the objective that a 2D model does not have to be too complex to use. With SRH-2D, users do not need to memorize many commands; they are guided by a preprocessor. The SRH-2D model, along with the manual and selected application cases, is freely downloadable at the following Bureau of Reclamation site: <http://www.usbr.gov/prmts/sediment>.

The goal of this course is to train attendees to become "modelers" who are knowledgeable about 2D modeling and may apply SRH-2D to their own projects. In the class, the theory of 2D modeling will be given. Problems that may be solved by SRH-2D are presented with real-life project examples, students will jump into the use of SRH-2D immediately with instructor provided sample cases. It is crucial for students to bring their own laptops to get hands-on experience. Students may also bring their own problems to the class. At the end of the class, it is expected that students can apply SRH-2D to their own projects and know the key steps and key parameters for a successful 2D analysis.

Students are expected to bring their own laptops for use during the workshop.

RiverWare – an Overview for Managers

Sunday, 8:30am to 5:00pm, \$125. CAPRI 101

Instructor: Edith Zagana, CADSWES, University of Colorado.

RiverWare is a modeling tool used for forecasting and scheduling reservoir and hydropower operations, water rights and water accounting, evaluating alternative operating policies, and planning new projects. RiverWare is used extensively by major water management agencies, utilities, research institutes and consulting companies. This course presents a hands-on overview of RiverWare's capabilities, particularly designed for managers to assess the potential use of this tool in their organizations. Through demonstrations and exercises, the course will teach how RiverWare works, how it can be integrated with other models, databases and analysis tools, and will show some example applications. The course will focus on: what is involved in building a model; how multi-objective policies are represented and solved using rule-based simulation; how water ownership is represented and tracked; prioritized water rights solution; flood control algorithms; groundwater-surface water modeling; how RiverWare can automatically communicate with data sources and other programs; output options; how to use multiple run management with stochastic inputs to generate probabilistic results; multi-objective optimization including hydropower scheduling; and special features for usability and runtime analysis. Examples of applications will illustrate these features.

Students are expected to bring their own laptops for use during the workshop. Training manuals will be provided.

Curve Number Rainfall-Runoff: Professional Application**Sunday, 9:00am to 4:00pm, \$120. CAPRI 102**

Instructors: Richard H. Hawkins, University of Arizona; and Don Woodward, USDA-Natural Resources Conservation Service (ret.)

This short course will cover the following sections:

- Chronology, development, and methodology basics, original goals, limitations, watersheds, and data. Also to be covered are Development assumptions and assertions, soils tie-ins, NEH4, Ia/S, CN aligner, and usage conventions.
- Reevaluation and reinterpretation (1½ hr), Background and handbook tables, alternate expressions. Three modes of CN: Rainfall-runoff return period concepts; random component interpretations; process approximations; AMCs-ARCs and handbook CN tables; sensitivity.
- Recent work (2 hr). Curve Numbers meet reality: How watersheds and Curve Numbers *really* act; runoff behavior types; a second look at Ia/S; Hydrologic Soil Groups, CN application explosion; seasonal CNs; universal runoff response types and CN forms; infiltration and losses; local calibrations.
- CN method vis-a-vis general rainfall-runoff hydrology: Does "S" exist? Complacent/Violent thresholds, international applications.
- Summary analysis, questions, answers, discussions: Some do's and don'ts; FAQs. Professional use, perspectives and ponderings. Improvements, replacement? Class participation, critique, user anecdotes, improvements, replacement? Research and development needs?

Participants will be provided with a course workbook (~100 pages), MS-PowerPoint© printouts and handouts. Some of the figures, tables, and handout sheets are from the "Report of the ASCE Task Committee on the State of the Practice in Curve Number Hydrology," by Hawkins, Ward, Woodward, and VanMullem, ca 115 pp. 2009. The report itself is not supplied as a part of the course. It may be obtained from ASCE for \$52.50 (members) or \$70.00 (nom-members).

Overview of Collection of Fluvial-Sediment Data**Sunday, 1:00pm to 5:00pm, \$45. CAPRI 104**

Instructors: John R. Gray, G. Douglas Glysson, and Gary Johnson, U.S. Geological Survey

This short course provides an overview of basic fluvial-sediment data-collection techniques, with emphasis on fluvial-sediment concepts, sampler characteristics, and sampling techniques. Methods for collecting suspended-sediment data are emphasized, but overviews of bedload and bed-material data collection techniques are included, as well. Basic requirements for collecting sufficient, useful sediment data, and considerations in data quality, are also presented.

The course is geared for professionals and technicians who will be, or are planning on, collecting suspended-sediment data. U.S. Geological Survey Techniques of Water-Resources Investigations Book 3, C2, "Field Methods for Collection of Fluvial Sediment" and several dozen additional technical resources will be provided on a CD-ROM.

This short course is a synopsis of the full 5-day course, "Sediment Data Collection Techniques," offered annually by the U.S. Geological Survey in Castle Rock and Vancouver, Washington (contact J. R. Gray at jrgray@usgs.gov for more information on the full course offering).

Short Courses: Thursday, July 1, 2010**Principles of Streambank Analysis and Stabilization****Thursday, 10:30am to 5:00 pm, \$210. CAPRI 106**

Instructor: Andrew Simon, USDA Agricultural Research Service, National Sedimentation Laboratory, Oxford, MS

This course is designed for professionals engaged in stream

investigation, management, stabilization and restoration. The course is designed to clearly demonstrate the essential links between research, analysis, design, project implementation, and post-project evaluation. Lectures will introduce the fundamental concepts linking streambank processes and geomorphic adjustments in the fluvial system. Field methods to rapidly evaluate the relative stability of alluvial channels and to quantify force and resistance mechanisms that control streambank erosion processes, failure mechanisms, and the importance of basal scour to sustained bank retreat will be described in detail. Hands-on modeling will provide students with the opportunity to investigate the factors which control bank stability, while also recognizing the significance of these factors when designing mitigation measures. All students will be provided with bank-stability modeling software (with sound effects) for future use, and a CD containing all lectures (in MS-PowerPoint© and PDF), and PDFs of relevant technical papers.

Course highlights include: Review of fundamental principles behind channel adjustment; Role of bank erosion in fluvial adjustment and sediment yields; Mechanics of streambank erosion; Field investigation methodologies; Bank-stability modeling; Application of the model for design, mitigation strategies, and sediment loadings; and Guiding principles for bank stabilization.

Prerequisites: Students attending this course should have solid algebraic and analytical skills. Experience using Microsoft Excel© or similar spreadsheet programs is highly recommended.

A laptop computer is also recommended for running bank-stability software provided during class.

Variable-Density Groundwater Flow and Solute Transport Modeling using SEAWAT**Thursday, 10:30am to 5:00 pm, \$200. CAPRI 107**

Instructor: Alyssa Dausman, U.S. Geological Survey

This workshop is an introduction to three-dimensional variable-density groundwater flow and solute transport using SEAWAT, a MODFLOW/MT3DMS-based program. SEAWAT has been applied to a wide variety of problems including saltwater intrusion, aquifer storage and recovery (ASR), deep-well injection, as well as inland brine transport. The newest version of SEAWAT (Version 4) can also be used to simulate simultaneous solute and heat transport including variations in viscosity from changes in temperature and/or solute. As part of this workshop, participants will develop an understanding of the fundamentals behind SEAWAT, the procedure for designing a SEAWAT model, and the types of problems it can be used to solve.

Students will need to bring their own laptops for the workshop

Basic Principles and Data Needs of Sediment Transport Modeling**Thursday, 1:00pm to 5:00pm, \$50. CAPRI 109**

Instructors: Blair Greimann and Yong Lai, U.S. Bureau of Reclamation

This short course will introduce the basic principles of designing a successful sediment transport modeling analysis. Participants will be exposed to a wide range of applications of sediment transport modeling issues. The course will discuss the selection of the sediment transport model and steps in the selection process: identification of the question you want to answer, identification of the process you want to simulate, understanding the limitations of various model types, and then the review of current models. The abilities and limitations of various sediment transport model types, such as sediment budget, one-dimensional, and two-dimensional sediment transport models, will be discussed. The course will describe the data requirements and data collection activities necessary for the model input. The focus will be on the collection of information relevant to the particular question you wish

to address. Various methods to calibrate model parameters using historical data will be given and, in the absence of historical data, selection of model parameters and sediment transport formulae will be discussed. Finally, if time allows, methods to address model uncertainty will be suggested.

Students may bring their own laptop computers for use during the workshop, but they are not absolutely necessary.

EXCEL-LEnt Training for Water Managers
Thursday, 10:30am to 5:00 pm, \$210. CAPRI 108

Instructor: Darrell G. Fontane, Colorado State University.

This workshop is designed to teach participants how to use some of the features of MS-EXCEL© that are particularly relevant to engineering and water resources analysis. Examples of engineering applications of MS-EXCEL© will be demonstrated and presented in the workshop. Participants will receive a CD containing all the files used at the workshop and accompanying computer-based video tutorials that cover the workshop topics. The workshop will be based on MS-EXCEL© 2007. Note however, that the topics presented in the workshop are applicable to previous versions of MS-EXCEL©.

Water managers often develop spreadsheets for their own use or to be shared with colleagues. Spreadsheets should be easy to use with required problem data input clearly identified and the output easy to understand. A variety of MS-EXCEL©'s tools can be used to minimize errors and to minimize the effort required to provide required input or to perform analyses in the spreadsheet. This workshop will focus on the functionality MS-EXCEL© provides to meet these goals of Positive User Guidance, Clarity, and Correctness.

MS-EXCEL© software provides many features that allow the user to develop input controls to make the spreadsheet easy to use and minimize errors. These features include a variety of buttons, list boxes, check boxes and spinner controls. These controls can be used in conjunction with table lookup functions, logical IF tests and conditional formatting to do many things. Further, MS-EXCEL© allows the user to record or develop custom macros in Visual Basic for Applications© that greatly extend the problem solving power of MS-EXCEL©. With a surprisingly small number of Visual Basic for Applications© (VBA) commands, users can create their own powerful custom macros and custom scientific or engineering functions.

Each student will need to bring a laptop with MS-EXCEL© 2007 installed.

HEC-HMS and HEC-GeoHMS
Thursday, 1:00pm to 5:00pm, \$100. CAPRI 104

Instructors: Hydrologic Engineering Center Staff

The Corps of Engineers Hydrologic Engineering Center's HEC-HMS program and its GIS companion product, HEC-GeoHMS, are widely used within the engineering community. GeoHMS, an ArcView and ArcGIS extension, is used for pre-processing an HMS dataset. It allows users to visualize spatial information, document watershed characteristics, perform spatial analysis, delineate basins and streams, and construct an HMS basin file. HMS simulates the precipitation-runoff processes of a dendritic watershed. It provides a wide variety of mathematical models for representing the mass and energy fluxes of the hydrologic cycle: precipitation, evapotranspiration, snowmelt, infiltration, surface runoff, baseflow, channel routing, reservoirs, and diversions, among others. These model choices include girded and area-averaged methods for event or continuous simulation. This short course will provide an overview and sample application of HMS and GeoHMS.

MONDAY – MORNING, June 28, 2010

8:00am Speakers' Breakfast, **CAPRI 104-106**

8:30am Pre-Conference BREAK, **EXHIBIT HALL**

OPENING SESSION

9:30am MONDAY 6/28/10

GRANDE BALL ROOM

Doug Glysson Chair, Joint Federal Interagency Conference	Call to order
Lorri Gray-Lee Lower Colorado Regional Director, Bureau of Reclamation	Local Welcome
Matt Larsen Alternate Chair, Advisory Committee on Water Information (ACWI)	ACWI Welcome
Don Frevert USBR (ret.), Chair, 4 th FIHMC	Thoughts on the 4th FIHMC
Jerry Bernard, LPG USDA-NRCS, Chair, 9 th FISC	Thoughts on the 9th FISC
Blaine D. Leonard, P.E., D.GE, F.ASCE, President, American Society of Civil Engineers (ASCE)	Sustainable Water Infrastructure: Moving into the Future
Jerry W. Webb, P.E., D.WRE, Principal Hydrologic & Hydraulic Engineer, US Army Corps of Engineers, Washington, DC	Challenges to Water Resources Engineering
Matthew C. Larsen, Ph.D., Associate Director for Water, USGS	Fluvial Sediment in the Environment: a National and Global Challenge

Noon Lunch on your own



MONDAY – AFTERNOON

1:30pm	MONDAY	6/28/10
1A	GULLY EROSION 1: GULLY EROSION ASSESSMENT	CAPRI 101
Chairs: Robert Wells, USDA-ARS / Greg Hanson, USDA-ARS		

- 1:30pm *Assessment of Photogrammetric Measurements of Gullies with Contrasting Form and Size.* R. Giménez¹, I. Marzolf², M.A. Campo¹, M. Seeger³, J. B. Ries⁴, J. Casali¹, and J. Álvarez-Mozos¹—¹Department of Projects and Rural Engineering, Public Univ. of Navarre, Pamplona, Spain; ²Department of Physical Geography, Johann Wolfgang Goethe Univ. Frankfurt am Main, Germany; ³Dept. of Land Degradation and Development, Wageningen Univ. & Research Center, The Netherlands; ⁴Department of Physical Geography, Univ. of Trier, Germany
- 1:50pm *Prevention and Control of Gully Processes in Diverse Climatic Settings: Lessons for the Age of Global Climate Change.* Frank Simpson, Univ. of Windsor, Windsor, Ontario, Canada
- 2:10pm *Assessment of Hydrological Controls on Gully Formation and Upland Erosion Near Lake Tana, Northern Highlands of Ethiopia.* Tigist Y. Tebebu¹, Anteneh Z. Abiy¹, Assafa Adzo¹, Helen E. Dahlke², Eric D. White², Amy S. Collick^{1,3}, Selemiyihun Kidnau^{4,5}, Farzad Dadgari⁴, and Tammo S. Steenhuis^{1,2}—¹Cornell Univ. at Bahir Dar, Ethiopia; ²Cornell Univ., Ithaca, NY; ³Bahir Dar Univ., Ethiopia; ⁴SWISHA, Bahir Dar, Ethiopia; ⁵ARARI, Bahir Dar, Ethiopia
- 2:30pm *Ephemeral Gully Erosion Impacts on Physical Soil Quality and Crop Yield.* Glenn V. Wilson, Robert R. Wells, and Seth Dabney, USDA-ARS National Sedimentation Lab., Oxford, MS

1:30pm	MONDAY	6/28/10
1B	SEDIMENT TRANSPORT 1	GRANDE BALLROOM A
Chairs: Tim Rowe, USGS / Robert Padilla, USBR		

- 1:30pm *HEC-6T Modeling of the Atchafalaya, River Basin, Louisiana.* Tom Kirkeeng, USACE, Rock Island District, IL
- 1:50pm *Mechanics and Modeling of Flow, Sediment Transport and Morphologic Change in Riverine Lateral Separation Zones.* Brandy Logan¹, Jonathan Nelson¹, Richard McDonald¹, Scott Wright², and Kees Sloff³—¹USGS, National Research Program; ²USGS, California Water Science Center; ³Deltas and Delt Univ. of Technology
- 2:10pm *Channel Changes and Maintenance on the San Acacia Reach of the Middle Rio Grande.* Robert Padilla and Drew Baird, USBR, Denver, CO
- 2:30pm *Building a Better Understanding of Sediment Issues Through the Application of a Long-Term Fluvial and Littoral Sediment Budget.* Jim Selegean, Rob Nairn, Travis Dahl, and Calvin Creech, USACE

1:30pm	MONDAY	6/28/10
1C	SEDIMENT ANALYSES	GRANDE BALLROOM C
Chairs: Francisco Simões, USGS / Trent Snellings, USDA-NRCS		

- 1:30pm *Impact of Flow-Duration Curve Temporal Resolution on Sediment Load Estimates.* Li Chen, Rina Schumer, Anna Knust, and William Forsee, Desert Research Institute, Las Vegas, NV
- 1:50pm *Innovative Streambank Protection Measures: Stone Toe and Bendway Weirs.* Meg Jonas, USACE-ERDC, Vicksburg, MS
- 2:10pm *Field Adjustments of Bed Form Phase Diagrams.* Drew C. Baird, USBR Technical Service Center, Denver, CO
- 2:30pm *Series Expansion of the Modified Einstein Procedure.* Seema C. Shah-Fairbank¹ and Pierre Y. Julien²—¹California State Polytechnic Univ., Pomona, CA; ²Colorado State Univ., Fort Collins, CO

1:30pm	MONDAY	6/28/10
1D	STREAM RESTORATION 1	GRANDE BALLROOM B
Chairs: Tim Randle, USBR / Fred Theurer, USDA-NRCS		

- 1:30pm *The Application and Validation of Dimensionless Sediment Rating Curves.* Dave Rosgen, Wildland Hydrology, Fort Collins, CO
- 1:50pm *Application of the FLOWSED and POWERSED Models in River Stability, Bridge Design and River Restoration.* George Athanasakes¹ and Dave Rosgen²—¹Stantec Consulting Services, Inc., Louisville, KY; ²Wildland Hydrology, Fort Collins, CO
- 2:10pm *Floodplain Riverine Backwater Restoration: A Case Study.* F. D. Shields, Jr., Scott S. Knight, Richard Lizotte, Charles T. Bryant, Jr., and Daniel G. Wren, USDA-ARS, National Sedimentation Laboratory, Oxford, MS
- 2:30pm *RiverRAT: Science Base and Tools for Evaluating Stream Engineering, Management, and Restoration Proposals.* Brian Cluer¹, Tim Beechie², Janine Castro³, George Pess², Conor Shea⁴, and Peter Skidmore⁵, and Colin Thorne⁶—¹NOAA Fisheries, Santa Rosa, CA; ²NOAA Fisheries, Seattle, WA; ³USFWS, Portland, OR; ⁴USFWS, Arcata CA; ⁵Skidmore Restoration Consulting LLC, Bozeman, MT; ⁶Univ. of Nottingham, UK

1:30pm	MONDAY	6/28/10
1E	CLIMATE VARIABILITY/ IMPACT 1	GRANDE BALLROOM D
Chairs: Jolyne Lea, USDA-NRCS / Mathias Collins, NOAA		

- 1:30pm *Web-Based Forecasting of Potential Evapotranspiration for Improved Water Resources Management in California.* David Yates¹, Michael Tansey², and Conrad Roesch³—¹National Center for Atmospheric Research, Boulder, CO; ²USBR, Sacramento, CA; ³Digital Dynamics, Boulder, CO
- 1:50pm *Variations in Precipitation and Water Yield for the Northwestern Great Plains and Adjacent Ecoregions.* Andrew Simon and Lauren Klimets, USDA-ARS National Sedimentation Laboratory, Oxford, MS
- 2:10pm *Flood Frequency in a Changing Climate, Projections Approach and Diagnostics.* David A. Raff, D. Suttley, T. Pruitt, and L. D. Brekke, USBR, Technical Service Center, Denver, CO
- 2:30pm *Climate Variations, Soil Conservation, and Reservoir Sedimentation.* Jurgen Garbrecht, USDA-ARS, El Reno, OK

1:30pm	MONDAY	6/28/10
1F	GIS TECHNOLOGY IN WATER RESOURCES 1	CAPRI 102
Chairs: Terry Costner, USDA-NRCS / Gregg Hudson, USDA-NRCS		

- 1:30pm *Federal Interagency Hydrology and Hydraulics GIS Applications Workgroup.* William Merkel¹, Jennifer Bountry², Vijay Singh³, and Di Long³—¹USDA-NRCS, Beltsville, MD; ²USBR, Denver, CO; ³Texas A&M Univ., College Station, TX
- 1:50pm *Geospatial Capabilities of HEC-RAS for Model Development and Mapping.* Cameron Ackerman, Mark R. Jensen, and Gary Brunner, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 2:10pm *ArcGIS Technique to Evaluate the SNOTEL Data Network.* Tom Perkins, James Marron, and Angus Goodbody, USDA-NRCS, Portland, OR
- 2:30pm *GIS Technology in Water Availability Using ArcHydro Data Model.* Ma. Angeles Suárez, E. Agulaar, J Velázquez, J. Riveria, C. Patiño, C. Astudillo; Mexican Institute of Water Technology, Jiutepec, Morelos, Mexico

3:30pm MONDAY**6/28/10****2A****GULLY EROSION 2: GULLY EROSION DEVELOPMENT, PROCESSES, AND IMPACTS****CAPRI 101**

Chairs: Ron Bingner, USDA-ARS / Tammo Steenhuis, Cornell Univ.

- 3:30pm *Rill Development, Headcut Migration, and Sediment Efflux from an Evolving Experimental Landscape.* Lee M. Gordon¹, Sean J. Bennett¹, and Robert R. Wells²—¹Department of Geography, Univ. at Buffalo, Buffalo, NY; ²USDA-ARS National Sed. Lab., Oxford, MS
- 3:50pm *Pore-Water Effects on Soil Erodibility and Its Implication in Ephemeral Gully Erosion Modeling.* Sayjro K. Nouwakpo¹ and Chi-Hua Huang²—¹Purdue Univ., West Lafayette, IN; ²USDA-ARS National Soil Erosion Research Lab, West Lafayette, IN
- 4:10pm *Subsurface Exit Gradients at a Drainage Ditch with Lower Water Table than the Groundwater Table.* M. J. M. Romkens, USDA-ARS National Sedimentation Laboratory, Oxford, MS
- 4:30pm *Effect of Upstream Sediment Inflow on the Morphodynamics of Headcuts.* Robert R. Wells¹, Sean J. Bennett², and Carlos V. Alonso³—¹USDA-ARS National Sedimentation Laboratory, Oxford, MS; ²Univ. at Buffalo, Buffalo, NY; ³USDA-ARS (ret.), Murray, UT

3:30pm MONDAY**6/28/10****2B****SEDIMENT TRANSPORT 2****GRANDE BALLROOM A**

Chairs: Chester Watson, Biedenharn Group / Jonathan Aubuchon, USBR

- 3:30pm *Mapping Vulnerability to Upland Erosion in the Chesapeake Bay Watershed.* Scott W. Ator¹, John W. Brakebill¹, and Gregory E. Schwarz²—¹USGS, Baltimore, MD; ²USGS, Reston, VA
- 3:50pm *Modeling Erosion under Future Climates with the WEPP Model.* Timothy Bayley, MS Student¹, William Elliot², Mark A. Nearing³, D. Phillip Guertin¹, Thomas Johnson⁴, David Goodrich⁴, and Dennis Flanagan⁵—¹Univ. of AZ, Tucson, AZ; ²USDA Forest Service, Moscow, ID; ³USDA-ARS, Tucson, AZ; ⁴U.S. EPA ORD, Washington, DC; ⁵USDA-ARS, W. Lafayette, IN
- 4:10pm *Sediment Budget Development for the Great Lakes Region.* Mark S. Riedel¹, James P. Selegean², and Travis A. Dahl²—¹Baird Madison, WI; ²USACE Detroit District
- 4:30pm *Regional Differences and Scale Dependency of Sediment Yield in Europe.* M. Vanmaercke¹, J. Poesen¹, G. Verstraeten¹, W. Maetens¹, J. de Vente^{1,2}—¹K.U. Leuven, Belgium; ²Estación Experimental de Zonas Áridas, EEZA-CSIC, Desertification and Geocology Department, Almería, Spain

3:30pm MONDAY**6/28/10****2C****SEDIMENT SURROGATES 1****GRANDE BALLROOM C**

Chairs: John Gray, USGS / Matt Romkens, USDA-ARS

- 3:30pm *Discriminating Silt-and-Clay from Suspended-Sand in Rivers Using Side-Looking Acoustic Profiler.* Scott A. Wright¹, David J. Topping², and Corry A. Williams³—¹USGS, Sacramento, CA; ²USGS, Flagstaff, AZ; ³USGS, Grand Junction, CO
- 3:50pm *Acoustic Measurement of Fines.* Wayne Carpenter¹, James Chambers¹, Daniel Wren², Roger Kuhnle², and Jeffrey Diers²—¹Univ. of Mississippi, University, MS; ²USDA-ARS National Sedimentation Laboratory, Oxford, MS
- 4:10pm *Review of Methods to Estimate Fluvial Suspended-Sediment Characteristics from Acoustic Surrogate Metrics.* Mark N. Landers, USGS, Atlanta, GA
- 4:30pm *High-Resolution Measurements of Suspended-Sediment Concentration and Grain Size in the Colorado River in Grand Canyon Using a Multi-Frequency Acoustic System.* David J. Topping¹, Scott A. Wright², Ronald E. Griffiths¹, Theodore S. Melis¹, David M. Rubin³, and Thomas A. Sabol¹—¹USGS, Flagstaff, AZ; ²USGS, Sacramento, CA; ³USGS, Santa Cruz, CA

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3:30pm MONDAY**6/28/10****2D****STREAM RESTORATION 2****GRANDE BALLROOM B**

Chairs: Brian Cluer, NOAA / Rob Sampson, USDA-NRCS

- 3:30pm *Integration of 2D Numerical and Physical Modeling at the Proposed Red Bluff Fish Screen and Pumping Plant.* Kendra Russell, Tracy Vermeyen, Mike Sixta, and Blair Greimann, USBR, Denver, CO
- 3:50pm *Characterizing Substrate and Morphology of the Kootenai River White Sturgeon Critical Habitat, Boundary County, ID: Analysis for Ecosystem Restoration.* Gary Barton, Marshall Williams, Rhonda Weakland, and Ryan Fosness, USGS
- 4:10pm *A Comprehensive Field Investigation for Rehabilitation of an Embankment Pond.* Saied Saiedi¹, Teh Hee Min¹, Zahiraniza Mustaffa¹, Nabilah Abu Bakar¹, Kalaikumar Vaflyutham¹, Amer Awad², and S. Baharom Azahar S. Osman¹—¹Universiti Teknologi PETRONAS (UTP), Perak, Malaysia; ²Worley Parsons Calgary, Canada (formerly UTP, Malaysia)
- 4:30pm *Performance of Engineered Log Jams in Washington State-Post Project Appraisal.* W. Barry Southerland¹ and Frank Reckendorf²—¹USDA-NRCS, Portland, OR; ²Reckendorf and Assoc., Salem, OR

3:30pm MONDAY**6/28/10****2E****CLIMATE VARIABILITY/IMPACT 2****GRANDE BALLROOM D**

Chairs: Tom Perkins, USDA-NRCS / Charles Berenbrock, USGS

- 3:30pm *Snowpack Trends in the Central Sierra Nevada Affecting Water Supply Forecasts in the East Slope Sierra Basins.* Jolyne Lea, USDA-NRCS, Portland, OR
- 3:50pm *Comparisons of Historical Versus Weather Inputs to Watershed Models and Their Effect on Pollutant Loads.* Fred Theurer¹, Daniel Moore², William Merkel¹, Quan Quan¹, Helen Fox Moody¹, Ronald Binger³, James Bonta⁴, and Dennis Flanagan⁵—¹USDA-NRCS, Beltsville, MD; ²USDA-NRCS, Portland, OR; ³USDA-ARS, Oxford, MS; ⁴USDA-ARS, Coshocton, OH; ⁵USDA-ARS, West Lafayette, IN
- 4:10pm *Decimation of River Geometry Datasets Using Genetic Algorithms for use in Surface-Water Models.* Charles Berenbrock, USGS, National Center, Reston, VA
- 4:30pm *Regional Collaboration on Climate Change in the Pacific Northwest.* James Barton, USACE, Portland, OR

3:30pm MONDAY**6/28/10****2F****HYDROECOLOGICAL MODELING 1****CAPRI 102**

Chairs: Cassie Klumpp, USBR / Shane Coors, Precision Water Resources Engineering

- 3:30pm *Increasing Trends in Peak Flow in the Northeastern United States and Their Impacts on Design.* Meghan Walter¹ and Richard M. Vogel²—¹USDA-NRCS, Portland, OR; ²Tufts Univ., Medford, MA
- 3:50pm *Extreme Storm Event Assessments for Nuclear Facilities and Dam Safety: John England¹, Thomas Nicholson², and Douglas Clemetson³—¹USBR, Denver, CO; ²NRC, Washington, DC; ³USACE, Omaha, NE*
- 4:10pm *An Integrated Hydro-Biological Model for Simulating the Establishment of Fremont Cottonwood Seedlings.* Michael Tansey¹, Charles Young², James Richards³, Emily Tozzi³, and Jim MacIntyre³—¹USBR, Sacramento, CA; ²Stockholm Environmental Institute, Univ. of California, Davis, CA; ³Univ. of Calif., Davis, CA
- 4:30pm *Hydrologic Engineering Center's Collaborative Hydrologic Development Efforts.* Jeff Harris, USACE Hydrologic Engineering Center (HEC), Davis, CA

5:15pm to 6:45pm Exhibitors' Reception & Student Posters (I) EXHIBIT HALL

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TUESDAY – MORNING

7:15am Speakers' Breakfast **CAPRI 104-106**

8:30am TUESDAY 6/29/10

3A GULLY EROSION 3: GULLY EROSION MODELING CAPRI 101

Chairs: Sean Bennett, Univ. of Buffalo / Lyle Frees, USDA-NRCS

- 8:30am *Assessment of Gully Erosion Contributions Within the ARS CEAP Goodwin Creek Experimental Watershed.* Ronald L. Bingner, Robert R. Wells, and Roger Kuhnle, USDA-ARS National Sedimentation Laboratory, Oxford, MS
- 8:50am *CHILD Evaluation with a Field Data Set.* M.A. Campo¹, J. H. Flores-Cervantes², R. L. Bras³, and J. Casali¹—¹Public Univ. of Navarra, Pamplona, Spain; ²Massachusetts Institute of Technology, Cambridge, Massachusetts; ³Univ. of California, Irvine, CA
- 9:10am *Scaling a Representative Storm Sequence to Estimate Ephemeral Gully Erosion with RUSLE2.* Seth M. Dabney¹, Daniel C. Yoder², Dalmo A. N. Vieira¹, Ronald L. Bingner¹, and Robert R. Wells¹—¹USDA-ARS National Sedimentation Laboratory, Oxford, MS; ²Univ. of Tennessee, Knoxville, TN
- 9:30am *Automated Mapping of the Potential for Ephemeral Gully Formation in Agricultural Watersheds.* Chris Parker¹, Ronald L. Bingner², Colin Thorne¹, and Robert Wells²—¹School of Geography, Univ. of Nottingham, UK; ²USDA-ARS National Sedimentation Laboratory, Oxford, MS

8:30am TUESDAY 6/29/10

3B SEDIMENT TRANSPORT 3 GRANDE BALLROOM A

Chairs: Mark Landers, USGS / Julia Grim, USDA-NRCS

- 8:30am *An Investigation of the Bed Armoring Process and the Formation of Microclusters.* Joanna C. Curran and Lu Tan, The Univ. of Virginia, Charlottesville, VA
- 8:50am *Gila River Sediment Program – Bed Material Analysis.* Stephanie Gerlach, and George Sabol, Stantec
- 9:10am *Topographic Evolution of Sand Bars: Flume Experiment and Computational Modeling.* Paul J. Kinzel, Jonathan Nelson, Richard McDonald, and Brandy Logan, USGS, Golden, CO
- 9:30am *Modeling Long-Term Sediment Budgets in Supply Limited Rivers.* Scott A. Wright¹, David J. Topping², David M. Rubin³, and Theodore S. Melis²—¹USGS, Sacramento, CA; ²USGS, Flagstaff, AZ; ³USGS, Santa Cruz, CA

8:30am TUESDAY 6/29/10

3C SEDIMENT SURROGATES 2 GRANDE BALLROOM C

Chairs: Gary Johnson, USGS / Tim Rowe, USGS

- 8:30am *Overview of Selected Surrogate Technologies for High Temporal Resolution Suspended-Sediment Monitoring.* John R. Gray¹ and Jeffrey W. Gartner²—¹USGS, National Center, Reston, VA; ²USGS, Tucson, AZ
- 8:50am *Nondestructive Sediment Bulk Density Measurements from X-Radiography.* Gregory Norwood, USACE-ERDC, Vicksburg, MS
- 9:10am *20,000 Grain-Size Observations From the Bed of Colorado River and Implications for the Sediment Transport Through Grand Canyon.* David M. Rubin¹, David J. Topping², Henry Chezar¹, Joseph Hazel³, John Schmidt⁴, Theodore S. Melis², and Paul E. Grams²—¹USGS, Santa Cruz, CA; ²USGS, Flagstaff, AZ; ³N. Arizona Univ., Flagstaff, AZ; ⁴Utah State Univ., Logan, UT
- 9:30am *Evaluation of Sediment Surrogates in Rivers Draining to Lower Granite Reservoir, ID and WA.* Molly S. Wood, USGS, Boise, ID

8:30am TUESDAY 6/29/10

3D STREAM RESTORATION 3 GRANDE BALLROOM B

Chairs: Barry Southerland, USDA-NRCS / Kerry Robinson, USDA-NRCS

- 8:30am *River Engineering: Past, Present, and Future—A Comprehensive Systems Approach.* John Remus¹ and Meg Jonas²—¹USACE Omaha District; ²USACE-ERDC, Vicksburg, MS
- 8:50am *Sediment Transport in Stream Restoration: Rolling the Dice.* Peter R. Wilcock, National Center for Earth-surface Dynamics, Johns Hopkins Univ., Baltimore, MD
- 9:10am *One Hundred and Fifty Years of Sediment Manipulation on the Trinity River, CA.* Andreas Krause¹, Peter Wilcock², and Dave Gaeuman³—¹USBR, Weaverville, CA; ²Johns Hopkins Univ., Baltimore, MD; ³USBR, Denver, CO
- 9:30am *Innovative Urban Stream Restoration and Flood Protection with Principles of Natural Channel Design and Fluvial Geomorphology.* David Bidelsbach, Stantec, Livermore, CO

8:30am TUESDAY 6/29/10

3E ENVIRONMENTAL RIVER MANAGEMENT 1 GRANDE BALLROOM D

Chairs: Paul Pedone, USDA-NRCS / Quan Quan, USDA-NRCS

- 8:30am *State Updating of Distributed Hydrologic Models via Variational Data Assimilation for Real-Time Analysis and Prediction of Streamflow.* Haksu Lee^{1,2}, Dong-Jun Seo^{1,2}, Paul McKee³, and Robert Corby³—¹NOAA, National Weather Service (NWS), Silver Spring, MD; ²NOAA, NWS, Univ. Corporation for Atmospheric Research, Boulder CO; ³NOAA, NWS, Fort Worth, TX
- 8:50am *The International River Interface Cooperative: Public Domain Software for River Modeling.* Jon Nelson¹, Y. Shimizu², H. Takebayashi³, and R. R. McDonald¹—¹USGS, Golden, CO; ²Univ. of Hokkaido, Sapporo, Japan; ³Univ. of Kyoto, Kyoto, Japan
- 9:10am *Determination of Existing Dam Excavation Extents Using FESWMS-2DH.* Woohee Choi¹ and Samuel Lee²—¹San Diego State Univ. Research Foundation, San Diego, CA; ²Federal Energy Regulatory Commission, San Francisco, CA
- 9:30am *Kootenai River White Sturgeon Critical Habit with Free Flowing and Backwater Conditions, Boundary County, ID: Evaluation of Water Depth and Flow Velocity During 2006-09 Spawning Seasons.* Gary Barton¹, Gregory Hoffman², Rich McDonald³, and Jon Nelson⁴—¹USGS, Tacoma, WA; ²USACE, Libby, MT; ³USGS, Golden, CO; ⁴USGS, Cook, WA

8:30am TUESDAY 6/29/10

3F HYDROECOLOGICAL MODELING 2 CAPRI 102

Chairs: Tim Magee, CADSWES / Edith Zagona, CADSWES

- 8:30am *Role of the Modeling, Mapping, and Consequences Production Center.* Russ Wyckoff, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 8:50am *Suspended-Sediment Concentration Regimes for Biological Reference Streams in Tennessee.* Timothy H. Diehl and William J. Wolfe, USGS, Nashville, TN (Grant moved to 11E)
- 9:10am *Modeling Drop 2 Storage Reservoir Operations with HEC-RAS, Imperial County, California.* David Polumbo, Scott Tincher, Douglas B. Blatchford, and Nathaniel Gee, USBR, Boulder City, NV
- 9:30am *Accounting for Legacy Sediment in Great Lakes Stream Restoration Approaches.* Faith A. Fitzpatrick, USGS, Wisconsin Water Science Center, Middleton, WI

10:00am BREAK EXHIBIT HALL

10:30am	TUESDAY	6/29/10
4A	CONSERVATION EFFECTS ASSESSMENT PROJECT (CEAP)	CAPRI 101
Chairs: Frank Simpson, Univ. of Windsor / Glenn Wilson, USDA-ARS		

- 10:30am *Cheney Lake CEAP Project Validation/Calibration: Streamflow.* Fred D. Theurer¹, Ronald L. Bingner², Lyle D. Frees³, and Lisa French⁴—¹USDA-NRCS, Washington, DC; ²USDA-ARS National Sedimentation Laboratory, Oxford, MS; ³USDA-NRCS, Salina, KS; ⁴Project Coordinator, Cheney Lake Watershed Inc., KS
- 10:50am *Cheney Lake CEAP Project Validation/Calibration: Sediment.* Ronald L. Bingner¹, Fred D. Theurer², Lyle D. Frees³, and Lisa French⁴—¹USDA-ARS National Sedimentation Laboratory, Oxford, MS; ²USDA-NRCS, Washington, DC; ³USDA-NRCS, Salina, KS; ⁴Project Coordinator, Cheney Lake Watershed, Inc., KS
- 11:10am *Cheney Lake CEAP Project Validation/Calibration: Nutrients.* Lyle D. Frees¹, Fred D. Theurer², Ronald L. Bingner³, and Lisa French⁴—¹USDA-NRCS, Salina, KS; ²USDA-NRCS, Washington, DC; ³USDA-ARS National Sedimentation Laboratory, Oxford, MS; ⁴Project Coordinator, Cheney Lake Watershed Inc., KS
- 11:30am *Cheney Lake CEAP Project: Conservation Practice Effects Assessment.* Lisa French¹, Lyle D. Frees², Fred D. Theurer³, and Ronald L. Bingner⁴—¹Project Coordinator, Cheney Lake Watershed Inc., KS; ²KUSDA-NRCS, Salina, KS; ³USDA-NRCS, Washington, DC; ⁴USDA-ARS National Sedimentation Laboratory, Oxford, MS

10:30am	TUESDAY	6/29/10
4B	SEDIMENT TRANSPORT 4	GRANDE BALLROOM A
Chairs: Francisco Simões, USGS / Mark Landers, USGS		

- 10:30am *Bankfull Mobile Particle Size and its Prediction from a Shields-Type Approach.* Kristin Bunte¹, Steven Abt¹, Kurt Swingle², John Polyony³—¹Colorado St. Univ., Fort Collins, CO; ²Boulder, CO; ³USDA-FS Stream Systems Technology Center, Fort Collins, CO
- 10:50am *A Renovation of the Einstein Sediment Function.* Andrew Kadib, USACE (ret.), Arcadia, CA
- 11:10am *An Evaluation of the Variability of Trinity River Sediment and Nutrient Loads into Galveston Bay, Texas, During High Flood Events.* Michael T. Lee, USGS Texas Water Science Center, Conroe, TX
- 11:30am *Sediment Transport Mechanics in Shallow Flow During the Saltation Phase.* M. J. M. Römkens¹, M. R. Suryadevara Madhsudana¹, and S. N. Prasad¹—¹USDA-ARS National Sedimentation Laboratory, Oxford, MS; ²University of Mississippi, University, MS

10:30am	TUESDAY	6/29/10
4C	SEDIMENT SURROGATES 3	GRANDE BALLROOM C
Chairs: John Gray, USGS / Ken Hyer, USGS		

- 10:30am *Erroneous Total Suspended Solids as a Result of No to Low Flow Conditions and Flocculent Substrate.* Michael Byrne, USGS, Orlando, FL
- 10:50am *Tracing Sediment Movement on a Semi-Arid Watershed Using Rare Earth Elements.* Viktor Polyakov¹, A. Kimoto², and Mark Nearing¹, and Mary Nichols¹—¹USDA-ARS, Tucson, AZ; ²Pima Co. Regional Flood Control, Tucson, AZ
- 11:10am *Comparison of SSC Measurements with Acoustic Backscatter Data: West Bay Sediment Diversion, Mississippi River.* David Perkey, Thad Pratt, and Naveen Ganesh, USACE-ERDC, Vicksburg, MS
- 11:30am *Assessing Sediment Movement by CFD Particle Tracking.* Jose (Pepe) Vasquez, Northwest Hydraulic Consultants (NHC), North Vancouver, BC, Canada

10:30am	TUESDAY	6/29/10
4D	STREAM RESTORATION 4	GRANDE BALLROOM B
Chairs: Jeff Harris, USACE / Kerry Robinson, USDA-NRCS		

- 10:30am *Island Construction – Rebuilding Natural Levees to Restore Connectivity in the Northern Reaches of the Upper Mississippi River.* Jon S. Hendrickson, USACE, St. Paul District, St. Paul, MN
- 10:50am *Sediment Transport Modeling and Monitoring of Dam Removal and Stream Restoration Projects in Illinois.* Timothy D. Straub and Donald P. Roseboom, USGS, Urbana, IL
- 11:10am *Sediment Characteristics and Transport in the Kootenai River White Sturgeon Critical Habitat near Bonners Ferry, Idaho.* Ryan Fosness and Marshall Williams, USGS, Boise, ID
- 11:30am *Evaluation of Shallow Water Habitat Construction Methods on the Missouri River.* Daniel Pridal, USACE, Omaha NE

10:30am	TUESDAY	6/29/10
4E	ENVIRONMENTAL RIVER MANAGEMENT 2	GRANDE BALLROOM D
Chairs: Dan Moore, USDA-NRCS / Fred Theurer, USDA-NRCS		

- 10:30am *The Effect of the Long Lake Valley Project on Larval Suckers in Upper Klamath Lake, Oregon.* Tamara Wood, USGS, Portland, OR
- 11:50am *Development of a Flood Analysis Model for the Delaware River.* Daniel Goode¹, Edward Koerkle², Joan Klipsch³, and Amy Shallcross⁴—¹USGS Pennsylvania Water Center, Exton, PA; ²USGS Pennsylvania Water Center, New Cumberland, PA; ³USACE Hydrologic Engineering Center, Davis, CA; ⁴Delaware River Basin Commission, West Trenton, NJ
- 11:10am *Identification of Relict Floodplain Areas Along the Upper Columbia River.* James Wands, Mark Velleux, Tarun Singh, and Paul Paquin, HydroQual, Inc., Mahwah, NJ
- 11:30am *One-Dimensional Sediment Modeling of the Middle Rio Grande River.* David Varyu¹ and Robert Padilla²—¹USBR Technical Service Center, Denver, CO; ²USBR, Albuquerque, NM

10:30am	TUESDAY	6/29/10
4F	MANAGEMENT & DECISION MAKING MODELS 1	CAPRI 102
Chairs: Shane Coors, Precision Water Resources Engineering / Cassie Klumpp, USBR		

- 10:30am *Representing Policy for Operations in the Upper Rio Grande Water Operations Model.* Craig Boroughs¹, Marc Sidlow², and Steven Bowser³—¹BH&H, Dillon, CO; ²USACE, Albuquerque, NM; ³USBR, Albuquerque, NM
- 10:50am *Application of the Inflow Design Flood Analysis Alternative to NRCS TR-60 Design Storm Criteria for High Hazard Dams.* Claudia Hoelt and Mark Locke, USDA-NRCS, Washington, DC
- 11:10am *An Approach for Simulating Agricultural Water Management in the San Joaquin Valley, California.* Brian Joyce¹ and Michael Tansey²—¹Stockholm Environmental Institute, Sweden; ²USBR, Sacramento, CA
- 11:30am *Hydrologic Modeling System (HEC-HMS): Physically-Based Simulation Components.* William Scharffenberg, Paul Ely, Steve Daly, Matthew Fleming, Jay Pak, USACE Hydrologic Engineering Center (HEC), Davis, CA

Noon Lunch on your own

SCHEDULE AT A GLANCE

2ND JOINT CONFERENCE ON SEDIMENTATION AND HYDROLOGIC MODELING, 2010*

THURSDAY, 6/24/2010		THURSDAY, 6/24/2010		THURSDAY, 6/24/2010		
2:00pm @ LAS A.P. Pre-Conference Field Trip: The "Grand" Grand Canyon Tour, 6/24/2010 through 6/27/2010. Ends Sunday, 6/27/10 by 2:00pm at the Riviera Hotel.						
SUNDAY, 6/27/2010		SUNDAY, 6/27/2010		SUNDAY, 6/27/2010		
9:00am– 3:00pm		Field Trip: Red Rock National Conservation Area				
9:30am– 3:30pm		Field Trip: Spring/Ecology Tour of Muddy River/Virgin River Valley Areas				
10:00am– 4:00pm		Field Trip: Hoover Dam and New Hoover Dam Bypass Project Bridge				
8:00am– 5:00pm		Short Course: <i>Stream Restoration Design</i>				
8:00am– 5:00pm		Short Course: <i>SRH 2D (U.S. Bureau of Reclamation's 2-dimensional hydraulic and sediment transport model-river hydraulics modeling)</i>				
8:30am– 5:00pm		Short Course: <i>RiverWare – an Overview for Managers</i>				
9:00am– 4:00pm		Short Course: <i>Curve Number Rainfall-Runoff: Professional Application</i>				
1:00pm– 5:00pm		Short Course: <i>Overview of Collection of Fluvial-Sediment Data</i>				
5:30pm– 7:30pm		OPENING RECEPTION (EXHIBIT HALL)				
MONDAY, 6/28/2010		MONDAY, 6/28/2010		MONDAY, 6/28/2010		
8:30am – 9:30am		Pre-conference refreshment break				
9:30am–12:00pm		OPENING SESSION (GRANDE BALLROOM)				
Concurrent Sessions	A (CAPRI 101)	B (GRANDE BALLROOM A)	C (GRANDE BALLROOM C)	D (GRANDE BALLROOM B)	E (GRANDE BALLROOM D)	F (CAPRI 102)
1:30pm– 3:00pm	1 Gully Erosion 1	Sediment Transport 1	Sediment Analyses	Stream Restoration 1	Climate Variability/Impact 1	GIS Technology in Water Resources 1
3:30pm– 5:00pm	2 Gully Erosion 2	Sediment Transport 2	Sediment Surrogates 1	Stream Restoration 2	Climate Variability/Impact 2	Hydroecological Modeling 1
5:15pm– 6:45pm	EXHIBITORS' RECEPTION AND STUDENT POSTER SESSION (I)/COMPETITION					

*The following two historically recurring conferences are combined: the 9th Federal Interagency Sedimentation Conference and the 4th Federal Interagency Hydrologic Modeling Conference.

SCHEDULE AT A GLANCE

2ND JOINT CONFERENCE ON SEDIMENTATION AND HYDROLOGIC MODELING, 2010*

Concurrent Sessions	A (CAPRI 101)	B (GRANDE BALLROOM A)	C (GRANDE BALLROOM C)	D (GRANDE BALLROOM B)	E (GRANDE BALLROOM D)	F (CAPRI 102)
TUESDAY, 6/29/2010		TUESDAY, 6/29/2010		TUESDAY, 6/29/2010		
8:30am–10:00am	3 Gully Erosion 3	Sediment Transport 3	Sediment Surrogates 2	Stream Restoration 3	Environmental River Management 1	Hydroecological Modeling 2
10:30am–12:00pm	4 Conservation Effects Assessment Project (CEAP)	Sediment Transport 4	Sediment Surrogates 3	Stream Restoration 4	Environmental River Management 2	Management & Decision Making Models 1
1:30pm – 3:00pm	5 Soil Erosion 1	Sediment Transport 5	Watershed Sediment Analysis	Stream Restoration 5	Flood Hydrology 1	Management & Decision Making Models 2
3:30pm – 5:00pm	6 Soil Erosion 2	Sediment Transport 6	Mt. St. Helens Sedimentation	Stream Restoration 6	Flood Hydrology 2	Management & Decision Making Models 3
WEDNESDAY, 6/30/2010		WEDNESDAY, 6/30/2010		WEDNESDAY, 6/30/2010		
8:30am–10:00am	7 Soil Erosion 3	Sediment Measurement	Reservoir Sedimentation 1	Watershed Planning 1	Flood Hydrology 3	Management & Decision Making Models 4
10:30am–12:00pm	8 Dam Breach Modeling	Turbidity	Reservoir Sedimentation 2	Watershed Planning 2	Flood Hydrology 4	Management & Decision Making Models 5
1:30pm – 3:00pm	9 Sand and Gravel Interactions	Dam Removal 1	Reservoir Sedimentation 3	Fluvial Geomorphology/ Watershed Management	Flood Hydrology 5	Modeling of Major River Systems 1
4:30pm – 9:00pm	JOINT CONFERENCE MODELS/DEMOS AND POSTER SESSION II					
5:30pm – 7:00pm	MODELS/DEMOS AND POSTER DINNER					
THURSDAY, 7/1/2010		THURSDAY, 7/1/2010		THURSDAY, 7/1/2010		
8:30am–10:00pm	10 Instrumentation Monitoring	Dam Removal 2	Streambank Erosion 1	Fluvial Geomorphology 1	Flood Hydrology 6	Modeling of Major River Systems 2
10:30am–12:00pm	11 Adaptive Hydraulics Model (ADH)	Fluvial Geomorphology 2	Sediment Impact Assessment Model (SIAM)	Streambank Erosion 2	Flood Hydrology 7	—
10:30am – 5:00pm	Short Course: <i>Principles of Streambank Analysis and Stabilization</i>			1:00pm – 5:00pm	Short Course: <i>Sediment Transport Modeling</i>	
10:30am – 5:00pm	Short Course: <i>Variable-Density Groundwater Flow and Solute Transport Modeling using SEAWAT</i>			1:00pm – 5:00pm	Short Course: <i>HEC-HMS and HEC-GeoHMS</i>	
10:30am – 5:00pm	Short Course: <i>EXCEL-LEnT Training for Water Managers</i>					

TUESDAY – AFTERNOON

1:30pm	TUESDAY	6/29/10
5A	SOIL EROSION 1: LABORATORY AND FIELD ERODIBILITY MEASUREMENT METHODS / INSTRUMENTS	CAPRI 101
Chairs: Robert Wells, USDA-ARS / Greg Hanson, USDA-ARS		

- 1:30pm *Comparison and Experiences with Field Techniques to Measure Critical Shear Stress and Erodibility of Cohesive Deposits.* Andrew Simon¹, Robert Thomas² and Lauren Klimetz²—¹USDA-ARS National Sedimentation Laboratory, Oxford, MS; ²Univ. of Mississippi, Oxford, MS.
- 1:50pm *Cohherence of Erodibility for Erosion Processes and Different Scales.* Greg Hanson, Sherry Hunt, and Ron Tejral, and Darrell Temple (ret.), USDA-ARS, Stillwater, OK
- 2:10pm *On the in situ Determination of Soil Erodibility: From the 20th to the 21st Century.* Kevin Black, Partrac Ltd., Glasgow, UK
- 2:30pm *Erodibility of Sediment at Bridge Foundations in Georgia.* P. Hobson¹, R. Navarro², and T. W. Sturm³—¹Geosyntec, Portland, OR; ²J.B. Trimble & Assoc., Atlanta, GA; ³Georgia Tech, Atlanta, GA

1:30pm	TUESDAY	6/29/10
5B	SEDIMENT TRANSPORT 5	GRANDE BALLROOM A
Chairs: Yong Lai, USBR / Trent Snellings, USDA-NRCS		

- 1:30pm *Effects of Local Immobile Gravel Bed Elevation on Turbulence.* Daniel G. Wren, Eddy J. Langendoen, and Roger A. Kuhnle, USDA-ARS National Sedimentation Laboratory, Oxford, MS
- 1:50pm *Coupling Watershed Sediment Yield Model with Instream Sediment Transport Model: An Example of Middle Rio Grande.* Dong Chen and Li Chen, Desert Research Institute, Las Vegas, NV
- 2:10pm *Historic and Modern Sediment Yield from a Forested Watershed and Its Impact on Navigation.* Calvin T. Creech, Jim Selegean, and Travis A. Dahl, USACE, Detroit District
- 2:30pm *Characterization of Sediment Transport from Urban, Urbanizing, and Rural Areas of Johnson County, Kansas, 2006-2008.* Casey J. Lee, and Andrew C. Ziegler, USGS, Lawrence, KS

1:30pm	TUESDAY	6/29/10
5C	WATERSHED SEDIMENT ANALYSIS	GRANDE BALLROOM C
Chairs: Jon Major, USGS / Paul Pedone, USDA-NRCS		

- 1:30pm *Developing a Sediment Budget of the Cowlitz System.* David Biedenham¹, Paul Sclafani², Matt Fraver², Michelle Martin³, and Chester Watson⁴—¹Biedenham Group, LLC, Vicksburg MS; ²USACE, Portland OR; ³Anderson Consulting Engineers, Inc., Fort Collins, CO; ⁴Biedenham Group, LLC, Fort Collins, CO
- 1:50pm *Fluvial Geomorphology of the Entiat River, WA and Implications for Stream Restoration.* Jeanne E. Godaire, Kendra L. Russell, and Jennifer A. Bountry, U.S. Bureau of Reclamation, Denver, CO
- 2:10pm *Seasonal and Decadal-Scale Channel Evolution on the Dammed Elwha River, Washington.* Amy E. Draut¹, Joshua B. Logan¹, Mark C. Mastin², and Randall E. McCoy³—¹USGS, Santa Cruz, CA; ²USGS, Tacoma, WA; ³Lower Elwha Klallam Tribe, Port Angeles, WA
- 2:30pm *Sediment Transport on Cape Sable, Everglades National Park, Florida.* Mark Zucker and Carrie Boudreau USGS, Ft. Lauderdale, FL

1:30pm	TUESDAY	6/29/10
5D	STREAM RESTORATION 5	GRANDE BALLROOM B
Chairs: Frank Reckendorf, Reckendorf and Assoc. / Jon Fripp, NRCS		

- 1:30pm *Geomorphic Response of Sandbars to the March 2008 High-Flow Experiment on the Colorado River Downstream from Glen Canyon Dam.* Paul E. Grams¹, Joseph E. Hazel², John C. Schmidt³, Matt Kaplinski², Scott Wright⁴, David Topping¹, Theodore Melis¹, and—¹USGS, Flagstaff, AZ; ²N. Arizona Univ., Flagstaff, AZ; ³Utah St. Univ., Logan, UT; ⁴USGS, Sacramento, CA
- 1:50pm *Evaluating Anthropogenic Impacts on Salmonid Habitat with a Two-Dimensional Hydraulic Model, Middle Fork John Day River, Oregon.* Elainea R. Holburn Gordon and Ralph E. Klinger, USBR, Denver, CO
- 2:10pm *Utilizing Geomorphic Information as a Guide for Rehabilitating Salmonid Habitat along the Middle Fork John Day River, Oregon.* Ralph E. Klinger¹, Elainea R. Holburn Gordon¹, and Toni E. Turner²—¹USBR, Denver, CO; ²USBR, Boise, ID
- 2:30pm *River Restoration on the Entiat River.* Mike Sixta, USBR, Denver, CO

1:30pm	TUESDAY	6/29/10
5E	FLOOD HYDROLOGY 1	GRANDE BALLROOM D
Chairs: Claudia Hoefft, USDA-NRCS / Henry Wu, WEST Consultants		

- 1:30pm *Recent Enhancements to the StreamStats Web Application of the U.S. Geological Survey.* Kernell G. Ries¹, John Guthrie², Alan Rea³, Peter Steeves⁴, and David Stewart⁵—¹USGS, Baltimore, MD; ²USGS, Lakewood, CO; ³USGS, Oklahoma City, OK; ⁴USGS, Northboro, MA; ⁵USGS, Reston, VA.
- 1:50pm *Flow Resistance Estimation in High-Gradient Streams.* Steven Yochum¹ and Brian Bledsoe²—¹USDA-NRCS, Fort Collins, CO; ²Colorado State Univ., Fort Collins, CO
- 2:10pm *Hydrodynamic Modeling of Extreme Flooding in Devils Lake, Northeastern North Dakota.* Rochelle Nustad, Jerad D. Bales, and Tamara M. Wood, USGS
- 2:30pm *Hydraulic Model Study of the Purgatoire River and Trinidad Dam.* Cassie Klumpp¹ and Dennis Garcia²—¹USBR, Technical Service Center, Denver, CO; ²USACE, Albuquerque, NM

1:30pm	TUESDAY	6/29/10
5F	MANAGEMENT & DECISION MAKING MODELS 2	CAPRI 102
Chairs: Edith Zagana, CADSWES / David Neumann, CADSWES		

- 1:30pm *Management of Conjunctive Use of Surface-Water and Groundwater During Droughts.* Sanaz Dashti¹ and Majid Khayati Kholghi²—¹Mahab Ghodss Consulting Engineering Company, Tehran, Iran; ²Tehran Univ., Tehran, Iran
- 1:50pm *Utilizing Ensemble Streamflow Predictions to Incorporate Uncertainty in Real-Time Reservoir Operations.* Joan Klipsch, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 2:10pm *Estimating Loss of Life from Dam Failure with HEC-FIA.* Jason Needham, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 2:30pm *Development and Evaluation of a Component-Based Watershed Model Using the Object Modeling System.* James Ascough II¹, Olaf David², George Leavesley², Peter Krause³, Sven Kralisch³, and Lajpat Ahuja¹—¹USDA-ARS, Fort Collins, CO; ²Colorado State Univ., Fort Collins, CO; ³Friedrich-Schiller Univ., Jena, Germany

3:00pm BREAK EXHIBIT HALL

3:30pm TUESDAY 6/29/10

**6A SOIL EROSION 2: USE OF SUBMERGED
JET FOR FIELD AND LABORATORY
ERODIBILITY MEASUREMENT** **CAPRI
101**

Chairs: Andrew Simon, USDA-ARS / Ron Tejral, USDA-ARS

- 3:30pm *Evaluation of the Accuracy and Precision of the Multiangle Submerged Jet Test Device.* C. Johnson¹ and T. Wynn²—¹Graduate Assistant, Virginia Tech, Blacksburg, VA; ²Assistant Professor, Virginia Tech, Blacksburg, VA
- 3:50pm *Erodibility of a Cohesive Soil Using a Submerged Circular Turbulent Impinging Jet Test.* K. A. Mazurek, Univ. of Saskatchewan, Saskatoon, Saskatchewan, Canada
- 4:10pm *Comparison of Submerged Jet Testing to Field Erosion Rates in Clay and Sand Channels, Blackland Prairie Ecosystem, Texas.* Peter M. Allen¹, Stephanie Capello², and Dave Coffman¹—¹Baylor Univ., Waco, TX; ²Freese & Nichols, Inc., Fort Worth, TX
- 4:30pm *Soil Erodibility Evaluation Under Different Management Practices.* Robert R. Wells, Ronald L. Binger, and Glenn V. Wilson, USDA-ARS National Sedimentation Lab., Oxford, MS

3:30pm TUESDAY 6/29/10

6B SEDIMENT TRANSPORT 6 **GRANDE
BALLROOM A**

Chairs: Paul Pedone, USDA-NRCS / Christopher Magirl, USGS

- 3:30pm *Sources of Fine-Grained Suspended Sediment in Mill Stream Branch Watershed, Corsica River Basin, a Tributary to the Chesapeake Bay, Maryland, 2009-2010.* William S. Banks, Allen C. Gellis, and Gregory Noe, USGS Water Science Center, Baltimore, MD
- 3:50pm *Sediment Budget for Source Analysis: Le Sueur Watershed, MN.* Patrick Belmont¹, Erica Viparelli², and Peter R. Wilcock³—¹National Center for Earth-surface Dynamics (NCED), Univ. of Minnesota, St. Anthony Falls Laboratory; ²NCED, Univ. of Illinois, Urbana, IL; ³NCED, Johns Hopkins Univ., Baltimore, MD
- 4:10pm *Issues in Development of a 1000-Mile-Long Numerical Sedimentation Model of the Mississippi River.* Ronald R. Copeland¹, Basil K. Arthur¹, Roger A. Gaines², Leslie Lombard³, Dennis L. Stephens⁴, Clarence E. Thomas⁵—¹USACE Vicksburg District; ²USACE Memphis District; ³USACE New Orleans District; ⁴USACE St. Louis District; ⁵USACE Mississippi Valley Division
- 4:30pm *Sediment Transport and Channel Morphology Model in the San Joaquin River from Friant Dam to Mendota Dam, California.* Jianchun Huang and Blair P. Greiman, USBR/Denver, CO

3:30pm TUESDAY 6/29/10

6C MT. ST. HELENS SEDIMENTATION **GRANDE
BALLROOM C**

Chairs: Jennifer Bountry, USBR / Jeff Bradley, WEST Consultants

- 3:30pm *Multi-Dimensional Modeling of the Cowlitz-Columbia Confluence.* Dan Gessler¹, David Biedenharn², Chester Watson³, Chris Nygaard⁴, and Mitch Peters⁵—¹Alden Research Laboratory, Ft. Collins, CO; ²Biedenharn Group, LLC, Vicksburg, MS; ³Biedenharn Group, LLC, Ft. Collins, CO; ⁴USACE, Alden Research Laboratory, Ft. Collins, CO; ⁵Anderson Consulting, Ft. Collins, CO
- 3:50pm *Two Dimensional Modeling of the Upper North Fork Sediment Plain.* Dan Gessler¹, Mitch Peters¹, and Michelle Martin²—¹Alden Research Lab., Ft. Collins, CO; ²Anderson Consulting, Ft. Collins, CO
- 4:10pm *Mobile Bed Modeling of the Cowlitz River using HEC-RAS: Assessing Flooding Risk and Impact Due to System Sediment.* Stanford Gibson¹, Chris Nygaard², and Pete Dickerson²—¹USACE Hydrologic Engineering Center, Davis, CA; ²USACE, Portland, OR;
- 4:30pm *Cowlitz-Toutle River Watershed Sediment Assessment Utilizing the SIAM Model.* Chester Watson¹, David Biedenharn², and Michelle Martin³—¹Beidenharn Group, LLC, Ft. Collins, CO; ²Biedenharn Group, LLC, Vicksburg, MS; ³Anderson Consulting Group, Inc., Ft. Collins, CO

3:30pm TUESDAY 6/29/10

6D STREAM RESTORATION 6 **GRANDE
BALLROOM B**

Chairs: Don Woodward, USDA-NRCS (ret.) / Don Frevert, USBR (ret.)

- 3:30pm *Case Study: Evaluation of Channel Forming Discharge in the Jocko River with Calibrated Sediment Transport Functions.* Mitch Price, River Design Group, Inc., South Whitefish, MT
- 3:50pm *Floodplain Sediment Trapping, Hydraulic Connectivity, and Vegetation Along Restored Reaches of the Kissimmee River, Florida.* Edward R. Schenk and Cliff R. Hupp, USGS, Reston, VA
- 4:10pm *Suspended-Sediment and Bedload Monitoring of the Kissimmee River Restoration, July 2007 through September 2008.* A. C. Gellis¹, J. L. Pearman¹, J. J. Valdes², and P. J. Habermah¹—¹USGS; ²South Florida Water Management District
- 4:30pm *Cross Sectional Variability of the Restored Kissimmee River, Florida.* Joann Mossa, Ursula Garfield, and Jim Rasmussen, Department of Geography, Univ. of FL

3:30pm TUESDAY 6/29/10

6E FLOOD HYDROLOGY 2 **GRANDE
BALLROOM D**

Chairs: Rob Sampson, USDA-NRCS / Steve Yochum, USDA-NRCS

- 3:30pm *A Flood Warning System for City of Findlay, Ohio.* Matt Whitehead, USGS, Columbus OH
- 3:50pm *Estimating Flood Discharges for Ungaged Basins Beyond Standard Use of USGS Regional Regression Equations.* Henry Hu and Raymond Walton, WEST Consultants, Bellevue, WA
- 4:10pm *Debris Production and Flood Hazard Evaluation for Planning, San Antonio Creek Watershed, Ventura County, California.* Julia Grim and Greg Norris, USDA-NRCS, Davis, CA
- 4:30pm *Developing an Inundation Map Standard for the U.S. Army Corps of Engineers.* Will Breitkreutz, USACE, Kansas City, MO

3:30pm TUESDAY 6/29/10

**6F MANAGEMENT & DECISION
MAKING MODELS 3** **CAPRI 102**

Chairs: David Neumann, CADSWES / Doug Blatchford, USBR

- 3:30pm *A Modeling Framework for Improved Agricultural Water-Supply Forecasting.* George Leavesley¹, Olaf David¹, David Garen², Angus Goodbody², Jolyne Lea², Jim Marron², Rashawn Tama², Tom Perkins², Michael Strobel², and Rashawn Tama²—¹Colorado St. Univ., Ft. Collins, CO; ²USDA-NRCS, Portland, OR
- 3:50pm *Real-Time Flash Flood Forecasting Using Weather Radar and a Distributed Rainfall-Runoff Model.* Carl Unkrich¹, Michael Schaffner², Chad Kahler³, David Goodrich¹, Peter Troch⁴, Hoshin Gupta⁴, Thorsten Wagener⁵, and Soni Yatheendradas⁶—¹USDA-ARS, Tucson, AZ; ²NOAA, NY; ³NOAA, Tucson, AZ; ⁴Univ. of AZ, Tucson, AZ; ⁵Penn St. Univ., State College, PA; ⁶New Mexico Tech., Socorro, NM
- 4:10pm *Automated Geospatial Watershed Assessment Tool for Rangelands.* D. Phillip Guertin¹, Ginger Paige², David Goodrich³, Mark Nearing³, Scott Miller², Phillip Heilman³, Jeffrey Stone³, George Ruyle¹, Shea Burns³, Haiyan Wei³, and Mitch McClaran¹—¹Univ. of AZ, Tucson, AZ; ²Univ. of WY, Lander, WY; ³USDA-ARS, Tucson, AZ
- 4:30pm *The AGWA – KINEROS2 Suite of Modeling Tools in the Context of Watershed Services Valuation.* David C. Goodrich¹, Carl L. Unkrich¹, Roger E. Smith (ret.)², David A. Woolhiser (ret.)², Phil Guertin³, Mariano Hernandez¹, Lainie Levick¹, Shea Burns³, Scott Miller⁴, Darius Semmens⁵, William Kepner⁶, Jamie Massart³, Mark Nearing¹, Phil Heilman¹, Haiyan Wei¹, Ginger Paige⁴, Mike Shaffner⁷, Soni Yatheendradas⁹, Hoshin Gupta³, Thorsten Wagener⁹, Peter Troch³, David Brookshire¹⁰, Andrey K. Guber¹¹, and Yakov A. Pachepsky¹¹—¹USDA-ARS, Tucson, AZ; ²USDA-ARS, Ft. Collins, CO; ³Univ. of Arizona, Tucson, AZ; ⁴Univ. of Wyoming, Laramie, WY; ⁵USGS, Denver, CO; ⁶EPA, Las Vegas, NV; ⁷NWS, Binghamton, NY; ⁸NASA Goddard, Greenbelt, MD; ⁹Penn State Univ., Univ. Park, PA; ¹⁰Univ. of New Mexico, Albuquerque, NM; ¹¹USDA-ARS, Beltsville, MD

WEDNESDAY – MORNING

7:15am Speakers' Breakfast, **CAPRI 104-106**

8:30am WEDNESDAY 6/30/10

**7A SOIL EROSION 3: ERODIBILITY
MEASUREMENT OF EARTHEN
EMBANKMENTS CAPRI 101**

Chairs: Tess Wynn, Virginia Polytechnical Univ. / Peter Allen, Baylor Univ.

- 8:30am *Relating HET and JET Test Results to Internal Erosion Field Tests.* Tony L. Wahl, USBR, Denver, CO
- 8:50am *A Comparison of the Hole Erosion Test and Jet Erosion Test.* Tony L. Wahl, USBR, Denver, CO
- 9:10am *Agricultural Soil Erosion Rates for the Linganore Creek Watershed in the Piedmont Physiographic Province of the Chesapeake Bay.* John W. Clune, Allen C. Gellis, and Lynn G. McKee, USGS, Maryland-Delaware-DC Water Science Center, Baltimore, MD
- 9:30am *Multi-Scale Calibration of KINEROS-DWEPP, a Combined Physically-Based Hydrologic Model and Process-Based Soil Erosion Model.* Ian Shea Burns, USDA-ARS SWRC

8:30am WEDNESDAY 6/30/10

**7B SEDIMENT MEASUREMENT GRANDE
BALLROOM A**

Chairs: Greg Norris, USDA-NRCS / Renjie Xia, USACE

- 8:30am *Measuring Bedload Transport on the Missouri River Using Time Sequenced Bathymetric Data.* David Abraham, Thad Pratt, and Jeremy Sharp, USACE-ERDC, Vicksburg, MS
- 8:50am *Plot-Scale Sediment Transport Processes on a Burned Hillside as a Function of Particle Size.* John A. Moody, USGS, Boulder, CO
- 9:10am *Adjustments Between Historical Flow and Sediments in a River Basin Using Genetics Algorithms.* J. M. Preciado¹, J. M. L. Arganis^{2,3}, and G. A. Ocon¹—¹Instituto Mexicano de Tecnología del Agua, Jiutepec, Mor., ²Instituto de Ingeniería, Universidad Nacional Autónoma de México, ³PUMAGUA, Universidad Nacional Autónoma de México
- 9:30am *Different Characteristics of Suspended Sediment Transport in Dry and Wet Years Revisited.* Renjie Xia, USACE, Rock Island, IL

8:30am WEDNESDAY 6/30/10

**7C RESERVOIR
SEDIMENTATION 1 GRANDE
BALLROOM C**

Chairs: Christopher Magirl, USGS / Ron Ferrari, USBR

- 8:30am *Development of a National, Dynamic Reservoir Sedimentation Database.* J. R. Gray¹, D. W. Stewart¹, G. E. Schwarz², J. M. Bernard², J. T. Stinson³, M. M. Jonas³, J. W. Webb³, and T. J. Randle⁴—¹USGS, National Center, Reston, VA; ²USDA-NRCS, Washington, DC; ³U.S. Army Corps of Engineers; ⁴Bureau of Reclamation, Denver, CO
- 8:50am *Methods, Bathymetry, and Sediment-Storage Capacity Change in a System of Reservoirs on the Lower Susquehanna River and Bathymetry of Three State Park Lakes, 2007-2009.* Michael Langland and Scott Hoffman, Pennsylvania Science Center, New Cumberland, PA
- 9:10am *Assessing Volumetric and Sedimentation Surveying Techniques for Texas Reservoirs.* Jason Kemp and Jordan Furnans, Texas Water Development Board, Austin, TX
- 9:30am *Sediment Load, Transport, and Accumulation in Lower Granite Reservoir on the Snake River.* Gregg N. Teasdale, USACE, Walla Walla District

10:00am BREAK GRANDE BALLROOM E

8:30am WEDNESDAY 6/30/10

**7D WATERSHED PLANNING 1 GRANDE
BALLROOM B**

Chairs: Don Frevert, USBR (Ret.) / Joe Steuber, USDA-NRCS

- 8:30am *Information Cascades in Engineering Decision Making Processes.* Mark S. Nemeth, Supervisory Civil Engineer, Albuquerque, NM
- 8:50am *Specific Gage Analyses of Stage Trends on the Middle Mississippi River.* Chester Watson¹ and David Biedenham²—¹Biedenham Group, LLC, Fort Collins, CO; ²Biedenham Group, LLC, Vicksburg, MS
- 9:10am *Comprehensive Geomorphic and Sedimentation Analyses of Lower Sacramento River for Flood Management, Erosion Mitigation, and Habitat Enhancement Design.* Brad Hall¹, Andrey Shvidchenko¹, René Leclerc¹, Lea Adams², Ron Copeland³, and Bryce Cruey¹—¹Northwest Hydraulic Consultants, Sacramento, CA; ²USACE, Sacramento, CA; ³Mobile Boundary Hydraulics, Clinton, MS
- 9:30am *Channel Evolution in Urban Watersheds: A Conceptual Model.* Meg Jonas, USACE-ERDC, Vicksburg, MS

8:30am WEDNESDAY 6/30/10

**7E FLOOD HYDROLOGY 3 GRANDE
BALLROOM D**

Chairs: Colin Niehus, USDA-NRCS / Mary Greene, USDA-NRCS

- 8:30am *Magnitude and Frequency of Floods in Rural Basins of Georgia, South Carolina, and North Carolina: A Multi-State Approach.* Toby Feaster¹, Anthony Gotwald², and Curtis Weaver³—¹Clemson Univ., SC; ²USGS, Atlanta, GA; ³USGS, Raleigh, NC
- 8:50am *NOAA's Community Hydrologic Prediction System.* John Roe, Christine Dietz, Pedro Restrepo, John Halquist, Robert Harman, Ronald Horwood, Billy Olsen, Harold Opitz, Robert Shedd, and Edwin Welles, NOAA, Washington DC
- 9:10am *Estimating Salinity Intrusion Effects Due to Climate Change Along the Grand Strand of the South Carolina Coast.* Paul Conrads¹, Edwin A. Roehl, Jr.², Charles Sexton³, Daniel Tufford⁴, Greg Carbone³, Kirstin Dow³, and John Cook²—¹USGS, Columbia, SC; ²Advanced Data Mining International, Greenville, SC; ³Univ. of South Carolina, Columbia, SC; ⁴Beaufort-Jasper Water & Sewer Authority, Okatie, SC
- 9:30am *Potential Mitigation Approach to Minimize Salinity Intrusion in the Lower Savannah River Estuary Due to Reduced Controlled Releases from Lake Thurmond.* Paul Conrads¹ and James Greenfield²—¹USGS, Columbia, SC; ²USEPA, Atlanta, GA

8:30am WEDNESDAY 6/30/10

**7F MANAGEMENT & DECISION
MAKING MODELS 4 CAPRI 102**

Chairs: Claudia Hoelt, USDA-NRCS / Joseph Giacinto, NRC

- 8:30am *HEC-RTS (Real-Time Simulation) Version 2 for Real Time Flood Forecasting and Water Control.* William Charley, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 8:50am *Conceptual Groundwater Model Development for Nuclear Power Plants.* Joseph Giacinto, Hosunq Ahu, Daniel Barnhurst, Mark McBride, Nebiyu Tiruneh, Richard Raione, Nuclear Regulatory Commission, Washington, DC
- 9:10am *Challenges in Water Resources Forecasting at the National Weather Service.* Pedro Restrepo, Gary Carter, and Geoffrey Bonnin, NOAA, National Weather Service, Washington, DC
- 9:30am *Hydrologic Ensemble Prediction for Risk-Based Water Resources Management and Hazard Mitigation.* Dong-Jun Seo^{1,2}, Julie Demargne¹, Limin Wu¹, Yuqiong Liu¹, James D. Brown¹, Satish Regonda¹, and Haksu Lee^{1,2}—¹NOAA, NWS, Silver Spring, MD; ²Univ. Corp. for Atmos. Res, Boulder, CO

10:30am	WEDNESDAY	6/30/10
8A	DAM BREACH MODELING	CAPRI 101
Chairs: Greg Hanson, USDA-ARS / Tony Wahl, USBR		

- 10:30am *Dam Breach Modeling - An Overview of Analysis Methods.* Tony L. Wahl, USBR, Denver, CO
- 10:50am *Use of Breach Process Models to Estimate HEC-RAS Dam Breach Parameters.* D. Michael Gee, USACE-ERDC, Vicksburg, MS
- 11:10am *Overview of Erosion Processes Within NWS-Breach and WinDAM.* Ronald Tejral, Greg Hanson, and Darrell Temple (ret.), USDA-ARS, Stillwater, OK
- 11:30am *WinDAM B Earthen Embankment Overtopping Analysis Software.* Karl Visser¹, Greg Hanson², Darrell Temple², Morris Lobrecht (ret.)¹, Mitch Nielsen³, KSU; Tony Funderburk¹, Helen Fox Moody⁴—¹USDA-NRCS, NDCSMC, Fort Worth, TX; ²USDA-ARS, Stillwater, OK; ³Kansas State Univ.; ⁴USDA-NRCS, Beltsville, MD

10:30am	WEDNESDAY	6/30/10
8B	TURBIDITY	GRANDE BALLROOM A
Chairs: Gary Johnson, USGS / Andrew Ziegler, USGS		

- 10:30am *Correlating Streamflow, Turbidity, and Suspended-Sediment Concentration in Minnesota's Wild Rice River.* Christopher A. Ellison, Richard L. Kiesling, and James D. Fallon, USGS, Mounds View, MN
- 10:50am *Computing Time-Series Suspended-Sediment Concentrations and Loads from In-Stream Turbidity-Sensor and Streamflow Data.* P. P. Rasmussen¹, J. R. Gray², G. Doug Glysson², and A. C. Ziegler²—¹USGS, Lawrence, KS; ²USGS, National Center, Reston, VA
- 11:10am *Analyzing Turbidity, Suspended-Sediment Concentration, and Particle-Size Distribution Resulting from a Debris Flow on Mount Jefferson, Oregon.* Mark Uhrich, USGS, Portland, OR
- 11:30am *Why Are Continuous In-Stream Turbidity Data Needed to Characterize Sediment Transport and Sources?—An Example from the Little Arkansas River, South-Central Kansas.* Andrew C. Ziegler and Patrick P. Rasmussen, USGS, Lawrence, KS

10:30am	WEDNESDAY	6/30/10
8C	RESERVOIR SEDIMENTATION 2	GRANDE BALLROOM C
Chairs: Ron Ferrari, USBR / Mark Hall, USDA-NRCS		

- 10:30am *Howard Hanson Dam Sediment Management Project.* Karl Eriksen and Kent Easthouse, USACE, Seattle, WA
- 10:50am *Influence of Stilling Basin Geometry on Flow Pattern and Sediment Transport at Flood Mitigation Dams.* Sameh A. Kantoush and Tetsuya Sumi, Water Resources Research Center, Disaster Prevention Research Institute, Kyoto Univ., Japan
- 11:10am *Simulation of Xiaolangdi Reservoir Sedimentation and Flushing Processes.* Jungkyu Ahn, Ph.D. student; and Chih Ted Yang, Borland Professor of Water Resources; Colorado State Univ., Fort Collins, CO
- 11:30am *Elwha River Restoration: Sediment Adaptive Management Plan.* Tim J. Randle and Jennifer Bountry, USBR Technical Service Center, Denver, CO

10:30am	WEDNESDAY	6/30/10
8D	WATERSHED PLANNING 2	GRANDE BALLROOM B
Chairs: Dave Goodrich, USDA-ARS / Pete Hawkins, Univ. of AZ		

- 10:30am *Sediment Load Variability and Sediment Sources for Forest Headwater Streams in the Southern Sierra Nevada, California.* Carolyn Hunsaker¹, Jason Adair¹, and Kurt Weidich²—¹USDA-FS, Fresno, CA; ²California State Univ., Chico, CA
- 10:50am *Floodplains, Equilibrium, and Fluvial Geomorphic Impacts of Human Alteration.* Cliff R. Hupp, Gregory B. Noe, and Edward R. Schenk, USGS, Reston, VA
- 11:10am *Enhancing The Sediment Transport Modeling Capability of a Watershed Modeling Framework.* Earl Hayter¹, Jack Kittle, Jr.², and Anthony Donigian Jr.²—¹USACE-ERDC, Vicksburg, MS; ²AQUA TERRA, Vicksburg, MS
- 11:30am *A Watershed Modeling Framework for Military Installations: Assessment of the Hydrologic and Sediment Washoff Impacts of Military Management Alternatives.* Anthony S. Donigian, Jr.¹, John C. Imhoff¹, Anurag Mishra¹, Patrick N. Deliman², and Eileen C. Regan¹—¹AQUA TERRA Consultants; ²USACE-ERDC, Vicksburg, MS

10:30am	WEDNESDAY	6/30/10
8E	FLOOD HYDROLOGY 4	GRANDE BALLROOM D
Chairs: Meghan Walter, USDA-NRCS / Colin Niehus, USDA-NRCS		

- 10:30am *Utilizing a Two-Dimensional Hydraulic Model for Making Discharge Estimates of Prehistorical Paleofloods on the South Fork Boise River, South-Central Idaho.* Travis Bauer and Ralph Klinger, USBR, Technical Service Center, Denver, CO
- 10:50am *U.S. Army Corps of Engineers Water Management for Environmental Sustainability.* James Barton, USACE, Portland, OR
- 11:10am *Simulating a Century of Hydrographs—Mark Twain Reservoir.* Ann M Midje Baniitt, USACE, St. Paul, MN
- 11:30am *Identifying Breach Analysis Needs of Multiple Dams with Limited Resources.* Terry Costner, Brian Wenburg, and Harrell Geron, USDA-NRCS, TX

10:30am	WEDNESDAY	6/30/10
8F	MANAGEMENT & DECISION MAKING MODELS 5	CAPRI 102
Chairs: Bill Merkel, USDA-NRCS / Shaun McKinney, USDA-NRCS		

- 10:30am *Hydrologic/Hydraulic Modeling of Westminster Watershed, Orange County, California.* James Chieh¹, Jay Pak², and Rene Vermeeren²—¹USACE, Los Angeles, CA; ²USACE Hydrologic Engineering Center (HEC), Davis, CA
- 10:50am *Simulation of Regional-Scale Groundwater/Surface-Water Interaction in the Upper Klamath Basin of Oregon and California.* Marshall Gannett¹ and Brian Wagner²—¹USGS, Portland, OR; ²USGS, Menlo Park, CA
- 11:10am *The Use of a Coupled Groundwater Simulation and Optimization Model to Guide Groundwater Management in the Upper Klamath Basin, Oregon and California.* Brian Wagner¹ and Marshall Gannett²—¹USGS, Menlo Park, CA; ²USGS, Portland, OR
- 11:30am *Incorporating Groundwater Flow into the WEPP model.* William Elliot¹, Erin Brooks², Tim Link², and Sue Miller¹—¹USFS Moscow ID; ²Univ. of Idaho, Moscow, ID

Noon Lunch on your own

1:30pm WEDNESDAY 6/30/10

9A SAND AND GRAVEL INTERACTIONS CAPRI 101

Chairs: John Potyondy, USDA-FS / Drew Baird, USBR

- 1:30pm *The Infiltration of and Influence of Sand Pulses Introduced into Mobile Gravel Substrates.* Stanford Gibson, David Abraham, and Ronald Heath, Hydrologic Engineering Center (HEC), Davis, CA
- 1:50pm *Morphology and Dynamics of a Gravel-Sand Transition.* J. G. Venditti¹, R. P. Humphries¹, M. A. Allison², J. A. Nittrouer², M. Church³—¹Simon Fraser Univ., Burnaby, BC, Canada; ²Univ. of Texas, Austin, Texas; ³Univ. of British Columbia, Vancouver, BC, Canada
- 2:10pm *Numerical Modeling of Bed Mixing and Transport Following Dam Removal.* Blair Greimann¹ and Edmund Andrews²—¹USBR, Denver, CO; ²USGS, Boulder, CO
- 2:30pm *An Experimental Study of Sand Transport Over an Immobile Gravel Substrate.* R. A. Kuhnle, D. G. Wren, and E. J. Langendoen, USDA-ARS National Sedimentation Laboratory, Oxford, MS

1:30pm WEDNESDAY 6/30/10

9B DAM REMOVAL 1 GRANDE BALLROOM A

Chairs: Mathias Collins, NOAA / Mary Andrews, NOAA

- 1:30pm *Scour Analysis Upstream of the San Acacia Diversion Dam on the Rio Grande.* Yong G. Lai¹, and Jonathan S. Aubuchon²—¹USBR, Denver, CO; ²USBR, Albuquerque, NM
- 1:50pm *Sediment Management Strategies Associated with Dam Removal in the State of Washington.* Christopher S. Magirl¹, Patrick J. Connolly², Bengt Coffin³, Jeffrey J. Duda⁴, Christopher A. Curran¹, and Amy E. Draut⁵—¹USGS, Tacoma, WA; ²USGS, Cook, WA; ³USDA-FS, Trout Lake, WA; ⁴USGS, Seattle, WA; ⁵USGS, Santa Cruz, CA
- 2:10pm *Evolving Fluvial Response of the Sandy River, Oregon, Following Removal of Marmot Dam.* Jon J. Major¹, Kurt R. Spicer¹, Jim E. O'Connor², Mackenzie Keith², J. Rose Wallick², Heather M. Bragg², Charles J. Podolak³, Peter R. Wilcock³, Smokey Pittman⁴, Abigail Rhode⁵, and Gordon E. Grant⁶—¹USGS, Cascades Volcano Observatory, Vancouver, WA; ²USGS, Portland, OR; ³Johns Hopkins Univ., Baltimore, MD; ⁴Graham Matthews and Associates, Weaverville, CA; ⁵Herrera Environmental Consultants, Portland, OR; ⁶USFS, Corvallis, OR
- 2:30pm *Guidelines for Assessing Sediment-Related Effects of Dam Removal.* Tim J. Randle, Jennifer Bountley, and Blair Greimann, USBR Technical Service Center, Denver, CO

1:30pm WEDNESDAY 6/30/10

9C RESERVOIR SEDIMENTATION 3 GRANDE BALLROOM C

Chairs: Mark Hall, USDA-NRCS / Jerry Bernard, USDA-NRCS

- 1:30pm *USACE Reservoir Sedimentation: Data, Assessment, and Guidance.* Meg M. Jonas¹, Fred Pinkard, Jr.¹, and John Remus²—¹USACE-ERDC, Vicksburg, MS; ²USACE, Omaha, NE
- 1:50pm *Sediment Transport Modeling with GSTARS-HTC as Part of the Lewis and Clark Lake Sediment Management Study.* Paul M. Boyd¹, Chih Ted Yang², Daniel B. Pridal¹, Jungkyu Ahn²—¹USACE Omaha District; ²Colorado State Univ., Fort Collins, CO
- 2:10pm *Assessment of Reservoir Trap Efficiency Methods Using the Hydrologic Modeling System (HEC-HMS) for the Upper North Bosque River Watershed in Central Texas.* Jay Pak, Matt Fleming, William Scharffenberg, and Paul Ely, USACE, Institute for Water Resources, Hydrologic Engineering Center, Davis, CA
- 2:30pm *Forecasting Potential Impacts of Development and Climate Variability on Sedimentation of a Hydropower Reservoir.* Mark S. Riedel, Amanda G. Stone, Qimiao Lu; Baird, Madison, WI

1:30pm WEDNESDAY 6/30/10

9D FLUVIAL GEOMORPHOLOGY/ WATERSHED MANAGEMENT GRANDE BALLROOM B

Chairs: Terry Costner, USDA-NRCS / Teri Seeman, USDA-NRCS (ret.)

- 1:30pm *Channel Geomorphic Responses to Disturbances Assessed Using Streamgage Information.* Kyle E. Juracek and Mark W. Bowen, USGS, Lawrence, KS
- 1:50pm *Upland Drainage Response to No-Tillage Winter Wheat Production.* John D. Williams, David S. Robertson, Stewart B. Wuest, USDA-ARS, Pendleton OR
- 2:10pm *The Effectiveness of Aerial Hydromulch as a Post-Fire Erosion Control Treatment in Southern California.* Peter M. Wohlgenuth¹, Jan L. Beyers¹, and Peter R. Robichaud²—¹USDA-FS, Riverside, CA; ²USDA-FS, Moscow, ID
- 2:30pm *Computational Modeling of Bedform Evolution in Rivers with Implications for Predictions of Flood Stage and Bed Evolution.* J. M. Nelson¹, Y. Shimizu², S. Giri³, and R. R. McDonald¹—¹USGS, Denver, CO; ²Univ. of Hokkaido, Sapporo, Japan; ³Deltares Delft, The Netherlands

1:30pm WEDNESDAY 6/30/10

9E FLOOD HYDROLOGY 5 GRANDE BALLROOM D

Chairs: Kazimierz Banasik, Warsaw Agricultural Univ. / Greg Norris, NRCS

- 1:30pm *Statistical Software Package.* David Harris, Gary Brunner, Matt Fleming, and Beth Faber, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 1:50pm *Examination of Curve Numbers From a Small Piedmont Catchment Under 33 Years of No-Till Crop Management.* Dinku Endale, Harry Schomberg, Dwight Fisher, and Michael Jenkins, USDA-ARS, Watkinsville GA
- 2:10pm *Recent Developments in Flood Frequency Analysis Including Plans to Update Bulletin 17B.* Wilbert Thomas, Jr.¹, John England, Jr.², Tim Cohn³, and Nancy Steinberger⁴—¹Michael Baker, Jr., Inc. Manassas, VA; ²USBR, Technical Service Center, Denver, CO; ³USGS, Reston, VA; ⁴FEMA, Denver, CO
- 2:30pm *Modeling the Impact of Microtopography on the Rainfall-Runoff Process.* Li Chen¹, Long Xiang², and Zhongbo Yu³—¹Desert Research Institute, Las Vegas, NV; ²Hohai Univ., Nanjing, China; ³Univ. of NV, Reno, NV

1:30pm WEDNESDAY 6/30/10

9F MODELING OF MAJOR RIVER SYSTEMS 1 CAPRI 102

Chairs: Bill Elliot, USDA-FS / Ed Radatz, USDA-NRCS

- 1:30pm *The Feasibility and Desirability of Stormwater Retention On Site.* Eric Strecker and Aaron Poresky, Geosyntec, Portland, OR
- 1:50pm *Truckee River High-Precision Operations Model Description and Applications.* Shane Coors, Precision Water Resources Engineering, Boulder, CO
- 2:10pm *Using HEC-RESSIM for Columbia River Treaty Flood Control.* Chan Modini, USACE Hydrologic Engineering Center (HEC), Davis, CA
- 2:30pm *Toward Modeling of River-Estuary-Ocean Interactions to Enhance Operational River Forecasting in the NOAA National Weather Service.* Hassan Mashriqui¹, Seann Reed², and Cecile Aschwanden¹—¹NOAA, NWS, Silver Spring, MD; ²NOAA, NWS, Salt Lake City, UT

4:30pm to 9:00pm DEMOS and POSTERS-II, GRANDE BALLROOM F

6:00pm to 7:30pm DINNER, GRANDE BALLROOM E, G, H

THURSDAY – MORNING

7:15am Speakers' Breakfast, **CAPRI 104-105**

8:30am THURSDAY 7/01/10

10A INSTRUMENTATION MONITORING CAPRI 101

Chairs: Christopher Ellison, USGS / David Gaeuman, USBR

- 8:30am *An Automated and Universal Method for Measuring Mean Grain Size from a Digital Image of Sediment.* Daniel Buscombe, David M. Rubin, and Jonathan A. Warrick, USGS, Santa Cruz, CA
- 8:50am *Mechanics of Bedload Rating Curve Shifts and Bedload Hysteresis in the Trinity River, California.* David Gaeuman, USBR, Trinity River Restoration Program, Weaverville, CA
- 9:10am *Video Measurements of Flocculated Sediment in Lakes and Estuaries in the USA.* Andrew J. Manning¹, David H. Schoellhamer², Ashish J. Mehta³, Daniel Nover⁴, and S. Geoffrey⁴, —¹HR Wallingford Ltd., Wallingford, UK; ²USGS, Sacramento, CA; ³Univ. of Florida, Gainesville, FL; ⁴Univ. of California, Davis, CA
- 9:30am *A Versatile Suite of Laboratory-Nonspecific Software for Processing Sediment Grain-Size Data.* L. J. Poppe¹, A. H. Eliason², and K. Y. McMullen¹—¹USGS, Woods Hole, MA; ²Eliason Data Services, Mashpee, MA

8:30am THURSDAY 7/01/10

10B DAM REMOVAL 2 GRANDE BALLROOM A

Chairs: Tim Randle, USBR / Julia Grim, USDA-NRCS

- 8:30am *Assessing Post-Dam Removal Sediment Dynamics Using the CONCEPTS Computer Model.* Eddy J. Langendoen, USDA-ARS, National Sedimentation Laboratory, Oxford, MS
- 8:50am *Predicting Sediment Routing on the Sandy River, Oregon Following the Removal of the Marmot Dam.* Charles J. P. Podolak and Peter R. Wilcock, National Center for Earth-Surface Dynamics, Johns Hopkins Univ., Baltimore, MD
- 9:10am *A Broad Level Classification System for Dam Removals.* Laura Wildman¹ and James MacBroom²—¹Princeton Hydro, LLC, Glastonbury, CT; ²Milone & MacBroom, Inc., Cheshire, CT
- 9:30am *Boardman River Existing-Conditions SIAM Model for Dam Removal Study.* Amanda G. Stone¹, James P. Selegnan², Travis A. Dahl¹, Mark S. Riedel¹—¹Baird, Madison, WI; ²USACE, Detroit, MI

8:30am THURSDAY 7/01/10

10C STREAMBANK EROSION 1 GRANDE BALLROOM C

Chairs: S. K. Nanda, USACE / Bethany Bearmore, NOAA

- 8:30am *Evaluation of Bank Stabilization Structures in the Delta Headwaters Project (DHP) in Mississippi.* David Biedenham¹, Charles Little², Kendall Smith², and Chester Watson³—¹Biedenham Group, LLC, Vicksburg MS; ²USACE-ERDC, Vicksburg, MS; ³Biedenham Group, LLC, Fort Collins, CO
- 8:50am *Field Application of the Reactive Stream Stabilization Structure (RS2).* Kenneth Carlson¹, David Biedenham², Kendall Smith³, David Derrick⁴ and Chester Watson⁵—¹Colorado State Univ., Fort Collins, CO; ²Biedenham Group, LLC, Vicksburg, MS; ³USACE, Vicksburg District, Vicksburg, MS; ⁴USACE-ERDC, Vicksburg, MS; ⁵Biedenham Group, LLC, Fort Collins, CO
- 9:10am *Streambank Erosion Causes, and Large Woody Material (LWM) Solutions for Streambank Erosion and Sediment Reduction.* Frank F. Reckendorf, Reckendorf and Associates, Salem, OR, and Adjunct Associate Professor of Geology, Portland St. Univ., Portland, OR

9:30am *Iterative Bank-Stability and Toe-Erosion Modeling for Predicting Streambank Loading Rates and Potential Load Reductions.*

Andrew Simon¹, Natasha Bankhead¹ and Robert Thomas²—¹USDA-ARS, National Sedimentation Laboratory, Oxford, MS; ²Department of Civil Engineering, Univ. of Mississippi, University, MS

8:30am THURSDAY 7/01/10

10D FLUVIAL GEOMORPHOLOGY 1 GRANDE BALLROOM B

Chairs: Andrew Simon, USDA-ARS / John Potyondy, USDA-FS

- 8:30am *Planform Evolution Model for the Middle Rio Grande, NM.* Tamara Massong¹, Paula Makar² and Travis Bauer²—¹USACE, Albuquerque NM; ²USBR, Denver, CO
- 8:50am *Origin, Evolution, and Hydraulic Connectivity of Side Channels Along the Middle Methow River, Central Washington.* Lucille A. Piety, Jennifer A. Bountry, and Ralph E. Klinger, USBR, Denver, CO
- 9:10am *Bedload Movement in Mountain Channels: Insights Gained from the Use of Portable Bedload Traps.* John Potyondy, Kristin Bunte, Steven Abt, and Kurt Swingle, Engineering Research Center, Colorado State Univ., Fort Collins, CO
- 9:30am *Functions to Adjust Transport Rates from a Helley-Smith Sampler to Bedload Traps in Coarse Gravel-Bed Streams (Rating Curve Approach).* Kristin Bunte¹, Steven Abt¹, Kurt Swingle², John Potyondy³—¹Colorado St. Univ., Fort Collins, CO; ²Boulder, CO; ³USDA-FS Stream Systems Technology Center, Fort Collins, CO

8:30am THURSDAY 7/01/10

10E FLOOD HYDROLOGY 6 GRANDE BALLROOM D

Chairs: Karl Visser, USDA-NRCS / Bill Merkel, USDA-NRCS

- 8:30am *Empirical Determination of Runoff Curve Number for a Small Agricultural Watershed in Poland.* Kazimierz Banasik¹ and Don Woodward², —¹Warsaw Agricultural Univ., Warsaw, Poland; ²USDA-NRCS (retired), Washington, DC
- 8:50am *Automatic Watershed Delineation/Curve Number Tool.* Colin Niehus, USDA-NRCS, Huron, SD
- 9:10am *Continuing Evolution of Rainfall-Runoff and the Curve Number Precedent.* Richard H. Hawkins¹, T. J. Ward², Don Woodward³, and Joe Van Mullen⁴—¹Univ. of Arizona; ²Manhattan College, Riverdale, NY; ³USDA-NRCS (retired), Washington, DC; ⁴USDA-NRCS (retired), Bozeman, MT
- 9:30am *San Antonio, Texas, Curve Number Study.* Troy Dorman¹ and Donald Woodward²—¹Pape-Dawson Engineers, San Antonio, TX; ²USDA-NRCS (retired), Washington, DC

8:30am THURSDAY 7/01/10

10F MODELING OF MAJOR RIVER SYSTEMS 2 CAPRI 102

Chairs: Doug Blatchford, USBR / Tim Magee, CADSWES

- 8:30am *Water Accounting and Allocation in RiverWare.* Edith Zagona¹, Ed Kandl², John Carron³, and Steven Bowser⁴—¹Univ. of CO, Boulder, CO; ²USBR, Albuquerque, NM; ³AMEC Earth & Environmental, Boulder, CO; ⁴USBR, Denver, CO
- 8:50am *Scheduling TVA's Reservoirs with RiverWare.* Tim Magee¹, Susan Jacks², and Edith Zagona¹—¹Univ. of CO, Boulder, CO; ²Tennessee Valley Authority, Knoxville, TN
- 9:10am *RiverWare's Integrated Modeling and Analysis Tools for Long-Term Planning Under Uncertainty.* Edith Zagona¹, Kenneth Nowak¹, Rajagopalan Balaji¹, Carly Jerla², and James Prairie²—¹Univ. of CO, Boulder, CO; ²USBR, Boulder, CO
- 9:30am *Multi-Objective Modeling in RiverWare for USACE-SWD.* Allen Avance¹, John Daylor², Jerry Cotter³, David Neumann³, and Edith Zagona³—¹USACE, Fort Worth, TX; ²USACE, Tulsa District; ³Univ. of CO, Boulder, CO

10:00am BREAK **GRANDE BALLROOM E**

10:30am SHORT COURSES (see listings)

10:30am THURSDAY 7/01/10

11A ADAPTIVE HYDRAULICS MODEL (ADH) CAPRI 101

Chairs: Gregg Hudson, USDA-NRCS / Jennifer Duan, Univ. of AZ

- 10:30am *Sediment Transport Modeling of a Missouri River Bend with ADH.* Aaron W. Buesing, USACE, St. Paul, MN
- 10:50am *Sedimentation Analysis of Upper Mississippi River at Lock and Dam 22 Using 2D Numerical Model ADH.* Thomas Gambucci, USACE, Rock Island District, IL
- 11:10am *Design for Fish Passage on the Yellowstone River at Intake Dam Using Numerical and Physical Modeling.* Daniel Pridal, Chris Svendsen, and Curtis Miller, USACE, Omaha NE
- 11:30am *Development of the River Analysis Tool (RAT): Comparison of Predicted Bed Changes to Adaptive Hydraulics Model (ADH) Results.* Jeremy A. Sharp and Charles D. Little, Jr., USACE-ERDC, Vicksburg, MS

10:30am THURSDAY 7/01/10

11B FLUVIAL GEOMORPHOLOGY 2 GRANDE BALLROOM A

Chairs: Lisa Fotherby, USBR / Thom Garday, USDA-NRCS

- 10:30am *Analyzing Shoaling Reduction Techniques on the Atchafalaya River at Morgan City, LA.* S. Keith Martin and Phu V. Luong, USACE, ERDC, Vicksburg, MS
- 10:50am *Mississippi River Geomorphology & West Bay Diversion.* Charles D. Little, Jr., USACE-ERDC, Vicksburg, MS
- 11:10am *1-Dimensional Modeling of Sedimentation Impacts for the Mississippi River at the West Bay Diversion.* Ronald E. Heath¹, Jeremy A. Sharp¹, and C. Fred Pinkard, Jr.²—¹USACE-ERDC, Vicksburg, MS; ²USACE Vicksburg District
- 11:30am *Flow Resistance in Open Channels With Fixed and Movable Bed.* Francisco J. M. Simões, USGS, Golden, CO

10:30am THURSDAY 7/01/10

11C SEDIMENT IMPACT ASSESSMENT MODEL (SIAM) GRANDE BALLROOM C

Chairs: Bethany Bearmore, NOAA / S. K. Nanda, USACE

- 10:30am *SIAM Case Study: Kankakee River Basin, Indiana and Illinois.* Meg Jonas and Charles Little, USACE-ERDC, Vicksburg, MS
- 10:50am *Analysis of Three Delta Headwaters Project (DHP) Streams Using the Sediment Impact Analysis Method (SIAM) Model.* Michelle Martin¹, David Biedenharn², Charles Little³, Kendall Smith⁴, and Chester Watson⁵—¹Anderson Consulting Engineers, Inc., Fort Collins, CO; ²Biedenharn Group, LLC, Vicksburg, MS; ³USACE, Vicksburg District, Vicksburg, MS; ⁴USACE-ERDC, Vicksburg, MS; ⁵Biedenharn Group, LLC, Fort Collins, CO
- 11:10am *Development of a Watershed Plan for the Sabougla Creek Watershed.* Kendall Smith¹, David Biedenharn², Charles Little³, Blake Mendrop⁴, John Smith¹, and Chester Watson⁵—¹USACE, Vicksburg District, Vicksburg, MS; ²Biedenharn Group, LLC, Vicksburg, MS; ³USACE-ERDC, Vicksburg, MS; ⁴Ridgeland, MS; ⁵Biedenharn Group, LLC, Fort Collins, CO
- 11:30am *Sediment Impact Analysis Methods (SIAM): Overview of Model Capabilities, Applications, and Limitations.* Charles Little and Meg Jonas, USACE-ERDC, Vicksburg, MS

10:30am THURSDAY 7/01/10

11D STREAMBANK EROSION 2 GRANDE BALLROOM B

Chairs: Fred Theurer, USDA-NRCS / Quan Quan, USDA-NRCS

- 10:30am *Erosion and Sediment Loads from Two Hawaiian Watersheds.* Jonathan Stock and Gordon Tribble, USGS, HI
- 10:50am *Assessment and Estimation of Streambank Erosion Rates in the Southeastern Plains Ecoregion of Mississippi.* J. J. Ramirez-Avila¹, E. J. Langendoen², W. H. McAnally¹, J. L. Martin¹, and S. L. Ortega-Achury¹—¹Mississippi State Univ., Starkville, MS; ²USDA-ARS, Oxford, MS
- 11:10am *Estimation of Streambank Lateral Migration and Erosion Hazard Boundaries.* Bruce Phillips, Pacific Advanced Civil Engineering, Inc. (PACE), Fountain Valley, CA
- 11:30am *Progression of Stream Bank Erosion During a Large Flood, Rio Puerco Arroyo, New Mexico.* Eleanor R. Griffin, J. Dungan Smith, Jonathan M. Friedman, and Kirk R. Vincent, USGS, Boulder, CO

10:30am THURSDAY 7/01/10

11E FLOOD HYDROLOGY 7 GRANDE BALLROOM D

Chairs: Don Woodward, USDA-NRCS (ret.) / Teri Seeman, NRCS (ret.)

- 10:30am *Hydroclimate Flood Trends in New England: Insights from Annual and Partial Duration Flood Series at Climate-Sensitive Stream Gages with Long Records.* Mathias J. Collins¹, William Armstrong², and Noah P. Snyder³—¹NOAA Gloucester, MA; ²Student, Boston College, Chestnut Hill, MA; ³Associate Professor, Boston College, Chestnut Hill, MA
- 10:50am *Runoff Curve Number Method in Sicily: CN Determination and Analysis of The Initial Abstraction Ratio.* Francesco D'Asaro and Giovanni Grillone, Univ. of Palermo, Palermo, Italy
- 11:10am *The Lower Colorado River Authority Daily River Operations Model.* John Carron¹, David Walker², Kevin Wheeler¹, Steve Setzer¹, Geoffrey Saunders², and Richard Brown²—¹AMEC Earth and Environmental, Boulder, CO; ²Lower Colorado River Authority, Austin, TX
- 11:30am *Instrumenting Wildlife Water Developments to Measure Precipitation and Estimate Runoff in Remote Catchments.* Nicholas Grant¹, Laurel Saito¹, Mark Weltz², Mark Walker¹, and Kelly Stewart¹—¹Univ. of NV, Reno, NV; ²USDA-ARS, Tucson, AZ

Moved from 3F

5:00pm All Short Courses end

5:00pm All Joint Conference activities end

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STUDENT POSTER PRESENTATIONS - I
Monday, 5:15 to 6:45pm

Title	Author(s)
<i>A Combination Method Coupling SEBAL and GG Models for Extending Remotely Sensed Evapotranspiration to Days Without Images at Watershed Scales</i>	Di Long and Vijay P. Singh, Texas A&M Univ.
<i>A Parsimonious Dynamic Flow Model for Hydrological Applications</i>	April Warnock, Jongho Kim, Valeriy Ivanov, and Nikolaos Katopodes, Univ. of Michigan
<i>A Sediment Budget for Town Creek Watershed: Suspended Sediment Transport Rates Analysis</i>	J. Ramirez-Avila ¹ , Graduate Research Assistant; W.H. McAnally ¹ ; Eddy J. Langendoen ² ; James L. Martin ¹ ; and S. L. Ortega-Achury ¹ — ¹ Mississippi State Univ., Starkville, MS; ² USDA-ARS National Sedimentation Laboratory, Oxford, MS
<i>A Simplified Close Range Photogrammetry Method for Soil Erosion Assessment</i>	Sayjro Kossi Nouwakpo, Chi-hua Huang, Jim Frankenberger, and James Bethel, Purdue Univ., Soil Erosion Laboratory, West Lafayette, IN
<i>Application of Digital Oblique Photogrammetry for Monitoring Erosion and Sedimentation at Mount St. Helens, Washington, USA</i>	Adam Mosbrucker, USGS, Cascades Volcano Observatory, Vancouver, WA
<i>Assessing Spatial Distribution of Fire Effects in Forests Using GIS</i>	Mariana Dobre, Washington State Univ., Pullman, WA
<i>Coupling Surface Flow Phenomena with Dynamics in the Unsaturated and Saturated Zones</i>	Jongho Kim, April Warnock, Valeriy Ivanov, and Nikolaos Katopodes, Univ. of Michigan
<i>Effects of Post-Fire Channel Treatments on Runoff and Sediment Transport</i>	Joseph W. Wagenbrenner ¹ , Peter R. Robichaud ¹ , and Scott W. Woods ² — ¹ USDA-FS, Rocky Mountain Research Station, Moscow, ID; ² Univ. of Montana, Missoula, MT
<i>Evaluation of a Permittivity Sensor for Continuous Monitoring of Suspended Sediment Concentration</i>	Barbara C. Utley, Tess M. Wynn, and Naiqian Zhang, Virginia Polytechnical Univ., Blacksburg, VA
<i>Evaluation of an In-Situ Measurement Technique for Streambank Critical Shear Stress and Soil Erodibility</i>	Cami Charonko and Tess Wynn, Virginia Polytechnical Univ., Blacksburg, VA
<i>Hydrologic Modeling of an Extreme Flood in the Guadalupe River in Texas</i>	Almoutaz El Hassan, Graduate Research Assistant; Hatim Sharif; T Lutz; and J. Zeidler; Univ. of Texas at San Antonio, TX
<i>Hydrometeorological Analysis of Flooding Events in San Antonio, TX</i>	Singaiah Chintalapudi, Graduate Research Assistant; Hatim O. Sharif, and Almoutaz El Hassan, Univ. of Texas at San Antonio, TX
<i>Initiation and Evolution of Concentrated Flow Induced Erosion on a Pinyon-Juniper Woodland</i>	Katie Costigan, Univ. of Nevada-Reno, Reno, Nevada
<i>KINEROS-OPUS—Spatially Based Watershed Hydrologic and Biogeochemical Modeling</i>	Jamie Massart ¹ , Graduate Student; Phil Guertin ¹ ; Roger Smith (ret.) ² ; David Goodrich ³ ; Carl Unkrich ³ ; and Lainie Levick ³ — ¹ Univ. of Arizona, Tucson, AZ; ² USDA-ARS, Fort Collins, CO; ³ USDA-ARS, Tucson, AZ

<i>Sediment Transport and Channel Form in a Reconfigured Gravel Bed Channel</i>	Susannah O. Erwin ¹ , John C. Schmidt ¹ , Peter R. Wilcock ² — ¹ Intermountain Center for River Rehabilitation and Restoration, Utah State Univ., Logan UT; ² Department of Geography and Environmental Engineering, The Johns Hopkins Univ., Baltimore MD
<i>Surface Water Availability Modeling of Kalamazoo River Basin under Present and Future Conditions</i>	Rabi Gyawali, Michigan Technological Univ., Houghton, MI (Advisor: Dr. David Watkins)
<i>Temporal Variation in River Nutrient and Dissolved Lignin Phenol Concentrations and the Impact of Storm Events on Nutrient Loading to Hood Canal, WA</i>	Nicholas D. Ward, Jeffrey E. Richey, and Richard G Keil, Univ. of Washington School of Oceanography, Seattle, WA
<i>Understanding Groundwater/Surface Water Interactions Along the Truckee River, Eastern Truckee Meadows, Nevada</i>	Wesley R. Henson and Harmony Ann Farnsworth, Univ. of Nevada, Reno, NV

NOTES

DEMONSTRATIONS / MODELS

Wednesday, 4:30 to 9:00pm Concurrent ↔

Title	Author(s)
<i>Demonstrating the Capabilities of the KINEROS-AGWA Suite of Modeling Tools: Operational Flash Flood Forecasting and Assessing the Impacts of Management on Nitrate and Pesticide Runoff from an Agricultural Watershed</i>	Carl L. Unkrich ¹ , Jamie Massart ² , Shea Burns ¹ , David Goodrich ² , Roger E. Smith (ret.) ³ , David Woodhiser ³ , Phil Guertin ² , and Michael Schaffner ⁴ — ¹ USDA-ARS, Tucson, AZ; ² Univ. of Arizona, Tucson, AZ; ³ USDA-ARS, Fort Collins, CO; ⁴ NOAA National Weather Service, Johnson City, NY
<i>Demonstration of RiverWare</i>	Edith Zagana and David Neumann, Univ. of Colorado Center for Advanced Decision Support for Water and Environment Systems, Boulder, CO
<i>Development and Evaluation of a Component-Based Watershed Model Using the Object Modeling System</i>	James Ascough III ¹ , David Olaf ² , George Leavesley ² , Peter Krause ³ , and Lajpat Ahuja ¹ — ¹ USDA-ARS, Fort Collins, CO; ² Colorado Univ., Boulder, CO; ³ Friedrich-Schiller Univ., Jena, Germany
<i>Hydrologic Modeling System (HEC-HMS): Physically-Based Simulation Components</i>	William Scharffenberg, Paul Ely, Steve Daly, Matthew Fleming, and Jay Pak, USACE Hydrologic Engineering Center (HEC), Davis, CA
<i>Method to Make Rapid Assessments of Detailed Breach Analysis Needs</i>	Terry Costner, Brian Wenberg, and Harrell Geron, USDA-NRCS, Temple, TX
<i>NRCS WinTR-20 and GEO-HYDRO—Computer Demonstration</i>	William Merkel and Quan D. Quan, USDA-NRCS Beltsville, MD
<i>Development of a National Dynamic Reservoir Sedimentation Database (RESSED)</i>	John R. Gray ¹ , D.W. Stewart ¹ , E.J. McFaul ¹ , K. W. Laurent ¹ , G. E. Schwarz ¹ , Jerry M. Bernard ² , J. T. Stinson ³ , M. M. Jonas ³ , J. W. Webb ³ , and Tim Randle ⁴ — ¹ USGS, Reston, VA; ² USDA-NRCS, Washington, DC; ³ USACE; ⁴ Bureau of Reclamation, Denver, CO
<i>Pollutant Load Reduction Model (PLRM)</i>	Brent Wolfe ¹ and Mark Leisenring ² — ¹ NW Hydraulic Consultants, South Tahoe, CA; ² GeoSyntec Consultants
<i>A Renovation of the Einstein Sediment Function Using the Sediment Function Spreadsheet Application Model (SFSAM)</i>	Andrew Kadib, USACE (ret.), Arcadia, CA
<i>The Object Modeling System (OMS): A Collaborative Approach to Component-Based Community Models and Tools</i>	David Olaf ^{1,2} , Laj Ahuja ² , George Leavesley ¹ , Frank Geter ³ , Ken Rojas ³ , and Jack Carlson ³ — ¹ CSU, Fort Collins, CO; ² USDA-ARS, Fort Collins, CO; ³ USDA-NRCS, Fort Collins, CO
<i>Watershed Management and GIS: The Automated Geospatial Watershed Assessment Tool (AGWA) 2.0</i>	Shea Burns ¹ , David Goodrich ² , Phillip Guertin ¹ , Darius Semmens ³ , Scott Miller ⁴ , Lainie Levick ¹ , Mariano Hernandez ¹ , and William Kepner ⁵ — ¹ Univ. of Arizona, Tucson, AZ; ² USDA-ARS, Tucson, AZ; ³ USGS, Denver, CO; ⁴ Univ. of Wyoming, Laramie, Wyoming; ⁵ USEPA, Las Vegas, NV
<i>WinDAM B Earthen Embankment Overtopping Analysis Software</i>	Karl Visser ¹ , Gregory Hanson ² , Darrell Temple (ret.) ² , Morris Lobrecht (ret.) ³ , Mitchell Neilsen ⁴ , Tony Funderburk ³ , and Helen Fox Moody ⁵ — ¹ USDA-NRCS, Fort Worth, TX; ² USDA-ARS, Stillwater, OK; ³ USDA-NRCS, Fort Worth, TX; ⁴ Kansas State Univ.; ⁵ USDA-NRCS, Beltsville, MD

POSTER PRESENTATIONS - II

↔ Concurrent Wednesday, 4:30 to 9:00pm

Title	Author(s)
<i>A Man, His Boat, and a Heck of a Fish Finder: An Economical Method for Conducting Reservoir Sedimentation Survey</i>	Gary T. Snellings, Frank A. Adams, and Reginald K. Harris, USDA-NRCS, Jackson, MS
<i>A Two-Dimensional Finite Element Hydrodynamic River Morphology and Gravel Transport Model</i>	Stephen Kwan ¹ , Jose A. Vasquez ² , Robert G. Millar ³ , and Peter M. Steffler ¹ — ¹ Hydraulic Engineering Concepts, Bellevue WA; ² Northwest Hydraulic Consultants, Vancouver, BC, CA; ³ Univ. of British Columbia, Vancouver, BC, CA; ⁴ Univ. of Alberta, Edmonton, AB, CA
<i>Acoustic Sediment (ACOU-SED) Surrogates in Illinois Streams</i>	Timothy D. Straub ¹ , Jon E. Hortness ² , Gary P. Johnson ¹ , and Joseph P. Parker ¹ — ¹ USGS, Urbana, IL; ² USGS, Boise, ID
<i>Bed Material Characterization of the San Joaquin River Using Photographic Techniques</i>	E. Holburn Gordon, J. Carlson, and B. Greimann, USBR, Denver, CO
<i>Bedload Traps: A New Sampler for Sampling Bedload in Mountain Streams</i>	Kristin Bunte ¹ , Steven Abt ¹ , John Potyondy ² , and Kurt W. Swingle ³ — ¹ Engineering Research Center, Colorado State Univ., Fort Collins, CO; ² USDA-FS, Fort Collins, CO; ³ Environmental Scientist, Boulder, CO
<i>Channel Change and Bed Material Transport in the Lower Chetco River, Oregon</i>	J. Rose Wallick, Scott W. Anderson, Charles Cannon, and Jim E. O'Connor, USGS, Portland OR
<i>Climate Change Scenario Generation and Uncertainty Assessment Using Hierarchical Bayesian Model and Wavelet-Based Stochastic Model</i>	Hyun-Han Kwon ¹ , Upmanu Lal ² , Jeong-Ju Lee, PhD Candidate ¹ , Jayantha Obeysekera ³ , and Young-II Moon ⁴ — ¹ Chonbuk National Univ., Jeonbuk, South Korea; ² Columbia Univ., New York, NY; ³ South Florida Water Management District; ⁴ Univ. of Seoul, Seoul, South Korea
<i>Comparison of Turbidity to Multi-Frequency Sideways-Looking Acoustic-Doppler Data and Suspended-Sediment Data in the Colorado River in Grand Canyon</i>	Nicholas Voichick and David J. Topping, USGS, Flagstaff, AZ
<i>Conducting Simple Sediment Surveys Using Modern GPS, Sonar, and GIS Technology</i>	Mark E. Hall and Jimmy R. Bramblett, USDA-NRCS, Athens, GA
<i>Estimating Monthly Water Withdrawals, Return Flow and Consumptive Use</i>	Kimberly Shaffer, USGS, Columbus, OH
<i>Evaluating KINEROS2 Simulated Sediment Yields Using Multiple Particle Size Distributions</i>	D. Goodrich, T. Keefer, E. Canfield, R. Smith, and M. Nichols, USDA-ARS, Tucson, AZ
<i>Expedient Cofferdam Technology for Repair of Gated Dams/Levees.</i>	J. E. Fowler, J. A. Padula, D. T. Resio, D. L. Ward, D. D. Abraham, and S. J. Boc; USACE-ERDC, Vicksburg, MS
<i>Extreme Precipitation in a Changing Climate for New York and the New England States</i>	William Merkel ¹ , Quan D Quan ¹ , Art DeGaetano ² , and Dan Zarrow ³ — ¹ USDA-NRCS, Beltsville, MD; ² NOAA, Ithaca, NY
<i>Field Evaluation of Sediment-Concentration Errors Arising from Non-Isokinetic Intake Efficiency in Depth-Integrating Suspended-Sediment Bag Samplers</i>	Thomas A. Sabol, David J. Topping, and Ronald E. Griffiths, USGS, Flagstaff, AZ
<i>GIS Tools for Geology</i>	Gregg S. Hudson ¹ and Nathaniel Todea ² — ¹ USDA-NRCS, Stillwater, OK; ² Hydraulic Engineer, USDA-NRCS, Salt Lake City, UT

<i>Grain-Size Evolution in Suspended Sediment and Deposits from the 2004 and 2008 High-Flow Experiments in the Colorado River Through Grand Canyon, Arizona</i>	Amy E. Draut ¹ , David M. Rubin ¹ , Scott A. Wright ² , and John C. Schmidt ³ — ¹ USGS, Santa Cruz, CA; ² USGS, Sacramento, CA; ³ Utah State Univ., Logan, UT;
<i>Integrating Remotely Sensed Data, Watershed Models, and Data Assimilation</i>	Brian Skahill and Mike Follum, USACE, Vicksburg, MS
<i>Loads of Suspended Sediment and Selected Trace Elements in the Clark Fork Basin, Montana, Before and After the Removal of Milltown Dam</i>	Steven K. Sando and John H. Lambing; USGS, Helena, MT
<i>Long-Term Sediment Transport Trends in Illinois Watersheds</i>	Laura L. Keefer, Misganaw Demissie, Rich Allgire, and David Crowder, Center for Watershed Science, Illinois State Water Survey, Champaign, IL
<i>New Nonpumping, Unattended Sampler Has Been Developed, Tested, and Is Ready for Suspended-Sediment Sample Collection</i>	Patrick P. Rasmussen ¹ , Casey J. Lee ¹ , Broderick E. Davis ² , and Wayne O'Neal ³ — ¹ USGS, Lawrence, KS; ² USGS, Vicksburg, MS; ³ Owner, Carnet Technologies, MS
<i>Overland Transport of Manure-Borne Pathogen and Indicator Organisms: Modeling and Uncertainty Assessment with the KINEROS-STWIR Model</i>	Andrey Guber ¹ , Yakov Pachepsky ¹ , A. K. Guber ¹ , Daniel R. Shelton ¹ , David Goodrich ² , and D. C. Unkrich ² — ¹ USDA-ARS Beltsville, MD; ² USDA-ARS Tucson AZ
<i>Parallelization Techniques in Sediment Transport Modeling.</i>	Phu V. Luong and Keith Martin, USACE-ERDC, Vicksburg, MS
<i>Revisions and Updates of Regression Models Relating Turbidity and Suspended-Sediment Concentration, North Santiam River, Oregon</i>	Heather Bragg, USGS, Portland, Oregon
<i>River Response to Dam Removal: The Souhegan River and the Merrimack Village Dam, Merrimack, New Hampshire</i>	Adam J. Pearson ¹ , Student; Noah P. Snyder ¹ ; and Mathias J. Collins ² ; and David Santaniello ¹ — ¹ Boston College, Chestnut Hill, MA; ² NOAA, Gloucester, MA
<i>Safety, Monetary, and Environmental Considerations in Replacing Footbridges with Cableway Installations for Peak-Flow Monitoring of Sediment and Discharge in the Ouachita Mountains, Arkansas</i>	Daniel A. Marion ¹ and Jaysson E. Funkhouser ² — ¹ USDA Forest Service, Hot Springs, AR; ² USGS, Little Rock, AR
<i>Sediment Load Variability and Sediment Sources for Forest Headwater Streams in the Southern Sierra Nevada, California</i>	Carolyn Hunsaker ¹ , Jason Adair ¹ , and Kurt Weidich ² — ¹ USDA-FS, Fresno, CA; ² California State Univ., Chico, CA
<i>Sedimentation Analysis—Suncook River in Epsom, NH</i>	Robert H. Flynn, USGS, Pembroke, NH
<i>Sensitivity Analysis of the SWAT and KINEROS-OPUS Snow Modules in a Small Headwater Catchment in the Semi-Arid Western United State</i>	Michele L. Reba ¹ , Danny Marks ¹ , Fred Pierson ¹ , Dave Goodrich ² , Carl Unkrich ² , and Ian Shea Burns ² — ¹ USDA-ARS, Northwest Watershed Research Center, Boise, ID; ² USDA-ARS Southwest Watershed Research Center, Tucson, AZ
<i>The Use of the Multi-Dimensional Surface-Water Modeling System (MD_SWMS) in Calculating Discharge and Sediment Transport in Remote Ephemeral Streams</i>	Ronald E. Griffiths ¹ , David J. Topping ¹ , Richard R. McDonald ² , and Thomas A. Sabol ¹ — ¹ USGS, Flagstaff, AZ; ² USGS, Golden, CO
<i>What's in My Dirt?—Use of the National Geochemical Survey to Determine Ecoregional Background Values for Elemental Constituents in Arkansas: A Process Demonstration, and Example Application</i>	Michael Crump, USDA-FS, Atlanta, GA